



Challenges in Verifying Historical Ophthalmological Texts: The Case of a Turkish **Book Derived from a Persian Source**

Abstract

This study aims to describe the challenges of authenticating and establishing the uniqueness of historical ophthalmological treatises by way of comparative analysis of two significant texts: the Persian "Zahīre-ye *Ḥāwarizmšāhī*'' authored by Isma'īl Ibn Ḥusayn Ğurğānī (1040-1136 AD) and the Turkish "Mīftāḥ al-Nūr wa-Ḥazā in al-Surūr" of Mu'min Ibn Muqbil, a 15th-century Ottoman oculist from Sinop (present-day Turkey). Although the latter claims independent scholar merit, investigation confirms that it is an adaptation and translation of the Ğurğānī's work. It raises major issues in medical historical scholarship, such as proper source material identification, translation concerns, and the consequences of misattribution in the history of ophthalmology. It accentuates the importance of rigorous source authentication protocols in ensuring scholarly integrity and generating more understanding of the transmission of medical knowledge in the Islamicate world, specifically in the Iranian plateau and Anatolia. It also addresses implications of broad significance for historians examining the development of ophthalmological knowledge in different cultures.

Key words: Ophthalmology, History of Medicine, Eye diseases, Persian Medicine

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The medieval Islamicate world witnessed advancements in the area of medical sciences, including ophthalmology, which was a separate field. Between the 11th and the 12th centuries, Arab and Persian physicians made groundbreaking contributions to the fields of anatomy, disease, and eye treatment. One of the most comprehensive medical encyclopedias of the time, the Persian treatise Zahīreye Hāwarizmšāhī of Ismā'īl Ğurğānī from the early 12th century, provides the most detailed descriptions of eye diseases and treatments that influenced medicine for centuries (Figure 1) (Golshani, and Esmaili, 2021). The Turkish treatise "Mīftāḥ al-Nūr wa-Ḥazā 'īn al-Surūr' by Mu'min—traditionally presented as an independent scholarly text—is the translation and adaptation of the Ğurğānī's work (Aciduman, and Şems, 2021). Crosslinguistic and cross-cultural transfer of medical information was common in the medieval Islamicate world. Translating, rewriting, and expanding upon previously existing texts were common practices by physicians, who built a complex network of intellectual legacy that modern scholars must approach with extreme caution. Although this enabled more to be shared, it has likewise offered challenges to historians seeking to trace sources and the development of numerous medical ideas and practices.

Materials and Methods

We approached the topic using a case-study method centered on well-structured, influential themes that support the authentication of historical sources. Specifically, we analyzed two works, $Zah\bar{\imath}re-ye$ $H\bar{\imath}awarizm\check{\imath}ah\bar{\imath}$ and " $M\bar{\imath}ft\bar{\imath}ah$ $al-N\bar{\imath}ur$ $wa-H\bar{\imath}az\bar{\imath}$ ", to identify findings that affect source selection in the history of medicine.

Results and Discussion

Methodological Challenges in Source Verification

1- Linguistic and philological Analysis

Historical medical texts are verified using advanced methodological techniques that combine linguistic research, philological examination, and comparative textual studies. In the case of "Mīftāḥ al-Nūr wa-Ḥazā ʾīn al-Surūr", the initial analysis had already identified exact similarities with Ğurğānī's work beyond just the topic. The Turkish translation contained the same diagnostic methods, therapeutic recommendations, and even detailed case descriptions, which appeared to be word-for-word translations rather than original observations.

Paleographic analysis of manuscript traditions presents additional challenges. Without original autographs for much of medieval medical writings, scholars must deal with copies that might have been rewritten, shortened, or expanded by different copyists over time. Each manuscript tradition bears the marks of its history of transmission errors, deliberate changes, and cultural translations, making



the relationships among texts harder to see.



Figure 1. The pages of this book, Zaḥīre-ye Ḥāwarizmšāhī, on eye diseases, written by Isma'īl-Ibn-Ḥusayn-Ğurğānī (1040-1136 AD) (Ğurğānī, 1277 AD)

2- Cross-Cultural Medical Terminology

Translation of Arabic and Persian medical terminology has its verification challenges. Medieval translators had to balance literal translation with cultural accommodation. No exact equivalents existed for certain technical terms in the target language, and translators were forced to create new terms or use descriptive phrases. This linguistic accommodation makes the task of establishing textual connections challenging because the same concept is conveyed using different words (Mir, and Anjum, 2025). The development of medical terms across languages adds a further risk of misunderstanding.

Evidence of Textual Dependency

1- Structural Analysis

A careful analysis of the two texts shows strong similarities in their organization, chapter order, and theme development. This structural similarity is also visible in how the subject matter is divided within chapters, indicating that the

2- Diagnostic Descriptions and Case Studies

Indeed, the strongest evidence of textual dependence is found in the diagnostic accounts and case series presented in both volumes. The Turkish translation contains many sections that seem to be literal translations of Ğurğānī's, such as specific descriptions of symptom progression and responses to treatment, that would be unlikely to occur separately in two different clinical settings.

The accuracy of these similarities indicates that Mu'min had a complete and precise version of Ğurğānī's work to translate from, rather than relying on incomplete sources or oral traditions. Such a high level of similarity points to systematic translation rather than accidental resemblance or shared source material.

Implications for Historical Scholarship

1- Attribution and Academic Integrity

Misattributing translated texts as original works significantly impacts our understanding of medical history. Considering secondary texts as primary sources can lead to an exaggerated view of the diversity and independence of medical knowledge across different cultures. Misattribution also obscures the real patterns of knowledge transfer and cultural exchange common in medieval Islamic medicine (Ragab, 2022).

The case of "Mīftāḥ al-Nūr wa-Ḥazā'īn al-Surūr" illustrates how medieval translation practices differed from modern academic citation standards. Scholars in the medieval period saw translation and adaptation as acceptable scholarly activities, especially when involving cultural adaptation or linguistic innovation. However, contemporary historical evaluation demands clear boundaries between original works and derivative ones to assess the development of medical knowledge properly.

2- Impact on Historiographical Narratives

Accurate identification of intertextual relationships significantly influences historiographical narratives about the development of ophthalmology in various cultural contexts. Recognizing the Turkish text as a translation rather than an independent work alters our understanding of the contributions of original Turkish physicians to ophthalmological science. This recognition does not diminish the value of the translation effort itself, which plays a crucial role in spreading medical knowledge. However, it prompts us to reconsider how we evaluate the independent development of medical traditions.



Collaborative Research Models

Authenticating historical medical documents is complex and requires collaborative research across fields. Proper authentication demands skills in historical linguistics, philology, medical history, and cultural studies. No single scholar can master all these areas, so interdisciplinary teamwork is essential for accurate analysis.

International networks focused on historical medical texts would enable more structured verification. These networks could establish shared methodologies, exchange resources, and create databases of accepted textual relationships, providing a common foundation for the broader academic community.

Conclusions

This investigation emphasizes the challenge and importance of careful source verification in historical medical research. It has implications for understanding knowledge transfer during the medieval Islamic period and highlights the need for systematic textual verification methods. Future research should develop standardized approaches for textual connections, create databases of verified sources, and build collaborative networks among scholars studying historical medical texts. Maintaining scholarly integrity in classical medical research requires careful source verification and adherence to methodological standards. Only through meticulous scholarship can we understand the rich history of medical knowledge across cultures and eras.

Authors' Contribution

The authors confirm their contribution to the paper as follows: conceptualization, writing, reviewing, editing: Mahnaz Sadat Mortazavi. Validation, reviewing, and editing: Fuat Ince, Shahrzad Irannejad, Arman Zargaran. All authors read and approved the final version of the work.

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Conflict of Interest

None.

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