*Yale Journal of Law & Technology*
Volume 26, Issue 3

*Special Issue:*
*Yale Information Society Project*
*Digital Public Sphere Series*

# Who Wants a Robo-Lawyer Now?: On AI Chatbots in China's Public Legal Services Sector

**Xin Dai**[*]

*The recent popularization of generative artificial intelligence (GAI) applications, such as ChatGPT and other large language model (LLM)-powered chatbots, has led many to expect transformative changes in legal practice. However, the actual use of LLM chatbots in the legal field has been limited. This Essay identifies China's public legal services (PLS) sector as a potential use case where AI chatbots may become widely and quickly adopted. China's political economy is generally conducive to such adoption, as the government must rely on technological solutions to fulfill its commitment to universal access to PLS. The Legal Tech industry is keen to find a practical use case for its LLM chatbots, which with proper development and fine-tuning could function adequately in meeting a significant popular demand for basic legal information. The use of AI chatbots in China's PLS sector could contribute not only to narrowing the gap in access to justice but also to strengthening the degree of legality in governance that the country has achieved through years of deliberate efforts. But such use could also raise a range of concerns, including loss of confidentiality, errors and inaccuracies, fraud and manipulation, and unequal service quality. On balance, however, AI chatbots*

---

[*] Associate Professor and Vice Dean, Peking University Law School; Affiliated Researcher, PKU-Wuhan Institute for Artificial Intelligence. The author thanks Gilad Abiri and Elisabeth Paar for helpful comments and suggestions; Chen Liang, Ma Xinyi, and Liu Yelong for helpful research assistance; and the *YJoLT* editors for their hard work that significantly improved the draft. Research underlying this Essay is supported by a grant from Wuhan East Lake High-Tech Development Zone National Comprehensive Experimental Base for Governance of Intelligent Society. All errors are mine.

*offer benefits in the PLS sector as a positive innovation, and the risks associated with their adoption appear manageable through pragmatic approaches.*

**Essay Contents**

## Introduction

Much has been said about how the rise of artificial intelligence (AI) could fundamentally transform legal practice.[1] But the overall picture about how soon legal practices will substantively integrate the latest technologies, in particular the much-hyped generative AI (GAI) applications powered by large language models (LLMs), remains murky. In 2023, the consumer advocacy firm DoNotPay announced plans to have its AI chatbot "participate" in its first trial in February 2024.[2] But it later backtracked on its announcement after receiving threats of legal action from various state bar officials for the unauthorized practice of law.[3] As of 2023, large organizations apparently remain quite hesitant to adopt GAI. As one survey by Thomson Reuters revealed, six months after ChatGPT's release, more than half of those working in large law firms thought GAI could and *should* be applied to legal work, but only five percent of those who were surveyed reported actual or planned use of GAI.[4] Half or more surveyed firms in the United States, United Kingdom, and Canada expressed no plans for firmwide adoption; many instead issued warnings about or against the use of ChatGPT.[5]

---

[1] *See, e.g.*, W. Bradley Wendel, *The Promise and Limitations of Artificial Intelligence in the Practice of Law*, 72 OKLA. L. REV. 21 (2019); Eugene Volokh, *Chief Justice Robots*, 68 DUKE L.J. 1135 (2019); Joshua P. Davis, *Of Robolawyers and Robojudges*, 73 HASTINGS L.J. 1173 (2022).

[2] Kathryn M. Rattigan, *A First in Court: AI Robot to Try Its Hand at Lawyering*, NAT'L L. REV. (Jan. 5, 2023), https://www.natlawreview.com/article/first-court-ai-robot-to-try-its-hand-lawyering [https://perma.cc/JR8K-XU6J].

[3] Bobby Allyn, *A Robot Was Scheduled to Argue in Court, Then Came the Jail Threats*, NPR (Jan. 25, 2023, 6:05 PM ET), https://www.npr.org/2023/01/25/1151435033/a-robot-was-scheduled-to-argue-in-court-then-came-the-jail-threats [https://perma.cc/6D8W-5JAC].

[4] *Generative AI and the Courts: Balancing Efficiency and Legal Obligations*, THOMSON REUTERS INST. (Apr. 20, 2023), https://www.thomsonreuters.com/en-us/posts/wp-content/uploads/sites/20/2023/04/2023-Chat-GPT-Generative-AI-in-Law-Firms.pdf [https://perma.cc/PE75-N6NA].

[5] *See id.* Skepticism about the current tools' utility extends beyond legal circles. *See* Tom Dotan, *Early Adopters of Microsoft's AI Bot Wonder if It's Worth the Money*, WALL ST. J. (Feb. 13, 2024),

Another survey among American corporate in-house counsel reported a similar pattern of high awareness but low adoption rates.[6] Meanwhile, in the media, the favorite story among both lawyers and laymen about the use of ChatGPT perhaps remains that of the attorneys who received court sanctions for submitting AI-generated filings with fabricated authorities.[7]

Of course, the legal profession's hesitance to adopt GAI, especially in front-facing client services, is well expected. LLMs are known to have a hallucination problem, and in the specific context of caselaw reasoning, one study shows that popular models such as ChatGPT 3.5 and Llama 2 can be prone to generate inaccurate information on verifiable questions.[8] Yet law is perceived as a high-stakes area of practice where, as in medicine, the socially acceptable error rate for AI is likely lower than that for humans.[9] Moreover, legal services are inherently relational, and thanks perhaps to "robo-phobia"[10] many people have difficulty trusting robo-lawyers.[11] Besides,

---

https://www.wsj.com/tech/ai/early-adopters-of-microsofts-ai-bot-wonder-if-its-worth-the-money-2e74e3a2 [https://perma.cc/T3YZ-JVV9].

[6] *Aware but Wary: In-House Counsel on the Power of Generative Artificial Intelligence*, LOWENSTEIN SANDLER, https://www.documentcloud.org/documents/24002037-lowenstein-sandler-survey [https://perma.cc/D58B-WSUM].

[7] Larry Neumeister, *Lawyers Submitted Bogus Case Law Created by ChatGPT. A Judge Fined Them $5,000*, A.P. (June 23, 2023), https://apnews.com/article/artificial-intelligence-chatgpt-fake-case-lawyers-d6ae9fa79d0542db9e1455397aef381c [https://perma.cc/M3WB-U27J].

[8] *See* Matthew Dahl, Varun Magesh, Mirac Suzgun & Daniel E. Ho, *Large Legal Fictions: Profiling Legal Hallucinations in Large Language Models*, ARXIV 1 (Jan. 2, 2024), https://arxiv.org/pdf/2401.01301.pdf [https://perma.cc/U5FZ-PNLS] (revealing high rate of legal hallucinations for ChatGPT3.5 and Llama 2 when these models are asked specific, verifiable questions about random federal court cases).

[9] Anders Lenskjold et al., *Should Artificial Intelligence Have Lower Acceptable Error Rates Than Humans?*, 5 BRIT J. RADIOLOGY 1, 1, 2 (2023).

[10] Andrew Keane Woods, *Robophobia*, 93 U. COLO. L. REV. 51, 55 (2022) (defining "robophobia" as a bias against robots, algorithms, and other non-human deciders).

[11] Eran Kahana, *Generative AI: Its Impact on AI Legal Advice and AI Computational Law Apps*, CODEX (Jan. 23, 2023), https://law.stanford.edu/2023/01/10/generative-ai-its-impact-on-ai-legal-advice-and-ai-computational-law-apps [https://perma.cc/UXS8-EYRU]. *But see* Benjamin Minhao Chen, Alexander Stremitzer, & Kevin Tobia,

for average legal professionals, too much may be on the line to accept the idea that AI can be "qualified" to perform legal tasks, especially in light of research finding that GPT-4 already outperforms human test-takers in most subject areas in the Multistate Bar Exam.[12] Without enough client pressure to protect their margins, profitable organizations can also be slow to adopt technologies to restructure their business model.[13]

In the long term, however, none of these hindrances to broader AI adoption in legal practices seems insurmountable. In the wake of various speculative accounts on this topic, this Essay offers an additional perspective: a potential near-term use case for AI chatbots in the legal field.

Surprisingly or not, one of the first real-world adoption cases can be found in China's hinterlands. Since September 2023, it has been reported that AI chatbots powered by Ernie, an LLM developed by the Chinese tech firm Baidu, have become deployed in the government-run public legal services stations of more than 14,000 rural villages in the southwestern Chinese province of Yunnan. These chatbots, accessible through devices stationed at local government offices, are said to have performed at least 620,000 free interactive legal consultations for rural residents in the initial couple months of their adoption.[14]

---

*Having Your Day in Robot Court*, 36 HARV. J.L. & TECH. 127, 163-65 (2022) (demonstrating with experiments that the public could perceive judicial decisions made by AI to be as fair and trustworthy as human decisions under certain circumstances).

[12] Daniel Martin Katz, Michael James Bommarito, Shang Gao & Pablo Arredondo, *GPT-4 Passes the Bar Exam*, 382 PHIL. TRANSACTIONS ROYAL SOC'Y A, Apr. 15, 2024, at 1, 7.

[13] Emily Forges, *Insight: U.S. Adoption of Legal Tech Lags Behind Europe, But Set to Grow*, BLOOMBERG L. (Dec. 24, 2019), https://news.bloomberglaw.com/tech-and-telecom-law/insight-u-s-adoption-of-legal-tech-lags-behind-europe-but-set-to-grow [https://perma.cc/ZWT9-NVCJ].

[14] *See, e.g.*, Yin Xining & Zhang Yi, *Breaking Through with Legal Services 'Into the Village Road,' Large Language Models Create AI Virtual Lawyers* (打通法律服务"进村路"，大语言模型造就 AI 虚拟律师), CYOL (Dec. 5, 2023), https://m.cyol.com/gb/articles/2023-12/05/content_99LLZgHa3x.html [https://perma.cc/4VQL-ZSRR]; *Legal Service Robots 'Take Position' for Free 'Lawyers' in the Villages* (法律服务

The wider background here is that China, in the last decade, has simultaneously pursued the advancement of computerization, digitization, and AI[15] on the one hand, and the elevation of legality in governance[16] on the other. While such a use case looks nascent and parochial now, this Essay suggests that government-sponsored legal services may be a "right" application for AI chatbots. Sure, speculating about robo-lawyers arguing cases in front of robo-judges may be more exciting. But in reality, at any given moment, tens of millions of people are anxiously looking on the web for free answers to simple, mundane legal questions. The potential for AI chatbots to meet this very real demand, as suggested by the Chinese case, could be a potent driver for the imminent deployment of GAI in the legal context. Indeed, using chatbots to close the gap in access to legal services and justice can be an example of "AI-for-Good," which refers to the use of AI to advance obvious societal interests and thus should be supported, not suppressed, by the law.[17]

This Essay proceeds in three Parts. I first explain the favorable political economy that predicts the wider adoption of AI chatbots in China's public legal services (PLS) system. Part I describes how China's government-dominant approach to access to justice creates significant demand that can be met perhaps only through the chatbots. Part II explores how, on the supply side, the legal technology industry is clearly interested in the PLS use case and technologically ready to meet the demand for PLS chatbots. Part III then explores several normative considerations associated with the potential wide adoption of PLS chatbots. I surmise that, in addition to helping close the gap in access to routine legal advice, making AI chatbots widely available will simultaneously facilitate

---

机器人"上岗" 免费"律师"进乡村), YUNNAN POL. & L. TIME (June 13, 2023), https://yn.12348.gov.cn/newspost/6487d99c7edc010333d07658 [https://perma.cc/R7LD-XNNG].

[15] Pablo Robles, *China Plans to Be a World Leader in Artificial Intelligence by 2030*, S. CHINA MORNING POST (Oct. 1, 2018), https://multimedia.scmp.com/news/china/article/2166148/china-2025-artificial-intelligence/index.html [https://perma.cc/8XQA-NMNQ].

[16] *See generally* Taisu Zhang & Tom Ginsburg, *China's Turn Toward Law*, 59 VA. J. INT'L L. 306, 317-46 (2019).

[17] Orly Lobel, *The Law of AI for Good*, 75 FLA. L. REV. 1073, 1094 (2023).

mediation-based resolution of grassroot disputes and reinforce, instead of undermine, the level of legality that China has achieved through decades of legal reforms. In light of these benefits, a favorable case for the PLS chatbots can be made—especially as concerns over their potential negative impact on confidentiality, service quality, fairness, and equality may be allayed if we consider them through a pragmatic frame of thought.

## I. The Demand for Public Legal Services Chatbots

It has long been acknowledged that digitization and AI technologies have the potential to close the access-to-justice gap.[18] Given private practitioners' relatively conservative attitudes towards the adoption of AI, will public sector demand be significant enough to drive the first wave of wide adoption of chatbots in legal services? Due to its unique government-dominant configuration, China's PLS system seems to offer a promising use case where the demand for chatbots' services is both large and imminent.

### *A. China's PLS System*

In the Chinese context, the phrase "public legal services" (PLS) broadly encompasses those services provided to the general populace by government authorities under the Ministry of Justice (MOJ) directly through government workers as well as indirectly through publicly funded third parties, such as mediators, grassroot legal workers, and pro bono lawyers.[19] The idea of government provision or funding of legal services to people in need is, of course, not unique to China. But the ability to approach the access-to-justice agenda with centralized planning and coordinated implementation is.[20] China is a country with a population of 1.4 billion and significantly varying levels of socio-economic development

---

[18] Drew Simshaw, *Access to A.I. Justice: Avoiding an Inequitable Two-Tiered System of Legal Services*, 24 YALE J.L. & TECH. 150, 154 (2022).

[19] MINISTRY OF JUSTICE, PUBLIC LEGAL SERVICE ITEMS LIST [公共法律服务事项清单] (1999).

[20] Song Fangqing & Zhang Xiangyu, *The Triple Logic Behind the Construction of the Public Legal Service System* [公共法律服务体系建构的三重逻辑], 6 E. CHINA UNIV. POL. SCI. & L.J. 99-100 (2022).

across regions. It is often observed that the transformation of its government and society towards greater formal legality commenced in the late 1970s.[21] Until the early 2000s, professionals trained in legal services remained so scarce, gravitating heavily toward developed urban areas, that the legal academy legitimately debated whether retired military personnel could suitably serve as judges in basic level courts in rural hinterlands.[22]

As the nation's formal legal order and profession continued developing through the first decade of the Twenty-First Century, however, a more ambitious project emerged. In 2014, Chinese leadership unveiled a comprehensive list of reform initiatives for the construction of legal services.[23] These initiatives include pushing forward the creation of a "public legal services system" that "covers all urban and rural residents," in order to "ensure that people receive timely and effective legal help."[24] To implement the agenda, the MOJ took the lead in establishing dedicated capacities for the provision and coordination of PLS at all vertical levels.[25] The policy objective was expressly to address the access-to-justice problem among disadvantaged regions and groups.[26] Apart from pro bono representation in litigation, the MOJ's menu of PLS provisions includes a range of services in the nature of providing basic legal information and answering routine inquiries.[27]

---

[21] *See, e.g.*, RANDALL PEERENBOOM, CHINA'S LONG MARCH TOWARD RULE OF LAW 6 (2002) (noting that 337 national laws and more than 6,000 local regulations were enacted in China between 1976 and 1998, while only 134 laws were passed between 1949 and 1978).

[22] Frank K. Upham, *Who Will Find the Defendant if He Stays with His Sheep? Justice in Rural China*, 114 YALE L.J. 1675, 1681 (2005).

[23] CENTRAL COMMITTEE OF THE COMMUNIST PARTY OF CHINA, DECISION ON MAJOR ISSUES CONCERNING COMPREHENSIVELY PROMOTING THE RULE OF LAW [中共中央关于全面推进依法治国若干重大问题的决定] (2014).

[24] *Id.*

[25] MINISTRY OF JUSTICE, OPINIONS ON PROMOTING THE CONSTRUCTION OF THE PUBLIC LEGAL SERVICES SYSTEM [司法部关于推进公共法律服务体系建设的意见] (Jan. 20, 2014).

[26] *Id.*

[27] *See* MINISTRY OF JUSTICE, *supra* note 25.

Subsequently, in 2019, the central authorities again issued a high-level policy document, in which they made a new round of calls for accelerating the system's construction.[28] This 2019 policy document again emphasized the paramount goal of "universal coverage" of PLS over the entire population, requiring that publicly funded legal advisors be accessible to all villages and urban residential communities.[29] To implement the requirements, the MOJ went on to craft a comprehensive blueprint for constructing the PLS system from 2021 to 2025 (the "2021 Blueprint"), in which the objective of universal coverage was translated into various numerical targets.[30] Notably, all of the country's more than 690,000 rural villages and nearly 120,000 urban residential communities are required to have onsite legal advisors.[31]

### *B. The Digitized Path Towards Universal Coverage*

While China has made significant progress in constructing its PLS system, the 2025 target for universal coverage remains an ambitious goal. As of 2022, the country had about 650,000 qualified lawyers and 56,000 grassroot legal workers,[32] the majority of whom are not and will never be employed at PLS work units. It is evident that meaningful universal coverage cannot count only on the existing supply of human lawyers.

In 2014, the MOJ already included the use of consultation hotlines and government websites as mechanisms to expand service capacities.[33] The 2019 policy document further cited

---

[28] GENERAL OFFICE OF THE CENTRAL COMMITTEE OF THE COMMUNIST PARTY OF CHINA & GENERAL OFFICE OF THE STATE COUNCIL, OPINIONS ON ACCELERATING THE CONSTRUCTION OF THE PUBLIC LEGAL SERVICES SYSTEM [关于加快推进公共法律服务体系建设的意见] (2019).

[29] *Id.*

[30] MINISTRY OF JUSTICE, NATIONAL PUBLIC LEGAL SERVICES SYSTEM CONSTRUCTION PLAN (2021-2025) [全国公共法律服务体系建设规划 (2021-2025 年)].

[31] *Id.*

[32] Ministry of Justice, *Annual Statistical Analysis of Lawyers and Grassroots Legal Services Work for 2022: Over 650,000 Practicing Lawyers Nationwide* [司法部发布《2022 年度律师、基层法律服务工作统计分析》：全国执业律师超 65 万人], MOJ (June 14, 2023), https://www.moj.gov.cn/pub/sfbgwapp/bnywapp/202306/t20230614_480744.html [https://perma.cc/5ZQL-LLRR].

[33] MINISTRY OF JUSTICE, *supra* note 25.

the creation of dedicated web platforms as one type of "infrastructure" for PLS. It also called for advancing "Internet *plus* PLS" and for leveraging then-novel technologies, such as deep learning AI, to deliver "intelligent legal services" with dynamic assessment of demand.[34] The 2021 Blueprint made clear once more that universal coverage is to be achieved through building the full suite of service capabilities, including physical venues, hotlines, and online platforms.[35] The MOJ further specified plans for adopting big data analytics, and textual and voice-based AI customer services, and also aimed to enable virtual processing of all PLS matters.[36]

It is not difficult to see that both human-staffed hotlines and web-based human customer service, though less demanding on human resources than in-person consultations, still require a staff of legal professionals or at least personnel with some legal knowledge. The magnitude of this challenge means that to advance further towards universal coverage, automation is a necessity. In fact, since 2018 (prior to the adoption of LLM chatbots in Yunnan), the MOJ has already offered interactive AI consultations through its public-facing website, *China Legal Services Web*.[37] This system utilizes an expert knowledge-based generative software. Users are guided to answer a series of questions (e.g., Are you or your spouse initiating the divorce? Do you have children? Are there circumstances such as domestic violence?), which the program processes to determine in which category of legal problems each matter falls. The system then generates a multi-page "legal opinion" for each user. The opinion not only explains relevant legal rules but also identifies possible courses of action, including negotiation, mediation, and litigation.[38]

---

[34] General Office of the Central Committee of the Communist Party of China & General Office of the State Council, *Opinions on Accelerating the Construction of the Public Legal Services System* [关于加快推进公共法律服务体系建设的意见] (2019).

[35] *See* MINISTRY OF JUSTICE, *supra* note 30.

[36] *Id.*

[37] Construction Guide for 12348 China Law Net (China Public Legal Services Net) [《12348 中国法网（中国公共法律服务网）建设指南》].

[38] Sample AI generated legal opinions on file with the author [hereinafter Generated Legal Opinions].

As of May 25, 2024, the official web page reported that 4,766,562 such opinions have been generated.[39] So far, no rigorous study that examines and evaluates the overall quality of such opinions has been conducted. However, merely looking at some randomly generated examples suggests that these automated services are seriously under-utilized. By all accounts, the MOJ's system generates much better information than general web searches,[40] which have been the go-to source of information for most people with legal questions.

Limited promotion and the resulting lack of awareness are almost certainly to blame, at least in part, for this underuse. Another potential reason is that the MOJ system's interface is not user-friendly enough, in particular for residents who have limited education and struggle to deal with a machine that insists they answer its rigid classification questions.[41] That is exactly why some from the industry consider LLM-based chatbots, which are expected to perform much better at the human-machine interface, as a logical next step.[42] These chatbots will allow users to initiate the process by asking their questions in natural language that is jargon-free and inherently vague, provide more responsive information, and rely to a much greater extent on the machine to connect the dots. Overall, interacting with LLM chatbots will more closely resemble an initial consultation session with a lawyer of reasonable knowledge and experience.

## II. The Supply Side: Chatbots' Search for the Path of Least Resistance

While the demand for such chatbots is conceivably significant, is the technology "ready" for large-scale

---

[39] *China's Legal Service Network* [中国法律服务网], https://ai.12348.gov.cn/pc [https://perma.cc/C923-ZD88].

[40] *See* Generated Legal Opinions, *supra* note 38.

[41] *See* sources cited s*upra* note 14; *Building AI Applications with Wenxin Yiyu, Lüpinhui Enhances Public Legal Services Benefiting Chinese Villages* [基于文心一言打造 AI 应用，律品汇助推公共法律服务惠及中国乡村], BAIDU AI (Oct. 16, 2023), https://baijiahao.baidu.com/s?id=1779894483691121201 [https://perma.cc/GH53-SCLK] [hereinafter *Building AI Applications*].

[42] *Building AI Applications*, *supra* note 41.

deployment in the PLS context? The short answer, for the purpose of this Essay, is "yes" even though important caveats are due.

Since the advent of ChatGPT, a series of path-breaking studies have suggested promising and, indeed, creative ways of using LLMs to perform legal tasks.[43] Nonetheless, it is well acknowledged that systemic methodologies for assessing LLMs' overall capacity to perform legal tasks are still in the early stages of development.[44] Evaluative studies conducted with these preliminary benchmarks sometimes caution against the legal use of LLMs. For example, using the "LegalBench" framework for legal reasoning tasks primarily in the U.S. law context, researchers tested twenty general LLMs (including leading commercial models like GPT-4, GPT-3.5, and Claude 1), with results retrieved in mid-2023. Those results revealed considerable variation across models and tasks.[45] The overall best-performing model, GPT-4, while scoring near or above 80 (out of 100) in most tasks, failed to get a pass (60) in accurately recalling applicable rules.[46] Such a finding is consistent with other research that warns of LLMs' tendency to hallucinate caselaw reasoning.[47] Inspired by LegalBench, a Chinese team developed a much simpler evaluative framework named "LawBench" for the Chinese law context. Testing fifty-one models, the team also found that LLMs' overall capabilities seemed limited in performing Chinese-law-focused tasks, and

---

[43] *See generally* Daniel Schwarcz & Jonathan H. Choi, *AI Tools for Lawyers: A Practical Guide*, 108 MINN. L. REV. 1 (2023) (recommending strategies for using GAI to perform legal research, text generation, and other legal tasks); Yonathan A. Arbel & David Hoffman, *Generative Interpretation*, 99 N.Y.U. L. REV. 451, 455 (2024) (proposing LLMs as a cheap and reliable way of solving contract-interpretation questions).

[44] Neel Guha et al., *LegalBench: A Collaboratively Built Benchmark for Measuring Legal Reasoning in Large Language Models*, ARXIV 4 (Aug. 20, 2023), https://arxiv.org/pdf/2308.11462.pdf [https://perma.cc/VKD5-GSLY].

[45] *See id.* at 13-20.

[46] More specifically, it scored 59.2 out of 100. *Id*. at 14-15.

[47] *See* Dahl et al., *supra* note 8, at 8-9 (showing results from experiments that GPT 3.5's hallucination rates are quite high for complex caselaw reasoning tasks, such as identifying the core legal question or central holding of a case).

the models performed especially poorly in terms of reciting specific statutory provisions.[48]

Without doubt, the hallucination problem, as a conceptual matter, poses a serious hurdle for LLMs to become safely and effectively incorporated in legal practice. That said, for the practical purpose of providing PLS in China, the currently developed and implemented solutions for mitigating hallucinations are effective enough to allow for the chatbots' expected use: answering routine, statutory-information-based questions that are asked with high frequency in a statute-based legal system. First, as current research suggests, training general models with data on specific legal Q&A tasks can considerably improve performance.[49] Thus far, such fine-tuning has been performed mostly on weaker models. It is expected that fine-tuning will bring about greater performance enhancement with more powerful models, such as ChatGPT.[50] Second, attempts have been made to train and develop specialized legal models, instead of fine-tuning general ones, with a much larger set of legal data and the incorporation of a logical structure for legal reasoning. The resulting product is reported largely to avoid hallucination and offer a level of explainability.[51] Third, Retrieval Augmentation Generation (RAG), one leading strategy for mitigating hallucinations by

---

[48] Zhiwei Fei et al., *LawBench: Benchmarking Legal Knowledge of Large Language Models*, ARXIV 13 (Sept. 28, 2023), https://arxiv.org/pdf/2309.16289.pdf [https://perma.cc/E7UC-GNPU].

[49] Jiaxi Cui et al., *ChatLaw: Open-Source Legal Large Language Model with Integrated External Knowledge Bases*, ARXIV 6 (June 28, 2023), https://arxiv.org/pdf/2306.16092.pdf [https://perma.cc/RL2X-PLDL] (showing that training much smaller, open-source models with specific task data could allow it to outperform GPT-4).

[50] *See* Fei et al., *supra* note 48, at 15.

[51] *See, e.g.*, Adam Allen Bent, *Large Language Models: AI's Legal Revolution*, 44 PACE L. REV. 91, 129 (2023) (noting that legal LLMs, such as CoCounsel and Lexis+AI, are different from non-legal LLMs in that they are specifically designed for law and to eliminate or limit hallucinations); PEKING UNIVERSITY LAW SCHOOL'S ARTIFICIAL INTELLIGENCE LAB (北京大学法律人工智能实验室), TECHNICAL REPORT ON THE PRINCIPLES OF PEKING UNIVERSITY'S YUAN LAW INTELLIGENT SYSTEM [北大元法智能系统技术原理报告] 2-3 (2023), https://www.law.pku.edu.cn/docs/2023-11/20231120120341542267.pdf [https://perma.cc/6ALU-RS3L].

connecting the models to external knowledge database,[52] has already been used by Chinese developers to improve LLMs' reliability.[53]

Based on these observations, and given the fast-paced progress of LLM performance in general, this Essay therefore predicts that hallucinations are unlikely to pose a significant hurdle to the useful deployment of LLM chatbots in the PLS context. It would not be naive to believe that currently available LLM chatbots, properly built and fine-tuned, are at least adequate for addressing one very significant gap in society's access to justice—providing reasonably reliable, on-demand information and advice on routine statutory, rule-based legal questions that are most germane to people's livelihoods. Such questions may include: What action can I take against my former employer to collect unpaid wages? What are the requisite conditions for obtaining a divorce? Can I collect unpaid rent if my tenant attempts prematurely to terminate the lease? As mentioned, these questions are already being

---

[52] *See, e.g.*, Jiarui Li, Ye Yuan & Zehua Zhang, *Enhancing LLM Factual Accuracy with RAG to Counter Hallucinations: A Case Study on Domain-Specific Queries in Private Knowledge-Bases*, ARXIV 7 (Mar. 15, 2024), https://arxiv.org/pdf/2403.10446.pdf [https://perma.cc/N564-TWHF].

[53] U.S. products such as CoCounsel and Lexis+AI both adopted such an approach. *See* Bent, *supra* note 51, at 123-25. Although systemic testing is not yet available, leading Chinese models such as Baidu's Ernie Bot seem to have performance advantages in knowledge over other models due to their utilization of the RAG approach. Michelle Toh & Nectar Gan, *We Asked GPT-4 and Chinese rival ERNIE the Same Questions. Here's How They Answered*, CNN (Dec. 15, 2023, 8:14 PM EST), https://www.cnn.com/2023/12/15/tech/gpt4-china-baidu-ernie-ai-comparison-intl-hnk/index.html [https://perma.cc/DZP3-NVCM] (noting that in side-by-side testing, Ernie's answers are updated with current affairs whereas GPT's are limited to training data from an earlier time). The author's preliminary, non-systemic test of Version 4.0 of Ernie also finds that the model is capable of accurately reciting statutory provisions in a range of national and provincial laws, clearly benefiting from the web search information the model can retrieve. Alibaba's legal LLM, Tongyi Farui, adopts this approach as well to improve accuracy in legal research. *See Tongyi Farui User Guide* [通义法睿用户操作手册], TONYI FARUI [通义法睿], https://tongyi.aliyun.com/farui/guide [https://perma.cc/6A4D-KR2M].

answered by the much more rudimentary expert-system-based Q&A chatbots on the MOJ website.[54]

Other than technological readiness, it is worth considering who will be interested in supplying chatbots for the PLS system. While lawyers have long used computers, the digitization of legal work in the last three decades has opened a market space for specialized developers, sometimes referred to as "Legal Tech" firms,[55] which create increasingly sophisticated tools for legal practice. By one account, the global market size for this market reached $23.45 billion in 2022.[56] Before the release of ChatGPT, the Legal Tech sector had already made significant breakthroughs in practical use cases of automated documentation review and generation.[57] To sustain a viable business model, however, successful Legal Tech firms have generally positioned themselves as providers of productivity tools for lawyers, not as lawyers' direct competitors.[58] That said, the latest GAI developments have certainly fanned the industry's enthusiasm for robo-lawyers as human replacements.[59]

---

[54] For example, as of February 22, 2024, the China Legal Services Web homepage showed that the most frequently asked questions about are unpaid wages. *See* MOJ.GOV, http://12348.moj.gov.cn/#/homepage [https://perma.cc/73X9-VCYT].

[55] *See, e.g.*, Cassandre Coyer, *10 Legal Tech Companies That Secured Funding in Q3*, LAW.COM (Sept. 29, 2023), https://www.law.com/legaltechnews/2023/09/29/9-legal-tech-companies-that-secured-funding-in-q3 [https://perma.cc/QL4T-737Q]. The phrase is also widely used in Chinese literature. MA QUN, THE BLUE BOOK OF GLOBAL LEGAL TECH INDUSTRY [全球法律科技行业蓝皮书] 3 (2023).

[56] *Legal Technology Market Size & Trends*, GRAND VIEW RSCH., https://www.grandviewresearch.com/industry-analysis/legal-technology-market-report [https://perma.cc/5VZM-FFB8].

[57] William J. Connell, *Artificial Intelligence in the Legal Profession—What You Might Want to Know*, 35 COMPUT. & INTERNET L. 32 (2018).

[58] According to one report, Legal Tech firms that market "enabling" technologies for legal practitioners are attracting the largest volumes of capital investment due to the market's favorable perception of their business model. *See* MA, *supra* note 55, at 44-45.

[59] *See, e.g.*, Rachna Manojkumar Dhanrajani, *Can ChatGPT Replace Lawyers? AI-Powered Robot Lawyer is Already Winning Cases and Even Sued for Malpractice*, BUS. TODAY (May 3, 2023), https://www.businesstoday.in/technology/news/story/can-chatgpt-replace-

The Chinese Legal Tech sector in particular has been exploring a path of growth for the past three decades. Early pioneers have offered expert legal database services equivalent to their western counterparts, Westlaw and LexisNexis, since the late 1990s.[60] And yet, the industry has only taken off on a trajectory of fast growth since 2013, with the number of firms increasing from about twenty to 300 or so in 2020.[61] Among these startups, about seventy had secured venture-capital investments by 2020, with the most popular among investors being firms that sell automated productivity tools to lawyers.[62]

The Chinese firms' initial enthusiasm for robo-lawyers was no less than that of their Western counterparts. In 2017, multiple startups were publicly reported to have developed China's first wave of AI legal chatbots.[63] Not surprisingly, in the last couple of years, LLMs have rapidly taken over China's Legal Tech industry, even though the legal profession's adoption of LLMs has occurred at a much slower pace than some enthusiasts had expected. Despite the general unavailability of OpenAI's services in China,[64] Chinese Legal Tech developers have pursued LLM chatbots by leveraging

---

lawyers-ai-powered-robot-lawyer-is-already-winning-cases-and-even-sued-for-malpractice-379800-2023-05-03 [https://perma.cc/U88D-TD7X] (noting that, with the advent of ChatGPT, law firms may pursue cost reduction through AI replacement of human lawyers).

[60] Beida Fabao, for example, a leading legal information database provider affiliated with Peking University Law School, was first set up in 1985 as a software developer that computerized legal information and subsequently started to offer web-based database services in late 1990s. Beida Fabao, *About Us*, PKULAW, https://home.pkulaw.com/about [https://perma.cc/H5R3-FR6Y].

[61] MA, *supra* note 55, at 35-36.

[62] *Id.* at 38-39.

[63] Du Taoxin & Li Zhangguang, *China's First Domestic Legal Robot: Making Fairness and Justice as Accessible as Sunshine and Air* [国内首个法律机器人：让公平正义像阳光和空气一样触手可及], MINZHU YU FAZHI SHIBAO [民主与法制时报] (Sept. 10, 2017), http://e.mzyfz.org.cn/paper/933/paper_19348_5185.html [https://perma.cc/UXB4-9XXR].

[64] *Supported Countries and Territories*, OPENAI, https://platform.openai.com/docs/supported-countries [https://perma.cc/N2HC-NPA4] (showing that China is not listed in supported countries and territories).

domestic LLMs such as Baidu's Ernie,[65] offering ChatGPT-based products through Microsoft's cloud services,[66] or developing smaller, specific models fine-tuned with specialized knowledge.[67] In addition to smaller Legal Tech firms, tech giants with their own foundational models, such as Baidu and Alibaba, have revealed a strong interest in legal services.[68] Notable fine-tuned models have also been developed through projects by universities and public research institutions.[69]

The industry, therefore, is standing by and waiting for the "right" use case. Compared to private legal practice, the PLS sector is a more attractive use case for legal chatbots' imminent deployment in China for three primary reasons.

---

[65] *See Building AI Applications*, *supra* note 41.

[66] *Legal + AI Applications: New Explorations, Fabao Intelligent Q&A Launched!* [法律+AI 应用范式新探索，法宝智能问答上线！], SOHU.COM (May 30, 2023), https://www.sohu.com/a/680442649_121123754 [https://perma.cc/MJ7H-4J22] (noting that Fabao AI offers services based on OpenAI technologies through Microsoft Azure). The U.S. government has, since July 2023, signaled its intent to ban U.S. firms such as Microsoft and Amazon from selling services to China. *US Plans New Rules for Cloud Firms to Cut Off China AI Access*, ASIA FIN. (Jan. 27, 2024), https://www.asiafinancial.com/us-plans-new-rules-for-cloud-firms-to-cut-off-china-ai-access [https://perma.cc/7ZCC-RZKG].

[67] For a non-exhaustive list of such models, see HqWu-HITCS, *Awesome Chinese LLM*, GITHUB (Apr. 25, 2024), https://github.com/HqWu-HITCS/Awesome-Chinese-LLM?tab=readme-ov-file#%E6%B3%95%E5%BE%8B [https://perma.cc/77LK-GP6L]. Besides those on the list, one other notable specialized model that was developed not by fine-tuning general models but from scratch, with a greater focus on understanding legal language, is Beida Yuanfa. *See* Peking University Law School's Artificial Intelligence Lab, *supra* note 51.

[68] Huayu Software, *Huayu Partners with Baidu Cloud to Explore Innovative Applications of Large Models in the Legal Field* [华宇携手百度智能云共同探索大模型在法律垂直领域的创新应用], HITHINK ROYAL FLUSH INFO. NETWORK (Aug. 29, 2023), http://stock.10jqka.com.cn/20230830/c650169121.shtml [https://perma.cc/8PHQ-9V89]; *Tongyi LawRUI* [通义法睿], TONGYI, https://tongyi.aliyun.com/farui/home [https://perma.cc/W64U-MFS5].

[69] Such products include ChatLaw (Peking University), Lawyer LLaMA (Peking University), LexiLaw (Tsinghua University), and LawGPT_zh (Shanghai Jiaotong University). *See* HqWu-HITCS, *supra* note 67.

First, chatbots' entrance into the PLS sector requires overcoming fewer regulatory barriers.[70] In China, Legal Tech firms are not authorized to "practice law." In recent years, online legal service providers have been targeted in various localities in government and bar-association crackdowns against unauthorized legal practice.[71] The dynamic would be different if Legal Tech firms deploy their chatbots through the authorities in the PLS sector, where private practitioners have relatively low interest. Furthermore, practitioners in the PLS context in China face almost no risk of malpractice lawsuits.[72] Although the absence of liability presumably leaves users serviced by PLS chatbots less protected than clients of private lawyers, such an institutional environment seems ideal for Legal Tech firms to test and improve their chatbots through trial and error.

Second, there is an existing precedent of government procurement of third-party platforms and services. The Chinese government has for a long time involved non-governmental entities in delivering PLS. Traditionally, NPOs, law schools, and pro bono lawyers are voluntary unpaid participants in the system, but their service capacities are limited. Since 2013, Chinese local governments have included PLS provided by non-government entities, in particular law firms, in the permissible scope of services that the government may procure from private vendors.[73] At a time of increasing

---

[70] Deborah L. Rhode & Lucy Buford Ricca, *Protecting the Profession or the Public? Rethinking Unauthorized-Practice Enforcement*, 82 FORDHAM L. REV. 2587, 2605 (2014).

[71] *See, e.g.*, *Rewards Up to 6000 Yuan! Zhongshan Launches Special Action for Rewarding Reports of Illegal and Irregular Behavior in Legal Service Consultations* [最高奖励 6000 元！中山开展法律服务咨询违法违规行为有奖举报专项行动], ZHONGSHAN WANG [中山网] (Sept. 6, 2023), https://www.zsnews.cn/wz/index/view/cateid/41/id/712720.html [https://perma.cc/HL99-J8VQ].

[72] According to the Law on Legal Aid, providers of legal aid services, including both licensed lawyers and other types of legal workers, are subject primarily to administrative sanctions by the MOJ authorities if they "fail to duly perform" their duties. *See* PRC Law on Legal Aid [法律援助法] (2022), arts. 62, 63.

[73] Ze Yingying & Xu Xu, *Discussion on Issues of Government Purchasing Public Legal Service Products* [政府购买公共法律服务产品问题探讨], 2014 JINLING L. REV. 141-43 [金陵法律评论].

government fiscal pressure, Legal Tech firms should expect greater opportunities to pitch their chatbots to government authorities, provided that the chatbots are indeed cost-effective solutions to expand PLS coverage.

Third, the PLS use case would be attractive to the industry for its sheer size. What is at stake here is not merely that technology firms get better shots with investors if they have convincing and impactful use cases to show. Large-scale deployment in the public sector will allow the LLMs underlying the chatbots to be fine-tuned to serve users better by leveraging insights gained through interactions with real people.[74] As previously mentioned, the failure of the last generation of AI legal query systems, such as the one adopted by the MOJ's service website, is partially rooted in the frustration that the rigid interactive process causes for users.[75] By observing real-world behavior of legal chatbots, the industry will acquire indispensable feedback about GAI's actual utility in client-facing, interactive aspects of the law. Firms can draw on this feedback to train better models and to improve product designs.

## III. Some Normative Considerations

The Chinese government's overarching goal of universal coverage in the PLS sector and the Legal Tech industry's interests in a practical use case together form favorable political economy for AI chatbots' near-term wide adoption in the PLS context. But should this development be welcome? This Part suggests that the adoption of chatbots holds promises not only for expanding access but also for reinforcing legality. Although there are obvious challenges and risks, practical solutions can be reasonably developed.

---

[74] Human feedback generally plays an important role in various methods being explored for fine-tuning LLM performance. *See* Tianqiang Yan & Tiansheng Xu, *Refining the Responses of LLMs by Themselves*, ARXIV 1-2 (May 6, 2023), https://arxiv.org/pdf/2305.04039.pdf [https://perma.cc/D2BL-2G63].

[75] *See Building AI Applications*, *supra* note 41 (featuring the developer of PLS chatbots citing last-generation products' deficient user experience as an important reason to develop LLM-based chatbots).

### *A. Closing the Access-to-Advice Gap and Reinforcing Legality*

As mentioned, tens of thousands of people seek answers to routine legal questions each day, yet many are frustrated by the inadequate or dubious information on their screens. Each instance of frustration seems trivial, but when considering the aggregate demand for legal advice, the importance of meeting that demand must not be overlooked. For individuals, getting easily accessible and reasonably reliable advice on routine legal questions is critical to form rational expectations and make informed decisions. Informed decision-making, in turn, leads to more cooperative resolution of disputes in the "shadow of the law,"[76] which benefits the public. Closing the gap in popular access to advice on routine legal questions, therefore, appears to be a Pareto improvement[77] that services everyone in need while bothering virtually no one who is otherwise already served.

In China, there have already been market attempts at closing this gap. Social-media sites have long offered venues for up-and-coming lawyers to try acquiring clients by answering netizens' initial questions for free.[78] In the heyday of the "sharing economy" in the early 2010s, startups launched ride-sharing-style intermediary platforms for spot lawyer consultation sessions.[79] None of these market-based supplies proved adequate or viable, however, because they still relied on the availability of human professionals who ultimately

---

[76] *See* Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950, 968 (1979).

[77] In welfare economics terms, a social choice decision, such as the adoption of an institutional measure, is a "Pareto improvement" if it creates no negative effects on the welfare of any individual member of the society and produces positive effects on the welfare of at least one member of the society. *See* HANS-BERND SHAFER & CLAUS OTT, THE ECONOMIC ANALYSIS OF CIVIL LAW 23 (2d ed. 2022).

[78] *See, e.g.*, *Hualu Net* [华律网], https://m.66law.cn/lawyeronline/list/page_1404.aspx [https://perma.cc/D3YJ-BBFC].

[79] *Lüdou: The Legal Profession's "Didi" Evolution and Fission* [律兜：法律界"滴滴"的蜕变与裂变], BAIDU (July 8, 2022), https://baijiahao.baidu.com/s?id=1737768867743750100 [https://perma.cc/77PJ-9GT5].

expect to be paid the right price for their services.[80] Their public-good nature renders these kinds of legal services unsurprisingly under-supplied—opening up a gap best filled by a public source.

Beyond this rather obvious point, it is worth noting that using chatbots to expand access to legal information also has particularly important legality implications in the contemporary Chinese context. For the past four decades, China has proceeded on a trajectory towards an overall increasingly legalistic form of governance. This trend, as Zhang and Ginsburg observe, has accelerated in the most recent decade under President Xi Jinping's leadership.[81] In 2011, Chairman Wu Bangguo, then head of China's national legislature, formally announced the "formation" of China's legal apparatus.[82] The country's body of laws has continued to grow, with the apparent aim of covering all corners of Chinese society. This increase in legality is indeed *the* reason why average Chinese people are asking more questions about the law. Meanwhile, the transformation of many social problems into legal issues has channeled far more disputes into formal legal venues, particularly the courts, resulting in over-burdened dockets.[83]

In response to tension arising from the new legality-centered governance paradigm, Chinese authorities have sought to make a new round of investment in societal dispute governance outside of the courts in recent years. President Xi himself remarked that China, with 1.4 billion people, is simply

---

[80] *Id.* (noting that one platform surviving until now changed its business model to sell to local government, which pays the platform for citizens' use of the platform's legal consultation services).

[81] *See* Zhang & Ginsburg, *supra* note 16, at 317-346.

[82] *Wu Bangguo on Forming a Socialist Legal System with Chinese Characteristics* [吴邦国关于形成中国特色社会主义法律体系的讲话], CENT. GOV'T PORTAL [中央政府门户网站] (Jan. 26, 2011), https://www.gov.cn/ldhd/2011-01/26/content_1793094.htm [https://perma.cc/6P49-XXMX] [hereinafter *Forming a Socialist Legal System*].

[83] *See generally* Weidong Chen, *Litigation Explosion and Reactions from Courts in China*, *in* RAGNA AARLI & ANNE SANDERS, COURTS IN EVOLVING SOCIETIES: SINO-EUROPEAN DIALOGUE BETWEEN JUDGES AND ACADEMICS 103 (Ragna Aarli & Anne Sanders eds., 2020).

unable to handle all disputes, big or small, in courtrooms.[84] One notable recent development is a series of efforts to revive the populist, mediation-centered model for dispute resolution. By invoking the "Fengqiao Model" (枫桥经验), an officially promoted exemplar for mediation-based community dispute resolution in the Maoist 1960s, Chinese authorities appear to have colored contemporary projects with nostalgic, ideological tones.[85] However, as a practical matter, one should not consider China's current shift towards emphasizing mediation-based dispute resolution as a "return" because returning is simply unfeasible. Thanks to the state's active project to build up legality and cultivate legal consciousness,[86] community mediation and reconciliation today no longer takes place in a context where little attention is paid to the legal baseline. Instead, before and while sitting in the mediator's office, ordinary citizens now first insist on knowing what the law says and then go from there. That is why the top legal-political official remarked that today's "*New* Fengqiao Model," as compared with the original one, will place a greater emphasis on legality.[87] Ironically, many judges at lower-level courts are more than occasionally dispatched to help answer legal

---

[84] *Xi Jinping: Unswervingly Follow the Path of Socialist Rule of Law with Chinese Characteristics to Provide Strong Legal Support for the Comprehensive Construction of a Modern Socialist Country* [习近平：坚定不移走中国特色社会主义法治道路 为全面建设社会主义现代化国家提供有力法治保障], CENT. GOV'T PORTAL [中央人民政府网] (Feb. 28, 2021), https://www.gov.cn/xinwen/2021-02/28/content_5589323.htm [https://perma.cc/6GT7-ZPPW].

[85] Chen Wenqing, *Persist and Develop the "Fengqiao Experience" of the New Era to Elevate the Rule-of-Law Level in Preventing and Resolving Disputes* [陈文清：《坚持和发展新时代"枫桥经验"提升矛盾纠纷预防化解法治化水平》], GUANGMING NET [光明网] (Dec. 31, 2023), https://baijiahao.baidu.com/s?id=1786759238330070072 [https://perma.cc/TNL2-P76S].

[86] Fu Hualing & Richard Cullen, *Weiquan (Rights Protection) Lawyering in an Authoritarian State*, 59 CHINA J. 111, 19 (2008) (observing that China was possibly the only country in the world where the government explicitly committed itself to indoctrinating citizens with legal knowledge).

[87] *See* Wenqing, *supra* note 85.

questions at community centers, which only exacerbates court staffing shortages that the new model was meant to alleviate.[88]

One promising way out of this paradox lies in PLS chatbots. Given their current capabilities, chatbots can effectively take the roles of onsite legal professionals, who are often in short supply, in offering reliable answers to the most frequently asked, routine, rule-based legal questions. Meanwhile, enabled by the chatbots, government staff, mediators, and community workers will be more effectively able to resolve a good portion of "grassroot disputes" that take place among members of local communities over issues concerning daily life.

That does not simply mean nipping costly lawsuits in the bud, however. What is more important here is that the readily available legal information will ensure that the various non-court dispute resolution processes will still revolve around the legal baseline—reinforcing the concept of legality in Chinese government and society. Indeed, the availability of PLS chatbots may be critical to addressing the tension between legality and practicality of governance. With PLS chatbots, China's pragmatic endeavor towards "legal order without (too many) lawsuits" will not be easily reduced to a more short-sighted version of "order without law."[89]

### *B. Risks and Responses*

While there are foreseeable benefits from PLS chatbots' mass adoption, risks associated with such technological application are readily identifiable. For example, most commonly discussed data privacy and security concerns applicable to digital technologies and GAI certainly apply here,

---

[88] *See, e.g.*, *Judges' Diary: Racing Against Time, Non-Stop . . . "Immersive" Experience of a Day in the Life of a Grassroots People's Judge* [法官手记: 争分夺秒、马不停蹄……"沉浸式"体验基层人民法官的一天], THE PAPER [澎湃新闻] (Aug. 14, 2023), https://m.thepaper.cn/newsDetail_forward_24228887 [https://perma.cc/P4GC-EF33] (offering a journalistic account of a typical fourteen-hour work day of Chinese judges at the basic level in Yunnan province, out of which four hours are spent mediating disputes at the community mediation station).

[89] Not in the sense of the phrase as it was coined by Robert Ellickson's seminal work, of course. ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES (1991).

too.[90] While not intended to be comprehensive, the following sections address four sets of concerns that are particularly relevant for this Essay.

1. Confidentiality

When interacting with PLS chatbots, even if users ask their questions in hypothetical forms, personally identifiable information will often still be communicated. In addition to common data privacy and security issues, confidentiality and privilege rules for attorneys create a unique challenge for PLS chatbots and other GAI applications used in legal practice. Even in China, where the Anglo-American-style attorney-client privilege does not exist, the law still requires attorneys to protect clients' confidential information.[91] In a recent guideline, the English judiciary asserted that "any information . . . input into a public AI chatbot should be seen as being published to the world."[92] Should users who consult PLS chatbots for legal advice still expect the same protections over human-machine communications as in human attorney-client exchanges?

If PLS chatbots are to be adopted to expand access to justice, there is certainly a good normative argument for their users to enjoy the same level of protection over information they reveal to the machine. But there are at least two obstacles. First, it is technologically difficult to ensure that information users input into LLM-based chatbots will never be leaked despite the service providers' reasonable privacy policies and

---

[90] Jessica E. Brown, *How to Protect Privacy in Use of Artificial Intelligence*, 31 NEV. LAW. 15, 15 (2023).

[91] Strictly speaking, under Chinese law, there is no attorney-client privilege, although the law does impose a duty on lawyers to keep confidentiality. This means that courts may order attorneys to testify about their clients' confidential personal or business information in a judicial proceeding, but the attorneys are otherwise prohibited from divulging such information to third parties without their clients' consent. *See* Xu Xi, *A Comparative Study of Lawyers' Ethics in the US and PRC: Attorney-Client Privilege and Duty of Confidentiality*, 1 TSINGHUA CHINA L. REV. 46, 52-55 (2009).

[92] *Artificial Intelligence (AI) Guidance for Judicial Office Holders*, CTS. & TRIBUNALS JUDICIARY (Dec. 12, 2023), https://www.judiciary.uk/wp-content/uploads/2023/12/AI-Judicial-Guidance.pdf [https://perma.cc/9LXZ-SFQY].

protective efforts.[93] That said, technical strategies, such as input data obfuscation and "OpaquePrompts," may be available to help reduce risks of unwanted processing of sensitive information in user inputs.[94] Second, to the extent that the chatbots' providers may be required to exclude user input from being used as further training data,[95] they will be unable to improve the chatbots' capabilities with real-world feedback.

Against this backdrop, confidentiality and privilege should better be understood as legal fictions created for the specific purpose of ensuring effective representation. If the primary concern is that the lack of protection leads to the chatbots' underutilization, it may be helpful to note that the current regulation of GAI by the Cyberspace Administration of China (CAC) requires providers of LLM-based services to protect users' personal information and not "illegally" supply user input and records to third parties.[96] Such rules are not fully comprehensive, of course, given that information leakage is inevitable due to technical limits. A possible further response could be to create a new confidentiality-protection duty for government staff at the PLS centers who may chaperone and subsequently be responsible for safeguarding chatbot communications. Such a legal duty would not address LLMs' technical limits *per se*. But it would both institutionally and psychologically assure chatbot users that their input will not be treated as having been voluntarily disclosed and thereby stripped of its protected status, and that a specifically

---

[93] David C. & Paul J., *ChatGPT and Large Language Models: What's the Risk?*, NAT'L CYBER SEC. CTR. (Mar. 14, 2023), https://www.ncsc.gov.uk/blog-post/chatgpt-and-large-language-models-whats-the-risk [https://perma.cc/HN2D-AHD9].

[94] Mark Hinkle, *LLMs and Data Privacy: Navigating the New Frontiers of AI*, NEW STACK (Sept. 27, 2023), https://thenewstack.io/llms-and-data-privacy-navigating-the-new-frontiers-of-ai [https://perma.cc/VL7H-3SYC].

[95] For example, OpenAI offers an opt-out mechanism for users who do not want their data to be used as training data. *See How ChatGPT and Our Language Models Are Developed*, OPENAI, https://help.openai.com/en/articles/7842364-how-chatgpt-and-our-language-models-are-developed [https://perma.cc/L7XW-F6HN].

[96] Cyberspace Administration of China, *Interim Measures for the Administration of Generative Artificial Intelligence Services* [生成式人工智能服务管理暂行办法] (July 13, 2023), arts. 9, 10.

designated human actor, instead of a machine, is responsible for responding to leaks. Such an approach is also practicable if the chatbots are available to users primarily through hardware at PLS centers, which resembles the current arrangement for Yunnan's deployment.[97] While that comes at the cost of reduced scale, restricting the use of chatbots to government-supervised spaces seems a reasonable middle ground, at least in the initial stage—balancing the needs for openness and safety.

2. Hallucination and Errors

As noted, hallucination is a major concern that makes many hesitate to use LLMs for legal tasks. Part II, *supra*, identified several responses to LLM hallucination, such as training specialized models and incorporating a RAG system. Again, although currently available solutions to the hallucination problem may not be optimal in a general sense, they are likely adequate for making usefully adoptable LLM chatbots for the Chinese PLS context, where such chatbots are primarily expected to produce easily accessible answers to routine, statutory-knowledge-based legal questions.

That said, errors resulting from hallucinations or other technical limits will inevitably occur. The psychology of the "human/machine double standard"[98] may render the public less tolerant of erroneous answers produced by chatbots than of those by human legal aid workers. At the same time, in the PLS context, there is a considerable risk that, despite explicit disclaimers,[99] citizens will place excessive trust in the chatbots, whose reliability will appear to be underwritten by government authorities.

What institutional safeguards may be appropriate to protect users from harms caused by PLS chatbot errors? As discussed, human attorneys and legal aid workers in China are not subjected to civil liability for malpractice but are supervised

---

[97] *See, e.g.*, sources cited *supra* note 14.

[98] *See* Lobel, *supra* note 17, 1083-84.

[99] The legal consultation opinion documents generated by PLS chatbots, such as those on the MOJ website, carry a salient disclaimer on the cover that "the content of this report is for reference only and may not warrant anything." *See* Generated Legal Opinions, *supra* note 38.

and disciplined by administrative authorities.[100] Straying from this practice to hold developers and/or operators of PLS chatbots liable for civil remedies is not advisable because doing so will create significant risk that industry players will turn away from this use case—particularly given that PLS chatbots are ultimately meant to be deployed at a large scale to maximize popular access.

Thus, realistically, setting up a regulation- and transparency-based governance system remains the most feasible response to the problem of chatbot errors. While small-scale pilot deployments, such as the Yunnan project,[101] have already taken place, before mass adoption can occur, authorities such as the MOJ and the CAC need to develop a regulatory framework with standards for pre-testing, piloting, and auditing such chatbots. Transparency requirements under CAC's current GAI regulatory regime, such as public disclosure of model information, likely apply to the PLS chatbots.[102] But a greater level of public oversight is necessary for real-time monitoring of chatbots' performance and for incentivizing developers to improve their models. Even if confidentiality protections are restricted to communications at PLS service points, as discussed *supra* in Section III.B.1, it will still be beneficial to make available a public-access version of the chatbots.[103] By being able to try out these chatbots and gain first-hand user experience, legal professionals, experts, and public-interest organizations will have opportunities to assess the chatbots' performance, identify patterns of errors, and contribute collaboratively to developing socially acceptable standards for legal chatbots' performance—which both industry and regulators can adopt and incorporate.

---

[100] *See* Law on Legal Aid, *supra* note 72.

[101] *See* sources cited *supra* note 14.

[102] Cyberspace Administration of China, *supra* note 96, art. 17.

[103] Admittedly, the public-access version of the PLS chatbots may undermine the previously contemplated institutional design for protecting user confidentiality, which is to restrict chatbot use and associated legal protection to PLS service points. Specifically, even with explicit disclaimers and risk warnings, unsophisticated users accessing the public version outside of the PLS service points may still run the risk of divulging sensitive information and losing confidentiality. Such risks are likely minimal if private models are used, however. *See* Bent, *supra* note 51, at 130.

3. Scams and Manipulation

Another concern related to but distinguishable from hallucination and errors is that AI-powered chatbots have already become handy tools for fraudsters, scammers, and other criminals.[104] The broader adoption of PLS chatbots will certainly create opportunities for malicious use, such as creating fake PLS platforms to entice web users to reveal sensitive information. Furthermore, government officials may themselves be tempted to misuse the chatbots. Civilians may perceive chatbots to be more neutral and objective than street-level government workers. This may be particularly true in China, which has a hierarchical pattern of institutional trust that leaves street-level bureaucrats at the bottom of the trust scale. [105] Wider use of chatbots could potentially exert constraints on official behaviors, as the asymmetry of legal information between the government and the governed will decrease. This should help to enforce greater alignment of bureaucratic conduct with legal requirements. In turn, however, this may give government officials incentives to "hack" or even build into the chatbots their private preferences that diverge from public interests and the law. In extreme situations, abusive officials could make chatbots to communicate inaccurate or fabricated legal information to users to restrict the lawful exercise of rights. Such a risk isn't entirely far-fetched. During the COVID-19 pandemic control period, government officials in the city of Zhengzhou made illegal use of the travel code system to prevent residents from traveling to make claims against a defaulting bank.[106]

---

[104] *See, e.g.*, Joe Hernandez, *That Panicky Call from a Relative? It Could Be a Thief Using a Voice Clone, FTC Warns*, NPR (Mar. 22, 2023), https://www.npr.org/2023/03/22/1165448073/voice-clones-ai-scams-ftc [https://perma.cc/MAD5-53V3].

[105] *See, e.g.*, Cary Wu & Rima Wilkes, *Local–National Political Trust Patterns: Why China Is an Exception*, 39 INT'L POL. SCI. REV. 436, 438 (2017).

[106] *It is Against the Spirit of Scientific and Precise Pandemic Control to Give Red and Yellow Codes to All Residents of the Entire County* [全县居民被赋红黄码，有悖科学精准防控精神], BAIDU (Aug. 4, 2022), https://baijiahao.baidu.com/s?id=1740203320319342383 [https://perma.cc/R8PV-MHG5].

The response to such overt and blatant abuses, to the extent that they often eventually become exposed, is relatively straightforward: the usual accountability and remedy mechanisms, such as *ex ante* rules against specific misconduct, supervisory procedures such as reports and investigations, and *ex post* courses of action, must be established and enforced.[107] In the PLS context, the Law on Legal Aid authorizes MOJ to oversee generally the provision of services, and it holds responsible officials accountable for abusive, negligent, and fraudulent behaviors by government entities and workers associated with legal aid work.[108] Such a formal framework of oversight can certainly be expanded to apply to severe abuses in the form of PLS chatbot manipulation even though, as a practical matter, rigorous enforcement is always challenging.

The harder question lies in the seemingly more mundane scenarios in which PLS chatbots could be configured to systematically nudge users away from "confrontational" solutions, such as litigation, to their problems.[109] The overall desirability for such systemic bias towards conciliatory dispute resolution is a larger debate.[110] However, in certain areas, there is growing consensus that over-emphasizing reconciliation unduly suppresses rightful claims. For example, Chinese courts have been known generally to persuade women seeking divorce to stay in their marriages, even when there may

---

[107] In the health code manipulation case, the officials' conduct violated, among others, provisions in the Law on Prevention and Treatment of Infectious Diseases that prohibit public-health and disease-control authorities from implementing illegal administrative measures and that allow individuals and entities affected by such acts to pursue remedies including administrative review and litigation. *See* PRC Law on Prevention and Treatment of Infectious Diseases [中华人民共和国传染病防治法] (2013), art. 12.

[108] PRC Law on Legal Aid [法律援助法] (2022), art. 66.

[109] Although a few portions of legal opinions generated by the MOJ website's current legal advice generation system include advice for seeking reconciliatory solutions, there is not yet any systemic test for bias within the system.

[110] In the U.S. context, see, for example, Owen Fiss, *Against Settlement*, 93 YALE L.J. 1073 (1984); Marc Galanter & Mia Cahill, *"Most Cases Settle": Judicial Promotion and Regulation of Settlements*, 46 STAN. L. REV. 1339 (1994).

be signs of domestic violence.[111] It would certainly be worrisome if chatbots were designed systemically to counsel against divorce, even if that approach may well match the preferences of human judges and government workers.

But here is where AI chatbots have a potential advantage—they can be trained to *remove* the unwanted biases that presently exist in the legal system. Although one common proposal to tackle AI biases is human intervention based on some norms for neutrality, as noted, bias in this context is difficult to define. The law itself is not an objective process in nature, but a discursive one whose outcome heavily depends on the substance and style of counsel and advocacy. That said, again, some form of public oversight over the chatbots' behavior is essential here. As discussed *supra*, if experts and the public have parallel access to the PLS chatbots for testing and trial purposes, they will have opportunities to identify the chatbots' potential flaws, debate any alleged biases in the chatbots' answers and advice, and hopefully come up with collaboratively formulated, socially acceptable standards for the chatbots' behavior.

4. Equality in Services

PLS chatbots will be expected to deliver legal services to those societal sectors that previously have had limited to no access to even basic consultation. In principle, therefore, the wide deployment of PLS chatbots should be considered a force for greater equality. Nonetheless, as long as the chatbots' consultations remain inferior to those of human lawyers, at least those high-quality (and expensive) ones, their use could still leave a bifurcated system in place—or even entrench existing divides.[112]

In the Chinese PLS context, the proliferation of chatbots could divert government funding and other resources away from human lawyer services, potentially resulting in even less involvement and presence of human lawyers to serve those in need.

---

[111] *See generally* ETHAN MICHELSON, DECOUPLING: GENDER INJUSTICE IN CHINA'S DIVORCE COURTS (2022) (empirically documenting biases in China's divorce courts against women seeking divorce, including those who were victims of domestic violence).

[112] Drew Simshaw, *supra* note 18, at 170-80.

But is it necessarily a serious equality concern if, with the adoption of PLS chatbots, people without means would have perhaps even less of a chance being serviced by human lawyers? The answer to such a question will ultimately turn on how well chatbots perform compared to human attorneys. As Volokh suggests, if robo-lawyers someday achieve an above-average level of performance relative to human lawyers, there could be little reason to object to their use,[113] especially in the form of free or subsidized access for the public. There is also little reason to think that the chatbots would create further inequality beyond what has long been present in the human-dominated paradigm for legal services.[114] Besides, as previously discussed, it is exactly the PLS chatbots' adoption that can pave the way for robo-lawyers to further catch up with and potentially surpass average human lawyers' capabilities.[115]

Moreover, the efficacy of chatbots, as manifested in the real-world use case of PLS, likely will create stronger client pressure on private law firms to restructure their labor-intensive practices. Paying clients in the private sector could

---

[113] *See* Volokh, *supra* note 1, at 1140 (proposing a "Modified John Henry Test," which requires an AI system to perform better than the average of relevant pool of human lawyers to be deemed as acceptable replacement). Although there has not been any overarching competition to determine the superiority of AI over human capabilities, numerous task-specific contests offer valuable insights. For instance, an earlier study by LawGeex demonstrated that AI can review Non-Disclosure Agreements (NDAs) with greater speed and accuracy than human lawyers can. Ron Friedmann, *AI Beats Lawyers in NDA Review Accuracy: LawGeex Study*, MEDIUM (Feb. 26, 2018), https://medium.com/@ronfriedmann/ai-beats-lawyers-in-nda-review-accuracy-lawgeex-study-acf83b2ea3b5 [https://perma.cc/GAS8-36VW]. In another study, AI made bail decisions more effectively than humans did. Jon Kleinberg et al., *Human Decisions and Machine Predictions*, 133 Q.J. ECON. 237, 257-72 (2018). Testing performed with LegalBench suggests that GPT-4 achieves above-average scores on a wide range of legal tasks, even though the tasks were relatively simple. *See generally* Guha et al., *supra* note 44. Furthermore, it has been shown that GPT-4 can successfully pass the Multistate Bar Exam, scoring higher than human test-takers—though exam conditions are often considered not reflective of real-world legal practice. *See* Katz et al., *supra* note 12, at 7.

[114] For the classical account, see generally Galanter, *Why the 'Haves' Come Out Ahead: Speculations on the Limits of Legal Change*, 9 L. & SOC'Y REV. 95 (1974) (discussing why the "haves" often come out on top in litigation).

[115] *See* text accompanying *supra* notes 74-75.

increasingly receive services from chatbots, too. The equality question will thus no longer be about the disparity between chatbots and human legal services but about the disparity between different machines. That is indeed a new type of inequality in the quality of legal services, which society will need to confront and address. But an unequal world with greater overall access is arguably superior to one with less.

**Conclusion**

Using an emerging use case from China, this Essay argues that near-term adoption of "robo-lawyers," especially in their early form of AI chatbots, makes better sense in the public legal services context than in private practice. The chatbots will help close a part of the access-to-justice gap that is often overlooked. And the risks associated with their adoption appear manageable through pragmatic approaches.

The favorable prospect for PLS chatbots surely has much to do with China's state-dominated approach to constructing legality and the delivery of legal services. However, it is not unique to China that the adoption of novel technologies tends to advance along a path of least resistance. If AI chatbots may eventually proliferate in the law, there is also reason for us to prefer that they first be led into the public services scenario where, at least in the critical formative stage, there is less pressure on AI product developers to pursue quick profits at the expense of societal interests.