

Disease and Medicine in India

A Historical Overview

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Physicians as Professionals in Medieval India

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A study of Mughal society reveals the existence of a 'class' distinct from the landholding class and the peasantry, comprising physicians, architects, scholars, teachers, poets, painters, musicians and a large number of craftsmen, apart from merchants, who made their living by selling their professional skills.¹ Some recent studies have shown that this newly-arising intermediary professional group, by the seventeenth century, had started being recruited to influential bureaucratic positions.²

This paper attempts to analyse the role of the physicians as professionals and assess their position in the Mughal society as well as their relations with the imperial ruling class. Was their position just that of clients bound to their patrons in expectation of a respectable income, or did a general demand exist for their services among various sections of the society, against which they received a salary? Related to this is the status of these practitioners of medicine from the point of view of their clients and patients.

I

Commenting on the level of medical education in India, Fryer suggests that the field of medical science in India was 'open to all Pretenders, here being no Bars of Authority, or formal Graduation, Examination or Proof of their Proficiency; but every one ventures, and every one suffers; and those that are most skilled, have it by Tradition, or former Experience descending in their Families.'³ Fryer further observed that the Indian physicians neither understood the pulse nor did they treat other ailments.⁴ Careri goes still further when he says, 'In Physick they have but small skill, and cure several diseases by Fasting',⁵

and Manucci is much harsher when he exclaims, 'From such doctors and such drugs *libera nos Domine!*'⁶

Although there were not many separate colleges exclusively dealing with the medical sciences, as in Aleppo, Egypt or Iran, their existence is testified in India as well. Monserrate pointedly mentions 'a very famous school of medicine' at Sirhind, 'from which doctors are sent out all over the empire'.⁷ Abdul Baqi Nahawandi mentions the *madrasa* of Hakim Shams and Hakim Mu'in at Thatta, where they also gave lectures on medicine.⁸ Similarly, Mir Abu Turab Gujarati, a contemporary of Akbar, had his own *maktab*, where he imparted education.⁹ Abdul Hamid Lahori mentions a certain Hakim Mir Muhammad Hashim who used to impart instruction in his own school at Ahmadabad.¹⁰ Hakim Alimuddin Wazir Khan is said to have built a *madrasa* at his native town Chiniot in the Punjab.¹¹

One may assume that in these schools run by the *tabibs*, the curriculum included a study of texts on *tibb*. This impression is strengthened by Abul Fazl's statement in *Ain-i Akbari*, that Akbar had directed the inclusion of *tibb* with the other sciences in the school curriculum.¹² The well-known *Nizami* course included, besides other texts, the following well-known texts on *tibb*: *Sharh-i Asbab*, *Mu'jaz al-Qanun*, *Qanun* of Abu 'Ali Sina, *al-Nafisi* and *Hidayah-i Sa'ida*.¹³

Another form in which education in *tibb* may have been imparted was through *dawakhanas* (dispensaries) and *sharbatkhanas* (syrup houses / distilleries), often run through state munificence.¹⁴

The most important centres of medical education during the sixteenth and seventeenth centuries, however, were located in Iran, from where many physicians in India were recruited.¹⁵ A sizeable number of physicians of the Mughal period are said to have attained their knowledge from various academies in Lahijan (Gilan), Mashhad, Isfahan and Shiraz.¹⁶ Mir Muhammad Hashim, better known as Hakim Hashim, who later became tutor to Prince Aurangzeb and had also opened his own *madrasa* at Ahmadabad, remained in the holy cities for twelve years to acquire knowledge. In India he was a student of Hakim Ali Gilani.¹⁷ Similarly, the famous Gilani brothers attained their education in Iran before migrating to India.

There exists evidence suggesting that sometimes Indian scholars too went to these institutions in Iran for training and education in *tibb*. One such person was Ahmad Thattavi who went to Iran

from Sindh and studied in Shiraz under the guidance of Mulla Kamaluddin Husain and Mulla Mirza Jan, two noted physicians of Shiraz; on completion of his studies he came back to India.¹⁸ Muhammad Akbar Arzani, a noted physician under Aurangzeb and a native of Delhi, also went to Iran for further studies in *tibb*.¹⁹

A perusal of the Persian sources shows that medical education was tutor-oriented. Those desirous to learn would go to a reputed physician and get the education from him.²⁰ Thus Hakim Ali Gilani acquired his knowledge in the company of Hakimul Mulk Shamsuddin Gilani and Shah Fathullah Shirazi.²¹

II

In Mughal India, like other professions, the physician's profession also gained prominence. Historical sources reveal the important position held by physicians. Abul Fazl, Nizamuddin Ahmad and Lahori, while listing *ulema* (scholars) and poets, duly included the physicians of the period. Considerable interest appears to have been taken in patronizing them. In ethnic terms, the *tabibs* of Mughal India were a predominantly Irani group (see Table 1). This is borne out by the list of physicians mentioned in the Mughal chronicles as well as the observations of the European travellers.²² But at Akbar's court the situation was slightly different in so far as there were also present a considerable number of Hindu *tabibs*, who are mentioned by Abul Fazl and Nizamuddin in their list of *Atibba*.²³ These 'Hindu' *tabibs* were probably brahmins by caste,²⁴ and experts of Ayurvedic rather than Unani *tibb*.

TABLE I

<i>Reign</i>	<i>Persians</i>	<i>Indians</i>	<i>Others</i>	<i>Total</i>
Akbar	15	14	13	42
Jahangir	11	07	01	19
Shahjahan	10	08	05	24
Aurangzeb	04	?	01	?

We find that a sizeable number of *tabibs* joined Mughal service in various capacities and were sometimes also assigned *mansabs*. These were physicians who would be recruited directly to the service of the emperor; others would join the establishment of nobles.

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Before a physician or a surgeon could join a service he had to pass certain tests, to the satisfaction of the employer. Extreme care was taken to select or appoint only the most accomplished and experienced physician.²⁵ Thus, at the time of Hakim Ali Gilani's employment, Akbar ordered several bottles containing the urine of sick and healthy persons, as also that of cattle and asses, to be brought before the Hakim for detection. The Hakim is reported to have diagnosed each one of them correctly and passed the test. From that time his reputation and influence increased and he became a close confidant (*muqarrab*) of Akbar.²⁶ Manucci recounts a similar incident that happened to him while in the retinue of Prince Shah Alam.²⁷

From a stray remark of Manucci it appears that, as in the case of those in imperial service, there was a hierarchical division in the establishment of a prince. There used to be a chief physician under whose charge were placed a number of subordinate physicians and surgeons who were bound to obey his orders.²⁸ This chief physician was, in Mughal terminology, known as *saramad-i atibba* or *saramad-i hukama*.²⁹ This hierarchy is also discernible, at least in the imperial household, by the reference to the title of *Hakimul Mulk* (the chief of the physicians), which was quite independent of the *mansab* he was holding. Although the most visible of the state physicians and the holder of the highest *mansab* under Akbar was Hakim Abul Fath, the title (or office?) of *Hakimul Mulk* was held by Hakim Shamsuddin Gilani.³⁰ In 1627, on the accession of Shahjahan, the title was bestowed upon Hakim Abu'l Qasim, the son of Hakimul Mulk Shamsuddin Gilani.³¹ In 1662 the recipient of this honour was Hakim Mir Muhammad Mahdi Ardistani,³² followed by Hakim Sadiq Khan, who was awarded the title in the forty-ninth regnal year of Aurangzeb (1704–05).³³

Mughal miniatures also confirm the hierarchical division amongst the physicians serving kings, princes and nobles. In three or four miniatures, a chief physician (*saramad-i atibba*) is depicted tending the patient along with his subordinate colleagues³⁴ (see Plate 1). The growing prosperity of the medical profession can be discerned through the depiction of the physician–bureaucrats. Muqarrub Khan (identifiable from an inscription, 'Shabih-i Muqarrub Khan'), in all his portraits, is shown wearing a white silken *dastar* with a golden design and standing amongst the nobles close to the emperor.³⁵ This attire is typical of a Mughal noble, with the exception that he is always wearing sober colours.³⁶ Unlike him, Masihuz Zaman is shown in a

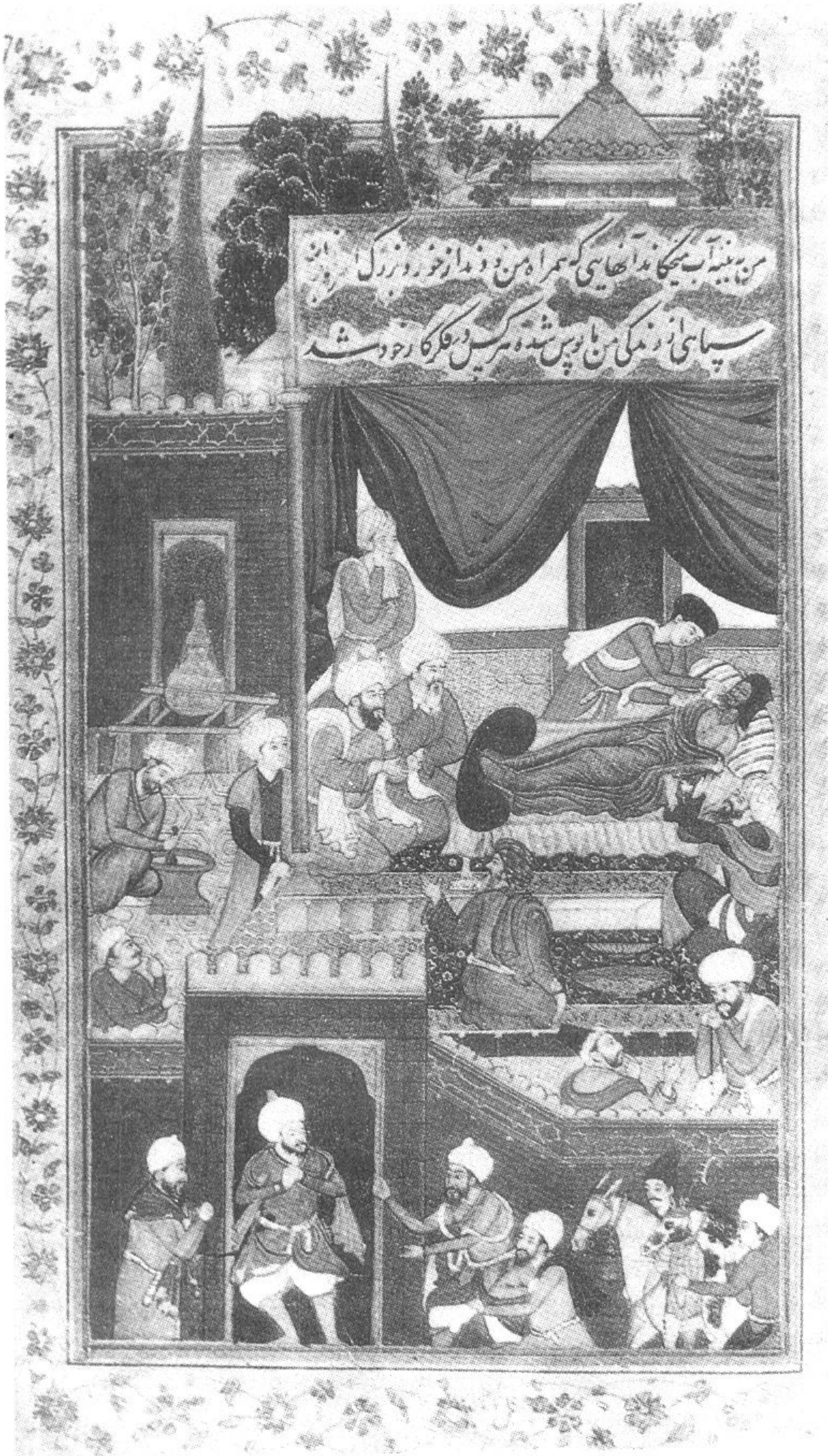


Plate 1

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dress that was typical of the attire of the scholars and *ulema*.³⁷ Physicians who joined imperial service or that of a noble, but had not been assigned a *mansab*, were recruited on a daily (*yaumiya*) or annual (*saliyana*) salary.³⁸ Even after the grant of *mansab*, they received 'pocket-money' (*zar-i jeb*) to maintain a medicine box (*kharita*) comprising essential medicines.³⁹ From our sources it appears that the personal salary of a physician could vary between Rs 300 per month, i.e. Rs 3,600 per annum, and Rs 100,000 per annum.⁴⁰ According to Manucci, the salary of a blood-letter (surgeon) varied between Rs 2 per day and Rs 700.⁴¹ Apart from remunerating a physician for his services through grant of *mansab* or cash allowances and salaries, they could also be given grants of bureaucratic offices or *madad-i ma'ash* grants.

Sometimes we find that the Mughal bureaucracy also included persons who were basically military or civil officers but had some knowledge of *tibb* which they used for treating people off and on. Such cases would include persons like Shaikh Faizi, Amanullah Khan Firuz Jang and Danishmand Khan. Khwaja Khawind, a noble under Humayun, is also said to have been a physician of some renown.⁴²

Our sources also throw some light on the patron-client relationship between employer and employee. For example, Manucci observes that before being conducted into the royal *haram* or into the harem of a noble, the physician was covered from head to waist with a cloth and was accompanied by eunuchs.⁴³ Generally, a set of rooms, styled *bimarkhana*, was assigned for the ailing lady in the *haram*.⁴⁴ Manucci further informs us that in the case of a patient being of royal blood, prior permission had to be taken from the emperor in order to start the treatment.⁴⁵ Another piece of interesting information which hints at a patron-client relationship is provided by Manucci when he says that it was not the practice among the princes, and nobles to talk or have any sort of relations with the servants of other nobles or princes, for fear of treason. This applied to physicians particularly. When, in 1683, Diler Khan, an enemy of Prince Shah Alam, fell ill and with fair promises summoned Manucci to treat him, the prince strictly refused him permission to do so.⁴⁶

There also exists evidence indicating the extent to which the ruler or nobles used to depend on the services offered to them by the physicians in their employment. This, for example, comes out very well from what we know about Jahangir's relationship with some of his physicians. On the one hand, he always had high expectations of

their service and skilful treatment; at the same time he tended to denounce and denigrate them whenever they failed to come up to his expectations. He would, at the same time, criticize a *tabib* for not being able to give him relief from a disease and resent the *tabib* leaving his company on one pretext or the other.⁴⁷

The dependence of the patron on his client is clearly brought out by a story narrated by Tavernier. In December 1665, when Tavernier passed through Allahabad, he was told that the chief of the Persian physicians in the governor's pay had tried to kill his wife by throwing her from the top of a terrace. The woman survived the fall. The governor dismissed the chief physician and the physician departed with his family. But soon after the governor fell ill and recalled the physician. On getting his message, the physician stabbed his wife, children and thirteen slave-girls, and returned to the governor at Allahabad. The governor said nothing to him and accepted him back in his service.⁴⁸ Similarly, Taqarrub Khan was retired and his son dismissed by Aurangzeb after the *hakim* had cured the imprisoned Shahjahan. But after some time when Aurangzeb himself fell ill, the *hakim* was restored to favour and the dismissal of his son was revoked.⁴⁹

Further, it appears that a physician joining the service of the state or a noble was not bound to his patron. He could, like a true professional, change his employer as and when he willed. This becomes apparent by the way the author of *Ma'asir-i Rahimi* mentions approvingly that after joining the service of Khan-i Khanan, Hakim Muhammad Baqir remained attached to him throughout his life.⁵⁰ We also have the evidence of Hakim Muhammad Husain Gilani who, on migrating to India, initially joined the service of Mahabat Khan. After some time we find him in the service of Khana-i Zaman Bahadur. From there again he went to the court of Adil Shah at Bijapur, where he remained employed for a period of ten years. Later he joined the service of Khan-i Dauran.⁵¹ A similar example is that of Hakim Momena Shirazi who, on coming to India, joined the service of Mahabat Khan.⁵² In 1662 we find him employed with Bahadur Khan, the *subadar* of Allahabad.⁵³ In 1665 he joined the imperial service and became the chief physician treating an ailing Shahjahan.⁵⁴

From the foregoing discussion it becomes apparent that the patronage extended to physicians after Akbar weakened under Jahangir but then rose again under Shahjahan, if we go by the number of physicians listed by various chroniclers (see Table 2). Secondly, the

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TABLE 2

Reign	Those holding Mansabs	Others	Total
Akbar	8	34	42
Jahangir	7	12	19
Shahjahan	15	9	24
Aurangzeb	5	?	?
Total <i>mansab</i> holders:	35		

Iranian element remained dominant from the reign of Akbar to that of Shahjahan. Thirdly, those who joined service came after formal and proper training. Lastly, the recruitment and promotion of a physician was linked with his expertise in medical practice. It was more a demand-related relationship rather than a fixed relationship of the feudal type.

III

Darush-shifa or *shifakhanas* (hospitals) were also run by the government, which employed physicians for the purpose. According to *Bahar-i Ajam*, these places were buildings (*makan*) established by the rulers and nobles for the treatment of the poor and needy (*ghuraba wa masakin*).⁵⁵ The tradition of building hospitals in India appears to have been established much before the advent of the Mughals. For example, in 1442–43 orders were issued by Sultan Mahmud Shah Khalji of Malwa to establish a *darush-shifa* as well as a *darukhana* (dispensary or pharmacy) at Mandu, where those who had knowledge of the drugs (*adwiya shinas*) used in the systems of medicine followed by the Muslim physicians and Indians (*brahman-i hindi*) and ‘accomplished physicians’ were to be appointed, to look after the patients visiting the hospital.⁵⁶

For the Mughal period, information about the establishment of state hospitals starts from the reign of Jahangir. In his twelve edicts of the first regnal year, Jahangir ordained the establishment of hospitals in all the great cities of the empire, where physicians were to be appointed for healing the sick. The expenses of these hospitals were to be met from the *khalisa sharifa*.⁵⁷ Sometimes, especially during Aurangzeb’s reign, hospitals were also established in small places that were within the *altamgha* assignments of the biggar *mansabdars* and *umara*.⁵⁸

It appears that in these hospitals, the state recruited a number of physicians and surgeons who were under the charge of a chief physician, who acted as the superintendent (*darogha*) of the hospital. To assist them in the general administration of the hospital, a number of clerks (*mutasaddis*) and a *kotwal* were also appointed.⁵⁹ From a reference to a *madrasa* being attached to a *shifakhana*, it appears that these hospitals sometimes served as medical colleges of sorts.⁶⁰ During the reign of Shahjahan, a government hospital was constructed at Delhi near Chowri Bazar, 'for the treatment of the travellers and the students (*talib-i 'ilman*) who cured the sick'.⁶¹ A reference to a 'school of medicine' at Sirhind has already been given, from where, according to Fr Monserrate, 'doctors are sent out all over the empire'. Monserrate was probably referring to a medical college. Another government hospital that flourished was the *darush-shifa* of Ahmadabad, where Shahjahan appointed Hakim Mir Muhammad Hashim as the head.⁶² This hospital was meant for treating the poor⁶³ and Unani as well as Ayurvedic (*tibb-i hindi*) physicians and surgeons were appointed here. We hear of two more government hospitals, the *darush-shifa* at Aurangabad and the *darush-shifa* at Surat.⁶⁴

The physicians appointed in these hospitals were generally paid on a daily basis (*yaumiya*) from the treasury (*bait-ul mal*),⁶⁵ through the *mutasaddis* of *dar-uz zarb* (officials of the royal mint).⁶⁶ The superintendent and chief physicians (*darogha wa hakim-i darush-shifa*) of the government hospital at Aurangabad drew a salary, after usual deductions, of Rs 136 (i.e. Rs 6 per day).⁶⁷

The physicians serving the government hospitals had to submit an attendance certificate (*tasdiq-i hazari*) before their salary was released. Sometimes, the *darogha-i darush-shifa* could be exempted from attendance.⁶⁸ To be appointed to the post of a physician, recommendations had to be made by the *bakhshi* or some other responsible person.⁶⁹ However, Aurangzeb did not like too much interference in the matter of appointment from ordinary people.⁷⁰

Apart from government hospitals, hospitals could also be established by nobles. During Jahangir's reign, Saif Khan built a hospital complex at Jeetalpur comprising a mosque, a *madrasa* and a *shifakhana* which treated the poor.⁷¹ During the same reign, Hakim Ali-muddin Wazir Khan constructed a *madrasa* and a *darush-shifa* along with other buildings at his native town of Chiniot in the Punjab, and

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dedicated them to the residents of that town.⁷² A certain Hakim Muhammad Rafi opened a *hawaij kadah* (clinic) for the treatment of the poor.⁷³

Interestingly, Careri remarks that European soldiers were hesitant to be recruited into the Mughal army as they had 'no hospital for the wounded men'.⁷⁴ However, we have repeated information that the Mughal forces were always accompanied by physicians,⁷⁵ and it appears that the physicians thus employed in the retinue of the *mansabdars* enjoyed attractive perquisites. Many *tabibs* clamoured to be appointed to such positions.⁷⁶ But apparently these physicians, in spite of their perquisites, were an overworked and harassed lot.⁷⁷

Another means of partronizing the profession of physicians in the Mughal empire was the system of rewarding expertise and service to the commonality through gifts and grants. Thus, when Nurjahan Begum was successfully treated by Hakim Ruhullah in 1618, the *hakim* was granted three villages in his native place as *madad-i ma'ash*, which were to be considered his *milkiyat* (private property).⁷⁸ The purpose of such *madad-i ma'ash* grants to the *tabibs* is clearly brought out by a number of Persian documents and chronicles. Hodivola has reproduced a number of documents relating to land and cash allowances granted to a family of Parsi physicians of Navsari, Gujarat, issued between 1517 and 1671.⁷⁹ According to these documents, these Parsi physicians received the *madad-i ma'ash* since they treated 'the poor and the diligent' of the locality.⁸⁰ A *parwana* quoted in *Muruqqat-i Hasan*, 1678, a compilation of letters written on behalf of Tarbiyat Khan, governor of Orissa, says that as a large number of ailing persons were being successfully treated by Hakim Muhammad Rafi, and as the people were greatly benefited by his medical knowledge, two *parganas* in *sarkar* Cuttack were given to him as *madad-i ma'ash*, from the income of which he was expected to meet the expenses of the *sharbat-khana* and the clinic (*hawaij kadah*) that he was running for the treatment of the poor.⁸¹

Importantly, this 'aid' was not confined to a particular religious or ethnic group of physicians. We have seen that apart from Muslim *tabibs* this grant was successively confirmed in favour of a family of Parsi physicians from the reign of Akbar to that of Aurangzeb.⁸² A number of documents testify to similar *madad-i ma'ash* grants to Hindu physicians.⁸³

IV

A general view which has found currency is that the physicians were completely dependent on royal patronage, or on the service of and endowments from the aristocracy. It is also sometimes held that the demand for the service was very limited.⁸⁴ This erroneous view seems to be based mainly on Tavernier's observation to the effect that: '... in all the countries we have just passed through, both in the Kingdom of Carnatic and the Kingdoms of Golkonda and Bijapur, there are hardly any physicians except those in the service of the Kings and Princes.'⁸⁵ But what the statement reveals is that Golconda and Bijapur were different in this respect from other areas. We have already noted in the preceding discussion that there were numerous physicians in Mughal India who ran their own clinics, imparted education and treated the poor. Apart from the evidence already cited, there are many more references to the private practitioners. Some of them however, were no more than quacks (*na-tabib*), a fact borne out by Badauni.⁸⁶ Manucci too, in one of his passages, refers to these unqualified *bazar* physicians. While giving an account of the caravan *sarais*, he mentions the 'endless cheating physicians' who pestered the travellers.⁸⁷

These *bazar* physicians appear to have lived mainly on private practice. For instance, Badauni uses the term *mutatabib-Sirhindi*, that is, a private practitioner of Sirhind, when he mentions Shaikh Hasan, father of Shaikh Bhina, the surgeon.⁸⁸ Banarsi Das, in his *Ardha Kathanak*, mentions a physician (*baidh*) of Jaunpur who treated him when he was young. He also mentions a *nai* (literally, barber), a term applied to local surgeons, who treated him for syphilis at Khairabad in 1602.⁸⁹ When his father fell ill in 1616, he was treated by yet another private practitioner at Banaras.⁹⁰ During Shahjahan's reign a physician called Hakim Basant had a flourishing practice at Lahore. Surat Singh mentions a 'specialist' of dog-bite at Kalanaur, to whom hapless patients would be carried.⁹¹ During the reign of Aurangzeb, Hakim Muhammad Abdullah practised and taught at Agra.⁹² Balkrishan Brahman, a petty official, in his letters written during the reign of Aurangzeb, mentions local medical practitioners like Balram Misr and Manka Tabib at Hissar Firoza. In one of his letters recommending Manka Tabib to a *mansabdar* for employment, he certified that 'a large number of people have benefited by associating with him'.⁹³ The presence of Hindu *bazar* physicians in the south is attested to by a number of European travellers.⁹⁴

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The practice of setting up private clinics in the *bazars* by physicians also finds place in the Mughal miniatures. A miniature attributed randomly to Abul Hasan and pertaining to the reign of Jahangir reminds us of Tavernier's descriptions (see Plate 2, next page). It depicts a physician sitting under a canopy (*shamiana*) on a platform and advising an old patient.⁹⁵ All around the physician (or is he just a druggist?) on the platform are displayed vials, bottles, jars, cups and bags containing a number of drugs, viz. *sufuf* (powder), *sharbats* (syrups) and *arq* (medicinal liquid extracts). A number of books are at hand, as is a small mortar and pestle to mix the medicines. On one of the bottles is inscribed '*sharbat-i diq*' (syrup for consumption). Every bottle and bag is labelled. Behind the physician stands a boy, who probably acted as his assistant.

Thus we see that not only was there considerable scope for private practice, in many cases physicians preferred establishing private clinics to government posts or accepting patronage from a noble. Yet, interestingly enough, we know on the testimony of Fryer that there was no dearth of physicians who coveted employment under a noble.⁹⁶ Presumably this was so because employment under a noble gave them a feeling of security and ensured a comparatively small but steady income.⁹⁷

These medical practitioners tended to be very hostile to their European counterparts. Partly this might have been an outcome of the European physicians assuming superior airs vis-à-vis the Indian physicians. As Manucci tells us, the Europeans were often not agreeable to accept salaries on a par with those of Indian physicians.⁹⁸ However, Linschoten speaks very reverentially of the Indian physicians who, he says, had no scruples in treating the natives and Europeans alike.⁹⁹ Careri goes a step further and, in one of his very perceptive passages, suggests that persons suffering from particular kinds of diseases found in India respond more naturally to the treatment given by Indian physicians: 'Experience having shown', observes Careri, 'that European Medicines are of no use here.' He further says:

. . . the physicians that go out of Portugal into those parts, must at first keep company with the Indian surgeons to be fit to practice, otherwise if they go about to cure those Distempers, so far different from ours after the European manner, they may chance to kill more than they cure.¹⁰⁰

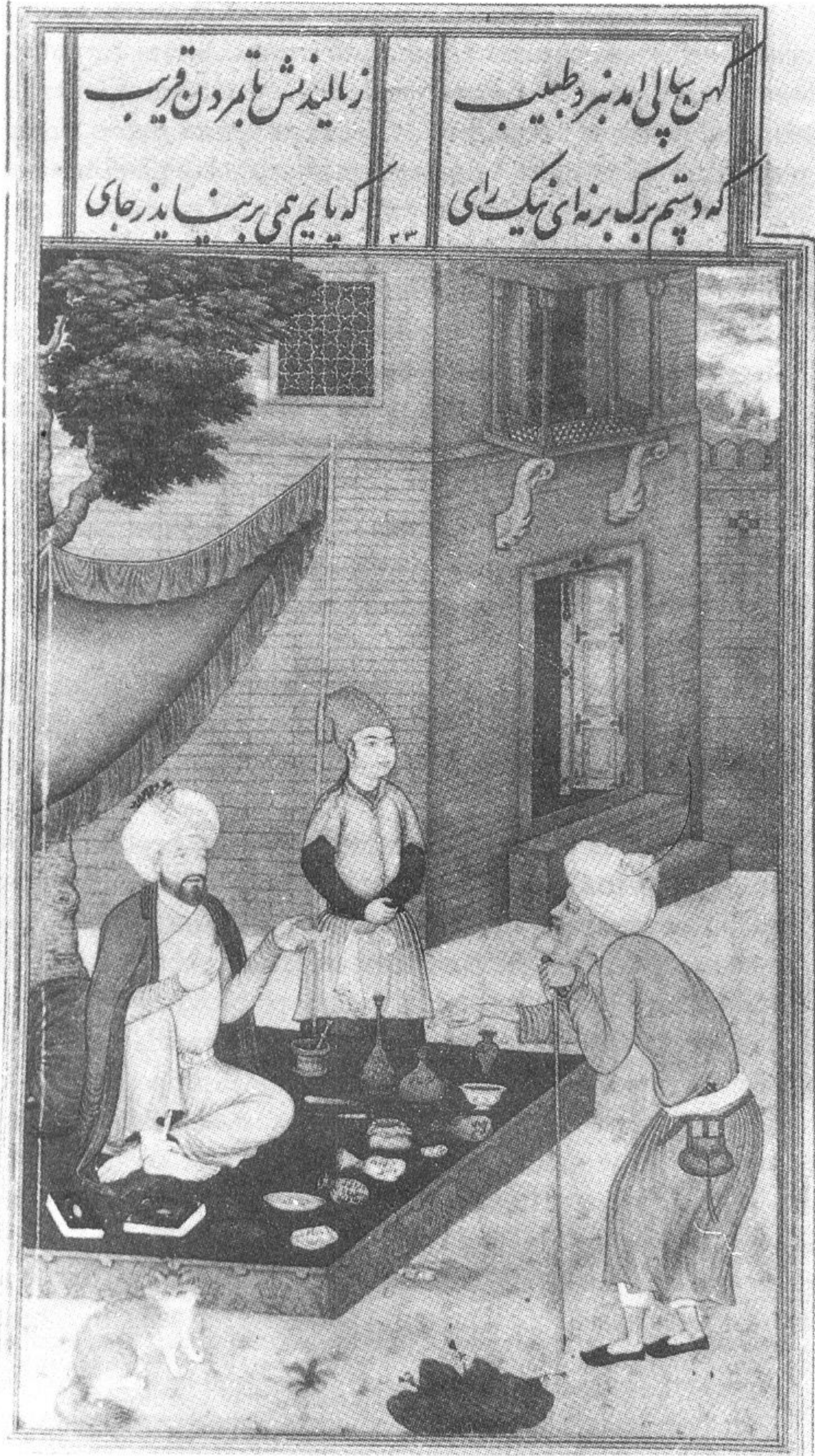


Plate 2

V

As far as the state of knowledge in the field of medicine during the Mughal period is concerned, many modern scholars, following the testimony of the European travellers of the seventeenth century, have expressed serious reservations. As a matter of fact, Manucci held a firm belief that these *tabibs* had no knowledge of medicine and were certainly not in a position to cure the stone, paralysis, epilepsy, dropsy, anaemia, malignant fevers or other difficult complaints.¹⁰¹

The available evidence, however, suggests that the medical profession in Mughal India had achieved a considerable degree of specialization within the frame work of Graeco–Arab medical science. The *hakims*, *tabibs* and *jarrahs* (surgeons) appear to have had amongst them ophthalmologists, specialized surgeons, pharmacologists, veterinarians, sexologists and anatomists. Manucci admits that the *tabibs* of the period were well-versed in the science of pharmacy. He says, 'In this country it is incumbent on a doctor to prepare medicines, ointments and distillation—in fact all things that appertain to the apothecary's office. Many a times it is also necessary to instruct as to the fashion of preparing the patient's food.'¹⁰²

Generally, the preparation of medicines was considered the responsibility of the physicians who prescribed them. The prescriptions, however, were generally kept a secret by the physician from each other, due to rivalry among them.¹⁰³ This was, perhaps, an important factor inhibiting the growth of pharmaceutical establishments. Generally, pharmaceutical preparations consisting of *sufuf* (powder), *mahlul* (suspension), *majun* and *jawarish* (electuaries), *sharbat* (syrups), *arq* (distilled medicinal water) and mixtures were prepared by the physicians themselves. Sometimes the physician possessed expertise in more than one field. For instance, during the reigns of Babur and Humayun, Hakim Yusum bin Muhammad Yusufi, who migrated to India along with Babur, was an expert in symptomatology, therapeutics, ophthalmology and general medicine. He was the author of at least twelve books. Two of his treatises dealing with symptomatology are preserved in the Maulana Azad Library, Aligarh.¹⁰⁴ His *Fawa'id-ul Akhyar* and *Ilajul Amraz* deal with hygiene and therapeutics.¹⁰⁵ He also compiled a short discourse on eye diseases and their cures.¹⁰⁶ Similarly, Hakim Muhammad bin Yusuf ut Tabib al-Harawi, the personal physician of Babur, was, in addition to his other accomplishment as *tabib*, one of the most widely-read pathologists of his time.¹⁰⁷ Hakim Abdur

Razzaq, who was a contemporary of Humayun, wrote *Khulasat-ut Tashrih*, which deals with human anatomy.¹⁰⁸

During Akbar's reign, much stress seems to have been laid on surgery. Shaikh Bhina, Mulla Qutbuddin Kuhhal (eye surgeon?), Hakim Biarjiu, Hakim Bhairon and Chandrasen were all reputed to be accomplished surgeons.¹⁰⁹ Hakim Shaikh Bhina wrote a book on medical prescriptions which is popularly known as *Mujarrabat-i Shaikh Bhina*.¹¹⁰ Hakim 'Ainul Mulk 'Dawwani' Shirazi excelled himself in the field of ophthalmology.¹¹¹ He was also an expert in the use of collyrium and pharmacology.¹¹² His treatise, *Fawaid ul Insan*, is a work on pharmacology in versified form.¹¹³ Muhammad Hakim Gilani had expertise in sexology.¹¹⁴ Hakim Ali Gilani, one of the most accomplished physicians of Akbar's reign, apart from his formula of *roghan-i deodar*, had also prepared *sharbat-i kaifnak*, which helped in removing exhaustion.¹¹⁵ He also had considerable knowledge in fields like osteology (study of bone structures), myology (study of muscles), angiology, neurology and the digestive system.¹¹⁶ Hakim Fathullah Shirazi translated the famous *Qanun* of Abu Ali Sina (Avicenna) into Persian for the benefit of the people.¹¹⁷ Muhammad Qasim Ferishta, the famous author of *Tarikh-i Ferishta*, wrote *Dastur-i Atibba*, now popularly known as *Tibb-i Ferishta*, in order to create among the Muslims an interest in the Indian system of medicine.¹¹⁸ During the same reign, Ma'sum Bhakhari, author of *Tarikh-i Sindh*, compiled a treatise on the treatment of diseases and drugs.¹¹⁹ Similarly, in 1556 Shaikh Tahir authored *Fawaid-ul Fuad*, dealing with general medicine.¹²⁰

During the reign of Jahangir, Muqarrab Khan and Hakim Ali Akbar were renowned surgeons.¹²¹ Muqarrab Khan was also an expert bleeder and veterinarian.¹²² Later his nephew Hakim Qasim also grew to become an expert bleeder.¹²³ Amanullah Firoz Jang Khanazad Khan, son of Mahabat Khan, famous noble under Jahangir and Shahjahan, had a sound understanding of medicine. His *Ganj-i Bad Awurd* is a good work on pharmacology. His second work, *Ummul Ilaj*, is a treatise on purgatives.¹²⁴

Under Shahjahan as well, much work was done on pharmacology. Sheikh Muhammad Tahir, Hakim Ma'sum Shustari and Hakim Nuruddin Muhammad 'Ainul Mulk, grandson of Hakim Shamsuddin Ali Dawani 'Ainul Mulk (of Akbar's reign), have left behind books on pharmacology.¹²⁵ Hakim Ma'sum's *Qarabadin-i Ma'sum* deals with the preparation of drugs, electuaries, pulps, pastes,

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syrups, tablets, collyriums, enemas, gargles and ointments, as well as the effects of tea and coffee.¹²⁶ Hakim Nuruddin 'Ainul Mulk's *Alfaz-i Adwiyya* is an encyclopaedia of pharmacology,¹²⁷ while his *Ilajat-i Dara Shukohi* is a compendium of medical science basically instructing travellers on dietary precautions, anatomy, medicines etc.¹²⁸

During the reign of Aurangzeb, Hakim Sanjak achieved much in the field of ophthalmia.¹²⁹ Bernier says that Danishmand Khan was well-versed in anatomy.¹³⁰ He even had works of William Harvey on the circulation of blood, and Pecquet translated these into Persian for him.¹³¹ Nurul Haq Sirhindi wrote *Ainul Hayat*, a rare work on plague.¹³² Hakim Muhammad Akbar Arzani, a renowned physician of this reign, apart from translating a well-known commentary of the popular thirteenth-century pathological treatise by Najibuddin Samarqandi,¹³³ wrote a commentary on Chaghmini's *Qanuncha*.¹³⁴ Qazi Muhammad Arif wrote *Tibb-i Qazi Arif*, a general work on medicine containing prescriptions for diseases that are especially indigenous to India.¹³⁵

It appears from the surviving manuscripts of works written on medicine and other sciences, now preserved in various repositories,¹³⁶ that in Mughal India a large number of books on medicine were either written or compiled, translated or commented upon (see Tables 3 and 4). Under the early Mughals (sixteenth to seventeenth centuries) and later Mughals (eighteenth century) the largest number of books written belonged to the field of medicine, as compared to astronomy

TABLE 3

Cen- tury	<i>Medicine</i>				<i>Astronomy</i>				<i>Mathematics</i>			
	Per- sian	Ara- bian	Sans- krit	Total	Per- sian	Ara- bian	Sans- krit	Total	Per- sian	Ara- bian	Sans- krit	Total
13th	4	33	31	68	11	21	8	40	5	30	2	37
14th	21	5	50	76	7	6	15	28	8	29	3	40
15th	18	1	36	55	25	32	47	104	8	22	4	34
16th	120	10	61	191	34	36	93	163	6	11	18	35
17th	102	12	122	236	39	30	190	259	23	25	14	62
18th	133	6	80	219	32	22	37	91	34	12	10	56

Source: A. Rahman et al., *Science and Technology in Medieval India: A Bibliography of Source Materials in Sanskrit, Arabic and Persian*, New Delhi, 1982.

TABLE 4: *Categories of Books on Medicine (Persian)*

Century	Total	General	Specialized	Anthologies/Compendiums	Dictionaries	Encyclopaedias	Commentaries	Translations
13th	4	1	2	-	-	-	-	1
14th	21	5	11	1	1	-	1	3
15th	18	4	10	-	3	-	-	-
16th	120	15	93	5	1	-	-	6
17th	102	10	68	5	4	3	2	10
18th	133	10	98	8	1	3	3	10

Source: A. Rahman et al., *Science and Technology in Medieval India: A Bibliography of Source Materials in Sanskrit, Arabic and Persian*, New Delhi, 1982.

and mathematics, the other two popular fields of study. A sudden impetus to the collection and writing of books on medicine started in the sixteenth century, which continued down to the eighteenth century. This trend was confined generally to works in Persian and Sanskrit; books in Arabic, on the other hand, either decreased or remained stable numerically.

Table 4 shows the trend of specialized books on medicine developing during the sixteenth century. The seventeenth century saw some decline followed by a steep rise under the later Mughals. The trend of anthologies and compendia, as well as translations of previous works also developed from the sixteenth century onwards.

VI

An interesting question can be asked about the physicians of medieval India: were these *tabibs* dogmatic in their approach or were they open to change? Some idea in this respect can be had from the discussion that is reported to have taken place at Akbar's court in 1603, on the use of tobacco. In this year Asad Beg Qazwini brought to the court from Bijapur a small sample of tobacco and a smoking pipe for the emperor. When Akbar showed an inclination to smoke, he was sought to be dissuaded by Hakim Ali Gilani, who argued that as nothing was mentioned regarding tobacco in 'our medical books', it would be risky to use it without making further investigations.¹³⁷ While one may not disapprove in principle of the advice that Hakim Ali Gilani gave on that occasion, one cannot help noting the intrinsic

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cause of the *hakim's* line of argument. For him nothing was permissible that was not sanctioned by the texts of *unani tibb* handed down by the great masters of earlier times. This obviously applied to the new ideas regarding medicine that were coming at this time from the west.

But then, did this not mean that the urge to improvise was absent among the Indian physicians? A stray reference by Manucci suggests that the surgeons, at least of the Deccan, improvised techniques that were a step forward towards the as yet unknown field of plastic surgery. He says that the native surgeons of Bijapur could fashion a crude nose for those who had this organ severed. They would cut the skin of the forehead above the eyebrows and make it fall down over the wounds on the nose. Then, giving it a twist, so that the live flesh might meet the other surface, and by healing applications, they fashioned for them a nose, though imperfect.¹³⁸ Manucci says he saw many persons with such noses.¹³⁹

Thus we see that the physicians of Mughal India were members of a highly developed and skilled profession. It was only after proper training and schooling that they were allowed to become members of this profession. Although it cannot be denied that many of them were physicians by hereditary occupation,¹⁴⁰ a large number of them also became physicians due to training and interest. It further becomes apparent that these physicians could be classified into a number of categories. There were some who joined the service of the king or nobles, amongst them those who rose to high positions as *mansabdars*. Others joined service but were appointed to mediocre offices. From a number of Mughal miniatures, where physicians of these two groups are depicted, it is apparent that in spite of their affinity to the ruling classes, they were perceived to be different. Their attire resembles that of the religious classes. They are seen wearing heavy and circular *dash-tars* (headgear); the *jamans* they wore were shorter than those of the *mullas*, coming down only up to the knee, and had tight sleeves, quite unlike those of the religious classes. They are also frequently depicted wearing a shawl.

The third category of physicians receiving state patronage were those who, instead of being given *mansabs*, were awarded cash salaries. Then there were those who were only patronized through *in'ams* and grants. All these physicians were recruited and promoted on the basis of an assessment of their medical knowledge and experience. Further, they could leave their employers at will.

Largest in number were those who, for convenience sake, we may designate 'bazar physicians'. These physicians had their own clinics and conducted private practice in conditions where the demand for their services was considerable. In general, physicians in Mughal India formed a distinct, non-theological professional class, held in high repute and able, as we have seen, to penetrate the ranks of the ruling classes. They thus formed a kind of primitive 'middle class' for their profession. The Mughal physicians, whether in government service or outside it, were much in demand and enjoyed a respected position in the society as well as at the court.

Notes and References

- ¹ For this emerging class see, for example, Iqtidar Alam Khan, 'The Middle Classes in the Mughal Empire', Presidential Address, Medieval Indian Section, *Proceedings of the Indian History Congress*, 36th session, Aligarh, 1975 (revised version, 'The Professional Middle Classes', being published in J.S. Grewal (ed.), *Social History of Medieval India*, Vol. VIII). See also W.C. Smith, 'The Mughal Empire and the Middle Classes', *Islamic Culture*, Vol. XVII, No. 4, 1994; S. Ali Nadeem Rezavi, 'The Empire and Bureaucracy: The Case of the Mughal Empire', *Proceedings of the Indian History Congress*, Patiala, 1998.
- ² A.J. Qaisar, 'Recruitment of Merchants in the Mughal Feudal Bureaucracy' (unpublished, mimeographed); S. Ali Nadeem Rezavi, 'The Mutasaddis of the Port of Surat in the Seventeenth-Century', *Proceedings of the Indian History Congress*, Burdwan, 1983, and 'An Aristocratic Physician of the Mughal Empire: Muqarrab Khan', *Medieval India 1*, edited by Irfan Habib, 1992, pp. 154–67. For a contrary view, see W.H. Moreland, *India at the Death of Akbar*, Delhi, 1962, pp. 73–77, 78.
- ³ John Fryer, *A New Account of East India and Persia in Eight Letters being Nine Years Travels Begun 1672 and Finished 1681*, Delhi, 1985, p. 114.
- ⁴ *Ibid.*, pp. 114–15.
- ⁵ Careri, *Indian Travels of Thevenot and Careri*, edited by Surendranath Sen, New Delhi, 1949, p. 247.
- ⁶ Niccolao Manucci, *Storia Do Mogor*, translated with Introduction and Notes by William Irvine, Vol. III, Pt iii, Calcutta, 1966, p. 214.
- ⁷ *The Commentary of Father Monserrate, S.J (on his Journey to the Court of Akbar)*, translated by J.S. Hoyland, annotated by S.N. Banerjee, Calcutta, 1922, p. 103.
- ⁸ Abdul Baqi Nahawandi, *Ma'asir-i Rahimi*, edited by Hidayat Husain, Vol. II, Calcutta, 1931, p. 274.
- ⁹ Shah Nawaz Khan, *Ma'asir-ul Umara*, edited by Maulvi Abdur Rahim, Vol. III, Calcutta, 1888–90, pp. 280–81.

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- ¹⁰ Abdul Hamid Lahori, *Padshahnama*, edited by Kabiruddin Ahmad and Abdur Rahman, I, ii, Calcutta, 1867, p. 345.
- ¹¹ *Ma'asirul Umara*, III, p. 936.
- ¹² Abul Fazl, *Ain-i Akbari*, translated and edited by Blochman, Vol. I, Calcutta, 1927, p. 279.
- ¹³ Cf. Abdul Jalil, 'The Evolution and Development of Graeco-Arab Medical Education', *Studies in History of Medicine*, Vol. II, No. 3, September 1978; see also Hakim Kausar Chandpuri, *Atibba-i 'Ahad-i Mughaliya*, Karachi, 1960.
- ¹⁴ Ibid. For state aid to dispensaries, see, for example, Maulana Abul Hasan, *Muraqq'at-i Hasan*, MS., Rampur Raza Library (transcript of MS. in Department of History, Aligarh Muslim University), pp. 330-31.
- ¹⁵ See for example *Ma'asir-i Rahimi*, III, p. 46. Hakim Jibrail, a famous physician, who later joined the service of Abdur Rahim Khan-i Khanan, while teaching at a *madrasa* known as *Darul Irshad* at Ardebil, heard people say that 'Iran was the *Maktab Khana* of Hindustan'.
- ¹⁶ See *Ma'asir-i Rahimi*, III, pp. 44, 46, 51, 52, 745-55, etc. For example, Hakim Fathullah Shirazi attained his knowledge at the *madrasa* of Mir Ghiyasuddin Shirazi, the reknowned *hakim* of Shiraz, and Khwaja Jamaluddin Mahmud and Maulana Kamaluddin at Shiraz. *Ma'asir-ul Umara*, I, pp. 100-01. For other such examples, see Muhammad Sadiq, *Tabaqat-i Shahjahani*, MS., Department of History Library, Aligarh Muslim University, p. 466. Saqi Must'ad Khan, *Ma'asir-i Alamgiri*, III, Calcutta, 1870-73, pp. 17, 50, 45-46.
- ¹⁷ Lahori, *Padshahnama*, I, ii, pp. 345-46.
- ¹⁸ *Ma'asir-ul Umara*, III, p. 263.
- ¹⁹ *Yadgar-i Bahaduri*, BM.MS.OR. 1652, f. 96, as cited in *Catalogue of the Persian Manuscripts in the British Museum*, Charles Rieu, Vol. II, 1881, p. 479.
- ²⁰ For details on medical education, see Abdul Jalil, 'Evolution and Development of Graeco-Arab Medical Education'; and A.H. Israili, 'Education of Unani Medicine during Mughal period', *SIHM*, Vol. IV, No. 3, September 1980.
- ²¹ Badauni, *Muntakhab-ut Tawarikh*, edited by Molvi Ahmad Ali, Vol. III, Calcutta, 1869, p. 166. For other such examples see Khwaja Nizamuddin Ahmad, *Tabaqat-i Akbari*, edited by B. De, Vol. II, Calcutta, 1931, p. 483; *Ma'asir-i Rahimi*, III, pp. 51-52; Lahori, *Padshahnama*, I, p. 346.
- ²² See, for example, in this regard, Manucci, *Storia Do Mogor*, II, iii, pp. 332-33, wherein the author says that the physicians in the Mughal court were basically Persians.
- ²³ *A'in-i Akbari*, I, pp. 542-44; *Tabaqat-i Akbari*, pp. 481-84.
- ²⁴ See, for example, the testimony of Fryer, *A New Account*, p. 115, also p. 27; also see Pyrard, *The Voyage of Francois Pyrard of Laval*, translated and edited by Albert Gray and H.C.P. Bell, Vol. I, Haklyut Society, London, n.d., p. 373.

- ²⁵ Manucci, *Storia Do Mogor*, II, iii, p. 332.
- ²⁶ *Ma'asir-ul Umara*, I, p. 569; Farid Bhakkari, *Zakhiratul Khawanin*, edited by Moinul Haque, Vol. I, Karachi, 1961–74, pp. 243–45.
- ²⁷ Manucci, *Storia Do Mogor*, pp. 373–74.
- ²⁸ *Ibid.*, p. 215.
- ²⁹ Khwaja Kamgar Husaini, *Ma'asir-i Jahangir*, edited by Azra Alavi, Centre of Advanced Study in History, Aligarh Muslim University, 1978, pp. 50–52; *Maasirul Umara*, I, p. 577; *Miratu'l Alam*, I, p. 332.
- ³⁰ *A'in-i Akbari*, Vol. I, p. 542; *Tabaqat-i Shahjahani*, p. 465.
- ³¹ Amin Qazwini, MS.BM.OR. 173, Add. 20734 (transcript of MS., Raza Library, Rampur, in Department of History, Aligarh Muslim University), II, p. 281.
- ³² Muhammad Bakhtawar Khan, *Miratu'l Alam*, edited by Sajida Alavi, I, Lahore, 1979, p. 297.
- ³³ Khafi Khan, *Muntakhabu'l Lubab*, edited by Kabiruddin Ahmad and W. Haig, Vol. II, Bib. Ind., Calcutta, 1905–25, p. 539.
- ³⁴ See 'Babur stricken by illness in Samarqand', signed by Nama, *Baburnama*, BM.OR. 3714, f. 79(a), cf. *Miniatures of Baburnama*, Samarqand, 1969, p. 18; 'Doctors and Patient', signed by Mirza Ghulam, *Diwan-i Hasan Dehlavi*, Walters Art Gallery, W. 650, f. 127, cf. Amina Okada, *Imperial Mughal Painters, Indian Miniatures from 16th and 17th Centuries*, translated by Deke Dusinberre, Flammarion, Paris, 1992, pl. 120; 'One Physician Killing Another', signed by Miskina, *Khamsa-i Nizami*, BM.OR. 12208 (Dyson-Perrins Collection) f. 23(b), cf. Amina Okada, *Imperial Mughal Painters*, pl. 143. For details, see S. Ali Nadeem Rezavi, 'Depiction of Middle-Class Professions and Professionals in Mughal Miniatures', *Madhya Kalin Bharat*, 7, edited by Irfan Habib, New Delhi, 2000 (Hindi translation of the paper presented at the Indian History Congress, Aligarh session, 1994).
- ³⁵ 'Jahangir amongst his Courtiers', Victoria and Albert Museum, IM. 9–1925, cf. Ivan Stchoukine, *La Peinture Indienne a l'Epoque des Grands Moghols*, Paris, 1929, pl. XXVIII.
- ³⁶ 'Jahangir being offered food by Dervishes', *Jahangirnama*, Edward Binney 3rd collection, San Diego, cf. A.K. Das, *Splendour of Mughal Painting*, Bombay, 1986, pl. V; 'Jahangir holding his court in a garden', State Library, Rampur, cf. Percy Brown, *Indian Painting under the Mughals, AD 1550 to AD 1750*, Oxford, 1924, pl. xlix; 'Jahangir celebrates *Ab-pashi*', attributed to Govardhan, State Library, Rampur, No. 1/5, cf. P. Brown, *ibid.*, frontispiece.
- ³⁷ 'Portrait of Hakim Sadra, Masihuz Zaman', signed by Mir Hashim, folio of an Album, BM. Add. 18801, No. 30, cf. P. Brown, *ibid.*, pl. 65.
- ³⁸ Discussing the salary of the state physicians, Manucci comments that 'those bearing the title of Khan—that is "noble", have a gross allowance of from twenty, thirty, fifty, one hundred to two thousand rupees a year'; Manucci, *Storia Do Mogor*, p. 332. See also Lahori, *Padshahnama*, II, p. 422; Muhammad Waris, *Badshahnama*, MS, IO Ethe 329 (transcript of MS., Raza

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Library, Rampur, at Department of History, Aligarh Muslim University), II, p. 255.

- ³⁹ Waris, II, p. 306.
- ⁴⁰ For example see, Manucci, *Storia Do Mogor*, IV, pp. 205, 210. *Mirat ul Alam*, I, p. 332; Lahori, *Padshahnama*, II, pp. 8, 11–12, 184, 234, 301, 334, and also I, p. 177; Qazwini, MS.BM.OR. 173, Add. 20734, II, p. 277; *Ma'asirul Umara*, I, p. 589.
- ⁴¹ Manucci, *Storia Do Mogor*, IV, p. 205.
- ⁴² *Ma'asir-i Rahimi*, I, pp. 516, 585. *Science and Technology in Medieval India: A Bibliography of Source Materials in Sanskrit, Arabic and Persian*, edited by A. Rahman, M.A. Alvi et al., New Delhi, 1982, p. 21. Francois Bernier, *Travels in the Mogul Empire, 1656–68*, Constable, 1968, p. 4.
- ⁴³ Manucci, *Storia Do Mogor*, II, iii, pp. 328–29, 332, 374–75; see also *ibid.*, p. 195.
- ⁴⁴ *Ibid.*, II, iii, p. 319. In the royal harem, sometimes a woman having a sound knowledge of *tibb* could also be attached. Lahori (*Padshahnama*, II, i, p. 629) refers to sati-un Nisa Begum, the wife of Nasira, the brother of Hakim Rukna, who was attached to the household of Mumtaz Mahal.
- ⁴⁵ *Ibid.*, II, iii, pp. 193–94, 195.
- ⁴⁶ Manucci, *Storia Do Mogor*, II, iii, pp. 383–84.
- ⁴⁷ See in this regard Jahangir, *Tuzuk-i Jahangiri*, edited by Saiyid Ahmad Khan, Vol. II, Ghazipur, 1863, p. 334; also see *ibid.*, II, p. 336.
- ⁴⁸ Jean-Baptiste Tavernier, *Travels in India*, translated by V. Ball, Vol. I, New Delhi, 1977, p. 96.
- ⁴⁹ *Ma'asir-ul Umara*, I, p. 493; *Ma'asir-i Alamgir*, p. 42.
- ⁵⁰ *Ma'asir-i Rahimi*, III, p. 45.
- ⁵¹ *Zakhiratul Khawanin*, III, pp. 336–38.
- ⁵² Lahori, *Padshahnama*, I, ii, p. 349; *Ma'asir-i Jahangiri*, p. 345.
- ⁵³ Manucci, *Storia Do Mogor*, II, p. 76.
- ⁵⁴ *Miratu'l Alam*, I, p. 332.
- ⁵⁵ Munshi Tek Chand 'Bahar', *Bahar-i Ajam*, 1739–40, litho. Nawal Kishore, Lucknow, 1336/1916, Vol. II, p. 166.
- ⁵⁶ *Ma'asir-i Mahmud Shahi*, p. 64.
- ⁵⁷ *Tuzuk-i Jahangiri*, I, p. 4.
- ⁵⁸ Ali Muhammad Khan, *Mirat-i Ahmadi*, edited by Nawab Ali, Vol. I, Baroda, 1972–78, p. 376.
- ⁵⁹ For a reference to the *mutasaddis* and *kotwal* in a government hospital, see Gopal Rai Surdaj, *Durrul Ulum*, MS., Bodleian Library, Oxford, Ms Walker 104, f. 45(b) (Rotograph in Department of History, Aligarh Muslim University).
- ⁶⁰ *Mirat-i Ahmadi*, I, p. 209.
- ⁶¹ *Sairu'l Manazil*, p. 8. This *Danish Shifa* is probably the same which is referred to by Gopal Rai Surdaj (*Durrul Ulum*, f. 45(b)).
- ⁶² Lahori, *Padshahnama*, I, ii, p. 345.
- ⁶³ *Mirat-i Ahmadi* (supplement), pp. 186–87.

- ⁶⁴ For the hospital at Surat, see *Ruqqat-i Alamgiri*, Nizami Press, Kanpur, 1273 AH, Letter No. 125. See also *Surat Documents*, ff. 174(b), 175(a).
- ⁶⁵ *Mirat-i Ahmadi* (supplement), p. 187; *Selected Documents of Aurangzeb's Reign*, edited by Yusuf Husain, Hyderabad, 1958, pp. 122–23.
- ⁶⁶ *Surat Documents*, Blochet, Suppl. Pers. 482, ff. 174(a), 174(b).
- ⁶⁷ *Selected Documents of Aurangzeb's Reign*, pp. 122–23. The total salary was Rs 180 p.m. which, after the deduction of usual dues, came to Rs 136 p.m. For salaries and daily allowances in government hospitals at Surat and Ahmadabad see *Surat Documents*, ff. 174(a)–175(b), ff. 81(a)–82(b); *Waq'a'i Ajmer wa Ranthambhar*, MS., Asafiya Library, Hyderabad (transcript in Department of History, Aligarh Muslim University) Vol. I, p. 9; *Mirat* (supplement), pp. 160–61, 186–87. Compare this with the salaries of local officials like *qanungo*, *muharrir*, *nawisanda*, etc., which ranged 'somewhere between Rs 10 to Rs 17 per month'. See S. Ali Nadeem Rezavi, 'The Empire and Bureaucracy'.
- ⁶⁸ *Selected Documents of Shahjahan's Reign*, edited by Y.H. Yahya, Hyderabad, 1950, pp. 211–12; *Daftar-i Diwani-o-Mal-o-Mulki-i Sarkar-i A'la*, Hyderabad (State Archives), 1939, p. 161.
- ⁶⁹ *Selected Documents of Aurangzeb's Reign*, pp. 120, 122–23.
- ⁷⁰ *Ruqqat-i Alamgir*, Letter No. 125.
- ⁷¹ *Mirat-i Ahmadi*, I, p. 209
- ⁷² *Ma'asirul Umara*, III, p. 936.
- ⁷³ *Muraqq'at-i Hasan*, Abul Hasan, MS., Riza Library, Rampur (Microfilm in Department of History, Aligarh Muslim University).
- ⁷⁴ *Indian Travels of Thevenot and Careri*, p. 218.
- ⁷⁵ See, for example, *Selected Documents of Aurangzeb's Reign*, p. 120; Manucci, *Storia Do Mogor*, II, pp. 95–96, 225, etc.; Bernier, *Travels in the Mogul Empire*, pp. 489, etc.
- ⁷⁶ Letter of Balkrishan Brahman, MS., Riell, 83, Add.16895 (Rotagraph in Department of History, Aligarh Muslim University), f. 31(b).
- ⁷⁷ See for example Manucci, *Storia Do Mogor*, III, iv, p. 459. These physicians were probably quite unskilled. See *Mirza Nama* of Mirza Kamran, cited in Iqtidar Alam Khan, 'The Middle Classes in the Mughal Empire', p. 19, n.68.
- ⁷⁸ *Tuzuk-i Jahangiri*, II, p. 253; *Nishan* of Maryam Zamani in *Edicts from the Mughal Haram*, pp. 50–52. See also *Tuzuk-i Jahangiri*, I, p. 91.
- ⁷⁹ Hodivala, *Studies in Parsi History*, Bombay, 1929, pp. 167–88. See also Irfan Habib, *The Agrarian System of Mughal India, 1556–1707*, 2nd edn, Oxford, 1999, p. 353. I am thankful to Professor Irfan Habib, for having brought this set of documents to my knowledge.
- ⁸⁰ Ibid. Of special interest in this regard is the public testimony explicitly mentioning this reason for the grant contained in a document of Aurangzeb's reign (Hodivala, *Studies in Parsi History*, pp. 185–86, 188); Irfan Habib, *Agrarian System*, p. 353.
- ⁸¹ *Muraqqat-i Hasan*, pp. 330–31.
- ⁸² *Parwana*, dated 1 Ramzan 1116AH/48th RY/28 December 1704, preserved

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- in National Archives, New Delhi, no. NAI, AD.2444; see also NAI, AD.2446 (dated 25 Ziqada 1127/3RY of Farukh Siyar/22 November 1715).
- ⁸³ See for example NAI, AD.2445 and NAI, AD.2447; *Some Firmans, Sanads and Parwanas (1578–1802 AD)*, edited by K.K. Datta, Patna, 1962, pp. 30, 45, 68.
- ⁸⁴ Amongst others this view is strongly endorsed by Moreland, *India at the Death of Akbar*, Delhi, 1962, p. 79, and B.B. Misra, *The Indian Middle Classes*, London, 1961, p. 59.
- ⁸⁵ Tavernier, *Travels in India*, I, p. 240
- ⁸⁶ Badauni, *Muntakhab-ut Tawarikh*, III, pp. 163, 170, 315.
- ⁸⁷ Manucci, *Storia Do Mogor*, I, p. 115.
- ⁸⁸ Badauni, *Muntakhab-ut Tawarikh*, III, p. 169.
- ⁸⁹ Banarsi Das, *Ardha Kathanak*, translated and annotated by Mukund Lath, Jaipur, p. 14, text, verse 15 and pp. 31–32, text, verses 185–92.
- ⁹⁰ *Ibid.*, p. 70, text, verse 488.
- ⁹¹ Surat Singh, *Tazkira-i Pir Hassu Taili*, MS., Department of History, Aligarh Muslim University, ff. 48(b), 171(a), 125(b)–126(a).
- ⁹² Abdul Hayy, *Nuzhat-ul Khawatir*, edited by Sharifuddin Ahmad, Vol. V, Hyderabad, 1962–79, p. 357. For another such example see Anonymous, *Iqbal Nama*, translated by S. Hasan Askari, Patna, 1883, p. 213.
- ⁹³ Letter of Balkrishan Brahman, MS., Riell, 83, Add.16895, ff. 125(a), 319(a)–31(b).
- ⁹⁴ See for example Francois Pyrard, *The Voyage of Francois Pyrard of Laval to the East Indies, the Maldives, the Moluccas and Brazil*, translated and edited by Albert Gray and H.C.P. Bell, Vol. I, Haklyut Society, London, n.d., p. 373; Manucci, *Storia Do Mogor*, III, iii, p. 129; J. Fryer, *A New Account of East India and Persia*, p. 27; Carre, *The Travels of the Abbe Carre in India and the Near East, 1672 to 1674*, Vol. I, translated by Lady Fawcet, edited by C. Fawcet and R. Burn, New Delhi, 1990, pp. 268–69.
- ⁹⁵ 'An old man consults a doctor', *Bustan-i Sa'adi*, Aboulala Soudavar Collection, f. 176r, cf. S.C. Welch, Annemarie Schimmel et al., *The Emperor's Album: Images of Mughal India*, New York, 1987, fig. 25.
- ⁹⁶ Fryer, *A New Account of East India and Persia*, p. 115.
- ⁹⁷ As a private practitioner, Manucci was offered Rs 4,000 by a patient (Manucci, *Storia Do Mogor*, III, iii, p. 132); in the service of Shah Alam he received Rs 300 p.m. (*ibid.*, II, p. 215) apart from occasional gifts ranging from Rs 400 to Rs 200 for individual treatment of the members of the princes' harem (*ibid.*, II, p. 331). The government physicians on the other hand had a salary of Rs 2 per day (i.e. Rs 60 p.m.). See *supra*.
- ⁹⁸ Manucci, time and again, laments over this hostility; see *Storia Do Mogor*, II, p. 381; IV, pp. 205–10.
- ⁹⁹ John Huighen Van Linschoten, *Voyages to East Indies*, Vol. I, Hakluyt Society, 1885, p. 230.
- ¹⁰⁰ Careri, *Indian Travels of Thevenot and Careri*, pp. 161–62. Compare this view regarding Indian surgeons with that of Tavernier (*Travels in India*, I,

- p. 241) that the people of this country understand nothing about it. See also Manucci, *Storia Do Mogor*, II, pp. 89–90, regarding limitations of Muslim surgeons at Agra.
- ¹⁰¹ Manucci, *ibid.*, II, p. 333.
- ¹⁰² *Ibid.*, III, iii, p. 187.
- ¹⁰³ See for example, *ibid.*, III, iii, p. 129.
- ¹⁰⁴ See *Dala'il ul Bul*, MS., Sir Sulaiman Collection, 493/14; Subhanullah Collection, 616/22; and *Dala'il un Nabz*, MS., Sir Sulaiman Collection, 492/12, Subhanullah, 616/22.
- ¹⁰⁵ MS., Maulana Azad Library, Aligarh, University Farsiyya Funun, No. 56.
- ¹⁰⁶ MS., Bodlein, Persian MSS. Catalogue, 3/76, 2757/3, cf. A. Rahman et al., *Bibliography of Source Materials*, pp. 266–69.
- ¹⁰⁷ *Bahrul Jawahir*, MS., Maulana Azad Libery, University Farsiya Funun, 4, pub. Calcutta, edited by Abdul Majid, 1830. Cf. A. Rahman et al., *Bibliography of Source Materials*, p. 113.
- ¹⁰⁸ MS., Bankipur Library, Patna, 11–40; 1013, cf. *ibid.*, p. 4
- ¹⁰⁹ Badauni, *Muntakhab-ut Tawarikh*, III, pp. 169–70; *Tabaqat-i Akbari*, II, pp. 483–84.
- ¹¹⁰ MS., Central State Library, Hyderabad, *Tibb*, 254; Asiatic Society of Bengal, Persian MSS Catalogue, Soc. 722, cf. A. Rahman et al., *Bibliography of Source Materials*, p. 41.
- ¹¹¹ Badanuni, *Muntakhab-ut Tawarikh*, III, p. 230
- ¹¹² *Ibid.*, III, p. 164; *Tabaqat-i Akbari*, II, p. 481.
- ¹¹³ MS., Salarjung, *Mashriqi Kitabkhana*, Hyderabad, cf. A. Rahman et al., *A Bibliography of Source Materials*, p. 16.
- ¹¹⁴ *Ibid.*, pp. 144–45.
- ¹¹⁵ *Tuzuk-i Jahangiri*, I, p. 152.
- ¹¹⁶ See R.L. Verma and V. Bijlani, 'Hakim Ali Gilani: Assessment of his Place in Greco-Medicine', *Studies in History of Medicine*, Vol. IV, No. 2, June 1980, pp. 98–99.
- ¹¹⁷ *Tarjuma-i Kitab-ul Qanun*, MS., Riza Library, Rampur, No. 1272.
- ¹¹⁸ *Tibb-i Ferishta*, MS., Maulana Azad Library, Subhanullah Collection, No. 616/17, ff. 1–7.
- ¹¹⁹ *Mufradat-i Sahih*, MS., Maulana Azad Library, Subhanullah Collection, No. 616/37.
- ¹²⁰ Cf. A. Rahman et al., *A Bibliography of Source Materials*, p. 203.
- ¹²¹ See *Tuzuk-i Jahangiri*, I, p. 347, II, pp. 344, 364; Lahori, *Padshahnama*, I, p. 350.
- ¹²² *Tuzuk-i Jahangiri*, p. 347.
- ¹²³ Lahori, *Padshahnama*, II, pp. 350–51.
- ¹²⁴ Cf. A. Rahman et al., *Bibliography of Source Materials*, p. 21.
- ¹²⁵ *Ibid.*, pp. 202, 134, 164.
- ¹²⁶ MS., Maulana Azad Library, Subhanullah Collection, No. 615/4.
- ¹²⁷ MS., Maulana Azad Library, Farsiya Funun (Suppl), *Tibb*, 9.
- ¹²⁸ MS., Maulana Azad Library, Subhanullah Collection, No. 610, 3/9.
- ¹²⁹ *Ma'asir-i Alamgiri*, p. 84.

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- ¹³⁰ Bernier, *Travels in the Mogul Empire*, pp. 353–54.
- ¹³¹ *Ibid.*, pp. 324–25.
- ¹³² Cf. A. Rahman et al., *Bibliography of Source Material*, p. 165.
- ¹³³ *Tibb-i Akbari*, MSS., Maulana Azad Library, Subhanullah Collection, Nos. 616/15, 616/6 cr.
- ¹³⁴ *Mufarrihul Qulub*, MSS., Maulana Azad Library, University Farsiya Funun, 58; Subhanullah Collection, 616/2; Sir Sulaiman Collection, 580/5.
- ¹³⁵ MS., Maulana Azad Library, Subhanullah Collection, 616/16.
- ¹³⁶ Tables 3 and 4 have been prepared on the basis of the information contained in A. Rahman et al., *Bibliography of Source Materials*.
- ¹³⁷ Asad Beg, *Ahwal-i Asad Beg Qazwini*, MS. BM. OR. 1996 (Rotograph in Department of History, Aligarh Muslim University), ff. 36–37.
- ¹³⁸ Manucci, *Storia Do Mogor*, II, p. 282
- ¹³⁹ *Ibid.*
- ¹⁴⁰ See in this regard the statement of Bernier, *Travels in the Mogul Empire*, p. 259.