

Can artificial intelligence technology replace compliance lawyers?

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Date: 2024-01-23T00:00:00+00:00

Abstract

The advancement of artificial intelligence technology has presented both opportunities and challenges to the legal profession; however, existing research lacks examination of these opportunities and challenges from the standpoint of specific practice areas. The emergence of new technologies has encroached upon the business domain of compliance lawyers, but will by no means replace them. Compliance lawyers should appropriately address changes in business preparation, areas of involvement, and work priorities, enhance their own technical competence, and achieve a virtuous interaction between AI development and the iteration of compliance practice.

Full Text

Preamble

Course Title: Legal Services and Judicial Management Technology – Legal Professional Ethics: Can Artificial Intelligence Technology Replace Compliance Lawyers?

Abstract

The development of artificial intelligence technology has brought both opportunities and challenges to the legal profession, yet existing research lacks examination of these dynamics from the perspective of specific practice areas. While emerging technologies have encroached upon the business space of compliance lawyers, they will by no means replace them. Compliance lawyers should properly address changes in business preparation, areas of participation, and work priorities; enhance their own technical competence; and achieve a virtuous interaction between AI development and the evolution of compliance practice.

Keywords: Artificial Intelligence, Compliance Business, Lawyer

1. Problem Statement

Since the advent of Industry 4.0, artificial intelligence technology has continuously achieved breakthroughs and been applied across various fields, triggering extensive discussions about AI's impact on employment, professional activities, and social labor structures. Among these is the question of whether AI might one day replace lawyers. In early 2023, ChatGPT 4.0 (hereinafter referred to as "GPT") developed by OpenAI once again ignited this longstanding debate. Due to its ability to better track and manage text to provide more coherent and relevant responses, handle ambiguous natural language more effectively to output more accurate answers, and continuously adjust its outputs based on user feedback to deliver better user experiences, GPT has been endowed with high expectations for applications such as generating writing outlines and responding to inquiries.¹ It is not difficult to see that GPT can, to some extent, answer clients' consultations and draft documents like a lawyer, making claims that "AI will replace lawyers" unsurprising.

Both domestically and internationally, research on the relationship between AI technology and the legal profession has primarily focused on macro-level issues. The debate on "the relationship between technological development and the legal profession" has become commonplace, with participants generally falling into two camps. The more traditional camp, from the perspectives of unauthorized practice of law, professionalism maintenance, and client interest protection, highlights potential issues such as difficulty in holding AI lawyers accountable and algorithmic black boxes leading to uncontrollable legal services. The other camp, focusing on reducing legal service costs and improving accessibility, advocates for maximizing automation of lawyers' work. The impact of AI technology on the legal profession cannot escape the framework outlined by these discussions. Building upon them, whether AI can replace lawyers has become a hot topic. Beyond the familiar dichotomous debate, there is also a moderate view that the relationship between AI and lawyers is one of benign interaction, each with its own comparative advantages and disadvantages, requiring cooperation and mutual benefit to achieve healthy development and keep pace with the times.² Some scholars have used specific data and modeling to analyze AI's concrete impacts, concluding that technology is transforming the legal profession rather than simply replacing it.³ However, despite detailed data support, it is difficult to conceal the fact that most current academic research on AI technology and the legal profession remains at a macro level. Existing studies are keen to analyze structural issues from abstract perspectives, such as whether AI development can replace the legal profession and what impacts it brings, while paying insufficient attention to meso- and micro-level issues.

Moreover, professional rules urgently need to respond to the shocks brought by technological development. For example, the American Bar Association added the concept of lawyer "technological competence" in Comment 8 to Rule 1.1 of its newly revised Model Rules of Professional Conduct: "To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the

law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education...” China’s Lawyers Law, however, does not contain such provisions, making it necessary to prepare for adding this concept and related regulations in future legislation. Therefore, it is essential not only to grasp the impact of technology on the legal profession at the macro level but also to understand its application and related impacts in specific practice areas at the meso level. This will deepen understanding of the technology and its impacts while providing guidance for lawyers in current practice areas for future transformation and upgrading.

Against this background, this paper examines compliance practice in lawyers’ actual work to explore whether AI technology will impact lawyers’ compliance business, whether it will replace lawyers in the compliance field in the future, and how lawyers should adjust themselves to adapt.

2. Compliance Practice and Technical Mechanism

2.1 Compliance Practice in China’s Legal Industry

Before answering the aforementioned questions, it is necessary to first delineate the boundaries of lawyers’ compliance business. Compliance business does not have a precise definition. In the author’s understanding, “compliance” refers to conforming to norms, which include laws and regulations, mandatory standards, internal corporate rules and regulations, and other binding norms for enterprises. Compliance business emerged at the beginning of this century and has a relatively short development history in China’s legal services market. Classifications of compliance business also vary. Professor Chen Ruihua believes compliance business includes five aspects: compliance program construction, compliance due diligence, compliance internal investigations, and compliance monitors. According to descriptions by practitioners in related fields, the current content of lawyers’ compliance business in China can be broadly divided into six areas: compliance advisory, compliance consulting, compliance investigation, compliance training, crisis response, and compliance systems.⁴ Specifically: (1) Compliance advisory business refers to providing ongoing routine compliance consultation for enterprises; (2) Compliance consulting business is divided into comprehensive compliance consulting, specialized compliance consulting, and industry compliance consulting. Comprehensive compliance consulting helps enterprises comprehensively identify compliance risks or establish and improve compliance management systems. Specialized compliance consulting arises when enterprises encounter compliance risks and preventive measures in specific operational segments or matters. Industry compliance consulting addresses compliance issues in particular industries, clarifying compliance development status and future trends; (3) Compliance investigation business manifests as internal anti-fraud investigations within enterprises (i.e., investigations into employees’ violations, illegal acts, and criminal behavior) and compliance due diligence; (4) Compliance training refers to regularly lecturing enterprises on compliance situations, policies, incidents, and latest legal provisions to help

employees enhance compliance awareness, promote compliance culture, and improve compliance management levels; (5) Crisis response refers to providing legal and effective responses when enterprises face administrative enforcement, criminal investigation, or public opinion crises, helping them weather the storm and reduce economic and reputational losses; (6) Compliance system business refers to lawyers helping enterprises establish and improve compliance management systems and thematic compliance programs.

Building upon the above, the author, combining the practical sequence of corporate compliance, organizes the specific work of compliance business as follows: pre-event assistance in constructing enterprise compliance systems and conducting compliance training for employees; during-event monitoring of employee compliance behavior and providing consultation on compliance issues encountered by enterprises; post-event investigation of employees who violate internal rules and regulations or laws and regulations, and assisting enterprises in completing corresponding crisis responses.

2.2 The Operating Mechanism of AI Technology

Artificial Intelligence (AI), as the name suggests, is “intelligence” created artificially. Its basic operating mechanism involves collecting massive amounts of data for analysis to model certain aspects of the world, with inferences drawn from these models used to predict and analyze future possibilities. AI enables machines to learn from experience (i.e., existing data), thereby gradually imitating human cognitive abilities. Its ultimate purpose is “...to enable computers to perform actions that humans would consider intelligent.”⁵ AI is essentially a machine learning technology that emphasizes using machines to simulate human intelligence, and its development itself relies on extensive processing of personal data. The intelligence simulated by AI can be divided into computational intelligence, perceptual intelligence, and cognitive intelligence.⁶ Computational intelligence refers to the ability to perform calculations rapidly and proficiently according to operational rules and store large amounts of memory. Perceptual intelligence refers to simulating human auditory, visual, tactile, and other sensory and perceptual abilities. Cognitive intelligence refers to simulating human abilities to analyze, think, understand, and judge problems.

The development of AI cannot be separated from three elements: data, algorithms, and computing power. Among them, data is the material foundation, computing power is the computational support, and algorithms are the core drivers. In the legal field, the data required by AI includes not only narrowly defined data in digital form but also legal provisions, judicial cases, and administrative penalty cases. Beyond these three elements, AI development cannot be separated from human debugging and training: manual data input, manual writing and modification of algorithms, manual correction of AI-provided answers (which is also a form of data input), and so on.

3. Application of AI Technology in the Compliance Business Field

3.1 Domestic Application Status

Currently, the AI technologies most commonly used in China's legal service practice mainly fall into three categories: (1) Litigation business AI represented by "Xiaozhi," which can help lawyers with foundational and preliminary tasks such as questioning, evidence summarization, case fact reconstruction, compensation calculation, and drafting initial judgments; (2) Legal consultation AI represented by "Fagougou," which can provide clients with analysis reports and case predictions through image and voice recognition, knowledge graphs, and evidence guidance; (3) Lawyer collaboration management systems represented by "Fachan," which assist lawyers in managing case processing workflows and provide administrative management support for law firms through legal big data, contract databases, and other auxiliary technologies. Reviewing existing AI application practices, they can be broadly categorized into four scenarios: legal research and e-discovery, contract and litigation management, legal document automation, and legal big data analysis.[5] It is not difficult to see that AI technology application scenarios in China's legal services market remain relatively limited, and the functions demonstrated by AI are still far from so-called "strong AI," belonging to "weak AI."

Specifically in compliance practice, the AI technologies most commonly used are merely (preliminary) legal document automation and legal big data analysis. Compliance lawyers use GPT to help them complete legal research, collect industry practice information (involving extensive data collection and analysis to observe and determine the overall compliance level of the entire industry), and compile corresponding penalty cases (to clarify where the compliance bottom line lies), thereby helping them produce legal documents more quickly. However, current technology still cannot completely generate legal opinions and improvement suggestions on compliance by machines alone.

3.2 Foreign Application Status

AI technology development is more mature in foreign jurisdictions. For example, the world's first robot lawyer, DoNotPay, is widely used in London, New York, and other places, having helped over 160,000 people handle traffic tickets at extremely low cost. After filling out a questionnaire, once the legal robot determines your legitimacy, it helps you issue a defense authorization letter. More and more law firms (such as Linklaters) have begun developing and deploying legal AI systems to improve work efficiency or provide legal services at low-cost models to enhance their market competitiveness.

Richard Susskind described in his book *Tomorrow's Lawyers* multiple disruptive legal technologies for the legal profession. One mentioned is "embedded legal knowledge," which can transform legal rules and principles into codes, algorithms, and programs embedded into our working systems and processes.

All system activities must proceed along predetermined paths. The options and mode selections provided by the system are mandatory and fixed—in other words, non-compliant and illegal options are not permitted. A more intuitive example: Article 15 of the Labor Law stipulates that Employers are prohibited from hiring minors under the age of sixteen. After translating this provision into an algorithm in the employee system, it can automatically identify age information from employee ID numbers or compare the age selected by employees with legal requirements to determine whether the employee’s age complies with the Labor Law’s mandatory requirements. Alternatively, it can be implemented by setting the system so that employees cannot select numbers less than 16 on the age interface to fulfill the enterprise’s mandatory compliance obligations. Thus, relying on a pre-established legal system, even people with no knowledge of laws and regulations can make compliant decisions.

The reason this technology is considered disruptive is that: “Where rules are embedded, lawyers are no longer needed to remind clients to pay attention to legally significant situations. Similarly, automatically executed contracts that may be implemented through blockchain technology will be able to initiate actions and automatically execute procedures and clauses without direct lawyer involvement.”⁷ From the operational model described in this vision, such technology can be particularly useful in the corporate compliance field, especially in helping companies achieve compliance system construction and monitoring of internal employee behavior compliance. Through system and algorithm guarantees, employees within the enterprise can directly make compliant decisions without even understanding legal provisions. After implementing such a system, enterprises can also ensure quality construction of their internal compliance systems in a very short time. Simultaneously, this saves enterprises substantial training costs and compliance system construction and operation costs.

At the same time, this technology will significantly encroach upon the space for lawyers to participate in corporate compliance and may even replace lawyers. In reality, such visions have gradually become reality to some extent. For example, the Seoul-based Yulchon Law Firm developed a client-centered digital compliance system called “AlgoCompliance,” whose algorithms can monitor daily regulatory changes on government websites and determine whether such changes may trigger compliance issues. Due to various limitations, the author cannot access detailed product descriptions and thus cannot ascertain its algorithmic operating mechanism. Based on descriptions of its functions by other scholars, this technology can only achieve preliminary compliance monitoring. However, problems are not solved merely by being identified. Whether enterprises need to address these non-compliance issues and how they should improve internal systems to resolve them still rely on professional lawyers’ judgment and guidance.

3.3 Summary: The Impact of AI

The development of AI technology will encroach upon lawyers' activity space in compliance business. AI's advantages over compliance lawyers lie in its low cost, high efficiency, and short time requirements. AI technology can enable cybersecurity and data governance business to be granular down to every single byte, without having to resort to sampling due to human limitations. It can enable computer systems to autonomously generate and create compliance management-related data, improving the efficiency, accuracy, innovation, and cost-effectiveness of data generation while reducing natural persons' workload and working hours. It can also serve as an enterprise's year-round, non-stop legal advisor or compliance officer, with service speeds and costs being hundreds, thousands, or even tens of thousands of times lower than before.⁸

Undoubtedly, automated compliance technologies represented by AlgoCompliance and embedded legal knowledge systems can help enterprises complete preliminary compliance system construction, achieve employee behavior compliance through mandatory programs to save compliance training costs, monitor changes in government regulatory rules in real-time, automatically achieve compliance monitoring, identify non-compliance issues, and facilitate lawyers and enterprises to respond promptly. In this way, nearly 60% of business in traditional compliance fields will be encroached upon by AI technology, increasing business pressure on compliance lawyers. How to recognize the situation, identify positioning, and achieve transformation and upgrading under such era pressure has become an unavoidable issue.

4. Embracing Opportunities: Transformation Rather Than Disruption

4.1 AI Will Not Replace Lawyers in the Compliance Field

First, laws and regulations inherently have lag. AI, relying on pre-set algorithms (including existing laws and regulations), finds it difficult to adapt to changes in law and practice. Even if automatic detection of legal and regulatory changes can be achieved, it is difficult to complete the steps of "concept interpretation—compliance system construction—practical behavior analysis and strategy formulation" through AI alone. In essence, AI can only determine whether enterprise and employee activities comply with the enterprise's compliance system based on that system and prevent obviously non-compliant matters. Fundamentally, whether it is the arguments behind legal opinions, the reasoning in court judgments, or legal advice on alternative action plans, how to rationalize them is a basic element of logical analysis and a fundamental skill of legal professionals. Specifically, it involves the ability to distinguish and articulate in clear and coherent terms the logical relationship between a set of premises (which may be fact findings, legal provisions, or other factors) and the legal conclusions or recommendations drawn from them. In this regard, there are certain differences between the algorithmic logic currently output by AI and human cognitive logic

in explaining basic principles. AI outputs algorithmic paths through forward logic—that is, based on a set of data, understanding what is the optimal decision or most effective operational process. AI lacks reverse logic capabilities.

Second, from the enterprise perspective, compliance is not just a legal obligation but also a way to shape brand image. The “rules” that compliance needs to conform to are baseline norms, above which there remains extensive space for institutional design. What kind of compliance strategy an enterprise ultimately adopts requires compliance lawyers to stand from the client’s perspective and decide through full discussion with the client. Current AI technology is at best “weak AI” and cannot replace lawyers in completing the aforementioned work.

4.2 AI Will Significantly Change Lawyers’ Practice Models in Compliance Business

The first transformation lies in the change of compliance business preparation. Since AI technology can complete the compilation and analysis of regulatory requirements, collection and organization of industry practice status, and compilation and analysis of penalty cases with extremely short time and high accuracy, compliance lawyers no longer need to spend substantial time searching for compliance bases. However, reading, analyzing, and interpreting relevant materials and data still requires professional wisdom. Compliance lawyers need to invest the saved time into research.

The second transformation lies in the change of participation areas. With the development and implementation of automated compliance technology, compliance training will gradually exit the stage of compliance business. Accordingly, compliance lawyers need to participate in writing automated compliance algorithms, engage in the transformation process from “legal rules to algorithms,” and ensure the accuracy of automated compliance algorithms.

The third transformation lies in the change of work focus. Current compliance business tends to focus more on pre-event risk prevention, preventing employee violations through constructing enterprise compliance systems. However, AI and algorithms can control pre-event risks within a relatively low range. Compliance lawyers’ work focus should shift from pre-event risk prevention to algorithm monitoring and timely algorithm modification based on employee violations.

4.3 Compliance Lawyers Should Actively Face the Challenge

Compliance lawyers should actively face the challenges of AI by enhancing their technical literacy and “technological competence,” understanding and mastering AI applications in compliance business. Simultaneously, they should leverage their professional advantages, using AI for processing and analyzing large amounts of data to improve work efficiency. Additionally, they need to conduct more in-depth compliance risk identification and management with AI assistance to adapt to new work models. Finally, compliance lawyers should actively participate in AI-related legal regulation and ethical discussions to better protect

the interests of enterprises and society in a future where AI is widely applied.

Note: Figure translations are in progress. See original paper for figures.

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