Cultural and Religious Studies, March 2025, Vol. 13, No. 3, 152-154
doi: 10.17265/2328-2177/2025.03.008

The Significance of ChatGPT in the Knowledge Production of Ancient Chinese Literature*

LIU Yi, GE Shuxian, LIU Shiqi, SHEN Mengjing, ZHANG Pei
Beijing Institute of Graphic Communication, Beijing, China

Ancient Chinese literature serves as the central repository of Chinese civilization, holding within it a wealth of cultural and historical wisdom. Nevertheless, its fragmented, obscure, and scattered nature has posed challenges in the process of knowledge production. The introduction of artificial intelligence (AI) technologies such as ChatGPT has opened up new avenues for knowledge production from ancient Chinese literature. These technologies can construct systematic knowledge networks through intelligent knowledge extraction and integration. They can also achieve the modern decoding and dissemination of ancient texts by leveraging text-generation and restoration capabilities. Additionally, they can enhance research efficiency and innovation dimensions with the support of academic assistance and decision-making. This paper delves into the technical advantages, practical cases, and future potential of ChatGPT in the processing of ancient Chinese literature from the perspective of knowledge production, uncovering its crucial role in the transformation of traditional academic paradigms.

Keywords: artificial intelligence, ancient Chinese literature, knowledge production

Preface

The collation and research of ancient Chinese literature are fundamental undertakings for the continuation of cultural heritage and the exploration of historical wisdom. Traditional research models are hindered by bottlenecks such as low manual efficiency, difficulties in information integration, and weak interdisciplinary collaboration. As a representative of a new generation of natural language processing artificial intelligence (AI), ChatGPT can not only efficiently carry out basic tasks like punctuation verification and semantic analysis but also promote the transformation of ancient Chinese literature research from “experience-driven” to “data-driven” through the construction of knowledge graphs and cross-text correlation analysis. This paper focuses on three core scenarios of ChatGPT in the knowledge production of ancient Chinese literature: knowledge extraction, text

* This paper is the periodic research result of the research project: The Significance of ChatGPT in the Knowledge Production of Ancient Chinese Literature (北京市大学生创新训练项目——论ChatGPT在古籍文献知识生产中的价值, serial number: S202410015001); foundation project: 2022 Beijing Municipal University Teacher Team Construction Support Plan for Excellent Young Talents Project—Research on the Compilation, Engraving, and Publishing of Song Dynasty Collection Classics Preserved in the Waseda University Library in Japan (基金项目：2022年度北京市属高校教师队伍建设支持计划优秀青年人才项目——日本早稻田大学图书馆所藏宋人集部典籍的编纂、刊刻与出版研究, BPHR202203075).
LIU Yi, Undergraduate, School of Publishing, Beijing Institute of Graphic Communication, Beijing, China.
GE Shuxian, Undergraduate, School of Publishing, Beijing Institute of Graphic Communication, Beijing, China.
LIU Shiqi, Undergraduate, School of Publishing, Beijing Institute of Graphic Communication, Beijing, China.
SHEN Mengjing, Undergraduate, School of Publishing, Beijing Institute of Graphic Communication, Beijing, China.
ZHANG Pei, Ph.D., Post-doctoral, Associate Professor, Doctoral Supervisor, School of Publishing, Beijing Institute of Graphic Communication, Beijing, China.

generation, and academic research. It analyzes its technical logic and practical value, aiming to provide a direction for the development of ancient Chinese literature research in the era of digital humanities.

Knowledge Extraction and Integration

Ancient Chinese texts are vast and fragmented, challenging the formation of coherent knowledge systems. Traditional manual extraction is inefficient and error-prone, failing modern academic demands. ChatGPT, an advanced AI tool, leverages natural language processing to rapidly analyze massive ancient Chinese literature, extract knowledge elements, and construct logical knowledge graphs. This enhances extraction efficiency and accuracy.

ChatGPT-like tools unify ancient literature into databases for systematic categorization, addressing needs like searching rare texts, identifying cross-document connections, and collating lost works. In traditional Chinese medicine (TCM), where concepts from classics like *Huangdi Neijing* (皇帝内经), *Shanghan Zabing Lun* (伤寒杂病论), and *Shennong Bencaojing* (神农本草经) remain clinically relevant, ChatGPT extracts diseases, treatments, and herbal formulas. These are categorized by disease type or therapeutic approach, creating a structured system to explore TCM's historical-modern links. This aids modern medical research by contextualizing ancient wisdom, bridging gaps between past practices and contemporary applications.

Text Generation and Creation

Historically, ancient texts like *The Analects* and *Li Sao* lacked punctuation and sentence segmentation due to classical writing conventions, technical limitations, and high costs, making them obscure and difficult to interpret. Modern decoding efforts for publication often require extensive manual labor. AIGC's natural language processing capabilities now automate punctuation, translation, and annotation, creating reader-friendly decoded content tailored to modern audiences and reducing comprehension barriers.

Trained on vast ancient literature, ChatGPT accurately masters archaic language patterns and grammatical rules. For fragmented texts, it intelligently infers missing content based on context and knowledge, ensuring textual integrity. It also precisely corrects erroneous characters and supplements lost works, particularly valuable for restoring blurred manuscript copies by generating plausible text from surrounding context.

While AIGC demonstrates enormous potential in automating ancient text recognition, translation, and proofreading, current applications in ancient text publishing remain largely confined to mining existing materials. Compared to other fields, knowledge production in this domain progresses slowly, with AI struggling to drive innovative ancient knowledge creation. As scholars note, "innovative development in ancient text publishing is still in the exploratory stage". Thus, the key challenge lies in how to leverage ancient text big data more effectively to transform AI into a tool for generating original, innovative content.

Academic Research and Decision-Making Support

Ancient texts, as critical carriers of traditional historical records, pose challenges in utilization due to complex expression, ambiguous precision, and decentralized collections. ChatGPT's natural language processing capabilities enable precise retrieval of vast databases, rapidly extracting relevant passages, annotations, and research outcomes. For instance, when studying economic systems in a specific historical period, it provides contextualized literature and interpretations, saving time and reducing omissions. Its interdisciplinary radiation effect constructs knowledge correlation networks—e.g., in Four Histories research, it links figures, timelines, and

events across texts, breaking historiographical barriers and expanding analytical dimensions.

Ancient text translation faces linguistic, cultural, and punctuation hurdles. ChatGPT decodes classical Chinese into modern language using extensive training data, aiding comprehension. Its cultural knowledge base offers contextual annotations to preserve heritage. AI translation excels in speed and accuracy, instantly processing simple texts. For labor-intensive punctuation tasks, it automates sentence segmentation via deep learning, boosting efficiency.

AI also integrates cross-temporal resources for academic arguments, providing diverse evidence. Tailored to scholars' needs, it intelligently retrieves and generates data from ancient texts, helping refine content and strengthen viewpoints. For example, analyzing "Song Dynasty commercial prosperity's impact on social structure", ChatGPT extracts trade activities and population mobility records from Song Shi (History of Song), strengthening the argument's foundation. During paper drafting, it organizes materials, analyzes logic, and suggests revisions—e.g., citing cross-dynastic cultural transmission cases to enhance rigor.

Conclusion

The application of ChatGPT in the field of ancient Chinese literature marks a deep integration of artificial intelligence technology and humanistic research. It reshapes ancient Chinese literature resources through efficient knowledge integration, bridges the language gap between ancient and modern times with the help of intelligent restoration and translation, and expands academic research directions by relying on interdisciplinary correlation analysis. Although current AI still has limitations in innovative knowledge production of ancient Chinese literature, such as insufficient in-depth understanding of cultural contexts and the need to improve creative reasoning ability, it has already shown revolutionary potential. In the future, with algorithm optimization and the combination of multimodal technologies, ChatGPT may further realize the dynamic reconstruction of ancient Chinese literature knowledge and cross-time-space dialogue, truly bringing the sleeping classics to life and infusing sustainable intelligent momentum into cultural inheritance and academic innovation. This process is not only about technological iteration but also requires humanistic care and ethical reflection to strike a balance between instrumental rationality and value rationality, enabling the wisdom of ancient Chinese literature to shine anew in the digital age.

References

Duncan, C. S. W., & Chang, S. W. (n.d.). Development status, issues, and strategies of ancient Chinese book publishing in the context of generative artificial intelligence. *Library*, 1-6.

Xiao, C., & Gao, Z. Q. (2021). Research on the business model of ancient books digital publishing in publishing houses: Based on the business model canvas theory. *Science-Technology & Publication, 40*(11), 74-84.

Zhang, J. (2022). New technologies inject vitality into ancient books collation. *China Social Science Journal*, 2022-03-17.

Zhang, Z. L. (2020). An overview of the six classics and nine divisions method (VI)—Inheritance of classic works in traditional Chinese medicine clinical practice. *Shanghai Journal of Traditional Chinese Medicine, 54*(2), 44-47.