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Shifting the Paradigm. A Vizir's Persian Handbook of Āyurveda in Sixteenth-Century India

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> *There is no book on medicine more esteemed in the Indian region.*
> – Rizq Allāh Muštāqī (d. 989/1581–2), *Wāqiʿāt-i Muštāqī*

1 PERSIANATE ĀYURVEDA IN SOUTH ASIA: THE SULTANATE PERIOD

Tʜɪs ᴀʀᴛɪᴄʟᴇ discusses the change in the contents and the forms of presentation of knowledge in Persian medical handbooks composed in South Asia. It argues that these handbooks mirrored and shaped a major epistemic shift in Muslim physicians' learning and practice in South Asia, and allowed them to master new local forms of interpretation, classification and treatment of diseases compared with earlier Arabic and Persian medical books. It explores the features of one of the most representative of these texts, the *Maʿdan al-šifāʾ-i Sikandar-šāhī* (Mine of Healing of King Sikandar),[1] compiled in Northern India in the early sixteenth century. This treatise was thought to provide a comprehensive account of Ayurvedic medicine and treatment for the use of Persian-speaking readers in South Asia. At the same time, the *Maʿdan al-šifāʾ* openly criticized the adequacy of ancient Greek medical doctrine, well before the influence of modern Western views during the colonial period.

The production and readership of medical handbooks in the Islamicate world have chiefly been studied from the perspective of the texts dealing with Greco-Arabic medicine, such as the *Qānūn fī al-ṭibb* (Canon of Medicine) by Ibn Sīnā (d. 370/980). Some studies have sought to consider a larger perspective that goes beyond the approach centered on Arabic reception of Greek medical thought. Oliver Kahl provided a detailed study of the passages from Sanskrit, Syriac, and

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1 Hereafter referred to as the *Maʿdan al-šifāʾ*.

Persian sources found in the *Kitāb al-Ḥāwī fī al-ṭibb* (Comprehensive Book on Medicine) by Abū Bakr al-Rāzī (d. ca. 323/935).[2] Some scholars have looked at the *Tanksūq-nāma* (Precious Book) compiled in Iran by the Ilkhanid vizier Rašīd al-Dīn Fażl Allāh Hamadānī (d. 718/1318), who had been a practicing physician.[3] This illustrated Persian treatise was based on the translation of Chinese medical sources and was realized in the same decades in which the earliest Persian texts on Ayurvedic medicine were written in India. Several studies have examined how Ayurvedic concepts and treatments were incorporated into Persian and Urdu texts written in South Asia.[4]

Persian texts composed in South Asia provided countless accounts of Indian medicine and remedies. This vast textual corpus was produced during a long period which began during the Sultanate epoch (ca. 1206–1526) and ended in the late nineteenth century. As suggested elsewhere, the writing of Persian books dealing with Ayurvedic medicine was a crucial element in Muslim scholars' composite strategy of negotiation with the natural and cultural environment of South Asia.[5] Muslim physicians' interaction with the new features of the Indian environment took place at different and overlapping levels – botanical, linguistic, textual, social, and economic – and impelled them to adapt Greco-Arabic medical practice to the local context, a process that was chiefly realized through the translation of Indian medical and pharmacological knowledge. The composition of these texts was meant to satisfy the growing demands of Muslim readers who could not access Ayurvedic sources in Sanskrit. In pre-Mughal South Asia, the production of Persian texts on Ayurvedic medicine was spread mainly over two centuries: the earliest extant treatise dates to the first part of the fourteenth century – although some earlier texts have been lost – and texts on this topic were written until the first part of the sixteenth century.[6]

The *Ma'dan al-šifā'* is one the lengthiest Persian texts on Ayurvedic medicine written in South Asia. It was compiled during the last phase of the Sultanate period, about fourteen years before the first Mughal emperor Bābur came to power in 932/1526. This article proposes a new reading of this text.[7] It suggests that the compilation *Ma'dan al-šifā'* should be read within the larger process of the incorporation of Ayurvedic materials within Persian medical texts which occurred during the Sultanate period. It inquires into the authorship and the dedication of the *Ma'dan al-šifā'*, suggesting that it was compiled by the vizir, usually

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2 Kahl 2015.
3 Berlekamp 2010; Lo and Wang 2013.
4 On Persian texts, see Speziale 2010*a*,*c*; 2014; 2018*a*,*b*; 2019; 2020; 2023. See also Mahmudian and Reichmuth 2020. For Urdu texts, see Husain, Bhatnagar, and Ali 1998; 1999; Husain and Bhatnagar 2002; Speziale

2010*a*.
5 See Speziale 2018*a*; 2020.
6 Speziale 2018*a*: 164–179.
7 For earlier discussions of the *Ma'dan al-šifā'* and its contents, see Dietz 1833; Haas 1876; Siddiqi 1959: 96–109; Pasha 1964; 1971; 1972; Azmi 2004: 16–18.

regarded as its writer. The next part discusses the conceptual and practical issues discussed in the book's preface, which explains the reasons underlying its composition, as well the parallels with the *Ṭoḍarānanda*, a Sanskrit encyclopedia written in the late sixteenth century. The last part looks at the conceptual structure of the *Maʿdan al-šifāʾ* and the way different Sanskrit sources were chosen to shape the organization of the sections of the Persian book. The conclusion suggests that the overall framework of the book relied on the overlap of models of presentation of medical knowledge, a device meant to negotiate between the models of the Sanskrit sources and those of the Muslim readers.

The *Maʿdan al-šifāʾ* did not appear ex nihilo. When the translations of the Sanskrit texts gathered in the *Maʿdan al-šifāʾ* began, Persian texts discussing Ayurvedic views and treatment had already appeared in different regions of South Asia. Later authors mention a few early texts which have not been preserved, such as the *Majmūʿa-yi Šamsī* (Compendium of Šams) by Ḫwāja Šams Mustawfī, seemingly written between the late thirteenth century and the early fourteenth century,[8] and the Persian translation – entitled *Maḫzan al-šifāʾ wa maʿdan al-ġanāʾ* (Repository of Healing and Mine of Wealth) – of a text attributed to Nāgārjuna. The latter could be the source of the chapter on Indian *rasaśāstra* (medical alchemy) in Żiyāʾ Muḥammad ʿUmar Ġaznawī's *Majmūʿa-yi Żiyāʾī* (Compendium of Żiyāʾ), a handbook of Greco-Arab medicine which also incorporates various materials from Indian sources. It was written at Dawlatabad when the city became (in 727/1327) the second capital of Sultan Muḥammad ibn Tuġluq (r. 1325–1351).[9] Indian notions and terms are found in the *Rāḥat al-insān* by Ilyās ibn Šihāb Żiyāʾ, a treatise on pathology and treatment written in 778/1376 for Sultan Fīrūz Šāh Tuġluq (r. 1351–1388) of Delhi who also ordered the translation of Sanskrit texts on astrology and related matters, among which is the *Bṛhatsaṃhitā* by Varāhamihira (sixth century).[10]

The *Šifāʾ al-maraż* (Healing of Disease) by Šihāb al-Dīn Nāgawrī, which proposed a synthesis of Greco-Arabic and Ayurvedic theories of humoral pathology, was one the most innovative texts written during the Sultanate period. This medical handbook in poetry was completed in 790/1388. Its author lived between Rajasthan and Gujarat and referred in his work to having frequented the yogis.[11] In the first chapter, Nāgawrī proposes an alternative view of pathology that combines the humoral principles of Greco-Arabic and Ayurvedic thought. Nāgawrī's main aim is to integrate the Ayurvedic concept of wind (*vāta* in Sanskrit, *bād*

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8 On this lost treatise, see Speziale 2013.
9 On the *Majmūʿa-yi Żiyāʾī* and its chapter on *rasaśāstra*, see Speziale 2019: 5–6, 25–26.
10 Ilyās ibn Šihāb Żiyāʾ, *Rāḥat al-insān*, MS Hyderabad, Oriental Manuscript Library and Research Institute, pers. 387. On the

Persian translation of the *Bṛhatsaṃhitā* made for Fīrūz Šāh Tuġluq, see Orthmann 2017.
11 On Indian Muslim physicians' accounts of yogis and yogis' alchemical formulas, see Speziale 2022.

in Persian) in the fourfold humoral and etiological paradigm of Muslim physicians.[12] The *Tajribāt al-mujarrabāt-i Ġiyāṯ-šāhī* (Tested Remedies of King Ġiyāṯ) by Saʿd Allāh Niẓām Zanjānī discusses Indian physicians' practices at length.[13] During the reign of Sikandar Lōdī, another Persian medical text dealing with Indian elements was written around fifteen years before the *Maʿdan al-šifāʾ*. It is the [*Kitāb-i*] *Sulaymān-šāhī* by Qāsim ibn Quṭb ibn Yaʿqūb Ḥakīm which was completed in 902/1496–1497 and dedicated to a nobleman of the court.[14]

The texts mentioned above are mostly composite works combining features of Muslim and Indian physicians' practices and written by physicians who sometimes dedicated their works to rulers and noblemen. The production of complete translations of Sanskrit texts into Persian was a more demanding enterprise that, during the Sultanate period, was realized chiefly in the court environment and under the patronage of Muslim elites. Not long before the compilation of the *Maʿdan al-šifāʾ*, the translation project of a Sanskrit medical text was completed in Gujarat at the court of Sultan Maḥmūd Bēgrā (r. 1458–1511). It was the Persian version of the *Aṣṭāṅgahṛdayasaṃhitā* of Vāgbhaṭa, one of the canonical texts of the Ayurvedic tradition. The translation was dedicated to the sultan and was given the title of *Ṭibb-i šifāʾ-i Maḥmūd-šāhī* (Medicine of Healing of King Maḥmūd).[15] The translation of Indian sources on veterinary medicine further shows this feature.[16] It began in the Sultanate period and was supported by Muslim kings' interest in the horse, an animal which played a key role in the military success of their armies in South Asia. All the Persian translations of the *Śālihotrasaṃhitā* (a title used by various Sanskrit treatises on the horse and its treatment) which appeared during the Sultanate period were made at the request of Muslim rulers of regional sultanates, Aḥmad Šāh Walī (r. 1421–34) of Gulbarga, Ġiyāṯ al-Dīn Muḥammad Šāh Ḫaljī (r. 1469–1500) of Malwa and Šams-al-Dīn Muẓaffar Šāh (r. 1511–1526) of Gujarat.[17]

This overview of the Persian treatises dealing with Āyurvedic medicine that appeared in the Sultanate period illustrates more clearly the background in which the translation project for the *Maʿdan al-šifāʾ* was conceived. Most of the Persian medical texts produced during the Sultanate period discussed and incorporated in various forms elements drawn from local sources and from

12 On Nāgawrī's division of humoral pathology, see Speziale 2014.

13 This treatise was probably dedicated to Sultan Ġiyāṯ al-Dīn Muḥammad Šāh Ḫaljī (r. 1469–1500) of Malwa, see Speziale 2018*a*: 172–173.

14 On the [*Kitāb-i*] *Sulaymān-šāhī*, see Mahmudian and Reichmuth 2020.

15 For this translation, see Zahoori 1964; Speziale 2018*a*: 169–172.

16 For the Persian writings on Indian veterinary medicine, see Speziale 2018*a*: 207–224.

17 On the earliest of these translations, the *Tarjuma-yi Sālōtar* made for Aḥmad Šāh Walī, see Orthmann and Speziale 2020. On the *Qurrat al-mulk*, realized for Ġiyāṯ al-Dīn Muḥammad Šāh Ḫaljī, see Orthmann and Speziale 2021. On the *Faras-nāma* made for Šams-al-Dīn Muẓaffar Šāh, see Speziale 2018*a*: 72–74, 211–213.

interaction with Indian scholars. This current of studies included (a) works that were entirely devoted to Āyurveda, such as the *Maʿdan al-šifāʾ* and the other translations of Sanskrit texts on medicine and veterinary medicine made in the court environment, and (b) composite works which integrated selective aspects of Indian medicine and treatment, such as Ġaznawī's *Majmūʿa-yi Żiyāʾī* and Nāgawrī's *Šifāʾ al-maraż*.

Taking the places of production of these texts into close consideration reveals a key feature of this current of studies that emerged during the Sultanate period and which would characterize the later production as well. The composition of Persian texts on Āyurveda was a trans-regional phenomenon that developed under different dynastic and regional powers. This aspect is closely connected to the political events of the Sultanate period. After the foundation of the Delhi Sultanate in the early thirteenth century, Muslim rule in South Asia split into regional kingdoms that ruled as independent powers, from the fourteenth century onward. The establishment of regional courts created new environments for the migration and settlement of Persian-speaking elites and literates, which included scholars of medicine and rational sciences as well as poets, historians, theologians, Sufis, and bureaucrats for the State administration. Provincial courts and urban environments where Hindus were the majority among the local population and savants provided a fertile ground for medical interactions with Muslim scholars. Since the beginning, the composition of Persian texts on Āyurveda appears thus as a multi-located activity where different places of production emerged and possibly even competed with each other, such as in the case of the three different translations of the *Śālihotrasaṃhitā* prepared at the instance of regional sultans.

2   THE COURT MILIEU OF THE *MAʿDAN AL-ŠIFĀʾ*: ITS AUTHORSHIP AND DEDICATEE

THE MAʿDAN AL-ŠIFĀʾ was compiled by Miyān Bhuwa ibn Ḫawāṣṣ Ḫān who dedicated it to Sultan Sikandar (r. 1489–1517) of the Lōdī dynasty (1451–1526), the last dynasty that ruled over the Delhi Sultanate (see Figure 1). It was also known under the title of *Ṭibb-i Sikandarī* (Medicine of Sikandar), and it was completed in 918/1512–3, most likely at Agra, which in 910/1504 had become the new capital of Sikandar Lōdī's reign. Miyān Bhuwa's father, Ḫawāṣṣ Ḫān, was a nobleman and a general of the Lōdī army. After his death, Miyān Bhuwa inherited his father's position and title of Ḫawāṣṣ Ḫān.[18] According to the historian Niẓām al-Dīn Aḥmad (d. 1030/1621), Miyān Bhuwa was among the great noblemen (*umarāʾ-i buzurg*) of the court and served as chief justice (*mīr ʿadl*) and
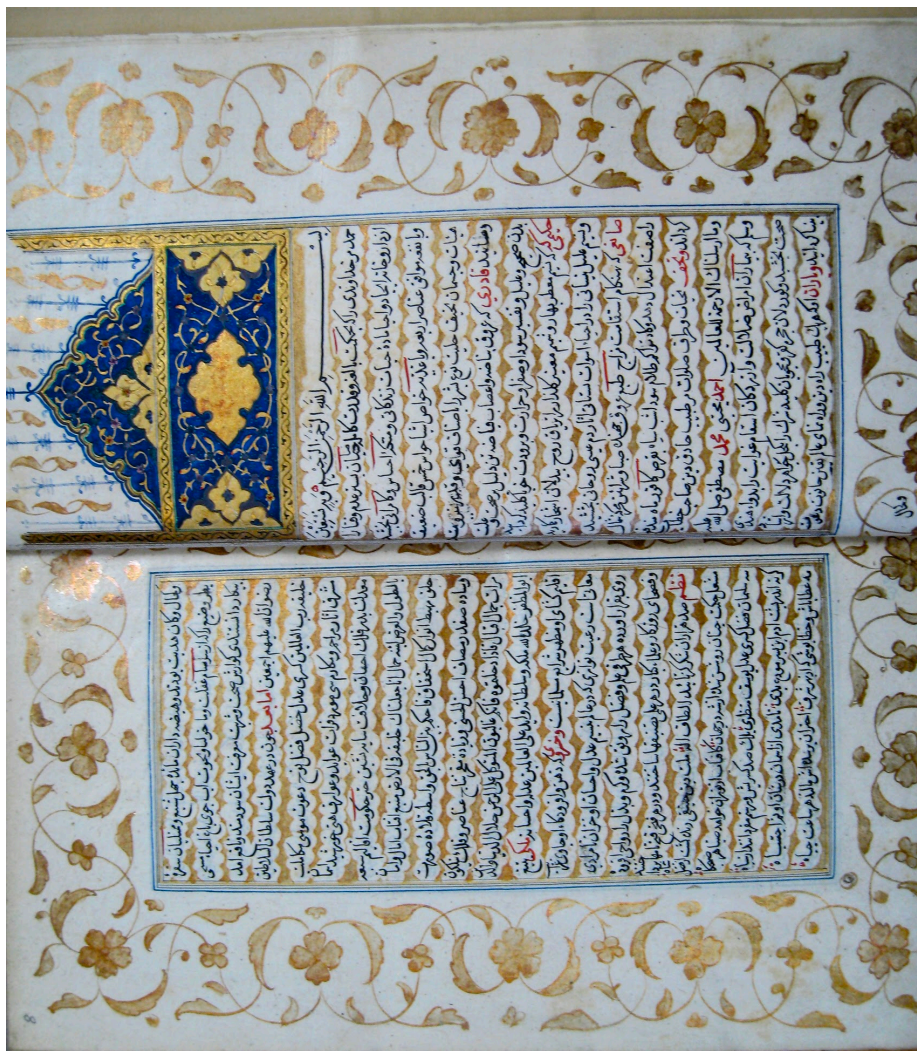
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18 Muštāqī 1422/2002: 89.

Figure 1: The preface of the *Ma'dan al-šifā'*. The above folios feature gilded interlinear decorations and vegetable patterns on the margins, and a polychrome *'unwān* (headpiece) with an interlaced floral design on a blue ground. Miyān Bhuwa, MS Cambridge, CUL, pers. Gg 2.12, ff. 7b–8a.

vizier (*wazīr*) of Sikandar Lōdī.[19] However, he fell into disgrace during the following reign of Ibrāhīm Lōdī (1517–1526), and he was imprisoned soon after the sultan's accession to the throne. Miyān Bhuwa died in prison, although his son continued to be favored by the sultan, who conferred on him his father's position.[20] Miyān Bhuwa was a Sunni, and he and his father had close connections with the Čištī master 'Abd al-Quddus Gangohī (d. 944/1537), one of the most significant figures of the interactions between Sufism and Hinduism in the early sixteenth century.[21]

Miyān Bhuwa is usually considered to be the author of the *Maʿdan al-šifāʾ*.[22] However, it seems unlikely that he alone carried out the many translations from Ayurvedic sources on which the *Maʿdan al-šifāʾ* is based. Rizq Allāh Muštāqī (d. 989/1581–2) was born in 901/1495–6 and was a contemporary of Miyān Bhuwa. He writes in his chronicle *Wāqiʿāt-i Muštāqī* that Miyān Bhuwa was associated with the *ʿulamāʾ* and the learned men (*fuzalāʾ*) of his age, and that he had scribes (*kātibān*) at his service to make copies of books and brought together scholars (*ḥukamā*) from India, Iraq, Khorasan, Transoxiana. Muštāqī further says that Miyān Bhuwa collected books on medicine (*ḥikmat*) from which selections (*intiḫāb*) were made and that one book was produced, which is known as *Ṭibb-i Sikandar-šāhī* (Medicine of King Sikandar).[23] The compilation of the *Maʿdan al-šifāʾ* was undoubtedly a lengthy task that needed adequate resources such as those of a nobleman who could employ a group of Hindu and Muslim translators.

Hāšimī was the Persian scholar who worked on the translation of the *Śālihotra* made in Gujarat, under the title of *Faras-nāma* (Book of the Horse), which was completed eight years after the *Maʿdan al-šifāʾ*. Hāšimī explains in the preface that the sultan sent him a master (*ustād*) of the Indian language with whom he worked sitting face to face. Hāšimī admits openly that the task was complicated and time-consuming due to the limits of mutual understanding, as his collaborator was a Marathi while he was from Khorasan.[24] A similar method of translation, employing a team of specialists in different languages, was probably used for the *Maʿdan al-šifāʾ*. In light of Muštāqī's account, it is more likely to suppose that Miyān Bhuwa could have assembled the translations he ordered of Ayurvedic texts and added the preface and part of the introduction.

19 Niẓām al-Dīn Aḥmad 1927: 339, 340, 347; see also Firišta 1387/2009: 615, 622, 625.
20 See Muštāqī 1422/2002: 154; Niẓām al-Dīn Aḥmad 1927: 347; Firišta 1387/2009: 622.
21 On Miyān Bhuwa's association with 'Abd al-Quddus Gangohī, see Speziale 2010*b*: 43. On 'Abd al-Quddus Gangohī and his Sufi treatise *Rušd-nāma*, see Digby 1975; Khodamoradi and Ernst 2019.
22 See Haas 1876; Pasha 1964; 1971; 1972; Azmi 2004: 16–18.
23 Muštāqī 1422/2002: 89.
24 On the *Faras-nāma* translated in 926/1520 by Zayn al-ʿĀbidīn Karbalāʾī Hāšimī, see Speziale 2018*a*: 72–74, 211–213.

The resources Miyān Bhuwa allocated for this task explain better certain features of the *Maʿdan al-šifāʾ*, and in particular, its encyclopedic character, compared with other Persian works discussing Ayurvedic materials composed in the Sultanate period. Miyān Bhuwa also commissioned and inspired the writing of a twin volume on Indian learning, the *Lahajāt-i Sikandar-šāhī* (Tones of King Sikandar), a treatise on music dedicated to the same Sultan.[25] Miyān Bhuwa's undertaking and the translations carried out at the court of Gujarat and other regional courts show that the setting up of this kind of translation project was a creation of the Sultanate period. The translation projects of the Sultanate period most likely provided the model for the well-known translation bureau (*maktab-ḫāna*) established at the Mughal court in the second half of the sixteenth century.[26]

Regarding the dedicatee, Sikandar Lōdī's attitude toward the Hindus is characterized by ambivalent features. He is remembered for destroying Hindu temples and for his strict Muslim views on religion, which led him, for instance, to prevent women from visiting shrines.[27] On the other hand, he is also known as a patron of learning, and according to Muḥammad Qāsim Firišta's history of Indian rulers, the *Gulšan-i Ibrāhīmī*, it was during Sikandar Lōdī's reign that Hindus (*kāfirān*) begin to learn the Persian language.[28] The availability of Hindu scholars trained in Persian may have helped Miyān Bhuwa's project to create a team of translators, although the *Maʿdan al-šifāʾ* does not make any reference to them or their names.

Miyān Bhuwa appears as the principal architect of the translation project. It does not seem that Sikandar Lōdī was directly involved in setting up the translation team that worked on the *Maʿdan al-šifāʾ*. ʿAbd Allāh, a historian who lived during the Mughal period, writes that the book was made on the orders (*ḥukm*) of the sultan.[29] However, this later account seems to refer to the fact that Sikandar Lōdī issued a *farmān* (royal decree) to allow Miyān Bhuwa's project. The account given in the preface about the process that led to the realization of the *Maʿdan al-šifāʾ* suggests that Sikandar Lōdī did not command the book. Miyān Bhuwa, notwithstanding or maybe due to his position at the court, had to ask the sultan's permission before starting the translation project. Sikandar Lōdī finally issued the *farmān* authorizing it. The text does not clarify why the *farmān* was necessary. However, this narrative would suggest that Miyān Bhuwa carried out his project in a context where he needed an official endorsement to justify his actions. Also, the Islamic narrative which is inserted just after the preface may

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25 See Sarmadee 1999.
26 See Truschke 2016: 104–106. For a miniature illustrating Hindu and Muslim translators working side by side in the *maktab-ḫāna*, see Speziale 2018*a*: 73.

27 See Firišta 1387/2009: 612. On the issue of temple desecration, see Eaton 2002.
28 Firišta 1387/2009: 613.
29 ʿAbd Allāh 1954: 40.

be read as a device to legitimize translation in the eyes of the dedicatee and those of Muslim readers. The text of the sultan's short *farmān* is reproduced in the preface of the *Maʿdan al-šifāʾ*. The content of this document does not reveal whether Sikandar Lōdī shared his vizir's interest in Ayurvedic medicine. The text of the *farmān* shows an appreciation of Miyān Bhuwa's book project and the translation into Persian, "the most elegant (*amlaḥ*) language." On the other hand, it does not convey any direct appreciation of the Indian knowledge dealt with in the book.[30]

3 GRECO-ARABIC KNOWLEDGE AND THE INDIAN ENVIRONMENT

THE PREFACE OF THE MAʿDAN AL-ŠIFĀʾ provides a remarkable account of the reasons underlying translation in the Indian environment and Muslims' efforts to become acquainted with Ayurvedic treatment. Translating local sources is presented here, from a theoretical and pragmatic perspective, as the most coherent strategy Muslim physicians could adopt to face the issues raised by the interaction with the South Asian natural and linguistic environment. The first key point dealt with in the preface is the discrepancy between the Greco-Arab understanding of the body and the different temperament of humans in South Asia:

> It is known on the basis of experience (*ba ḥisab-i tajārib*) that Greek knowledge (*ḥikmat-i yūnān*) is not suitable (*munāsib*) for the temperaments of people in India and does not agree (*muwāfiq*) with the climate (*āb wa hawā*) of this country".[31]

Such direct criticism of Greek knowledge is very unusual in Persian and Arabic medical texts written before the colonial period. It illustrates how the practice in a new ecological setting shaped the emergence of Muslims' critical reflections about the authority of the old texts. The same hermeneutic of the body of Greco-Arab thought is used here to prove its incongruity. The *Maʿdan al-šifāʾ* explains (a) the limits of using Greek knowledge in a different environment, such as the Indian one, and (b) the necessity of studying the local sources, on the basis of the same principles of the Greco-Arabic doctrine, namely the fact that the treatment must be appropriate to the bodily temperament in a specific climate.

Two other interrelated issues are raised in the preface, the drug lexicon and the availability of drugs referred to in Arabic and Persian texts: "Since the names of drugs are in Persian and Greek languages, they are barely identified in this country, while a number of them (*aktar-i ān*) are not present at all. Therefore it has been necessary to study (*tatabbuʿ*) books by Indian doctors, which are a

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30 Miyān Bhuwa 1294/1877: 3.

31 Miyān Bhuwa 1294/1877: 3.

magnetite (*miqnāṭīs*) for the iron of diseases and corruption of temperament".[32] On how Indian technical terminology has been integrated into the book, the text explains that: "Of some terms which are not used in Persian the original (*'ayn*) in the *hindī* language is mentioned and their meaning is explained. Some [terms], although they are used in Persian, are also mentioned in *hindī* in order to make them clear (*īżāḥ wa tašrīḥ*)".[33] As this account clearly stresses, the incorporation of the local lexicon is one of the priorities of Muslim scholars' interest in Āyurveda, especially the terms most crucial for a physician's practice, such as those relating to drugs and diseases.

Other Muslim scholars who wrote on Āyurveda posed similar questions about the understanding of temperaments in different environments and the issues of local languages and drugs.[34] Among them was the historian and physician Muḥammad Qāsim Firišta (born ca 978/1570), who wrote the *Dastūr al-aṭibbā'* (Canon of Physicians), a Persian handbook of Ayurvedic medicine. In the chapter on *rasaśāstra*, he explains that "Indian herbalists (*'aṭṭārān*) and drug sellers (*adwiya-furūšān*) know little Persian," and for this reason, he was "compelled in this book to write the names of drugs and other [items] in the Indian language (*zabān-i hindī*)".[35] From the translator's and the reader's perspective, translation was not only a way to understand the other but also a means for Muslim scholars to be understood in the local professional environment. Far from being an abstract endeavour, translation was a pragmatic strategy to overcome the lacunae of earlier Arabic and Persian texts, which, with a few exceptions, did not provide significant accounts of the lexicon, drugs, and diseases of the Indian environment.

The preface of the *Ma'dan al-šifā'* provides a bibliography of the authors or the titles – written in Persian script – of the Sanskrit sources translated for the compilation of the Persian book. Among these are the treatises of Suśruta, Caraka, Jātūkarṇa, Bhoja,[36] Bheḍa, Vāgbhaṭa, Śārṅgadhara, Vaṅgasena and Kayadutta.[37] The other texts are mentioned by their titles, the *Rasaratnākara*, the *Mādhavanidāna*, the *Cakradatta*, and the *Cintāmaṇi*.[38] The works by Caraka, Suśruta and Vāgbhaṭa are commonly regarded as the three canonical sources of Ayurvedic

32 Miyān Bhuwa 1294/1877: 3.

33 Miyān Bhuwa 1294/1877: 3.

34 On these accounts, see Speziale 2018*a*: 47–48, 52–54; 2020: 95–97.

35 Firišta, *Dastūr al-aṭibbā'*, MS Copenhagen, Det Kongelige Bibliotek, pers. XXII, f. 88b.

36 On the medical authors known as Bhoja and their works, see Meulenbeld 1999–2002: vol IIA, 160–162.

37 It has been suggested that Kayadutta

may be Kaiyadeva, the author of *Pathyāpathyavibodhaka*, a medical lexicon. See Meulenbeld 1999–2002: vol IIB, 206, note 576.

38 The *Cintāmaṇi* could be the *Vaidyacintāmaṇi* by Vallabhendra or Vallabhācārya (see Meulenbeld 1999–2002: vol IIA, 481–489), although a few texts are known by the title of *Cintāmaṇi*, see Rahman et al. 1982: 247; Meulenbeld 1999–2002: IIA, 505; III, 94.

medicine. The influence of Suśruta's *Suśrutasaṃhitā* is particularly evident in the first and the second sections of the *Ma'dan al-šifā'*. The *Mādhavanidāna* or *Rogaviniścaya* of Mādhava (around the eighth century), a treatise on diagnosis, has an essential role in shaping the third section of the Persian text.[39]

Vaṅgasena (eleventh or twelfth century) was the author of a medical handbook entitled *Cikitsāsārasaṃgraha*, which was also referred to as *Vaṅgasena*.[40] The *Cakradatta* (or *Cikitsāsaṃgraha*) of Cakrapāṇidatta (fl. 1075) is a work on therapeutics.[41] Nityanātha's *Rasaratnākara* is a well-known treatise dealing with iatrochemistry. The *Śārṅgadharasaṃhitā* by Śārṅgadhara (thirteenth or fourteenth century), a medical treatise written during the Sultanate period, is the main source for several chapters of the Persian text.[42] Besides this group of texts, translations from works that are not mentioned in the preface are also included in the Persian text, such as the *Madhukośa* (a commentary on the *Mādhavanidāna*) and the *Yogamuktāvalī*.[43]

The preface explains that the work is based on selections (*ḫulāṣa*) from Indian medical sources. The compiler further explains why he planned this composite work (*majmū'a*) instead of translating a single source:

> Among the books of Indian physicians, there is none that contains all the rules of medicine, and none of these texts is independent of the others. In addition, they are written in an unclear language (*zabān-i ġayr-faṣīḥ*) and a style without beauty (*adā'-i ġayr-malīḥ*)".[44]

This rather critical view is emblematic of the difficulties that Muslim scholars encountered in figuring out the pedagogic style and the division of subjects of Ayurvedic sources, which differed from those of Muslim medical treatises.[45]

Nevertheless, an analogous statement is found in the *Ṭoḍarānanda*, written between 1572 and 1589 by a group of pandits from Benares under the patronage of Ṭoḍaramalla (d. 998/1589). The *Ṭoḍarānanda* is a Sanskrit encyclopedia that includes a book on Ayurvedic medicine, the *Āyurvedasaukhya*. Like Miyān Bhuwa, Ṭoḍaramalla was a vizir in the service of a Muslim court. The accounts of the Mughal period relate to Ṭoḍaramalla's brilliant skills in financial matters, his bravery on the battlefield, and his scrupulous adherence to Hinduism. He enjoyed the personal patronage of Akbar (r. 1556–1605), who appointed him as the head of the financial and revenue departments, where he undertook a major reform of the imperial financial system.[46] The *Āyurvedasaukhya* is a compilation of

39 Mādhava 1987.

40 Vaṅgasena 2014.

41 Cakrapāṇidatta 2014.

42 Śārṅgadhara 2003.

43 *Yogamuktāvalī* is the title of a treatise composed by Ballāladeva (twelfth century) who did not follow Mādhava's nosography, see Meulenbeld 1999–2002: vol IIA, 158.

44 Miyān Bhuwa 1294/1877: 3.

45 See Speziale 2018*a*: 62–63.

46 See Nawāz Ḫān 1890: 123–129, who defines him as an intelligent accountant (*nawīsanda-yi fahmīda*) and an intrepid minister (*mudabbir-i šujā'*); see also Abū al-Faẓl 1873: 32, 351–353.

older texts; as observed by Dominik Wujastyk, its content is not particularly original. Nonetheless, the account of the reasons for writing the *Ṭoḍarānanda* recalls the critical judgment of Sanskrit sources of the *Ma'dan al-šifā'*. The text explains that "the old *śāstras* are hard to go through and their topics are scattered," therefore Ṭoḍaramalla "ordained that everything be united in one place and be made easy to understand."[47]

The accounts in the *Ma'dan al-šifā'* and the *Ṭoḍarānanda* justify their criticisms based on analogous arguments, namely the abstruse style of previous texts, and their lack of comprehensiveness. Could Ṭoḍaramalla or the scholars who worked for him have been aware of the *Ma'dan al-šifā'*? Although there is no direct evidence for that so far, this hypothesis is not unlikely considering that Ṭoḍaramalla knew Persian and endorsed the choice of Persian as the official language of the Mughal administration. Moreover, the *Ma'dan al-šifā'* was certainly known in the milieu of the Mughal court. Bīnā ibn Ḥasan, one of the physicians employed at Akbar's court, used the *Ma'dan al-šifā'* as a main source for his *Ḫulāṣa-yi Bīnā* (Epitome of Bīnā), a Persian handbook of pathology and treatment based on Ayurvedic sources.[48]

Another passage of the *Ṭoḍarānanda* seems to refer to the Hindus' perception of foreigners' involvement with Hindu scriptures. It relates that Ṭoḍaramalla "sponsored the work to rescue the Veda which was sunk in the deluge of foreigners".[49] Ṭoḍaramalla's project is reminiscent of Mātsyāvatāra rescuing the Vedas after they had been stolen by a demon. The polemical metaphor of the foreigners' deluge could refer to the idea of the decline of Hindu learning under Muslim rule. However, it could also indicate that certain Hindu scholars, at least those employed by Ṭoḍaramalla, perceived foreigners' appropriation of Hindu texts as a threat for which a response was needed. Nonetheless, the *Ma'dan al-šifā'* and the *Ṭoḍarānanda* share the same concern about the need to write new texts to overcome the limits of old ones.

4   THE STRUCTURE OF THE BOOK AND THE SANSKRIT MODELS OF ITS SECTIONS

THIS PART INQUIRES into the structure and the organization of the contents of the *Ma'dan al-šifā'*. It looks at the Islamic narrative placed at the beginning of the text. It explores in more detail how certain Sanskrit texts, among those translated, occupied a prominent role in the compiler's plan and how they were used to organize the different sections of the Persian book. The *Ma'dan al-šifā'* is

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47 I rely on the translation by Wujastyk 2005: 109 On the medical book of the *Ṭoḍarānanda*, see Dash and Kashyap 1980,

Meulenbeld 1999–2002: vol IIA, 272–296.
48 Speziale 2018*a*: 64, 86, 187; 2019: 9.
49 Translation by Wujastyk 2005: 109.

divided into a preface, an introduction (*muqaddama*), and three sections (*bāb*).
The introduction (*muqaddama*) is divided into two paragraphs (*mabḥaṯ*, lit. 'discussion') the first of which is meant to begin the book with an Islamic narrative
about medicine. The reference to Islamic traditions and accounts was a typical
device in medical texts by Muslim authors. Persian texts dealing with Ayurvedic
medicine and veterinary medicine also used it and adapted this practice to the
local context.[50] For instance, the preface of the fifteenth-century Persian translation of the *Śalihotra* realized by ʿAbd Allāh ibn Ṣafī at Gulbarga provides an
Islamic adaptation of the Sanskrit myth of the winged horses.[51]

The *Maʿdan al-šifāʾ* provided a rather sophisticated Islamic framework for
translation. The first paragraph of the introduction deals with "The definition of
the medical science and its nobility" (*dar taʿrīf-i ʿilm-i ṭibb wa šaraf ān*). This paragraph discusses several traditions (*ḥadīṯ*) of the prophet Muḥammad (d. 11/632)
relating to medicine and one account where God obliged Moses to take medicine
when he was ill and wanted only to rely on resignation (*tawakkul*) to God's will.
One *ḥadīṯ* is used to underline the role of diet for human health, a notion present
in both medical cultures. In this Islamized preface, the traditions of Muslim
prophets take the place of the Hindu accounts, which are included at the beginning of Ayurvedic books. For instance, one narrative referred in the first chapter
of the *Suśrutasaṃhitā* relates that Brahmā was the first to promulgate Āyurveda
and Prajāpati learned it from him.[52] Although the *Maʿdan al-šifāʾ* heavily relies
on the *Suśrutasaṃhitā* this passage and other accounts of the same kind were not
translated. The replacement of sacred narratives may be read as an effort to adapt translated materials to the reader's perspective and maybe to the views of a
zealous Muslim such as the book's dedicatee. Moreover, the compiler's use of
Islamic traditions aims to provide a justification and even an exhortation for the
book project on Indian medicine. One Islamic tradition is used to emphasize the
importance of medicine for human society (*tamaddun*, lit. "residing in a city").
In the compiler's discourse, Muḥammad's statement that "The best people are
those who are most useful to others" illustrates the principle of the universal necessity of the medical profession, which goes beyond the divisions between men,
times, and religions (*adyān*).[53]

The second paragraph of the introduction, on the principles of medicine (*dar
mabādī-i ṭibb*), deals with the Indian classification of diseases and cures. It explains that man is composed of body (*badan*) and soul (*rūḥ*) and that it is this
compound (*majmūʿ*) which is affected by diseases and not just one of the two
elements. The classification of pathology and medical substances follows the

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50 See Speziale 2018*a*: 104–110.

51 See Orthmann and Speziale 2020.

52 See Meulenbeld 1999–2002: vol IA, 203.

53 Miyān Bhuwa 1294/1877: 4.

one exposed in the first chapter of the *sūtrasthāna* (1.23–30) of the *Suśrutasaṃhitā*, although the rest of the Persian text presents several differences.[54] Diseases are divided into four types (*naw'*), of which one is 'external' and is called *āgantu*, which is translated by the Arabic equivalent term *ḫārij* (external), and three are internal (*dāḫilī*). The internal ones are the mental, *mānasa*, translated by the Arabic equivalent *qalbī*, *svābhāvika* (natural) translated by the compound term *badanī ṭabī'ī*, "natural [disease] of the body," and *śārīrika* (bodily) which is rendered by using the expression *badanī ġayr-ṭabī'ī*, the "unnatural [disease] of the body." Medicines are divided into two main categories: the immobile (*sthāvara*), that is, plants and metals, and the mobile (*jaṅgama*), which are those of animal origin.

The first section of the *Ma'dan al-šifā'* deals with the preliminary aspects of treatment (*muqaddamāt-i 'ilāj*) translated as *de praecipuis medicinae regulis* (about the main rules of medicine) in the Latin version of the table of contents contained in the Hamburg manuscript (see below).[55] The text clarifies that this *bāb* corresponds to the section called *sūtrasthāna*, that is to say, the first general section of Ayurvedic texts. It is divided into thirty-two chapters (*faṣl*) which cover a number of different subjects, including medical instruction and the importance of studying with an experienced teacher, the doctrine of tastes and seasonal regimen, surgical operations and instruments, hygiene and diet, humoral pathology, diagnosis and analysis of pulse, weights, and a medical lexicon as well as the descriptions of different kind of medicines.

Many chapters in this section are based on translations from the *Suśrutasaṃhitā*.[56] Among these, chapter four presents a translation of chapter seven (*yantravidhi*, written as *jantra-bidhi* in Persian script) of the *sūtrasthāna* section of the *Suśrutasaṃhitā* on blunt surgical instruments. There are one hundred and one of these and the most important of them is said to be the physician's hand. The following *faṣl* is an adaptation of chapter eight (*śastrāvacāraṇīya*, written as *šastrāwačāranī* in Persian script) of the *sūtrasthāna* which describes twenty sharp surgical instruments. This chapter shows that Persian glosses were added to the Sanskrit source during the translation to make it clearer. The Persian text explains that according to Suśruta, the shape of those instruments can be deduced from their names – which obviously could hardly be understood by non-Sanskrit-knowing Hindu readers. For this reason, in the Persian version a paragraph has been included explaining the shape and the dimensions of instruments. The short chapter six is an adaptation of chapter nine (*yogyāsūtrīya*) of

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54 Suśruta 1907–16: 10–13; Meulenbeld 1999–2002: vol IA, 204.
55 Miyān Bhuwa 1294/1877: 6–92; Dietz 1833: 176.

56 See Suśruta 1907–16. For a detailed description of the contents and titles of sections and chapters of the *Suśrutasaṃhitā*, see Meulenbeld 1999–2002: vol IA, 201–333.

the first section of the *Suśrutasaṃhitā*, which deals with how to teach surgical operations to students.

Chapter twelve of the Persian text is based on chapter thirty-eight (*dravyas-aṃgrahaṇīya*) of the *sūtrasthāna*, which describes thirty-seven groups of drugs. However, the Persian chapter is arranged in thirty-eight paragraphs. The Arabic category of *ma'jūn* (electuary) is used throughout the chapter to refer to Ayurvedic prescriptions. The Sanskrit names of groups of drugs are carefully referred to in Persian script, while some are partially translated into Persian. For instance, the smaller (*svalpa*) *pañcamūla* group becomes *pančamūl ḫurd* (small), and the greater (*mahat*) *pañcamūla* is rendered as *pančamūl buzurg* (great).

The following *faṣl* (*dar 'alāmāt-i ziyadātī wa nuqṣān-i aḫlāṭ-i ṯalāṯa wa haft dhātu wa bawl*) is based on chapter fifteen (*doṣadhātumalakṣayavṛddhivijñānīya*) of Suśruta's *sūtrasthāna* which deals with the signs of decrease and increase of humors (*doṣa*, glossed by the Arabic *aḫlāṭ*), bodily elements (*dhātu*) and impurities (*mala*, glossed by the Arabic *bawl*). This chapter shows a more selective integration of Indian technical terms compared with other chapters, such as the previous one, which included many Sanskrit words. The three *doṣa* are here referred to through the equivalent terms of the Arabic-Persian lexicon (*bād* for wind, *balġam* for phlegm, and *talḫa* for bile), while the Sanskrit terms are not specified. Nor are the Sanskrit terms referred to when the three Ayurvedic humors are mentioned for the first time in the book at the end of the preface.[57]

The terms used in chapter fifteen of *sūtrasthāna* to define the subdivisions of each *doṣa* are also excluded from the Persian version. The following *faṣl* (*dar kayfiyyat-i ijtimā'-i ġalb-i aḫlāṭ-i ṯalāṯa wa ḫūn*, "on the combination of the predominance of the three humors and blood") is an adaptation of chapter twenty-one (*vraṇapraśna*) of the first section of *Suśrutasaṃhitā* which deals with sores (*vraṇa*). The title of the chapter is considerably changed in the Persian version, seemingly to convey to a Muslim readership a more immediate idea of the contents of this chapter which at the beginning contains a relevant discussion of the three *doṣa* (*aḫlāṭ-i ṯalāṯa*). Chapter twenty-three, which deals with the instructions for the physician of the king and the army, is a translation of chapter thirty-four (*yuktasenīya*) of the first section of *Suśrutasaṃhitā*.[58] The last chapter of the first *bāb* deals with blood and is based on chapter fourteen (*śoṇitavarṇanīya*) of the first section of Suśruta's *saṃhita*.

Śārṅgadhara's *Śārṅgadharasaṃhitā* is the source for some chapters in the first section of the *Ma'dan al-šifā'*. Śārṅgadhara's work stands as a seminal text in the development of Ayurvedic writings as it is the first Sanskrit treatise that includes

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57 For a detailed discussion of the translation of the theory of *tridoṣa* in Persian texts, see Speziale 2018*b*.

58 On this chapter, see Haas 1876.

a chapter on the examination of the pulse.[59] Muslim physicians in South Asia became quite familiar with the contents of this treatise. The *Śārṅgadharasaṃhita* and
extracts from it circulated through different Persian translations, such as the one
by Muḥammad Jamīl ibn ʿAbd al-Wahhāb who, in the preface, does not hesitate to equate the practical utility (*ʿamalī*) of Śārṅgadhara's work with that of the
Qānūn fī al-ṭibb of Ibn Sīnā.[60] Chapter eighteen of the first *bāb* of the *Maʿdan al-
šifāʾ* is an adaptation of the paragraph on weights and measures and of part of
the following one on ingredients which are in the first chapter of the first section
(*pūrvakhaṇḍa*) of the *Śārṅgadharasaṃhita*. The original text is interpolated with
glosses that specify the equivalents of several Indian weights into *diram*, a unit
of weight commonly used in Persian medical texts. Chapter twenty (*dar maʿrifati nabż*) corresponds to the third chapter (*nāḍīparīkṣādividhi*) of the *pūrvakhaṇḍa*,
which deals with the diagnosis of the pulse and exposes the relations between
the kind of pulses and the three *doṣa*.

Embryology and anatomy are dealt with in the second and shortest section
of the *Maʿdan al-šifāʾ* (*dar kayfiyyat-i ḫilqat-i insān wa tašrīḥ-i aʿżā-yi ān*, "on the
creation of man and the anatomy of his organs").[61] The whole section is an
adaptation of the third part (*śārīrasthāna*) of the *Suśrutasaṃhitā*. However, the
first chapter of the Sanskrit text has not been kept in the Persian version. This
chapter dealt with the principles of the Sāṃkhya philosophy which are relevant
to medical learning. The number of chapters (*faṣl*) of the second *bāb* is therefore
reduced to nine compared to the ten chapters of the Sanskrit text. Apart from
this, the order of chapters follows that of Suśruta's *śārīrasthāna*. Chapter one (*dar
kayfiyyat-i manī-i rijāl wa ḫūn-i ḥayż-i nisāʾ*) corresponds to chapter two (*śukra-
śoṇitaśuddhiśārīra*) of the Sanskrit text dealing with male and female fluids and
related matters. Regarding the translation of the Indian humoral lexicon, both
the Persian term *kaf* (corresponding to Sanskrit *kapha*) and the Arabic *balġam* are
used here to refer to Ayurvedic phlegm. The translator resorted to synonyms instead of offering an unvarying translation of the same term because he took it for
granted that readers of medical texts would have understood that the two terms
were equivalents.

The two following *faṣl* deal with conception and the description of the fetus,
while the fourth (corresponding to the fifth of *śārīrasthāna*) is devoted to the anatomy of the human body. Chapter five describes the vital and vulnerable parts
of the body (*marman*, glossed by the Persian expression *maqāmhā-yi ḫaṭarnāk*),
the sixth deals with the veins (*sirā*, translated by the Persian equivalent *rag*), the
seventh is devoted to phlebotomy (*sirāvyadhavidhi*, translated by the equivalent

59 See Śārṅgadhara 2003.

60 Muḥammad Jamīl, *Ḥadīqa al-šifāʾ*, MS
London, Wellcome Trust Library, pers. 603,

f. 2b.

61 Miyān Bhuwa 1294/1877: 92–119.

Sections of the Ma'dan al-šifā'		*Sections of Ayurvedic texts*
First section on the principles of medicine	→	*sūtrasthāna* first general section of Ayurvedic texts
Second section on embryology and anatomy	→	*śārīrasthāna* section about the body, including embryology and anatomy
Third section on diagnosis and treatment	→	*nidānasthāna* and *cikitsāsthāna* sections on etiology and treatment

Table 1: The correlations between the sections of the *Ma'dan al-šifā'* and the sections of Ayurvedic texts.

Arabic term *faṣd*), the eighth to the veins called *dhamanī* (translated by the expression *uṣūl-i raghā*) while the last deals with pregnancy in women and related issues.

The third section of the *Ma'dan al-šifā'* deals with the symptoms and treatment of diseases (*'alāmat-i marż wa 'ilāj-i ān*). This section, divided into eighty-seven chapters, is the longest of the book and takes up almost four-fifths of the text in the lithograph edition.[62] The asymmetry between the length of this section and that of the first two *bāb* is emblematic of the attention Muslim scholars devoted to pathology and to methods of treatment in Ayurvedic sources. The incorporation into Persian writings of local therapeutic knowledge, substances, and lexicons is an essential element of Muslim physicians' efforts to face the critical issues of drug identification, language, and the discrepancy of Greek theory in India, which are raised in the preface of the *Ma'dan al-šifā'*. After the title of the section, the text explains that this *bāb* corresponds to what is called *cikitsāsthāna* in *hindī*, namely the section of Ayurvedic texts which deals with therapy. In addition, a few sentences later, it clarifies that it also includes materials relating to *nidāna*, the etiology of diseases. This view shapes the structure of most of the chapters dealing with a specific pathology which are divided into two parts (*qism*), the first on the symptoms and diagnosis (*'alāmat*) of a disease and the second on its treatment (*'ilāj*).

The order of chapters of the third *bāb* of *Ma'dan al-šifā'* is based on that of Mādhava's works. Although the *Mādhavanidāna* was chiefly a compilation of earlier sources, it played an influential role in rearranging the order of diseases discussed in Ayurvedic texts compared to the earlier treatises of Caraka, Suśruta, and Vāgbhaṭa.[63] Mādhava's model was followed by many later Sanskrit

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62 Miyān Bhuwa 1294/1877: 119–491.

63 Meulenbeld 1974: 2; see also Mādhava 1987; Meulenbeld 1999–2002: vol IIA, 61–62.

Sections of the Ma'dan al-šifā'		*Main Indian source and model*
First section on the principles of medicine	→	first section of *Suśrutasaṃhitā*
Second section on embryology and anatomy	→	third section of *Suśrutasaṃhitā*
Third section on diagnosis and treatment	→	Mādhava's nosographic model

Table 2: Main Indian sources and models of the sections of the *Ma'dan al-šifā'*.

works, among which Cakrapāṇidatta's *Cikitsāsaṃgraha* and Vaṅgasena's *Cikit-sāsārai* which are also among the sources used for compiling the *Ma'dan al-šifā'*. Chapters one to seventy of the third *bāb* of the *Ma'dan al-šifā'* follow the structure of the *Mādhavanidāna*, which is also divided into seventy chapters. The five forms of knowledge about the disease – which are etiology (*nidāna*), prodromes (*pūrvarūpa*), symptomatology (*rūpa*), therapeutic diagnosis (*upaśaya*), and pathogenesis (*saṃprāpti*) – and their further subdivisions are presented in the first chapter (*dar taqsīm-i 'alāmat-i marż wa bayān-i har qism-i ān*) of the Persian text; the following chapters are devoted to a specific disease or to the pathologies of a part of the body. The remaining chapters from seventy-one of *bāb* three cover several topics dealt with in the last chapters (from sixty-eight to eighty-one) of Mādhava's *Mādhavacikitsā*, a work on therapy, which until chapter sixty-seven is arranged in the same order as the *Mādhavanidāna*.[64]

The *Madhukośa* of Vijayarakṣita and Śrīkaṇṭhadatta, a major commentary of the *Mādhavanidāna*, was certainly used for the compilation of the Persian text, and it is possible that other commentaries of the *Mādhavanidāna* were consulted as well. On the other hand, the Persian text's arrangement also presents some differences compared with Mādhava's model. For instance, the topics of chapter twenty-six of the *Mādhavanidāna*, which deals with different kinds of colic (*śūla*, *pariṇāmaśūla*), are divided into two separate chapters in the Persian text, the twenty-sixth and twenty-seventh, the latter dealing only with the symptoms and treatment of *pariṇāmaśūla*. Chapter fifty-one of Mādhava's arrangement, dealing with *amlapitta* (a kind of gastritis), is shifted, and it becomes chapter twenty-five in the Persian work, most likely to place this disease close to a group of chapters dealing with the troubles of the same part of the body.

Although based on Mādhava's scheme, the third *bāb* also includes materials and prescriptions translated from several other Ayurvedic treatises, especially

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64 Mādhava   2012;   Meulenbeld   1999–
   2002: vol IIA, 67.

Figure 2: A talismanic square for pregnancy, from the lithograph edition of the *Maʿdan al-šifāʾ* (Miyān Bhuwa 1294/1877: 416).

for writing the second *qism* of chapters devoted to *ʿilāj* (treatment). For instance, the first part of chapter two, on fevers (*tap*), is based on an abridged translation of the corresponding chapter of the *Madhukośa*, while the second *qism* on treatment includes iatrochemical prescriptions (*rasahā*) drawn from the work of Śārṅgadhara, from the *Yogamuktāvalī* and the *Rasaratnākara*. Chapters two and three (on diarrhea and *grahaṇī*) again include remedies taken from the *Rasaratnākara* and Śārṅgadhara's treatise. The second *qism* of chapter five (on hemorrhoids) refers to a prescription from Vaṅgasena's treatise as well as the second *qism* of chapters eight (on anemia and jaundice) and ten (on consumption) which also include remedies taken from the *Rasaratnākara*.

The titles of the Sanskrit sources used to write the *qism*s on the treatment in the third section are often carefully referred to in the Persian script, although not throughout the text. For instance, the second chapter presents the different names of fevers in various animals which are discussed in the *Hastyāyurveda* by Pālakāpya, a well-known Sanskrit treatise on the elephant and its treatment, parts of which were also translated in later Persian treatises on elephant care.[65] This passage from the *Hastyāyurveda* is quoted in the *Madhukośa*.[66] However, none of these sources is directly referred to in the Persian text. Chapter sixty-six on pregnant women (*zan-i ḥāmila*) includes a talismanic square for pregnancy without specifying the source from which it is taken (Figure 2).[67]

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65 On the Persian texts on the elephant and the mahouts written in South Asia, see Speziale 2018*a*: 215–224.

66 See Meulenbeld 1974: 85.
67 Miyān Bhuwa 1294/1877: 416.

A group of chapters is devoted to the diseases of specific body parts. Chapter fifty-seven (corresponding to chapter fifty-six of Mādhava's classification) deals with the diagnosis and treatment of the diseases of the mouth called *mukharoga* in *hindī*; the following one exposes the ailments of the ears, while chapter fifty-nine explores the afflictions of the nose (*nāsāroga* in *hindī*). Chapter sixty gives a detailed description of the diseases of the eyes, while the following one is devoted to the illnesses of the head (called *śiroroga* in *hindī*). Another group of chapters, from sixty-two to sixty-nine, is devoted to the diseases of women and children. One of the chapters of the last part of the section, *faṣl* seventy-three, is devoted to iatrochemistry and exposes methods to purify and make hashes (*ṣāf kardan wa kuštan*) of various substances such as mercury, gold, silver, copper, iron, tin, and talc.[68] Although Nityanātha's *Rasaratnākara* is used in other chapters of the Persian text, chapter seventy-three seems to be based on an adaptation of the corresponding chapters (11 and 12) of the second section of the *Śārṅgadharasaṃhita*. The chapters on the administration of emetics and purgation (seventy-seven) and enema (seventy-eight) are followed by chapters dealing with the disorders (*fasād*) caused by these treatments. The last chapter (*fī al-mutafarriqāt*) exposes a number of miscellaneous prescriptions.

A short conclusion (*ḫātima*) is found in the lithograph edition of the Persian text. However, this seems to be absent from most manuscript copies.[69] It includes a lengthy conventional praise of Sultan Sikandar. A sentence recalls the inclusive character of the *Maʿdan al-šifāʾ*. It reminds the reader that one thousand, one hundred and sixty-seven diseases and various kinds of remedies have been mentioned in it.[70] The complete list of these diseases is also presented in the second to last chapter of the lithograph edition.

5   THE READERSHIP OF THE *MAʿDAN AL-ŠIFĀʾ*

THE MAʿDAN AL-ŠIFĀʾ enjoyed a wide readership among scholars and was copied many times in manuscript form.[71] Although composed in the court environment, it was not meant for the elite. Historical works such as Muštāqī's chronicle and the *Tārīḫ-i Dāwudī* by ʿAbd Allāh (fl. late sixteenth–early seventeenth century) also comment on the impact of this text. This type of attention and praise is seldom reserved for medical works in Persian historiographical sources. Muštāqī writes that "There is no book on medicine more esteemed (*muʿtabar*) in

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68 For the Persian medical texts dealing with *rasaśāstra*, see Speziale 2019.

69 See Miyān Bhuwa, MS Cambridge, CUL, pers. Gg 2.12; MS Copenhagen, Det Kongelige Bibliotek, pers. XXI. See also Dietz 1833; Rieu 1881: 471–473; Sachau and

Ethé 1889: 961; Ivanow 1924: 718.

70 Miyān Bhuwa 1294/1877: 490–491

71 For a list of manuscripts, although incomplete, see Munzawī 1382 š./2003: 3711–3712.

the Indian region, and anyone who reads it understands what a book it is".[72]
According to 'Abd Allāh,

> By order of Sultan Sikandar, an astonishing (*'ajīb*) book was trans-
> lated from Ayurvedic treatises (*granthā-yi bedīk*) on the science of
> medicine under the supervision of Miyān Bhuwa and was titled
> *Sikandarī*. The principles of treatment (*madār-i 'ilāj*) of the Indian
> physicians rely on this book of Sikandar".[73]

Later physicians writing in Persian on Ayurvedic medicine used the *Ma'dan al-
šifā'* in their works, for example, Bīnā ibn Ḥasan in the *Ḫulāṣa-yi Bīnā*, a text
on pathology and treatment. Another physician who was active at the Mughal
court, Nūr al-Dīn Šīrāzī, mentions the *Ma'dan al-šifā'* in the bibliography of the
texts he used to write the *'Ilājāt-i Dārā Šikōhī* (Healings of Dārā Šikōh), a medical
encyclopedia dedicated to the prince Dārā Šikōh (d. 1069/1659).[74]

The *Ma'dan al-šifā'* was printed for the first time by Nawal Kišor at Lucknow
in 1294/1877 and then reprinted in 1889. About a decade later, Muḥammad
'Aẓīm Allāh realized an Urdu translation which was published at Kanpur under
the title of *Mujarrabāt-i Ṭibb-i Sikandarī*.[75] This translation appeared at the time
when Urdu was replacing Persian as the primary language of medical teaching
among South Asian Muslims. A Latin translation of the book's table of con-
tents was to be found in the manuscript copy (made in 1001/1592), which was
kept in Hamburg.[76] The *Ma'dan al-šifā'* drew some attention in early Western
philological studies on Oriental medicine. Two articles appeared in Germany
in the nineteenth century. In 1833, Fridericus Dietz edited and published the
table of contents in Persian with the Latin translation of the Hamburg manu-
script and presented the text as *Libros Sanscritos in Persicum sermonem*, "The San-
skrit books in Persian Discourse" (see Figure 3).[77] Through the comparison of
the Persian and the Sanskrit texts, Haas showed the correspondence between
chapter twenty-three of the first *bāb* of the Persian book and the chapter on *yuk-
tasenīya* of the *Suśrutasaṃhitā*. However, he advanced the wrong hypothesis that
the *Ma'dan al-šifā'* could have been written by the Hindu physician Bhāvamiśra
(sixteenth century), who was the author of *Bhāvaprakāśa*.[78]

6   CONCLUSION: OVERLAPPING STRUCTURES

Mɪʏāɴ ʙʜᴜᴡᴀ's ᴄᴏᴍᴘᴇɴᴅɪᴜᴍ marks a significant innovation in the produc-
tion of Persian texts on Ayurvedic medicine in South Asia. It is the first

72 Muštāqī 1422/2002: 79–80.
73 'Abd Allāh 1954: 40.
74 Speziale 2010c: 60.
75 Miyān Bhuwa 1902.

76 See Storey 1971: 232.
77 Dietz 1833: 170–179; reprinted in Fonahn 1910: 19–21.
78 Haas 1876.

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Liber tertius.

De morbis cognoscendis et curandis. Indice Nidana et Chikitsā.

C. 1) De divisione symptomatum morbi et de natura uniuscujusque eorum. 2) de febre. 3) de fluxu alvi. Indice Atisāra. 4) de sangrahāni. (Ind. voc. diarrhoen.) 5) de haemorrhoide. 6) de morbo venae sectoris (varices?). 7) de helminthiasi. 8) de bandaroga (Ind. arthritide) et ictero et halimaka. (?) 9) de raktapitta (Ind. bile flava.) 10) de rācharoga (morbo regio? phthisi?) 11) de tussi. 12) de singulta. 13) de asthmate (Ind. Swāsa.) 14) de amissione vocis gutturis (aphonia.) 15) de inappetentia ciborum. 16) de vomitu (Ind. Chhardi). 17) de hydrope (Ind. Atrishna). 18) de lipothymia. 19) Potio quam faciunt. 20) de specie aliqua insaniae. 21) de epilepsia. 22) de spirituum (sive flatuum Ind. vāta) molestiis. 23) de rubris spiritibus (raktavāta?). 24) de urustambha (Ind. pedum gravitate, paralysi). 25) de Anubāta (ānavāta?). 26) de suia. 27) de specie morbi Sula. 28) de morbo uddvarta. 29) de tympanita abdominis. 30) de morbo gula (gulma?). 31) de morbo cordis (hridroga). 32) de pectoris oppressione (asthmate, urograha). 33) de ardore urinae (stranguria, mūtrākrichchhra). 34) de retentione urinae (ischuria, mūtrāghāta). 35) de calculo vesicae. 36) de seminis fluxu (gonorrhoea) 37) de morbosa obesitate (meda?) 38) de morbo quodam. 39) de morbo āmūa (spasme? sotha?) 40) de tumore testiculorum. 41) de contorsione. 42) de aegritudine hepatis (Ind. kalakanda, hepar.) 43) de morbo bilis. (?) 44) de apostemate (Ind. widdradhi.) 45) de bachtaki et vulneribus. 46) de vulneribus (ulceribus.)

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47) de bhagandara (Ind. fistula ani.) 48) de specie quadam morbi veretri. 49) de eadem re. 50) de morbo sicco (Ind. kushtha, lepra.) 51) de morbo Auderd (?) et Sītapitta (bila alba, pituita) et Kutha (?). 52) de felle acescente. 53) de specie quadam bachtaki. (?) 54) de efflorescentiis (?), quae in corpore apparent. 55) de morbo, cui apud Indos nomen Masurika (variola) et de fluxu. 56) de morbis, qui ad dentitionem pertinent. 57) de morbis, qui in internis corporis partibus apparent. 58) de morbis aurium. 59) de morbis narium (Ind. nasakaroga.) 60) de morbis oculorum (Ind. netraroga.) 61) de morbis capitis (Ind. siroroga). 62) de sanguinis superabundantia. 63) de corruptela seminis (? liquoris) et humiditate pudendi. (Ind. Somaroga.) 64) Explicatio. 65) de morbo pudendi muliebris. 66) de praecavendis quibusdam morbis. 67) de morbis mammarum (Ind. Sthanaroga.) 68) de galactopoeis mammarumque sanatione. 69) de morbis infantium (Ind. Bālaroga.) 70) de mentis indole et cura. 71) de mentis morbis curandis. 72) Interpretationes. 73) de corporibus mundandis et expurgandis. 74) de potionibus parandis. 75) de oleo propinando. 76) de calore faciendo. 77) de vomitu et purgatione. 78) de vomitu ac purgatione materiae morbosae. 79) de clysteribus. 80) de clysmis ex tempore. 81) de medicamentis naribus instillandis. 82) de fumigationibus inhalandis et gargarismatis holisque deglutiendis. 83) de sanguinis detractione. 84) de aquis amaris et acribus. 85) de cauteriis (epidemiis?). 86) de prophylaxi morborum statibusque temperamentorum. 87) de convalescentiis.

Figure 3: Fridericus Dietz's Latin translation of the table of contents of the third section of Maʿdan al-šifāʾ, on diagnosis and treatment (*de morbis cognoscendis et curandis*) (Dietz 1833: 178–179).

work which aimed to combine materials from different Sanskrit sources into a new comprehensive Persian handbook on Āyurveda that has been preserved. In several aspects, the *Maʿdan al-šifāʾ* is a specific text and presents distinctive features compared with earlier and later Persian texts on Āyurveda. Muslim physicians often preferred to produce more compact treatises on Āyurveda or chapters of works, where the materials discussed were not necessarily based on the direct textual translation of Sanskrit sources. They often presented the Ayurvedic knowledge and treatment they practiced and learned from their teachers in a context where oral teaching with masters played a crucial function in physicians' studies.[79]

The specific features of the *Maʿdan al-šifāʾ* are related to the method used to produce this book which was based on the work of a group of translators hired for the job. Miyān Bhuwa's main aim was to make a large number of Indian materials from ancient and more recent sources accessible to Persian-speaking

[79] On cross-cultural teaching involving Hindu and Muslim masters and students, see Speziale 2018a: 128–133, 147–154. The requirement to study with an expert master (*ustad-i kāmil*) is also underlined in the introduction of the *Maʿdan al-šifāʾ*, see Miyān Miyān Bhuwa 1294/1877: 4; Speziale 2018a: 129.

scholars, as can be inferred from the size of the lithograph edition of the *Maʿdan al-šifāʾ*, which counts 492 large-size pages. No other Muslim patron or scholar after him undertook such an ambitious program of translation from different Ayurvedic sources. Also, although the translation adds glosses to unclear parts of the source texts, the purpose of the *Maʿdan al-šifāʾ* is not to interpret translated materials through the eyes of the translator. It does not provide major comparisons to or quotations from canonical authorities of the Greco-Arabic tradition. Conversely, the text is intended to offer readers a rather accurate rendering of the source texts. Glosses are meant to clarify meanings, not to add extra layers of interpretation.

Certain features of the *Maʿdan al-šifāʾ* may recall the style of the *kunnāš*, a Syriac word meaning "compilation," which was used to refer to the new compilations and handbooks of Greek medical knowledge produced in the Arabic-speaking world from the tenth century onward, such as Abū al-Ḥasan al-Ṭabarī's (d. 375/985 ca.) *Kitāb al-muʿālajāt al-buqrāṭiyya* (Book of Hippocratic treatment). These texts provided compendiums of older texts to a growing Arabic readership that did not know Greek. As pointed out by Ursula Weisser, the novelty of these texts consisted in unifying within a single work the two main aspects of medicine: the theoretical concepts and the knowledge necessary for daily medical practice. [80]

The influence of the conceptual structures of the translated sources is more evident in the *Maʿdan al-šifāʾ* than in other types of Persian treatises on Āyurveda, a feature which can also be related to the way the text was realized, that is to say by collating the translations of parts of Sanskrit sources. The division into sections of the *Maʿdan al-šifāʾ* is thought to correspond to specific sections of Ayurvedic texts (see Table 1). The first *bāb* of the Persian text corresponds to the *sūtrasthāna* of Sanskrit treatises, the second to the *śārīrasthāna*, while the third covers materials from both *nidānasthāna* and *cikitsāsthāna*. This arrangement excluded other sections of Ayurvedic books, such as the *Suśrutasaṃhitā*, which included six sections. The first and the second sections of the *Maʿdan al-šifāʾ* are modeled on the *Suśrutasaṃhitā*, while the third relies on the nosographic classification of the *Mādhavanidāna* (see Table 2).

In parallel, the overall framework of the contents shows that the *Maʿdan al-šifāʾ* was based on two overlapping levels, a device meant to negotiate between the views of the Sanskrit sources and those of the Muslim readers. At the first level, as just observed, the text follows the models of the Sanskrit treatises for the internal organization of the sections of the Persian text. Then the arrangement of the sections superposes an additional level that organizes the book according to a pattern more familiar to Muslim readers. A typical pattern of organization of

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80 On the *kunnāš*, see Weisser 2002.

contents used in Arabic and Persian medical texts is the division of knowledge into theoretical (*'ilmī*) and practical (*'amalī*) sections. For instance, the first book of Avicenna's *Qānūn fī al-ṭibb* was dedicated to the principles (*kulliyat*) of medicine (including anatomy) and the following ones to pharmacology, pathology, and treatment. The three sections of the *Ma'dan al-šifā'* are arranged to roughly divide the contents in a similar manner. The first part – corresponding to the first and second *bāb* – is devoted chiefly to the principles of medicine and anatomy and is followed by a section on pathology and the treatment of diseases. Later Persian texts on Āyurveda were also organized according to this general criterion, such as the *Dastūr al-aṭibbā'* by Firišta and the *Takmila-yi hindī* by Šāh Ahl Allāh (d. 1190/1776), another handbook of Ayurvedic medicine.[81] The method used to assemble the third and most extensive *bāb* of the *Ma'dan al-šifā'*, which combines together the sections on *nidāna* and *cikitsā* of Ayurvedic texts and creates one single section on pathology and treatment, also appears as a stratagem to facilitate readers' use of the book.

The same method, meant to rearrange the order of translated materials according to readers' perspectives, was used in the opposite direction of translation. Paṇḍita Nityānanda Miśra (fl. 1630–1650) translated into Sanskrit the astronomical tables *Zīj-i Šāh Jahānī* composed by Mullā Farīd (d. 1039/1629) and his brother Mullā Ṭayyib for the Mughal emperor Šāh Jahān (r. 1628–1658). The Sanskrit treatise was titled *Siddhāntasindhu* and closely follows the structure of the *Zīj-i Šāh Jahānī*. Sanskrit scholars were unfamiliar with the concept and structure of the *zīj* (table), a typical genre of Arabic and Persian treatises on astronomy. Some years later, Nityānanda wrote his major work, the *Sarvasiddhānta-rāja* (1639), where Persian astronomical materials were arranged according to the structure of Sanskrit canonical treatises in astronomy (*siddhānta*).[82]

Although the *Ma'dan al-šifā'* provides a fairly informative account of how the text was realized, certain aspects remain unclear. What is known about the commissioner and the context of production raises the question of whether a practicing physician compiled and assembled the book. There is no clear evidence that Miyān Bhuwa was a physician, although we may suppose he had some knowledge of medicine. The text does not specify if and to what extent Hindu and Muslim physicians were directly involved in the translation process, the selection, and the arrangement of translated sources.

Nevertheless, internal evidence suggests that scholars trained in medical studies took part in the project. The way Indian technical terms and concepts are translated and integrated into the text indicates clearly that the translators were confident with the medical lexicon and aware of how these terms were rendered in Persian medical books. The way the translated sources have been

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81 On this topic, see Speziale 2018*a*: 62–65;   82 See Misra 2021: 32.
2020: 106–107.

selected and assembled following overlapping patterns further indicates that the author of these choices was familiar with medical literature. Furthermore, the preface shows that the compiler was well aware of the medical debates of his time and makes a noteworthy attempt to explain the conceptual and pragmatic issues underlying the translation of Ayurvedic texts.

ACKNOWLEDGEMENTS

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