Vernacular Languages and Invisible Labor in Tibb

by Shireen Hamza*

ABSTRACT

Glossaries providing the names of materia medica across languages are ubiquitous in medical manuscripts composed in the Islamic world. These anonymous medical glossaries were produced by physicians who sought out regional names for materia medica from nonliterate people, verifying them for local use in a process called tahqiq. In early modern South Asia, glossary entries were Arabic or Persian terms, while translations were offered in Persian, Hindavi, or other vernacular Indian languages. Translation was a dynamic process, demonstrating the continuous use of multiple languages in tibb, or learned medicine, not often acknowledged by historians of science in Islam. I focus on four glossaries accompanying a Persian medical text composed by Shihâb Nâgaurî in 1388 in Western India. While affirming the hierarchy of certain languages over others, the glossaries offer us a glimpse into how the experiential knowledge of nonliterate people constituted tibb.

In this region, the ‘ajam (non-Arabic) language is common, but in the Ikhtiyârât-i Bâdî‘î, the names of the medicines are written in Arabic. Thus, I have compiled this glossary with the name of each thing in both Persian and Arabic so that from this text, the names of each object in Persian and Arabic may be easily known, and Allah knows best what is right.

—Anonymous, Index of Names of Medicines in the Ikhtiyârât-i Bâdî‘î (Fihrist-i Asâmî-i Adwiyya-i Ikhtiyârât-i Bâdî‘î)

A physician enters the room and takes her place. While examining the patient, she understands the diagnostic sensations under her fingers through the formal language of medicine, but when it comes time to speak to the patient, to ask further questions, and to communicate her prognosis, she must reach for words in another language entirely. And when she leaves the patient’s side in search of the many ingredients needed to prepare the remedy, ingredients even the pharmacist does not carry, in what language does she

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1 Salar Jung Museum Library, Hyderabad (hereafter cited as SJML), Tibb, Farsi 31, Acc 1661, fol. 117a; Bibliothèque Nationale de France (hereafter cited as BnF) Supplément Persan 335 fol. 1b. All translations in this article are my own.

Osiris, volume 37, 2022. © 2022 History of Science Society. All rights reserved. Published by The University of Chicago Press for the History of Science Society. https://doi.org/10.1086/719223.
communicate then? Medical practice was and is multilingual, though formal texts and documents do not openly reflect on this. Oral translation remains an integral, everyday part of medicine.

In the premodern Islamic world, learned physicians wrote their texts in cosmopolitan registers of Arabic and Persian, but they used other languages and registers to communicate orally with patients and procurers of medicines. Their success in medicine depended on their ability to communicate with nonliterate people. However, historians immersed in the formal texts authored by physicians, the only sources surviving of their practice, may forget that physicians worked in vernacular languages. This article explores the orality of ṭibb (learned medicine) through an overlooked archive—anonymous medical glossaries abundant in premodern medical manuscripts. These glossaries translated the names of medicinal plants and diseases from formal, scholarly language to local, vernacular names. I will focus on ṭibb in South Asia through a study of four glossaries that accompany the Persian medical text Shifāʿ al-Marāz (Illness’s cure). The author, Shihāb Nāgaurī (fl. 1390s), lived in Rajasthan and Gujarat in Western India and composed this text in 1388 CE. I will refer to this text as the Ṭībb-i Shihābī (Shihāb’s medicine), as it was often known, after its author. Written in rhyming, didactic verse (rajaz) and covering diseases and their treatments head to toe, this text was meant to be accessible to students. Within the text itself, the author includes a number of terms in Hindavi, a major vernacular language in North India. The text has remained in circulation in South Asia since its time of composition; the four glossaries accompanying this text were included in manuscripts copied from the seventeenth to nineteenth centuries. Why might a physician capable of reading the Ṭībb-i Shihābī, a formal text of medicine written in a scholarly idiom, need these glossaries? With whom did physicians need to discuss the names of medicines in vernacular languages? And why did these glossaries rarely leave their marginal location at the end of manuscripts, to become a genre of their own?

I argue that much of the content in these glossaries was gained and verified through oral and experiential means, a continuous process of verification of the names of materia medica used among literate and nonliterate people in a given locale. Alongside formal terminology, physicians needed to know the most up-to-date names for materia medica in the places they practiced medicine. The formal names physicians studied in texts of ṭibb were not necessarily known by their patients, or the people who planted, collected, prepared, transported, and traded medicinal substances. By interrogating the content of these glossaries within the contexts of their production, we can better understand how the knowledge and labor of nonliterate people undergirded literate medicine. The changing nature of spoken languages necessitated the continuous production and verification of glossaries: as soon as a medical glossary was written down, it was in need of being verified again. This article is the first study of ṭahqīq (verification) in the realm of practical knowledge, a term shown to have important implications for Islamic

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2 I have used feminine pronouns in this paragraph to call attention to gender. I acknowledge the possibility of women’s participation in these interactions, but the premodern authors whose names I know are all men. I explore “medical masculinity” at length in my dissertation; Shireen Hamza, “Islam and Medicine in the Medieval Indian Ocean World” (PhD diss., Harvard University, forthcoming).

3 For an exception to this trend, see Ahmed Ragab, “‘In a Clear Arabic Tongue’: Arabic and the Making of a Science-Language Regime,” Isis 108 (2017): 612–20, at 614.

4 My gratitude to the physician-scholar Hakim Syed Zillur Rahman for pointing out a reference to the Shifāʿ al-Marāz in his uncle’s own twentieth-century text in verse.
philosophy, philology, and medicine. After contextualizing multilingualism in tibb and analyzing four glossaries accompanying seventeenth- to nineteenth-century manuscripts of the Tibb-i Shihabî, I show how taḥqiq operates in this genre of medical texts. Then, through a discussion of the autobiography of Nāgārī, I explore how medical education related to the development of glossaries. This article may encourage historians to understand oral translation as constitutive of medical practice. Centering the oral reveals the participation of people whose labor is made invisible by the conventions of scholarly language.

**MEDICAL GLOSSARIES IN ṬIBB**

Historians have often approached the history of tibb by studying formally titled and authored Arabic texts written in the medieval period. They have considered tibb to be a discipline studied, maintained, and furthered by male physicians, who learned it from experienced senior physicians. From the ninth century onward, these texts of tibb were written in a register of Arabic and Persian that would be legible to scholars and bureaucrats from “the Balkans to Bengal,” and, by the fourteenth century, from Kedah (in what is now Malaysia) to Kanem Bornu (in what is now Chad and Nigeria). Across these regions, medieval physicians were able to both write texts in cosmopolitan registers of Arabic, Persian, and Hebrew, and to speak a dazzling variety of vernacular languages, though they rarely referred to them in their texts. This hierarchy between cosmopolitan and vernacular languages was also a norm among learned physicians using Sanskrit, Pali, Uighur, Tibetan, Armenian, Chinese, and Latin. Linguistic complexities are to be expected within a textual tradition of medicine stretching from Greek and Roman antiquity to the Byzantine Empire and into the Islamic world. The full geography of tibb shows us that there are many relevant languages to consider, beyond the cosmopolitan. As Ahmed Ragab argues elsewhere in this volume, the Abbasid-era Translation Movement of texts from Greek to Syriac to Arabic, considered to be the birth of science in the Islamic world, also came about through multiple generations of physicians and astronomers orally translating aspects of their work into vernacular languages and invisible labor in ṭibb.


7 Sheldon Pollock, *The Language of the Gods in the World of Men: Sanskrit, Culture, and Power in Premodern India* (Berkeley: Univ. of California Press, 2006). To ascribe agency to vernacular actors in the premodern world, Pollock focuses on the literarization of vernacular languages, primarily in the disciplines of grammar, epic, and courtly poetry, referring to these literarized languages as the “cosmopolitan vernacular.” In the medical glossaries under study in the present work, vernacular languages like Hindavi are literized, or written down, but not literarized. The agency of vernacular actors is minimized, relegated to the appendices of texts in prestige registers of Arabic and Persian. The work of Pollock and others carefully disaggregates the vernacular from the oral and the subaltern, which had been lumped together in historiography. But in this article, the vernacular does refer to oral communication and local knowledge. My gratitude to Eric Gurevitch and Anand Venkatkrishnan for helping me think through this.

Arabic to engage their new patrons. Oral translation between the textual and spoken registers has been an integral part of tibb since its inception.9

Though anonymous medical glossaries may well have been produced throughout the medieval period, most surviving glossaries can be found in manuscripts produced from the seventeenth century onward.10 While searching for vernacular languages in premodern science, we catch sight of a different geography of knowledge production than the one illuminated by authoritative texts. These short, anonymous glossaries often appear without introduction or title, in contrast to the formal introductions provided by authors of most medical texts, and thus cannot be easily cited by later writers. They are often appended to such formal texts at the end or beginning of a manuscript. From their marginal position within manuscripts, these glossaries can demonstrate a hierarchy between cosmopolitan and vernacular languages. Arabic medical terminology—heavily inflected by Greek and Syriac—maintains pride of place in the shifting hierarchy of languages in the sciences. Arabic terminology remained a part of tibb even in Persian texts composed in regions where Persian was the language of literature, governance, and science. We can better understand Arabic and Persian as languages of science and medicine by recognizing their place within a multilingual world.11

Medical glossaries range from a few dozen terms to a few thousand, from a single folio to fifty, and can be found appended to monographs or compendia. While they share a purpose, these glossaries demonstrate a great diversity of form, length, and language, composed as they were in vastly different geographies across the Islamic world. In Yemen, for example, the lemmas and translations in the glossaries were often from one register of Arabic to another, or took three steps, from transliterated Greek and Syriac to cosmopolitan Arabic and then to local Arabic.12 This is not surprising; the regional specificity of Yemeni terms for materia medica is reflected in many texts.13 In al-Andalus, where Galenic medicine had been practiced in multiple languages even before it arrived as tibb in Arabic texts, “synonyms” for materia medica across languages were included as a column in tabular texts, alongside the qualities, dangers, uses of, and substitutes for these materials.14 In the Maghreb, the Greek and Syriac transliterations and Arabic

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10 For medieval tables of pharmaceutical equivalences based on the visual shape of transliterated words, see Oliver Kahl, “The Pharmacological Tables of Rhazes,” *Journal of Semitic Studies* 56 (2011): 367–99. Quid pro quo substitution lists, a long tradition, were sometimes similar in form to medical glossaries but played a different role by creating an equivalence between two different substances; see Alain


12 For example, see Biblioteca Ambrosiana, Milan, Italy, Arabi Nuovo Fondi H20, fols. 258a–259b.


lemmas were paired with synonyms in Amazigh languages. In West Africa, handbooks of Quranic medicine “include the names of local trees and plants (in Bambara, as well as other local languages) and instructions for their preparation and interaction with the verse in question.” And in Ottoman contexts, Arabic-Turkish glossaries were commonly included in compendia of medical texts.

Though there are many parallels with these Middle Eastern and North African contexts, tibb in South Asia differed in several respects. From its spread in the thirteenth century, tibb remained one of multiple learned medical traditions in the subcontinent, alongside Ayurveda, for example. Glossaries translated lemmas or headings of transliterated Greek, Syriac, Arabic, and Persian into Persian and Hindavi words. Across these regions, several terms were used as generic titles for the glossaries, including lughat (language), farhang (glossary), fihrist (index), and tafsir (elaboration/interpretation). Regardless of their language, these glossaries’ lemmas likely consisted of strange words that a reader would never have heard spoken aloud; this is demonstrated by the diacritics found in some glossaries that instructed readers in pronunciation. These terms were then translated into names the reader might more easily recognize. Hundreds of extant glossaries have not merited scholarly attention, perhaps owing to the hierarchy of the cosmopolitan over the vernacular at work within many archives of premodern science, including those of South Asia. These glossaries were part of a broader process of negotiating the presence of vernacular languages, such as Hindavi, in Persian or Arabic texts, through marginalia and even occasionally as glosses within the body of authoritative medical texts.

The conventions of these medical glossaries differ from those of authoritative medical texts. They make visible what is hidden and unnamed in formal texts of tibb—the community of knowers beyond physician and patient, including people who made, used, and circulated material remedies of tibb, such as farmers, pharmacists, and yogis. These people are not cited conventionally, as the authors of texts of tibb would be. Rather, they are mentioned only in the third-person plural, as the people who name or speak of things (yusammūn, ġiyand). At most, they are specified by their professional

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15 As in the glossary in Cambridge Univ. Library, Cambridge, UK, Or. 1021 (12), fols. 27–30. By contrast, most of the thirty “Berber” terms included by Ibn Baklarish in Spain may not match up to any spoken dialect; Ana Labarta, “Ibn Baklarish’s Kitab al-Mustani: The Historical Context to the Discovery of a New Manuscript,” in Ibn Baklarish’s Book of Simples (cit. n. 14), at 25.
17 For one such Ottoman glossary see Österreichische Nationalbibliothek, Vienna, Austria, Cod. Mixt, 944, fols. 119v-156v. Digitized by the Hill Museum and Manuscript Library (HMML), Saint John’s University, Collegeville, MN.
18 Most of the glossaries I examined did not include diacritics, unlike those examined in Vivek Gupta, “Images for Instruction: An Illustrated Multilingual Dictionary in Sultanate India (BL Or. 3299),” in Muqarnas: An Annual on the Visual Cultures of the Islamic World (forthcoming). Similarly, in Europe, sometimes the Latin synonyms of Arabic materia medica had accent marks “to assist in the oral delivery of the terms”; see Burnett, “Synonyma Literature” (cit. n. 14), 133.
19 One exception is a formal text by Maimonides, An Explanation of the Names of Drugs, which goes into more detail than the glossaries but served largely the same purpose. Maimonides often included the local names for a given material according to “the common people of the Maghreb” or “the people of Egypt” specifically. See Max Meyerhof, Sarh Asma’ al-Uqqar. (Explication des noms de drogues.) Un glossaire de matière médicale composé par Maimonide. Texte publié pour la première fois d’après le manuscrit unique avec traduction, commentaire et index, Memoires presentes à l’Institut d’Egypte, vol. 41 (Cairo, 1940).
The abundance of these glossaries makes it clear how important it was for physicians to know the names that these "speaking people" used for materia medica, and even certain illnesses. While historians have no doubt imagined the interactions between physicians, pharmacists, and the many kinds of people who cultivated, foraged, traded, and transported a vast number of medicinal substances across continents, we have done little to study these exchanges. The growers, foragers, and traders who supplied pharmacists and physicians have not left us texts of their making, so we catch glimpses of these people by reading against the grain of surviving texts. Between the sparse frame of lemma and gloss, lemma and gloss, the glossaries signified their usefulness to a world beyond the text. The reader would have to draw on tacit knowledge to understand when and how the glossaries could be relied on, since they included no statement of method. Unlike formal texts of ُتْب, in which the validity of principles and remedies were supported by the author’s reputation and citations of authorities from previous generations of physicians, these glossaries employed a different strategy to be convincing and useful tools for physicians—a continuous process of communal verification of knowledge (تَحْقِيق). The reader would know that the author was drawing on both textual and oral sources and, importantly, verifying the knowledge with a number of people in their vicinity.

Because all sources remain unmarked in medical glossaries, besides the occasional references to groups such as farmers, it seems that the names of materia medica were recognized as local, contingent information. The lack of title and anonymity of glossaries showed that they were not meant to be cited by later generations. Both lemma and gloss were written in the same Perso-Arabic script, so these glossaries may not appear at first to be multilingual. All of the lemmas in the glossary in figure 2, ُیِتِبَبِ-یُشِیحةِبی، were marked with a red line on top. Glossaries were ordered alphabetically by lemmas, each new entry marked by a red line, but the text was sometimes written in a regular block, like any prose text. The red lines were thus necessary to highlight these terms and make the glossary easily searchable. All the languages were subsumed into a single Perso-Arabic script, even in the many glossaries written in tabular format, whether lined or unlined (as in fig. 1), whether demarcating entries through spacing or by writing the lemmas in red ink. This continuity of script underscores the prestige of Arabic and Persian; texts of ُتْب in South Asia were exclusively composed and read in Arabic and Persian until the nineteenth century. But Persian especially functioned as a “composite expressive whole—a sort of hyperlanguage—made up of several different and recognizable languages,” including Arabic, Turki, and Hindavi, as Stefano Pellò argues in his study of glossaries in fifteenth-century India. Reflecting on the “almost complete
absence of Hindavi from Persian texts,” Francesca Orsini uses the term *diglossia* to index the hierarchy between Persian and Hindavi, among other vernacular languages in medieval North India. Thus, we realize Hindavi was relevant to the daily practice of *ṭibb* before the nineteenth century only through manuscripts in the Perso-Arabic script, rather than other contemporary scripts.

Across South Asia, the diglossia of Persian and Hindavi is also apparent in the location of these anonymous medical glossaries within manuscripts as mere appendages to properly authored Persian texts. However, Persian and Hindavi were in use at the same time, with oral Hindavi genres circulating among Indo-Persian audiences. Persian-Hindavi glossaries were also included alongside popular erotological texts, like the fourteenth-century *Laẓẓat al-Nisāʾ* (The pleasure of women) by Ḍiyāʾ al-Dīn

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24 Francesca Orsini, “Traces of a Multilingual World: Hindavi in Persian Texts,” in Orsini and Shaikh, *After Timur Left* (cit. n. 23), 404–5. By contrast, in some manuscripts of the Mediterranean *synonyma* literature, different scripts were used to list the names of materia medica in Latin and Arabic, while names in vernacular *ajamiyya* (referring to Romance languages) were written in the Perso-Arabic script. Local words are taken from earlier generations of textual authorities, only occasionally drawn from the author’s experiences with people locally. See note 14 of the present article.

Nakshābī (d. ca. 1350). This and other texts in the “Nakshābī tradition” drew heavily on the erotological Kokaśāstra tradition in Sanskrit and had a large readership beyond medical practitioners.26 This is just one example among many of the formal translation of Sanskrit medical knowledge into Persian over seven centuries, a process which—while moving knowledge from one cosmopolitan language to another—often involved oral conversations in a shared vernacular among the learned translators.27 But as informal medical glossaries show, multilingualism also shaped the more mundane practice of ṭībb, beyond formal translation.

Teasing out the relationship between textual and oral knowledge, and between cosmopolitan and vernacular languages, leads us to a better understanding of any science’s full community of knowers. The glossary entry is the outer edge of the cosmopolitan, a juncture from where the relationships between languages in ṭībb and other sciences are visible. It is in medical glossaries that cosmopolitan and vernacular languages are calibrated with each other, and medicinal substances mediate this link or “articulation.” The differences between these registers are softened through their linkage, but also reinforced. The lemma was made to be the formal term: its gloss was contingent, in need of verification and replacement.

As Orsini puts it, “The oral Hindavi world got transcribed in Persian, or else was left out of the archive.”28 However, the hierarchy of languages in the Persianate sphere was not representative of all South Asian languages. By the turn of the second millennium, practitioners of Ayurveda had to choose whether to compose their medical texts in cosmopolitan languages (Arabic, Persian, and Sanskrit) or in vernacular languages (like Bangla, Tamil, Kannada, and Hindavi). There was precedent for composition in both registers.29 This choice would have been even more pronounced by the seventeenth century, when the glossary in figure 2 was appended to one manuscript of the Tibb-i Shihābī. Vernacular-language texts of Ayurveda proliferated by the early modern period, perhaps creating an environment in which multiple authors of ṭībb explicitly justified their choice to write in Persian over Hindavi.30 Though they affirmed the language hierarchy, they acknowledged the vernacular as an (inferior) option. And as Persian texts about Ayurveda and Sanskrit texts about ṭībb demonstrate, the relationship between language and medical tradition was by no means fixed.31 Medical glossaries

27 Fabrizio Speziale, Culture Persane et médecine Ayurvédique en Asie du Sud (Leiden: Brill, 2018), 36.
28 Orsini, “Traces of a Multilingual World” (cit. n. 24), 406.
30 Speziale, Culture Persane (cit. n. 27), 56.
enabled the continued use of cosmopolitan languages in ṭibb amid these dynamic shifts.

THE FOUR GLOSSARIES OF THE ṬIBB-I SHIHĀĪ

While the creation and use of medical glossaries was a broader phenomenon across the Islamic world, I focus in this article on ṭibb in South Asia rather than the Middle East. We need to disaggregate the “Islamic world” and understand ṭibb in its regional specificities to comprehend a medical system used across a huge swathe of Eurasia and parts of Africa. The glossaries give us crucial insights into the particularities of their sites of composition—something that formal texts of ṭibb do not usually acknowledge.
The four glossaries I focus on in this article were added to the beginning or end of manuscripts of the Ṭibb-i Shihābī, but they still differ in length, format, and content. These appended glossaries were written in manuscripts copied from the seventeenth to the nineteenth centuries. Of the thirteen surviving manuscripts of Ṭibb-i Shihābī, five have accompanying glossaries.32 Often, medical glossaries are not titled, but as illustrated in table 1, the titles of the glossaries range from a single word, Farhang (Glossary), to descriptive, as in Farhang-i Ṭibb dar Bayān-i lughāt-i mufradāt bar tartīb-i hurūf-i tahajjī (Medical glossary explaining the language of simples in alphabetical order). Two of these glossaries are organized in tabular format and tend to be terse, providing a name of a drug for a name of a drug. The other two glossaries occasionally provide longer entries that list the available types of a substance, describe their differences, and state which is most efficacious. This style is facilitated by their prose format;

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32 I studied four manuscripts of the Ṭibb-i Shihābī that include glossaries: First glossary: Telangana Government Oriental Manuscript Library and Research Institute, Hyderabad (hereafter cited as TGOMLRI) Tibb 355; Second glossary: The Royal Danish Library, Copenhagen (hereafter cited as RDL), The Oriental Collection, Pers. 23; Third glossary: Salar Jung Museum Library, Hyderabad, Tibb 145; Fourth glossary: British Library, London, Indian Office Islamic 1735. Fabrizio Speziale relies on two manuscripts, the Teheran, Kitābkhanā-yi Majlis, 14404, which I have not gained access to, and the RDL manuscript mentioned above. See Speziale, Culture Persane (cit. n. 27), 79n137.
the author would have had to compose or copy the glossary from beginning to end, since each term takes up a different amount of space.

Before delving further into the specificities of each glossary, it may be helpful to trace mentions of a single substance through each, to give a sense of how much individual glossaries diverge. Ajwain, a common seed used in medicine and cuisine in South Asia and beyond, appears in all the glossaries as the meaning for a variety of terms. In many Arabic and Persian texts of *ṭibb*, ajwain is called *nānkhwāh*; some Arabic texts explain that this is a Persian word meaning “desirer of bread.”³³ They largely agree on its heating and drying qualities. Unlike any of the authoritative medical texts, three of the four glossaries offer ajwain as the gloss for the lemma *qurrat al-ʿayn*, a phrase that means “darling” (lit. “solace of the eye”). This lovely phrase occurs along with the more common *nānkhwāh*, though sometimes, *qurrat al-ʿayn* is described as a different type of ajwain from *nānkhwāh*. In the first glossary, further specifications are provided as to where *qurrat al-ʿayn* can be found. In the second glossary, this same phrase is translated as *ajwāīn khurda tā*, or “edible ajwain.” And in addition to these names for ajwain, two of the glossaries have several other lemmas that also translate to it. In the second glossary, the author provides *naqar khwān*, *walakhnūt*, and *wadd* as equivalents for *ajwāīn khurāsānī*. In the third glossary, *ajmūd* is the gloss for *ajwain khurāsānī* and *zanyān*, while *shānā* is the gloss for *chūrā ajwain* and *naghzkhūlān*. This profusion of terms for variants of a single material was not uncommon. While some of these names remain mysterious, others have come to refer to other plants: *qurrat al-ʿayn* for “watercress” in standard Arabic, *ajmūd* for “parsley” in Persian.

The variation across glossaries points to the temporal instability and regional specificity of terminology, adding strength to Guy Attewell’s argument that *ṭibb* is not one system across time. Calling *ṭibb* a system has its own history rooted in the professional concerns of practitioners at the turn of the twentieth century.³⁴

The authors of glossaries were in conversation with a variety of people to obtain this profusion of names for materia medica, people whose role is obfuscated in formally authored texts. Many historians of science are now attending to the epistemologies of people who were efficacious in manipulating the natural world, working primarily in the oral and experiential rather than the textual.³⁵ The glossaries point to how generative their methodologies will be for the history of science and medicine in the Islamic world. A focus on this line of inquiry would lead to more sources being considered as relevant to the history of medieval science. For example, recent work on the medieval history of the language of the peripatetic Banū Sāsān people shows that among speakers of this language were medical practitioners—but not physicians. Speakers of this “language of ghurābāʾ (strangers),” as Banū Sāsān’s language was often called, included bloodletters, cuppers, “sellers of unguents and medicines,”

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and practitioners of eye medicine, alongside beggars, astrologers, and others. Training in literary Arabic and Persian was largely accessible to particular classes and genders of people in a social hierarchy. Looking at other languages may reveal more of premodern medicine beyond male, literate physicians, in whose work historians of medicine have primarily been interested. No doubt, there is still much work to be done in that vein, considering the number of Arabic and Persian \textit{ṭibb} manuscripts in libraries all over the world that have not yet been studied.\textsuperscript{37} Persian texts—and thus the history of sciences in Persia, Central Asia, and South Asia—have received less attention in European language scholarship than Arabic texts, largely because Persian texts were not as directly relevant to the history of European science as Arabic texts composed in the Mediterranean littoral.\textsuperscript{38} This paucity should soon be remedied. But these glossaries may help to put the textualized knowledge of physicians in broader context. As Alberts, Fransen, and Leong argue in their introduction to this volume, the “articulation” of translation is contingent and context-dependent; the “linkage” between words in a glossary is, as Stuart Hall notes, “not necessary, determined, absolute or essential for all time.”\\textsuperscript{39} The format, anonymity, and marginality of the glossaries show just how contingent the authors of these translations into the vernacular considered them to be.

\section*{GLOSSARIES BEYOND MEDICINE}

The glossaries appended to the ends of texts of \textit{ṭibb} were mostly concerned with correctly identifying plant-based materia medica. Comprehensive coverage of medical terminology was taken on by hefty dictionaries like the \textit{Bahr al-Jawāhir fī tahlīq al-muṣṭalahāt al-ṭibbiyya} (The Sea of gems in the verification of medical terminology), composed in 1518, mentioned below. The short multilingual glossaries never became an autonomous genre of their own—they aimed to assist readers in medical encounters.\textsuperscript{40} Their content was also less consistent than that of formal herbals or pharmacopeias, which described and classified the properties of materia medica at length, though pharmacopeias sometimes included local names for a given substance, specifying the region in which a given name was used. A genre of dictionaries in \textit{ṭibb} about “Indian medicines” became prominent only at the turn of the nineteenth century, though glossaries translating from Sanskrit to vernacular languages in Ayurveda already constituted their own genre.\textsuperscript{41}


\textsuperscript{37} Let alone texts in Judeo-Arabic, Judeo-Persian, Bengali, Tamil, Dakhani, Telugu, and Malay (Jawi)! Attewell gives examples of Tamil and Telugu texts printed in the early twentieth century, including “a glossary of Hindustani and Telegu names of drugs”; Attewell, \textit{Refiguring Unani Tibb} (cit. n. 34), 19–20.


\textsuperscript{40} Speziale, \textit{Culture Persane} (cit. n. 27), 78–80. For a few rare exceptions, see the following: BL IO Islamic 88; Dār al-Kutub, Cairo, Tibb 291; TGOMLRI Tibb 282; and BL Add. 17948.

\textsuperscript{41} Speziale, \textit{Culture Persane} (cit. n. 27), 49 and 67. Thank you to Eric Gurevitch for bringing these freestanding glossaries, \textit{nighantus}, to my attention. For more on \textit{nighantus} in colonial contexts, see Minakshi Menon, “What Is Indian Spikenard?,” \textit{South Asian History and Culture} (forthcoming).
Medical glossaries were more concise and practical than literary glossaries designed to aid in the understanding of canonical authors and cultivate literary expertise, but they borrowed the titles of *farhang* or *lughat* from this long literary tradition. Lexicography, called *ʿilm al-lugha*, or “the science of language,” was a discipline of growing importance from the eighth century onward in the Islamic world, as Arabic became a language of governance in addition to literature and the religious and natural sciences. As the use of Arabic as a language of religio-political significance spread in the eighth century, these dictionaries, written by and for poets, bureaucrats, and ulema, set standards of aesthetic excellence. The earliest bilingual Arabic-Persian glossaries were compiled in the twelfth and thirteenth centuries to help readers of Persian navigate literary and religious texts. Within this broader literary context, the reader of a medical glossary may have understood how to use the text, though medical glossaries were meant to help a reader navigate oral rather than literary interactions.

The dictionary in the Persian tradition, often known as a *farhang*, was “an ancillary discipline to poetry,” meant to help students of Persian read epic poetry by glossing the difficult regional or archaic vocabulary of works like the *Shāhnāma* (Book of kings) by Firdausī (d. 1020 CE). Though these *farhangs* were “monolingual” Persian literary glossaries, compiled from the ninth to the eleventh centuries and organized topically or alphabetically, they worked across registers to translate words unknown outside a given province. While early *farhangs* in the ninth century generally contained one to two thousand entries, the *farhangs* of the fourteenth century swelled to tens of thousands of words. Readers of literary *farhangs* needed access to language that was increasingly removed in time and space from the original site of composition of texts such as the *Shāhnāma*. This was the key to writing and speaking a refined Persian for people living in Persia as well as those in the broader “Persianate” realms of Central and South Asia, where Persian was the language of governance, literature, and science but few people’s mother tongue. India became the primary site for the compilation of Persian *farhangs* between the thirteenth and eighteenth centuries, which were “explicitly comparative enterprises that sought to mediate between the desire for cosmopolitan coherence, on the one hand, and the interplay of local vernacularity on the other.” The challenge of maintaining a literary tradition is reminiscent of the problem faced by physicians, who tried to keep medical terminology in *ṭibb* consistent across many languages. The variation in medical glossaries show this was not always possible in the vernacular.

Like the medical glossaries, lexicographical texts were all written in the same Perso-Arabic script, whether they were in Arabic, Persian, or Arabic-Persian. Visually and

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textually, these literary glossaries absorbed regional variants and vernacular languages into the cosmopolitan language. Some scholars have argued that “using an Arabic and a [Hindavi] lexical equivalent in the same entry and at the same level would have given the latter language a certain prestige,” and thus have played some role in the literarization of vernacular languages in South Asia.47 A lexicography completed by Badr al-Dīn Ibrāhīm in 1433, the Farhang-i zaftānguyā u jahānpuyā (Lexicon of the polyglot and experienced world-traveler), likely received the patronage of the Ghurid dynasty in Malwa, Western India.48 At least half of the ninety-two Hindavi equivalents to Persian words in this text refer to medicines and medicinal plants; clearly, there was a desire to know vernacular names of materia medica among a reading public well beyond physicians.49 As the farhang tradition grew, it included more terms relating to everyday life, making these texts valuable sources of social history and local knowledge.50 Alongside these massive lexicographies, humble medical glossaries exemplify this untapped historical potential.

GLOSSARIES AS LOCAL TEXTS

Anonymous medical glossaries circulated in local communities. Those writing the glossaries had expectations about what their readers would and would not be familiar with. Many substances within the glossaries are listed as “well-known” (ma ṛif) or “famous” (mashhūr), or are marked with a mīm, the first letter of these two words.51 In the second glossary (mentioned in table 1), for example, we find “hawhīrah: a famous medicine (advīyya mashhūra)—the term is thus left undefined.52 In the third glossary, zaytūn (olives), rayḥān (aromatic plants), and kūknār (poppy seed) are all described as famous (mashhūr).53 Similarly, rūḍantī is simply glossed as “a famous plant” in the fourth glossary.54 The ma ṛif convention was also common in the literary farhang tradition, but it takes on a new meaning in the context of glossaries aiding physicians in the acquisition of medicinal substances or in communicating diagnoses and treatments with patients in a multilingual environment. While certain substances listed as “known” had to be learned in the cosmopolitan language, with no vernacular equivalent, the convention also gestures toward the destructive aspect of translation, as one term wins out over multiple, local names of a substance or disease, and all of their conceptual specificities. As Alberts, Fransen, and Leong argue in their introduction to

47 Pellò, “Local Lexis?” (cit. n. 23), 182.
48 While these texts may have contributed to the reputation of patrons, these translations were not institutionally produced, unlike the bilingual glossaries in multiple scripts created by the imperial Ming’s Translators’ College; Carla Nappi, “Full. Empty. Stop. Go. Translating Miscellany in Early Modern China,” in Early Modern Cultures of Translation, ed. Karen Newman and Jane Tylus (Philadelphia: Univ. of Pennsylvania Press, 2015), 206–20.
49 This text also included six hundred “Turki” words, a name that “refers to Chaghatai . . . a Turkic literary language of Central Asia of the fourteenth to sixteenth centuries”; Dilormor Karomat, “Turki and Hindavi in the World of Persian: Fourteenth- and Fifteenth-Century Dictionaries,” in Orsini and Shaikh, After Timur Left (cit. n. 23), 130–65, at 153.
51 See BnF Supplément Persan 335, fol. 1a-2a, for an example of the mīm convention.
52 RDL, The Oriental Collection, Pers. 23, fol. 27a.
53 SJML Tibb 145, fols. 9b, 10b, and 14a.
54 BL IO Islamic 1735, fol. 16b.
this volume, this process can be accidental and reluctant, or intentional and, in some contexts, violent, with the newly dominant term considered to be an “improvement” over the one it replaces.55 This intentionality of improvement is reminiscent of the perspective of physicians seeking to promote and normalize the use of their discipline’s terminologies, shuffling the glossaries with vernacular terms off into the margins.

Though local language was less valued by physicians than cosmopolitan terminology, it is a boon for historians. The glossaries sometimes specify where medicinal substances can be obtained or where the best variety can be found. The lemma for marjân, or “coral,” in the fourth glossary explains, “They call it bāsidra as it resembles a tree from the middle of the sea. They bring it out from a mountain.”56 Some descriptions specify the kind of environment where a given plant grows: one example explains that “wild fawdaj is nāghd, known to grow close to rivers”; another describes the three types of zift, or “tar,” as of the sea, desert, and mountains (daryā ṭā ṣaḥrā ṭā kūhrā).57 This may imply that the glossaries were meant to circulate in a relatively immediate geography, where the market for locally cultivated (bustānī), wild (barrī), and imported versions of each plant would have been consistent. Since the availability of substances varied widely across the vast geographies in which texts of ṭībb circulated and informed practice, they would hardly have had relevance throughout the entire region.58 In specifying the location where plants were best or most easily obtained, the glossaries often index the broader world of Indian Ocean trade.59

Except for in the fourth glossary, the languages of both lemma and gloss are not marked; the reader would be expected to figure out which word was in which language, a task for which they would need familiarity with ṭībb. Most entries are words in transliterated Greek or Syriac, as well as more obscure Arabic and Persian words.60 The hierarchy of languages is further affirmed by the alphabetical organization by lemmas in Arabic and Persian, rather than by the glosses in Persian and Hindavi.61 These sometimes include categories rather than specific objects, like aromatic plant (rayhān in Arabic, glossed as sabz in Persian), wind (rīḥ in Arabic, glossed as bād in Persian), and flower (ward in Arabic, glossed as gul in Persian).62 Because many Persian lemmas in the glossaries were actually loan words from Arabic, these glossaries also demonstrate how the boundary between Arabic and Persian terminologies

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55 Leong, Fransen, and Alberts, “Translating Medicine, ca. 800–1900” (cit. n. 39).
56 BL IO Islamic 1735, fol. 34a. Another example can be found in the Yemeni glossary composed in 1720, Biblioteca Ambrosiana, Arabi Nuovo Fondi H20, fol. 258a: “fējāwshīr is a red gum which is brought from Fārs (Persia).”
57 BL IO Islamic 1735, fol. 17b.
59 Sometimes, the place names added to plants are unique to a locale, as when many plants are called “al-hindi,” or from India, in the Yemeni glossary mentioned in n. 56. These are common substances, not known as “Indian” except in Yemen: for example, the well-known black seed of prophetic medicine (Biblioteca Ambrosiana, Arabi Nuovo Fondi H20, fol. 258b).
55 Some names come from origin stories about the substance, like the story for al-tabāšīr in the eighteenth-century Yemeni glossary mentioned in footnotes 12 and 56–8 (Biblioteca Ambrosiana, Arabi Nuovo Fondi H20, fol. 258b). The same story can also be found in Ibn Sīnā’s Canon.
60 A few of these terms were created when Sanskrit knowledge was appropriated in the ninth century Translation Movement; one such example is ṣṭīrāl, the Arabization of tripālā, an elixary of myrobalans in Ayurveda. Ṣṭīrāl is a lemma in almost every glossary; Speziale, Culture Persane (cit. n. 27), 57.
61 BL IO Islamic 1735, fol. 38b; “nārjīl pārsī jāwz hindī.” The lemma is in Persian and it was included under the first letter of the lemma rather than the first letter of the gloss in Hindavi.
62 RDL, The Oriental Collection, Pers. 23, fols. 13b, 13b, and 26b, respectively.
was shifting in medical contexts, as were the norms for medical instruction. Persian words also needed to be glossed in some of these entries, as is shown for the word *walnut* (*bakhgale* in Persian, *jawz* in Arabic, *akhrūt* in Hindavi), though Persian lemmas with Arabic glosses are rare.

Further, the glossaries demonstrate that *ṭibb* had vocabularies and norms unique to local geographies, and that there was no one vocabulary consistent within so-called Islamic medicine. Some lemmas have generic meanings in Arabic but seem to refer to the specific names of illnesses in local contexts: *waj*, which means “pain” in Arabic, is translated in the second glossary as *dard-i chashm*, or “eye pain,” in Persian. Similarly, *yabūs*, which just means “dry” in Arabic, is translated as *khushgī-yi duhn*, or “dryness of the mouth,” in Persian. Bizarrely, *ruṭūbat*, or “moisture” in Arabic, is glossed in the fourth glossary as *sard-u sardī*, the Persian words for “cold,” and in the first glossary as *tarī balgham*, the Persian words for “wet phlegm.” These specific meanings for general Arabic terms may have become colloquialisms that did not exist in other regions—they carried these meanings only for the people who compiled these glossaries in India. As the field turns toward more regional studies of science in the Islamic world, the agency of nonliterate people may become more easily visible.

**LEARNING ṬĪBB IN INDIA**

As these examples demonstrate, the glossaries give us insight into the process of learning *ṭibb* in a multilingual context like South Asia. The question of medical education is crucial to understanding the origin of this genre. Shihāb Nāgaurī, the author of the text to which these glossaries were appended, grew up in an intensely multilingual environment. All that we know of his life comes from what he tells us in his two surviving texts, both written in Persian. He likely lived in Rajasthan before moving to Gujarat at the end of the fourteenth century to seek the patronage of the governor, ZafarKhān. There, he may have also witnessed multilingual inscriptions in multiple scripts, some combination of Sanskrit, Old Gujarati, Arabic, and Persian. Other inscriptions, though bilingual in Arabic and Persian, would have been written in the same script. His inclusion of Hindavi words in the Persian script would not have seemed unusual, though he would likely have been aware that Hindavi had already been written in other scripts. Throughout his text, he gives the local names of ailments (using the verbs *khvānand* and *gūyand*) either as a part of the chapter title or in the first verse of a chapter.

Nāgaurī did not start out practicing medicine but decided to undertake its study at a later stage of life, which perhaps prompted him to write the *Ṭibb-i Shihābī* in didactic verse: a concise and accessible text for students. He included an autobiographical chapter at the end of this book, which is unusual. He tells us of his family’s history

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63 Ibid., fol. 26b.
64 Ibid., fol. 27a.
65 BL IO Islamic 1735, fol. 16b; TGOMLR Tibb 355, fol. 89a.
67 In the first verse of chapter forty-eight on *kulfaḥ*, he says, “they call it *chahā‘ī* in India” (*bi khwānand chahā‘ī bi hindūstān*); see Jamia Hamdard Acc. 2683, fol. 17b.
of migration from Ghazni to India several generations before he was born. They were appointed governors of Nagaur, Rajasthan—a position they then lost. The most recent generation of his ancestors thus worked in the administrations of other rulers, and he followed suit. Nagaurī and his father became more devoted to Islam at the behest of a charismatic sheikh and decided to leave their positions for more humble work, which led Nagaurī to medicine. Thus, as an Indian-born Muslim, he certainly spoke vernacular Indian languages like Hindavi, in addition to being trained in a refined Persian.69 He would have orally translated between the cosmopolitan and vernacular on a daily basis, but he also made the decision to include some translations of Persian terms in Hindavi in the Tibb-i Shihābī.

Two aspects of Nāgaurī’s autobiographical chapter are relevant to the present discussion. First, Nāgaurī stressed the place of orality in medicine. He believed that students of medicine needed teachers if they were to properly access the knowledge in texts, thus ensuring that learning would have an indispensable oral component. This was true in Nāgaurī’s own education: he learned Galenic medicine from a ḥakīm for a month with the aid of a Hippocratic work and other books, and studied Ayurveda in the presence of a yogi.70 Nāgaurī refers to medicine as both ṭībb and ḥikmat, but in addition to these more common names, he calls his treatment of patients “guftan-i adwiyya” and “dawā gīyī,” literally, to speak medicine.71 Nāgaurī writes about using multiple diagnostic processes, such as pulse diagnosis and urine analysis, in treating his patients, but “speaking medicine” suggests that perhaps he considered the conversations between practitioner and patient to be a diagnostic method as well. Nāgaurī cannot be made the sole representative of ṭībb in his time and period, or in the “medieval Islamic world.” Other authors in fourteenth- and fifteenth-century Gujarat took different approaches to the inclusion of Indic medicine and language in their texts, reminding us that ṭībb was not a uniform system. Nāgaurī’s biography shows that the oral was a lively realm of medical education and practice with unique, local qualities.

TEXTUALITY AND ORALITY

In the glossaries composed centuries after Nāgaurī’s death, it is clear that the process of compiling a glossary was textual as well as oral. When I counted the number of terms glossed per chapter, I tracked which chapters had the most and least terms. The chapters of terms beginning with the letters ḍād and dhāl, letters with unique pronunciations in Arabic and which are used less commonly in Persian, had less than 1.5 percent of the total terms in the glossary. This ratio was true across all the glossaries and suggests that those writing the glossaries were often adapting their lists of lemmas from older glossaries, though they felt no need to acknowledge sources for either lemmas or glosses.

69 Fabrizio Speziale has highlighted the creativity of Nāgaurī’s synthesis of Ayurvedic and Galenic physiology; he incorporated wind (vāta, an Ayurvedic dosa) into a new four-humor framework; see Speziale, “A 14th Century Revision of the Avicennian and Ayurvedic Humoral Pathology: The Hybrid Model by Šihāb al-Dīn Nāgawrī,” Oriens 42 (2014): 514–32; and Speziale, Culture Persane (cit. n. 27), 90–101 and 168.

70 He also emphasizes orality when describing the effectiveness of the arguments (ḥujjat) of his sheikh.

71 Hamza, “A Hakim’s Tale” (cit. n. 68), 69. Nāgaurī also uses the words for physician derived from ṭībb (ṭabīb) and ḥikmat (ḥakīm) for practitioners of both Galenic and Ayurvedic medicine.
But the importance of the oral to the creation of these glossaries is most evident when they mention other groups of people, some nonliterate, whom physicians must have interacted with in an oral register. Most glossaries communicated equivalence between lemma and gloss through a simple juxtaposition, though some, like the second and fourth glossaries, include commentary in certain entries. Sometimes, longer entries specify the communities in which medicinal substances are known by a certain name.\textsuperscript{72} These imply that the plants in question would be available from farmers or pharmacists who were knowledgeable about them. Thus, for a physician to obtain them directly from someone in that professional group, he would need to know the names in use among these professional communities. The first glossary includes many such entries: “Astarak is a plant which in India is called (gūyand) makhnā mul. The yogis (jūgyān) dig up its roots.”\textsuperscript{73} These group names remind us that physicians may have had strong incentives to build relationships with a range of nonliterate people to succeed in their practice.

Occasionally, the translations are qualified by verbs. As mentioned above, this usually takes the form of the verbs gūyand, “they say,” and khwānand, “they read/recite,” which generally means “as they say” or “which they call.” For example, in the second glossary, we find “lāghiyya, a plant that they call (gūyand) jhalat.”\textsuperscript{74} The meaning of these verbs is significant and suggests an environment of orality in which the compiler and reader of the glossary seek to match what people call a plant or a disease with its name in authoritative terminology. Because most of the glossaries do not explain which word is in which language and expect the reader to be able to discern this, these glossaries are meant to aid those with enough prior knowledge of textual ṭebb to recognize the lemmas. At the least, the reader should be able to read the Perso-Arabic script and recognize the glosses provided. Still, because the text is organized alphabetically by the lemmas, it would be most useful to those already familiar with the specialized terminology of ṭebb. But the omnipresence of gūyand makes one wonder: who exactly is naming and speaking about these plants in the oral register?

These passive verbs, or verbs with vague subjects, emphasize the hierarchy of textual knowledge in ṭebb. Though some fluency in the vernacular languages of a region would have been useful, and necessary, to a practicing physician like Nāgaurī, this was not emphasized or valued as something that one should learn within authoritative texts of ṭebb. The language used by nonlearned people was considered tacit knowledge, something physicians would rely on while treating or trading with them. Although most physicians relied on the people who grew and traded in medicinal substances, these individuals are not often explicitly recognized within texts of ṭebb.\textsuperscript{75} While texts of ṭebb are not known for their meticulous citation, it is a strategy used when a physician needed to marshal the authority of a source; for example, when entering a debate on a contentious physiological matter or emphasizing the efficacy of an unusual recipe. The

\textsuperscript{72} Biblioteca Ambrosiana, Arabi Nuovo Fondi H20, fol. 258b. For an example, see note 21 of this article.
\textsuperscript{73} TOGMLRI, Tibb 355, fol. 81a.
\textsuperscript{74} RDL, The Oriental Collection, Pers. 23, fol. 28a. In this case, I was unable to identify either lemma or gloss.
conspicuous absence of even a single textual citation, the kind of citation more common in regular medical texts, indicates that authority functions differently in the glossary than in more formal genres of medical texts. The glossary contains useful and communally determined knowledge verified by the compiler and is not meant to have the lasting authority of the knowledge textualized by physicians in their tomes.

As the primary purpose of these glossaries was to facilitate the accessibility of materia medica and to correlate available medicinal substances and textual knowledge, the authors sometimes needed to mention specific communities. No individual is ever credited with helping the physicians identify these plants. No name is given as a source to make this knowledge more legitimate. All nonliterate people who are mentioned are anonymous, and their presence blurs together through the passive verb. While this may at first seem elitist, this third-person passive verb was a convention in the farhang tradition, as mentioned earlier. It could also demonstrate a sense of the communal origins and ownership of knowledge. Perhaps including individual names in such a sparse genre would have been counterproductive, especially the names of people who had not authored works and thus whose knowledge could not be located and accessed, even if cited.

As with the vague mention of “yogis” above, there are also minimal references in ṭibb to specific people who are learned in other traditions of medicine, even if those other traditions are also textual. As Fabrizio Speziale has suggested about the pre-modern process of translating Ayurvedic texts from Sanskrit into Persian, this method involved a team of learned practitioners of both Ayurveda (vaidyas) and ṭibb (ḥakīms). However, though many of these translations were done by respected scholars and sponsored by rulers in elite court contexts, most of those involved in the translation process are not named, and the Hindavi intermediary translations they almost certainly relied on have not been preserved. If oral sources of knowledge are not cited within these august scholarly circles of textual translation, it is no surprise that the communities of farmers, foragers, and traders involved in more everyday translation processes were not acknowledged by the conventions of textual citation.

**TRANSLATION AS TAḤQĪQ (VERIFICATION)**

The authors of glossaries may have thought of this process of everyday translation as taḥqīq, as they sought to ensure the accuracy of the translations and equivalences they were drawing between the names of plants. Thus, none of the glossaries are identical—even those that bear the same name are unique in content. Glossaries were open and fluid texts, meant to be altered and emended by each physician who made one anew. The physician would verify this knowledge, ensuring it was useful in the region and period in which the glossary was produced. It is clear from these glossaries that a dynamic process of translation was a crucial part of medicine across the medieval Islamic

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76 Dror Weil’s essay in this volume offers a fascinating counterpoint to the kind of translations discussed here, both in terms of how some translators maintained the link to original texts and authors, and in the seventeenth-century vernacular-language summaries of oral discourses explaining Arabo-Persian texts; Weil, “Unveiling Nature,” in *Osiris* vol. 37.

77 Speziale, *Culture Persane* (cit. n. 27), 72–4 and 162–3.

78 Ibid., 72. The exceptions are the names of the authors of the source text and the translation, such as Vāgbhaṭa and Muḥammad ibn Ismā‘īl al-Āṣīwīl respectively, when the *Aṣṭāṅgahrdaya* was translated as the *Ṭibb-i-Mahmūd Shāhī* in fifteenth-century Gujarat. See Hamza, “Islam and Medicine” (cit. n. 2).
world. Physicians became accustomed to creating equivalences between terms across a cosmopolitan-vernacular axis by matching older, textual terminology to the local names for materia medica, and sometimes ailments too. Because of the dynamism of spoken language and the variation of plant life across time and region, none of these translations could be taken for granted as stable: they needed to be continuously updated, trimmed, corrected—in short, “verified”—through a process both oral and textual.

But tahaqqiq was not an individual critical mode; physicians relied on a community closer to their region and time than the remote authorities of tibb. The imperative of tahaqqiq drove physicians practicing tibb in premodern South Asia to bring the vernacular into their Arabic and Persian texts. The belief that the cosmopolitan is more valuable than the vernacular as a language of science, in epistemologies both pre-colonial and Orientalist, has played too large a role in the history of medicine. The tahaqqiq of physicians willing to acknowledge this reality closed the distance across languages kept apart in the hierarchy of diglossia even though they were in use at the same time.

Most scholars studying tahaqqiq have focused on logic, philosophy, and theoretical medicine. Several historians of the Islamic world have recently written about the importance of tahaqqiq as verification. Within medico-philosophical debates, tahaqqiq was refined by Fakhr al-Dīn al-Rāzī (d. 1219), Ibn al-Nafīs (d. 1288), and other “post-classical” authors into a precise analytical and exegetical method, deployed by subsequent generations of writers debating theoretical topics within medical commentaries.79 In the context of new movements in seventeenth-century philosophy, some scholars defined tahaqqiq as the “independent logical demonstration of the truth” of a scholar’s views, in contrast to taqlīd, the “uncritical acceptance of received philosophical views.”80 Some have gone so far as to characterize all of early modern “Afro-Eurasian” intellectual history in terms of tahaqqiq and taqlīd, including that of early modern Europe.81 Turning to medicine and other natural sciences will reveal the other facets of tahaqqiq by acknowledging other critical methodologies besides logical demonstration—in this case, experiential and oral knowledge about material objects.

In the context of medical glossaries and dictionaries, an author’s tahaqqiq is a critical assessment of received wisdom by confirmation of the validity of equivalences across languages. Tahaqqiq is both an actor’s category and an analytical tool for understanding the epistemic work involved in translating medicine across multiple languages simultaneously. Despite Islamic authors’ stated reverence for, and frequent references to, the earliest authorities of tibb, the continuing validity of previous information could not be assumed by each new generation of physicians—especially regarding materia medica. In other words, physicians recognized that there was a dynamic, local element to this knowledge.

79 Karimullah, “Emergence of Verification” (cit. n. 5); Nahyan Fancy, “Verification and Utility in the Arabic Commentaries on the Canon of Medicine: Examples from the Works of Fakhr al-Dīn al-Rāzī (d. 1210) and Ibn al-Nafīs (d. 1288),” J. Hist. Med. Allied Sci. 75 (2020): 361–82. Fancy argues in pages 375–81 that Ibn al-Nafīs draws on his practical experiences and observations to intervene in theoretical debates. Though his process was more philosophically oriented than what we find in the medical glossaries, Ibn al-Nafīs’ reliance on observation and experimentation lends strength to the notion that the authors of glossaries may have considered their experiential work to be a form of verification.
81 Melvin-Koushki, “Tahaqqiq vs. Taqlīd” (cit. n. 5).
Physicians were not alone in constituting ṭibb. Their dependence on material substances that they did not grow, gather, or transport themselves necessitated an interplay between the oral and the textual in fixing the names of medical substances. Of the six hundred plants found in Dioscorides’ (d. ~90 CE) De Materia Medica or the hundreds more added by authors in subsequent centuries, some were no longer available by the ninth century, or were considered unidentifiable—knowledge lost to time. Many herbals, like the one written in the twelfth century by al-Ghāfiqi, included glossaries that traced the origin of plant names in use at the time, and provided equivalents across several languages, including Arabic, Greek, Syriac, Latin, Amazigh, Romance, and Persian.82 Perhaps the diglossia of multiple cosmopolitan and vernacular languages at one end of the Islamic world, in al-Andalūs, may be productively compared with the other end of Eurasia, as studied by Dror Weil in this volume.83 However, these long lists of names of materia medica across languages did not make it into most practical texts of ṭibb, let alone descriptions or illustrations of whole plants. Standard medical texts helped physicians identify dried seeds, roots, gums, and other commodities in the marketplace and would not have been useful to those foraging for whole plants. Even in an unusually practical pharmacist’s manual composed by the Cairene al-Kūhīn al-ʿAṭṭār in 1260, the processes of identifying and testing the quality of materia medica were undertaken at the shop, not in the field.84 And while physicians and pharmacists are mentioned in biographical dictionaries of the time, other laborers, such as foragers, are not.85 The division of labor in ṭibb is reflected in the archive. Though the few physicians who did forage themselves are praised, the prestige of their experiential knowledge was tied to their ability to contribute to a long textual tradition of botany, from Dioscorides onward.86 The foragers, farmers, and yogis referenced in medical glossaries who did not participate in this textual tradition could not become named authorities.

The multilingual medical glossaries could have perhaps enabled literate, male physicians to enter the domain of growers and foragers. Glossaries may have shown physicians how to access materia medica directly instead of having to rely on the pharmacist.87 The author of the fourth glossary introduces the text with this very suggestion about its usefulness:

Know this—medicines are of two types. First, those which can be found in the pharmacist’s shop. As for [the second], a perfect man should put what is known to good use!88

83 Weil, “Unveiling Nature” (cit. n. 76).
85 Ibid., 128.
86 In Ibn ʿAbī Usāība’a’s biographical dictionary of physicians, only two are described as “al-nabātī,” or botanists. Rashīd al-Ḍīn ibn al-Ṣūrī is described as one who would go to “Mount Lebanon and other spots where particular plants were found,” along with a painter whom he employed to illustrate young, full-grown, and withered plants; see E. Savage-Smith, S. Swain, and G. J. van Gelder, eds., A Literary History of Medicine (Leiden: Brill, 2020), https://doi.org/10.1163/377040688IbnAbiUsaibia.Tabaqatalatibba.lhom-ed-ara1.
87 Without a history of pharmacy in premodern South Asia, it is unclear how comparable these pharmacies were to the “marketplace pharmacies” in the medieval Middle East as described by Leigh Chipman.
88 BL IO Islamic 1735, fol. 1b.
The author implies that someone who has attained learning and improved himself, the “perfect man” (mard-i kāmil), should be able to move past the mediation of the pharmacist. He should put the local names in this glossary to good use and acquire the materia medica himself. Considering how useful it would have been to physicians to know these vernacular language names, it may be surprising that this material was relegated to glossaries and not often integrated into medical texts. The exclusion can be explained by the temporal and regional limits of local plant names, a limit that did not apply in the same way to physiology or etiology, as well as by the hierarchy inherent in the diglossia of textual and oral knowledge. As their ubiquity in medical manuscripts attests, these glossaries were an important tool for physicians.

This hierarchy was reinforced by the anonymity of the authors of these glossaries. It is also apparent in the work of authors of formal medical dictionaries, who relied on oral knowledge as a source for their process of authorship and taḥqīq. For example, Muhammad ibn Yusuf al-Harawī (fl. 1492–1518) wrote this introduction90 to one of his two alphabetical medical dictionaries, Bahr al-Jawāhir:

> All that I have reported here from trusted authorities of both kinds of science—that of bodies (abdān) and that of religions (adyān)—may aid [students] in their task. In working on this, I required the verification (taḥqīq) of that which is found within [this knowledge] about the human body as a whole, as well as its parts, and about medicines and foods, simple and compound, together with their dispositions and degrees, and some of their beneficial properties, as well as some ailments, both names and definitions, and other words in use. I found no compilation of all such words, so I compiled them from well-regarded books . . . and that which I did not find there, I became satisfied [to know] by listening to learned physicians and experienced scholars.90

Those to whom al-Harawī listened were learned and experienced physicians, but he still believed that his oral learning from them was epistemically inferior to what he learned from authoritative texts. Further, al-Harawī himself subjected this knowledge to taḥqīq through his own experiential and textual learning. Perhaps he considered the knowledge of authoritative texts to have been verified by each successive generation of physicians, and their ongoing use to be proof of a critical consensus. The way al-Harawī describes taḥqīq goes beyond the process physicians used to verify the names of materials in glossaries, applying more broadly to all aspects of knowing and treating the body in ṭibb.

Glossaries drew on and organized oral knowledge about the local names of medical terms according to the priorities of the broader tradition, creating equivalences between the cosmopolitan and vernacular registers that would augment the broader tradition, leaving its norms unchanged.91 They did not unsettle the epistemic hierarchy of ṭibb, which valued textual learning over oral, cosmopolitan languages over vernacular.

As Alisha Rankin says of the experiential knowledge of indigenous and European medical practitioners in Monardes’s work, “the archive of practice faded behind a

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90 He begins the text praising Allah, the “knower, who gave people of understanding verification (taḥqīq) and the loftiest of languages, Arabic.”
90 Bethesda, National Library of Medicine (USA) MS A 6, item 1, fol. 2a (emphasis and translation my own).
91 Medical marginalia were another means for verification across region and period; see Deborah Schlein, “Medicine without Borders: Tibb and the Asbab Tradition in Mughal and Colonial India” (PhD dissertation, Princeton Univ., 2019).
new authority”—the authority of the translator. However, in this case, the anonymous translators never asserted themselves as authors. They remained unnamed verifiers of local, communal knowledge. Those encountering the glossaries were not looking for authors and sources, because they understood names of materia medica to be shared between regional communities of knowers.

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What if medical glossaries were used in South Asia by those with primary facility in vernacular Indian languages and only minimal knowledge of Persian? Presumably, such a reader would be seeking specific Arabic or Persian medical terminology for a vernacular word they already knew. Walter Hakala suggests this possibility in his analysis of the *Qaṣīda dar Lughat-i Hind* (Poem on Indian terminology), written by Yūsufī in the sixteenth century, after he migrated to Agra. This metered, rhyming poem contains Persian and Hindavi equivalents of the names of farm animals, foods, luxury commodities, travel provisions, medicinal plants, metals, familial relationships, times of day, and weather. These are listed one after another, with the Hindavi gloss following the Persian lemma; sometimes verses included the verbs *gūyand* and *khwānand* as well. Hakala places the poem within a didactic genre called *niṣāb al-ṣīḥīyān* (children’s curriculum). Persian language-learning in South Asia, evinced by *niṣābūs* in Persian-Pashto, Persian-Punjabi, Persian-Urdu, and others, was a site for the translation of scientific and medical terminologies in literary contexts.

The fourth glossary under consideration in this article also gestures at a broader readership, because it specifies the language of lemma and gloss. The author knew that some readers were students of *ṭibb* for whom both Arabic and Persian terminologies were new. They would have been learning terms like *pain*, *eye*, and *cumin* in Persian medical texts but not necessarily known which were loanwords from Arabic, having learned them first in a vernacular like Hindavi or Dakhani. In this glossary, one finds Hindavi referred to as either *hindī*, *hindavī*, or *ahl-i hind gūyand* (as the people of India say). Another tactic the author uses is to specify the language of a given entry with its name and the verb *gūyand*. Occasionally, he spells it out as a full sentence:

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92. Alisha Rankin, “New World Drugs and the Archive of Practice,” in *Osiris* vol. 37.


95. This genre goes back to the beginning of Persian in India, inspired by the *Khāliq Bārī*, an Arabic-Persian-Hindavī poem attributed to Amīr Khusrāu (d. 1325).


97. BL IO Islamic 1735. In the *Fihrist-i Asāmī-yi Adviyya-yi Ikhtiyārāt-i Bādī ’ī* (Index of names of medicines in the *Ikhtiyārāt-i Bādī ’ī*), terms are marked with a ʾā and an ʿayn—the first letters of Persian (*fārsī*) and Arabic (*’arabī*); see SJM Tīb Farsi 31 Acc 1661.

98. Because the author was likely among the “people of India” himself, it is strange to read this phrase in the third person. However, use of this phrase was a convention of the farhang genre and does not necessarily imply that the author excluded himself. For example, in the entry for *jībāl*, some properties of the plant are prefaced with “*hukamā guft-e-and,*” or “as the physicians have said,” though the author was likely a physician. BL IO Islamic 1735, fol. 10b.

99. For example, in the entry on bamboo sugar: “*tabāsīr hindavī nabs lūchan gūyand*”; BL IO Islamic 1735, fol. 23a.
“the language of ḍarb is Arabic (lughat-i ḍarb ‘arabīst).”[100] The niṣāb and the glossary were treasured tools for students in early modern South Asia, who would encounter many Arabic as well as transliterated Greek and Syriac words in Persian texts. These short texts furthered the accessibility of ṭibb in the vernacular before the era of print.

By the end of the nineteenth century, ṭibb came to be known in South Asia as Unani ṭibb. Printed texts in both cosmopolitan and vernacular languages became a means to broaden the realm of authority and practice in ṭibb. Because of the efforts of practitioners (ḥakīms), Unani ṭibb was institutionalized and standardized by the colonial government—unlike in the Middle East, where colonial and postcolonial governments alike considered it an impediment to the spread of modern medicine.[101] Since the founding of Unani schools in South Asia at the turn of the twentieth century, ṭibb has been taught in modern Urdu, a decision closely tied to British colonial administrators’ shifting ideas about education and language politics.[102] While scholars have worked on translation and print technology in the vernacularization of ṭibb and ṭibb nabawī, or prophetic medicine, few have considered the role of the vernacular in medicine before the eighteenth century. Perhaps between general lexicographies and medical glossaries, literate patients or traders of medicinal substances gained access to specialist medical terminologies.

As demonstrated by the study of medical glossaries, investigating the relationship between cosmopolitan and vernacular languages in medical practice suggests new modes of inquiry about the history of nonelite people in the premodern Islamic world. Though this article is a preliminary study of four glossaries, a tiny share of the medical glossaries still to be found in tens of thousands of extant medical manuscripts, I hope it is sufficient to open new directions in the study of ṭibb. The authors of these glossaries were using methods of tahqīq (verification) to create these sparse but useful texts for other physicians—bridges between the lofty cosmopolitan language of authoritative texts and the everyday vernacular languages with which physicians acquired medicinal substances and communicated with patients. Throughout the early modern period, one in which vernacular languages in South Asia were gaining increasing traction as literary languages, many physicians continued to uphold the language hierarchy in ṭibb. This continuity shows that the epistemic ruptures of the nineteenth century were long and varied processes.

Attention to local specificities of ṭibb and the appearance of vernacular languages within cosmopolitan texts will lead to a disaggregation of generalizations about so-called Islamic medicine. Attending to the vernacular in our sources may help us to render visible the labor and experiential knowledge disappeared by authoritative texts of ṭibb. Medical glossaries maintain the primacy of textual and cosmopolitan language, but they show us that authoritative texts of medicine float on a sea of vernacular languages.

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[100] Ibid.