

SOCIALIZING MEDICINE: ILLUSTRATIONS OF THE *KITĀB AL-DIRYĀQ*

Among the earliest extant Islamic illustrated manuscripts are two copies of an Arabic text on antidotes derived from or used as remedy for snake venom. It is known by the short title, *Kitāb al-diryāq* (Book of Antidotes).¹ The earlier of the two copies, dated Rabi' I 595 (1199), is in the Bibliothèque Nationale, Paris (arabe 2964) and the second, datable towards the middle of the thirteenth century, is in the Nationalbibliothek, Vienna (A.F. 10).² Although the figural style of the paintings persuaded at least one scholar to attribute both manuscripts to Iran, it is more commonly thought that they originate in the Jazira.³

The importance of both manuscripts for the study of early Islamic painting has long been recognized in the scholarship. Along with about a dozen other illustrated manuscripts from the first half of the thirteenth century, they constitute the earliest milestones in an increasingly more sophisticated tradition of illustrated codices. This recognition of their significance, however, has been achieved mostly at the cost of a fragmentary understanding of their pictorial programs. Discussion of such early manuscripts, based on style and elements of iconography, has most frequently revolved around questions of attribution to various schools of painting. Although discrete iconographic elements, such as the frontispieces or the portraits of authors and scholars, have prompted in-depth studies on the sources of imagery,⁴ by and large, such studies have not been concerned with connecting their findings with the overall pictorial program in any given manuscript.

The aim of this essay is to shift the focus of inquiry away from perennial questions of attribution in an attempt to redress the fragmentary reception of the illustrated *Kitāb al-diryāq*, particularly the copy in Paris, by revisiting the entirety of its painting program. As the earliest extant dated Islamic manuscript illustrated with extensive figural paintings, the pictorial sequence in the Paris manuscript reveals a distinct humanistic attitude in representing the acquisition

and transmission of knowledge as a social asset. Through the subject of antidotes, these paintings promote learning as a highly valued activity that is hierarchical in its essence and yet, at the same time, socially relevant, accessible, and attainable. This popular humanistic perception of the practice of knowledge as an exalting activity is crystallized particularly in the Paris *Kitāb al-diryāq* through its visualization of physicians as sages mediating in a cosmic continuum delineated by reference to both celestial and earthly realms in creation. A comparison of this manuscript with its later counterpart in Vienna reveals an alternative approach to representing the agents, processes, and contexts of learning, possibly as a result of courtly involvement in the definition and production of its pictorial program. Together, the Paris and Vienna copies of the *Kitāb al-diryāq* epitomize two aspects of the cultural endorsement of learning in the late Seljuq period.

The illustrations of the Paris manuscript begin with an exceptional double frontispiece showing two seated figures each holding up a crescent moon with an attendant on either side, enclosed by two dragons and surrounded by four winged figures (fig. 1a-b).⁵ The two pages are nearly identical, differing only in a few details. The inscription, spread across the two pages, reads: "Its owner and scribe is the meekest of God's servants, be He praised, Muhammad, son of the fortunate Abu'l-Fath, son of the rightly guided imam Abu'l-Hasan, son of the beneficent imam."⁶ The double frontispiece is followed by a second double-page composition. The inscription on the right-hand page states that the book is for the library of a certain Imam Abu'l-Fath Mahmud who, it appears from his patronymic, may well have been the nephew of the owner/scribe named on the frontispiece.⁷ The left-hand page introduces the work: "The Book of Antidotes of the virtuous physician Galen from the collection of the first discourse of the book of Galen on electuaries with the commentary of John the Gram-

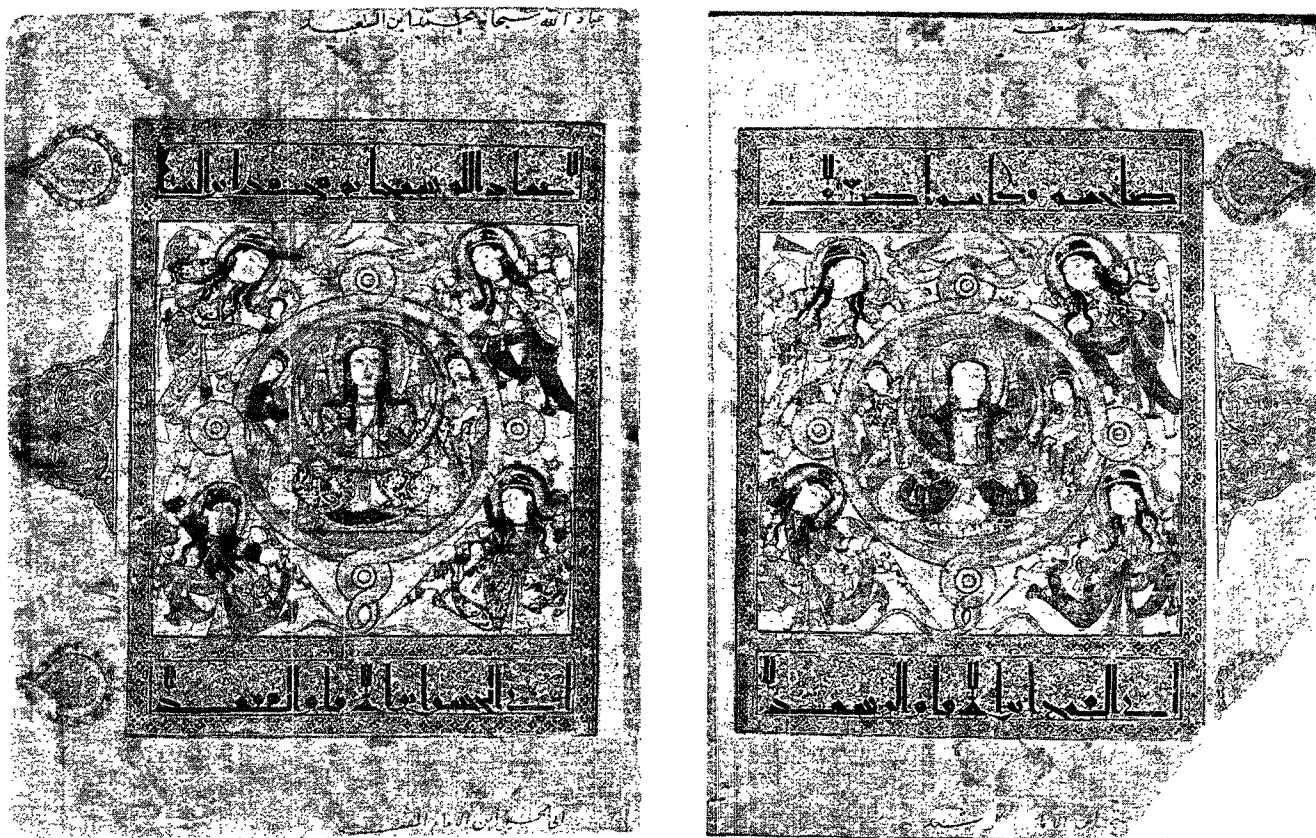


Fig. 1a-b. Double frontispiece. *Kitāb al-diryāq*, dated Rabī' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 36–37. (Photo: Bibliothèque National de France, Paris)

marian [Philoponus] of Alexandria, may God have mercy on him; he is the wise falcon and the wondrous phoenix.”⁸

Galen, the renowned second-century Greek physician and pharmacologist, is known to have composed treatises on both theriacs and antidotes that were later translated into Arabic by the ninth-century scholar of the translation movement, Hunayn b. Ishak.⁹ The *Kitāb al-diryāq*, on the other hand, appears to be pseudepigraphic and probably the work of a later, perhaps a tenth-century, anonymous Arabic author who may have compiled the text from a variety of sources without being too concerned about the accuracy of its historical components.¹⁰ In medieval Islam, pharmacology was a highly developed branch of medicine which was based to a large degree on Greek sources and, to a lesser degree, on Indian ones. Along with the translation of the principal reference works such as Dioscorides' *De Materia Medica* on simple drugs

in the ninth and tenth centuries and new treatises produced by Islamic scholars based on assimilated and original findings, there was also considerable redaction of a vast corpus of inherited pharmacological knowledge, not infrequently disseminated as pseud-epigraphic texts. In addition to descriptions of poisons (*summ*, pl. *sumūm*) and their remedies compiled from the ancient sources, medieval Islamic physicians and pharmacists produced a number of original writings devoted specifically to toxicology that relied on both Greek and Indian sources. In most medical compendia, a chapter was devoted to poisons and antidotes, the latter holding a special status among the compound drugs not in the least because of the complexity of their composition.¹¹

Popular interest in the subject of toxicology in particular is apparent from its inclusion in encyclopedias of the natural sciences, particularly those written in Persian between the eleventh and thirteenth

centuries and intended for a non-scientific audience. For example, in the *Farrukhnāma* (Book of Auspiciousness), a popular encyclopedia of cosmographical knowledge and various types of useful instruction written in 1185 by Abu Bakr al-Mutahhar Jamali Yazdi for a vizier named Majd al-Dawla Ahmad b. Mas'ud, descriptions of poisons and antidotes as well as anecdotes related to their application constitute the subject of one chapter.¹² Thus, discussion of toxicology was not confined to literature for the specialist, but was part of general learned discourse, as a topic that interested laymen for whom handy descriptions of poisons, recipes of antidotes, and accounts of their application were offered in such compilations. The tenth-century physician Ibn Juljul's statement that antidotes are of great importance especially to travelers, rulers, and men of affairs since they are in greatest danger of being poisoned speaks for the popular consumption of this type of knowledge.¹³ The reason for producing a copy of the *Kitāb al-diryāq* for the library of a person outside of the medical profession, in this case a member of the Shi'i religious class, may therefore be understood, at least in part, in the context of this popular and pragmatic interest in the wondrous curing effect of the successful antidote.¹⁴

The double frontispiece and title pages of the Paris *Kitāb al-diryāq* are followed by three illustrated pages on which the title of the work is given one more time (fig. 2a-c). These pages contain portraits of nine physicians of antiquity (including Galen) whose contributions to the development of the antidote recipes is the subject of the text. The physicians, whose names are given above their portraits, are portrayed with the necessary attributes of learning (pencase, inkwell, bookstand, oil lamp, etc.) and, except for the central physician on each page, they are also depicted in the company of their student.¹⁵ The portraits are followed by a page containing the beginning of the text which introduces the nine physicians. This extended pictorial introduction to the nine physicians, who are presented in the book as the historical heroes of the antidote, visually anchors this text with regard to its putative sources. Although these depictions are usually referred to as "author portraits," they should not be perceived specifically as such. Galen, the alleged author of the text according to the title, is not distinguished in any way from his eight colleagues, and John the Grammarian, the alleged commentator, does not figure at all in this assembly. Each

one of these nine portraits, which depicts the physician as a scholar and teacher in the process of recording or imparting his knowledge, functions as a link in a chain of transmission that includes his attentive student and, by extension, the reader who engages with the book. This clear indication of the generation and transmission of knowledge at the very beginning of the Paris *Kitāb al-diryāq* sets the tone for the remainder of its pictorial program where these two themes are assimilated and explored in an expanded context.

The first section of the *Kitāb al-diryāq* chronicles the lives of the nine physicians, giving the number of years for each physician's life and career and outlining the contributions of each to the evolution of the antidote recipes. This section concludes with three anecdotes attributed to the life of the physician Andromachus the Younger (Andrumakhos al-Qarib al-'Ahd) in which the applicational value of the antidotes is described. The Paris manuscript contains three paintings that illustrate the lives and contributions of the first three of the nine physicians. Originally, this number may have been four as there is a missing folio in the segment about the physician Proklos (Afruqlus). Each of the three paintings illustrates a scene in which a physician is depicted in an activity related to the composition and preparation of the antidote.

The first painting depicts the physician Andromachus the Elder on horseback observing a youth who has just been bitten by a snake (fig. 3). The text explains that Andromachus developed his antidote recipe from this encounter with this youth who had cured himself by eating leaves from a laurel tree depicted in botanical fashion behind him. The second painting depicts the physician Herakleides (Abraqlidis) who, according to the text, had improved upon Andromachus's recipe (fig. 4). This scene shows the physician, book in hand, supervising an assistant who is measuring out ingredients for the antidote on a scale. The scene appears to be set in the practice of the physician or in the shop of a pharmacist where pouches of medicinal substances hang from hooks. Herakleides is assisted by two apprentices and waited upon by three attendants shown standing behind his seat. The indoor setting is indicated by the doorway to the right occupied by a crouching sleeping groom. The third painting depicts the physician Philagrios (Aflaghuras) in the process of preparing his antidote

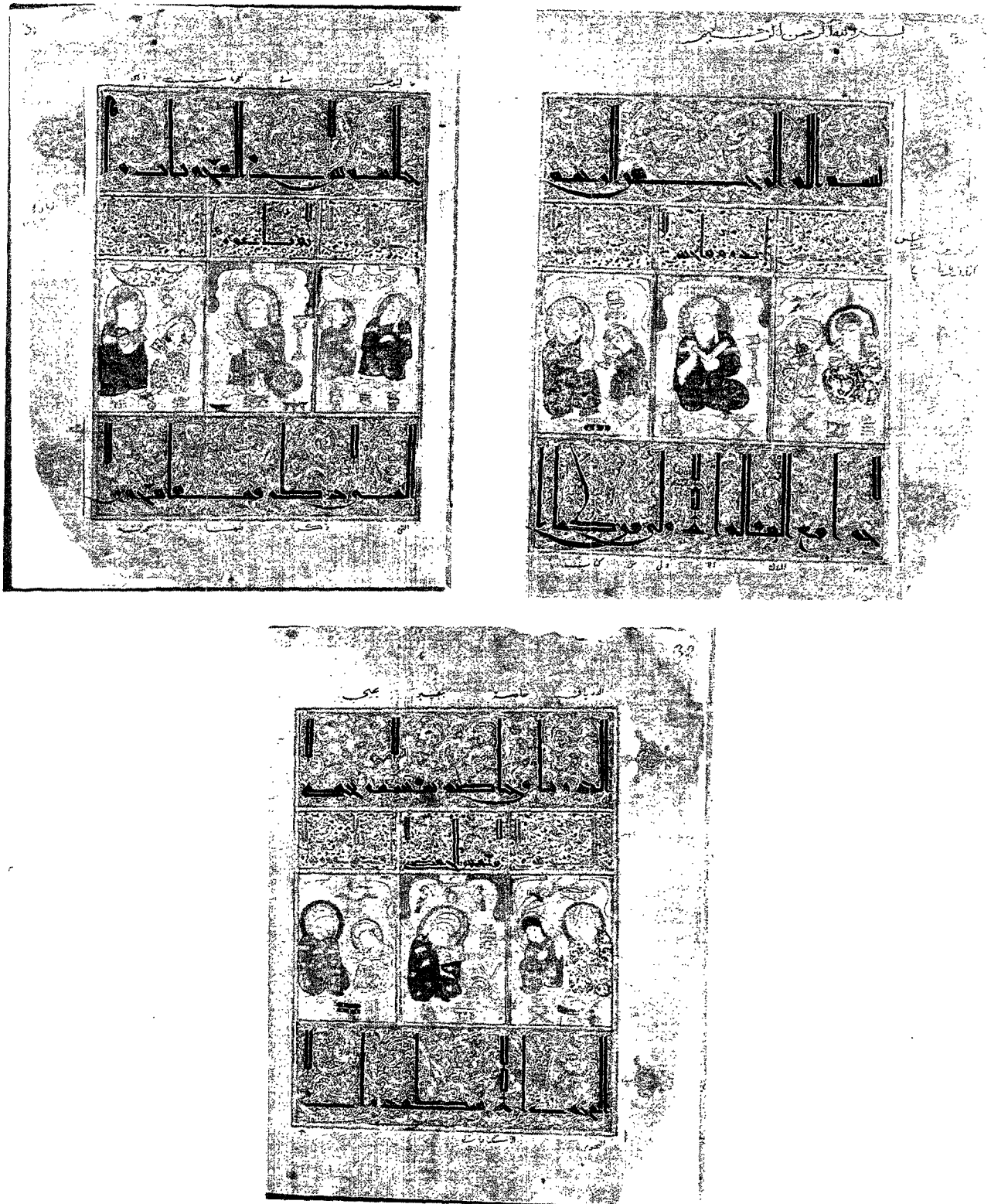


Fig. 2a-c. Portraits of the physicians. *Kitāb al-diryāq*, dated Rabi' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 34, 31–32. (Photo: Bibliothèque National de France, Paris)



Fig. 3. Andromachus the Elder and the poisoned youth. *Kitāb al-diryāq*, dated Rabi' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 19. (Photo: Bibliothèque National de France, Paris)

(fig. 5). He is shown indoors, perched over a stove, stirring the contents of a pan, while his assistant does his best to keep the fire going. The scene is replete with additional figures who appear to be onlookers requesting some of the physician's concoction. To the left are two veiled women with a child accompanied by an attendant and to the right is an older woman leaning on her cane with an emaciated man by her side. A sleeping groom occupies the far left corner.

These three paintings accompanying, respectively, the accounts of the first three physicians' lives and works, function on one level as illustrations explicating or enhancing the text. On another level, they appear to function independently of the text, in pictorial relationship to each other, constituting a nearly narrative progression of scenes that highlight the physician and the nature and context of his prac-

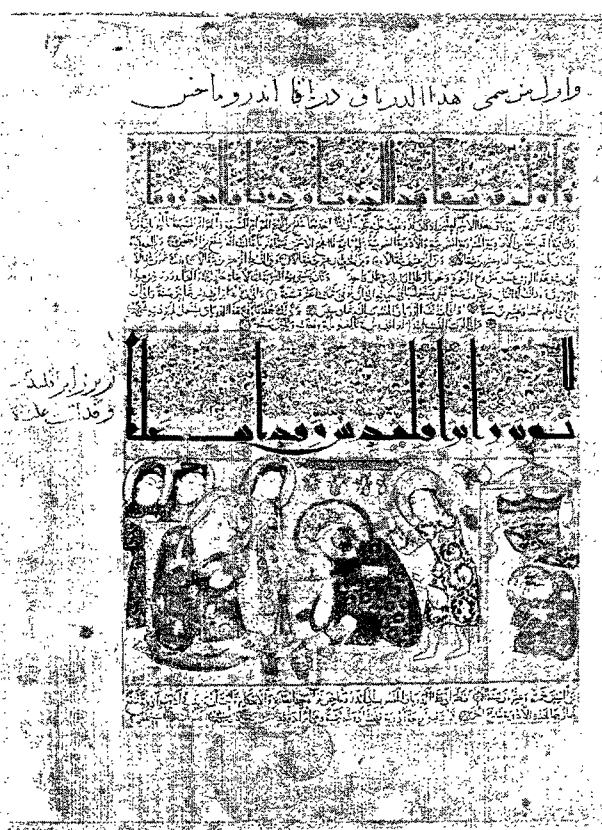


Fig. 4. Herakleides measuring ingredients for an antidote. *Kitāb al-diryāq*, dated Rabi' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 17. (Photo: Bibliothèque National de France, Paris)

tice. Thus, the paintings take the viewer from an outdoor scene—the site of the discovery of an antidote—to the indoor measurement of the ingredients, and, finally, to the distribution of the antidote to common folk. With each scene, the social context expands further and, within each scene, the primacy of the physician as the codifier and transmitter of the knowledge of antidotes is emphasized. This emphasis on the role and rank of the physician is further strengthened by the series of epigrammatic portraits that immediately precede these three scenes.

This sequence of paintings suggests the premise of a pyramidal social structure for learning that is occupied at the apex by the physician, in the middle by aspiring students, and at the bottom by common folk, thereby constructing a relationship between the scholarly and the non-scholarly segments of society which are differentiated from and, at the same time,



Fig. 5. Philagrios preparing an antidote. *Kitāb al-diryāq*, dated Rabī' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 15. (Photo: Bibliothèque National de France, Paris)

linked to each other by their varying degrees of knowledge and initiation. While primacy is given to the physician as the wise sage, the students' progress along the path of knowledge is acknowledged by way of their incorporation into the preliminary portraits. Common folk are also included for their recognition of the medical knowledge codified and dispensed by the physician. In this way, the paintings function not just as illustrations to the text but as a superimposed exposition on learning and its social structure. This social framework of the pursuit and practice of medical learning is given further treatment in the last three figural paintings of the Paris manuscript. These three paintings illustrate three anecdotes about the discovery and application of antidotes attributed to Andromachus the Younger.

The first of the series depicts an incident involving Andromachus's brother Tulusus, a land survey-



Fig. 6. Tulusus discovers an antidote. *Kitāb al-diryāq*, dated Rabī' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 5. (Photo: Bibliothèque National de France, Paris)

or in the service of the king (fig. 6). While out surveying land one day, Tulusus is bitten by a poisonous snake. Feeling death overcoming him, he writes his will, hangs it on a nearby tree, and drinks his last cup of water from a jar. This drink immediately cures him. Surprised, he stirs the jar to find out what caused this healing and finds two snakes inside, as is depicted in the painting. The painting also includes Andromachus, who is observing the discovery of the two snakes in the jar. The anecdote portrayed in the second painting takes place on Andromachus's estate (fig. 7). One day, Andromachus decides to pay a visit to his agricultural workers and has his servant bring them food and drinks. When the workmen discover a certain snake inside the water jar, they make a leper drink this water, which cures his affliction.¹⁶ The painting shows Andromachus and his servant in the upper left corner while the composition is taken up



Fig. 7. Andromachus the Younger visiting workers at the field. *Kitāb al-diryāq*, dated Rabi' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 22. (Photo: Bibliothèque National de France, Paris)



Fig. 8. Enslaved prisoner bitten by a snake at the palace. *Kitāb al-diryāq*, dated Rabi' I 595 (December 1198–January 1199). Paris, Bibliothèque Nationale, arabe 2964; current pagination 27. (Photo: Bibliothèque National de France, Paris)

primarily by a scene of busy agricultural work. In the final painting the third anecdote related to Andromachus is depicted (fig. 8). The incident takes place in the court of a prince. The prince's favorite slave, who is the envy of the court, has been given an overdose of opium. While drugged and under house arrest, the slave is bitten by a snake, as a result of which he is revived from the opium-induced stupor. The painting depicts a garden pavilion that is occupied on the upper level by the oblivious prince and his court while, on the lower level, the improved condition of the imprisoned slave is witnessed by an alert workman.

These three illustrations of anecdotes shift the focus away from the physician (although he is present in two of them as observer) to elaborate further on the variety of social and environmental settings in which the accidental or conventional application of

antidotes takes place. The paintings, especially the last two, emphasize the social setting as much as the incident described in the anecdote. These settings further expand the social context of medical knowledge to include both agricultural workers and a royal court, thereby covering essentially the entire range of society. The knowledge of antidote recipes which are obtained in these settings is visually conveyed as an asset with widespread relevance, application, and effect, demonstrating the extent of the physicians' sphere of activity from which they derive their learning.

The nine portraits and subsequent six paintings of the Paris *Kitāb al-diryāq* depict, via the subject of antidotes, the acquisition and application of knowledge as an occupation of paramount significance for society and as a pursuit anchored in the person of the physician who obtains, codifies, and, in turn, trans-

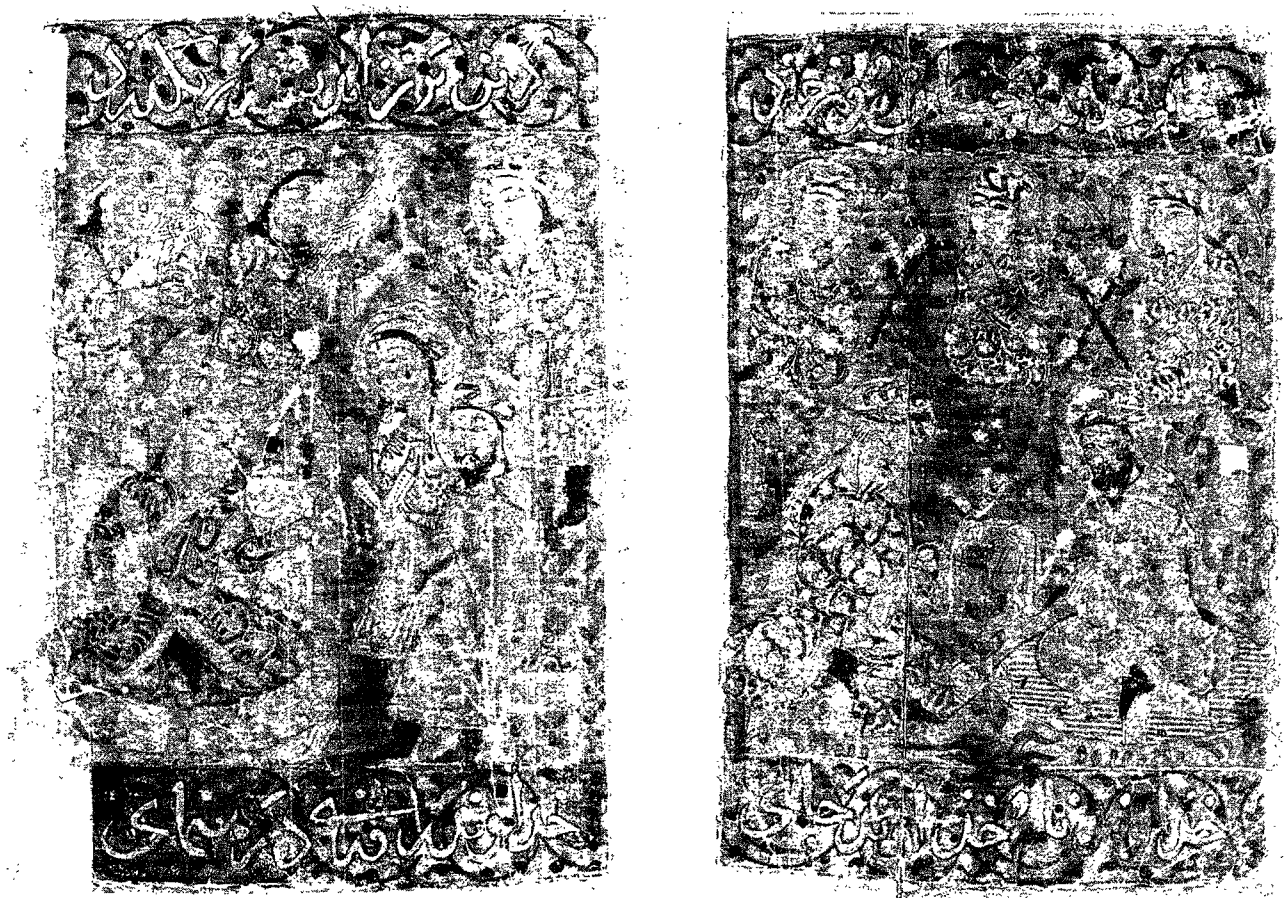


Fig. 9a-b. Double frontispiece. Nasr Allah Munshi, *Kalīla wa Dimna*, early thirteenth century. Istanbul, Topkapi Palace Library, H. 363; fols. 1b–2a. (Photo: Topkapı Sarayı Müzesi, Istanbul)

mits his learning. The emphasis on the dissemination of learning in the Paris *Kitāb al-diryāq* is made apparent in the portraits of the nine physicians, most of which include a figure that can be identified as a scribe or student. In fact, representations of the transmission of knowledge between scholar and student are included in most of the extant illustrated manuscripts from the early thirteenth century. The well-known frontispiece to the 1228 copy of Dioscorides' *De Materia Medica* (Istanbul, Topkapi Palace Library, Ahmet III 2127), for example, depicts two students holding books in their hands and dutifully approaching the scholar who approvingly summons them.¹⁷ The indispensability of the student from a representation of the scholar can also be seen in similar compositions consisting of teachers and student groups in early-thirteenth-century illustrated literary manuscripts.

The interest in visualizing the agents and processes of learning is perhaps most evident in the double frontispiece to the early-thirteenth-century copy of the Persian version of the animal fable book, *Kalīla wa Dimna* (Istanbul, Topkapi Palace Library, Hazine 363) that explicitly renders the transmission and translation of the stories of Bidpai (fig. 9 a-b). On the right-hand page, Nasr Allah Munshi, the translator of *Kalīla wa Dimna* into Persian, is shown receiving the text as a book from an older scholar. They are accompanied by three scribes, who are equipped for the task at hand with penboxes and bookstands. On the left-hand page, the process of transmission is completed as Nasr Allah presents the book to his patron, the Ghaznavid Bahram Shah, surrounded by his courtly attendants.

This pictorial emphasis on the agents, processes, and even tools of the transmission of knowledge in

the first half of the thirteenth century can be understood more fully in the context of new forms and attitudes in the exercise of knowledge during the period of the Seljuqs and their successors (late eleventh to early thirteenth centuries). The well-known rise of the madrasa, for example, provided an institutional locus where knowledge could be pursued as social capital. Among the learned civilian elite who held posts in the madrasas, the act of learning was regarded as a means of guaranteeing loyalty, service, and honor between teachers and students. Teaching and learning were seen as ritual processes that yielded benefit (*fā'ida*), and knowledge was classified as a distinct form of blessing (*baraka*). The special bond between students and teachers was described with the concept of *ṣuḥba* (fellowship), implying loyalty on the part of the student and frequently expressed in terms of the experience of love. Students were often referred to as *muhibbūn* (lovers), thus emphasizing the personal affiliation and devotion implied in ties of love. From this emic relationship, the student derived not only moral benefit but also moral identity.¹⁸

In addition to the rise of the madrasa, the twelfth and thirteenth centuries also witnessed the institutionalization of Sufism into orders and a relatively new form of social organization known as *futuwwa* which functioned in the form of urban fraternities dedicated to the promotion of a chivalric code of behavior.¹⁹ Like the institution of the madrasa, both Sufi orders and *futuwwa* brotherhoods were centered on the relationship between master and disciple, providing a useful framework for the creation and maintenance of social associations across the various segments of society. The fundamental system of hierarchy between masters and disciples, which was crucial to all three of these organizations, afforded personal stability and opportunity and gave clear new definition to the processes of social initiation. It is against the background of this new emphasis on the exercise of knowledge as a social asset and of the accompanying general interest in articulating social initiation by accentuating the relationship between teacher and student that these paintings of the transmission and practice of knowledge can be understood.

This value accorded to learning was also emphasized in medieval Islamic texts on ethics in which knowledge is posited as one of the two principal prerequisites to the attainment of human perfection.²⁰ Those who attain this rank of perfection are considered to have realized their microcosmic potential as human beings in whom the cosmos is epitomized and

who thereby occupy an intermediary status between the temporal and the universal realms of God's creation. According to the philosopher Miskawayh, the perfect man "reaches the limit of his realm [which is] the beginning of the realm of angels. This is the highest rank possible for man. Here the existents are unified, and their beginnings become joined to their ends and vice-versa."²¹ Having reached this stage, man will "become an intermediary between the higher world and the lower."²² Miskawayh conceived of this intermediary status as being occupied either by prophets who receive divine revelation or by "complete philosophers" who receive heavenly inspiration and support for their endeavors. As implied by the title *ḥakīm*, denoting both medical doctor and philosopher or sage, the physician was uniquely situated to be a candidate for the rank of the "complete philosopher." This cosmic ramification of the ultimate attainment of knowledge may provide the semantic justification for the choice of the frontispiece of the Paris *Kitāb al-diryāq* (fig. 1a-b).

That the frontispiece representation of two seated moon figures, each encircled by two dragons and surrounded by four winged celestial beings, establishes a cosmic connection for the book has been recognized in the scholarship from the outset. Bishr Farès, who first brought this manuscript to light in a monograph, saw in this frontispiece the memory of the ancient Mesopotamian cult of the moon god, Sin, who was occasionally associated with healing and suggested that this memory was preserved through the perpetuation of this cult by the planet-worshipping Sabians of Harran well into the Islamic period.²³ For the intertwined dragons, Farès proposed a talismanic function akin to the frequent usage of snake and dragon reliefs on walls and gates and reinforced by the healing powers associated with snakes in ancient Mesopotamian and Greco-Roman beliefs.²⁴ Although Farès aptly stressed the relevance of the various elements in the composition of a talismanic nature to a text on poisons and antidotes, the main thrust of his analysis, albeit perceptive, was to discern in the iconography of the frontispiece traces of ancient Mesopotamian tradition without being too concerned about explaining why such elements reemerged or were revived in an established Islamic context on the eve of the thirteenth century.

In an article devoted exclusively to the iconography of this frontispiece, Guitty Azarpay rightly pointed out that the moon figure and the intertwined dragons could also be perceived as a discrete representation

of the lunar eclipse.²⁵ In Islamic celestial sciences, the eclipse of the sun and the moon were attributed to an invisible pseudo-planet, *al-jawzahr*, corresponding to the two nodes of the moon's orbit and conceived of as a bipartite dragon temporarily "devouring" the sun or the moon.²⁶ Along with the rise of anthropomorphic celestial imagery in the second half of the twelfth century from Khurasan to Anatolia, depictions of *al-jawzahr* menacing a personification of the sun or the moon became particularly prevalent in decorative programs of objects, either alone or in combination with the other seven planet figures. Azarpay, however, like Farès, was interested primarily in tracing the Mesopotamian antecedents of this iconography and only offered, as a possible explanation for the frontispiece's subject matter, the occurrence of a partial solar eclipse around the time of the completion of the manuscript. In addition to avoiding the basic question of why a representation of the lunar eclipse might be chosen to refer to a solar eclipse, Azarpay's restrictive analysis explicitly precluded a correlation between the iconography of the frontispiece and either the content of the text or the remainder of the pictorial program of the manuscript.

The analyses of both scholars, preoccupied as they were with the ancient sources of the imagery, nonetheless provide a number of valuable observations which suggest that the frontispiece may be understood more completely if it is acknowledged to be a polysemic representation both in itself and in relationship to the overall pictorial program and the text. Thus, on an immediate level, as both Farès and Azarpay noted, the choice of the moon figure may well have had specific regional significance as this image was frequently depicted on coins, architecture, and metalwork particularly in the Jazira between the mid twelfth and early thirteenth centuries. The memory of the pagan cult of Sin, the moon god, in Harran is indeed attested by medieval Islamic writers even after Sabian practices had become extinct in that city.²⁷ On the other hand, there is no evidence to link the resurgence of the moon figure directly with any new impetus provided by such a memory specifically around the middle of the twelfth century. Indirectly, it may perhaps be explained as part and parcel of the more widespread emergence of cosmographical imagery across the eastern Islamic world at that particular time which emphasized regionally meaningful, even if latent, celestial imagery. Be that as it may,

simply ascribing the moon figures of the frontispiece to regional tradition does little to explain their function in this particular manuscript.

Interpretation of the intertwined dragons around the moon figures as the ecliptic *al-jawzahr* yields another level of potential meaning which need not be connected to the actual occurrence of an eclipse, solar or lunar, as Azarpay had proposed, but which may be semantically related to the contents of the manuscript. Personifications of the sun or the moon in combination with *al-jawzahr* can, in many cases, be read as images of the triumph of light over darkness or good over evil, as the two "planets" are always seen to emerge unscathed from their temporary eclipse by the "dragon."²⁸ As an image of triumph which resonated with images of kingship, the representation of dragons subdued by a human figure also found its way to the decoration of city gates where they naturally acquired talismanic connotations.²⁹ This auspicious indication of celestial victory, reinforced by the presence of the winged figures, in the beginning of the Paris *Kitāb al-diryāq* manuscript may have been intended to provide a cosmic parallel to the basic theme of the text defined by the triumph of antidotes over poison, especially those from snakes.

The idea of this semantic parallel between the subject matter of the frontispiece and the subject matter of the text, which was also hinted at in passing by Farès, merits further consideration. Medieval Islamic medicine, based largely on Galenic pathology, ascribed ailments of the body to a disturbance in the equilibrium (*i'tidāl*) of the four humors (*akhlāt*: blood, phlegm, yellow bile, and black bile), each of which corresponded to one of the four sublunar elements (*arkān*: air, water, fire, and earth) and embodied four qualities or temperaments.³⁰ Because of their respective correspondences, the humors were also called "daughters of the elements" (*banāt al-arkān*). Deviation from the equilibrium was attributed to a number of such external "non-naturals" as abnormalities in diet and sleep or environmental factors including changes in climate, miasma, and even astral influence. Similarly, the action of poisons in the body was explained as an upset of the humors.³¹ The role of the physician was to reinstate the humoral equilibrium by his understanding of the correspondences between the humors and external forces. In this connection, the choice of the triumphant moon figure may be interpreted as a device signaling the extent of the sublunar domain of creation in which the four

elements give rise to the three kingdoms (animal, vegetal, and mineral). The physician achieves his goal by negotiating the forces of this sublunar domain and administering the necessary remedy extracted from the natural world of the three kingdoms. It is perhaps not entirely coincidental that the moon figures of the frontispiece are surrounded by four winged figures which may have been intended to represent the four elements and, by extension, their four humoral counterparts. Taking this idea further, the four knots formed by the two dragons may also be read as a reinforcement of this number symbolism.

On the basis of the foregoing, therefore, it is possible to offer two interrelated meanings for the frontispiece to this manuscript. As the image of triumph over the eclipse dragon, the moon figure functions as a cosmic parallel to the power of antidotes to overcome the effect of poisons, particularly snake venom. As a representation defining the extent of the sublunar realm in which human well-being depends on the balance of the humors and the elements, the moon figure also provides a cosmic context for the physician's purpose and practice as mediator. In both cases, the frontispiece situates the textual and pictorial contents of the manuscript in a framework defined by the concept of a cosmic continuum between the temporal and celestial realms of creation. The physicians, whose portraits follow the frontispiece, occupy a pivotal position in that continuum by virtue of their consummate learning which both allows them to negotiate a balance between bodily and external forces and grants them an intermediary rank between the universal and the temporal realms. And as intermediaries, the nine physicians are not only codifiers and rationalizers of medical knowledge which they transmit to their students but also exemplary human beings in the natural world. This natural world which is the source of the antidotes is the setting of the physicians' progression from mere human existence—in which knowledge of antidotes has application and is disseminated—to human perfection, the ultimate destination of the pursuit of knowledge, conferring microcosmic status to the human individual. Thus, the pictorial program of the manuscript, when read consecutively from the initial moon figures, through the physician portraits, and into extended social settings, delineates a cosmic hierarchy articulated by the degrees of initiation into knowledge of the interrelation of forces and, in this case, of antidotes.

The idea of a cosmic continuum communicated

by the pictorial program of the Paris *Kitāb al-diryāq* also suggests the possibility of another, esoteric, level of meaning. Based largely on late-antique forms of Greek medical knowledge which contained currents of occult practices and beliefs, medieval Islamic medical practice likewise included such syncretistic aspects which were not strictly peripheral to the mainstream discipline.³² Discourse on pharmacology and toxicology, in particular, contained ideas infused with late-antique concepts of magic based on the Hermetic notion of a unified cosmos of interdependent forces.³³ Besides the popular interest in its practical aspects, the subject of toxicology especially intersected with the Islamic occult sciences immersed in Hermeticism, such as alchemy. These occult sciences were predicated on the understanding of a cosmic "sympathy" between the celestial and the terrestrial, spirit and matter, or the hidden and the seen, and aimed to gain intellectual and spiritual mastery of the cosmos by tapping into the forces relevant to the task at hand. An Arabic text on the poisons of snakes and other venomous creatures attributed to Hermes translated or compiled from the Greek probably in the ninth century and in circulation through the medieval period, reveals the affiliation between toxicology and the Hermetic notions of sympathies.³⁴ Specifically, the belief in the connection between the terrestrial and the celestial informed the description of snakes, their venom, and antidotes which were systematized in this text according to their correspondence to the twelve constellations of the Zodiac and the seven planets. The relationship between toxicology and the other occult sciences is also evinced by the attribution of one of the earliest Islamic works devoted exclusively to the subject of toxicology, the *Kitāb al-sumūm* (Book of Poisons) to Jabir b. Hayyan, the putative eighth- or ninth-century author of a large body of Hermetic alchemical literature.³⁵

An esoteric, or Hermetic, interpretation of the cosmic continuum suggested by the pictorial program of the Paris *Kitāb al-diryāq* is supported by two observations. As a pseudepigraphic Arabic text which purports to have been written by Galen and commented on by the sixth-century Greek Christian theologian and literary scholar, John the Grammarian (Philoponus) of Alexandria, the *Kitāb al-diryāq* is probably a descendant of the medico-magical compilations of late-antique authors in cities such as Alexandria and Harran that constituted centers of Hermetic thought.³⁶ Furthermore, the apparently Shi'i affiliation of the

scribe and owner of the manuscript points to a socioreligious context that may have been favorably disposed to an esoteric interpretation of the text and its pictorial program. The Jabirean corpus is believed to be the work largely of later Isma'ili authors and Jabir's name was closely associated with Ja'far al-Sadiq, the sixth imam, who was also held to be the author of a number of alchemical treatises.³⁷ Moreover, Isma'ili esotericism also propounded the idea of a continuum between the microcosm and the macrocosm which was formulated especially by the Brethren of Purity (Ikhwan al-Safa') in the tenth century.³⁸

The ideas conveyed by the complete pictorial program of the Paris *Kitāb al-diryāq* is more than the sum of its parts. The illustrations were conceived with an eye toward conveying the hierarchical nature of creation and the singular role of humankind in apprehending and manipulating it. Textually, the *Kitāb al-diryāq* can be situated at the intersection of popular and esoteric interest in toxicology, which had its roots in the late-antique period and which was absorbed into an Islamic context early on, along with the transmission of both medical and occult knowledge. The illustrated manuscript in Paris not only represents the enduring popularity of such pseudepigraphic texts around 1200, but, more significantly, also reflects, through its pictorial program, a distinct emphasis on the idea of a continuous and interdependent creation which humankind is uniquely able to comprehend and ascend through the acquisition and dissemination of learning. The sequence of paintings suggests that in the twelfth century the artist and his audience were immersed in and motivated by the visual and literary popularization of the interrelated notions of a cosmic continuum and of man's microcosmic potential and that they subscribed to the articulation of knowledge as a social asset. Although it is possible that the Paris manuscript may have been destined specifically for an Isma'ili audience and designed, therefore, to communicate on an esoteric level as well, the polysemy of the pictorial program would have nonetheless rendered it equally accessible and meaningful to a wider audience of learned individuals.

The continuing interest in copying the *Kitāb al-diryāq* as an illustrated manuscript into the thirteenth century is evident in the second copy of this text, now in Vienna, and usually dated to the second quarter of the century. Although similarly furnished with an elaborate frontispiece, portraits of the physicians, and several paintings accompanying the text, the pictori-

al program of the Vienna manuscript conveys a significantly different approach to the illustration of the text that seems to be designed for a distinct, probably courtly, audience. Specifically, it displays an alternative vision for the cultural sanction of learning in visual culture which did not subscribe to a polysemic conceptualization of the themes offered by the text as with the Paris manuscript, but instead favored a discrete and circumscribed definition of the pictorial program.

In its present state, the Vienna *Kitāb al-diryāq* is introduced by a frontispiece depicting a lively court scene revolving around the person of the prince who is grilling meat before his patron (fig. 10). Just behind the royal pavilion, gardeners can be seen tending to their work and, beyond them, several figures on horseback are engaged in hunting. In the fore-



Fig. 10. Frontispiece. *Kitāb al-diryāq*, mid thirteenth century. Vienna, Nationalbibliothek, A.F. 10, fol. 3a. (Photo: Bildarchiv, Österreichische Nationalbibliothek, Vienna)

ground is a procession of more figures on horseback, followed by two camels carrying veiled women and one child. The first two folios are missing, leaving open the possibility that the manuscript may have originally had a double frontispiece. This elaborate representation of activities, both ceremonial and mundane, epitomizing aspects of medieval Islamic palace life at the outset of the manuscript provides a semantic context that is clearly royal and distinctly different from the celestial one seen in the Paris manuscript. As one of the earliest extant manuscripts to incorporate exclusively royal imagery into its frontispiece, the Vienna *Kitāb al-diryāq* is representative of a pictorial alternative to other early-thirteenth-century manuscripts, scientific or literary, which were typically introduced by author portraits. Although there is no information in the manuscript in its present state about the patron or the artist/scribe of this

manuscript, the subject of the frontispiece offers the strong possibility of courtly patronage.

The subsequent page in the manuscript contains the portraits of the nine physicians of antiquity and the introduction to the text (fig. 11). In contrast to the Paris manuscript where the portraits of the nine are spread over three pages, here the depictions are reduced to an almost emblematic composition on a single page. The physicians hold books in their hands but the matrix-like arrangement precludes the inclusion of students and, therefore, also the idea of the transmission of knowledge from one generation to the next. Taken together, the frontispiece and the portraits in the Vienna *Kitāb al-diryāq* constitute a notably different direction to the representation of learning in terms of the royal iconography dominating the opening of the book, the minimization of the space allotted to the physicians' portraits, and the simplification of the composition of those portraits.

The reductive approach to the portraits is echoed in the subsequent paintings of the manuscript, revealing a general simplification and even standardization of the imagery, especially when compared with the Paris manuscript. For example, the painting of Philagrios preparing his antidote in the Paris manuscript is conceived as taking place indoors with various customers eagerly awaiting the concoction about to be served by the physician (fig. 5). The same scene in the Vienna manuscript is set outdoors, lacks any onlookers, and consists basically of the physician supervising his assistant as he stirs the contents of a cauldron (fig. 12). In fact, unlike the nearly narrative progression of scenes in different settings discerned in the Paris manuscript, this basic composition of the physician and his assistant before a cauldron, always set outdoors, is repeated three times in the Vienna manuscript without major variations.³⁹ In addition to this standardization of imagery in the paintings showing the physicians preparing their respective antidotes, depictions of the three anecdotes related to Andromachus the Younger are also significantly less elaborate than their counterparts in the Paris manuscript. The painting of the snake-bitten slave, for example, excludes the explicit representation of the courtly context and conveys just the incident described in the text (fig. 13).

This standardization and simplification of imagery communicating the nature and context of the physician's practice reinforce the notion of an alternative



Fig. 11. Portraits of the physicians. *Kitāb al-diryāq*, mid thirteenth century. Vienna, Nationalbibliothek, A.F. 10, fol. 3b. (Photo: Bildarchiv, Österreichische Nationalbibliothek, Vienna)



Fig. 12. Philagrius supervising the preparation of an antidote. *Kitāb al-diryāq*, mid thirteenth century. Vienna, Nationalbibliothek, A.F. 10, fol. 9a. (Photo: Bildarchiv, Österreichische Nationalbibliothek, Vienna)

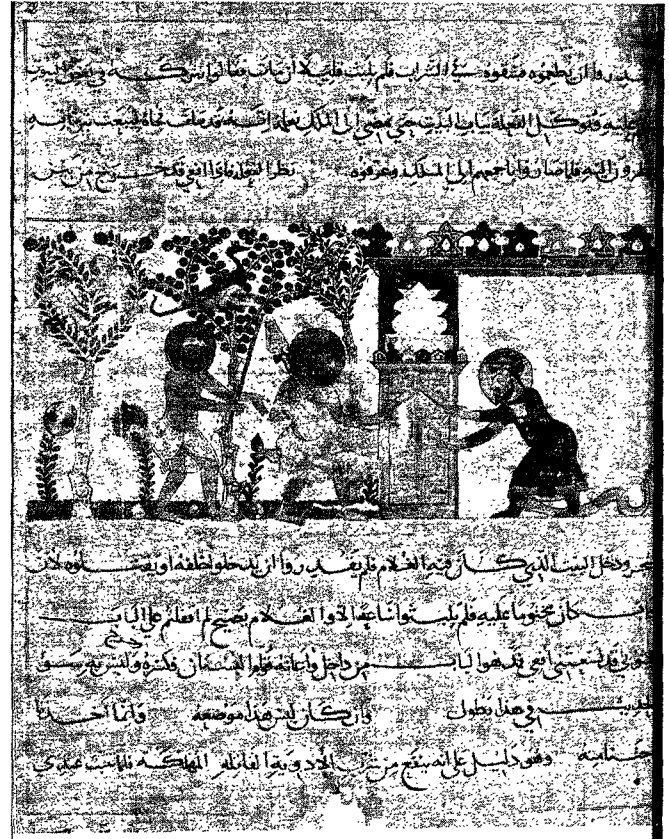


Fig. 13. Enslaved prisoner bitten by a snake at the palace. *Kitāb al-diryāq*, mid thirteenth century. Vienna, Nationalbibliothek, A.F. 10, fol. 19a. (Photo: Bildarchiv, Österreichische Nationalbibliothek, Vienna)

disposition towards the visualization of learning. The artist of the Vienna *Kitāb al-diryāq* was apparently less interested in conveying the variety of contexts, social and physical, in which the knowledge of antidotes is obtained and disseminated. Indeed, the only painting in the manuscript invested with an elaborate setting is the frontispiece which is easily the most elaborate representation of court life from medieval Islam. Whereas the sequence of paintings in the Paris manuscript appears to have been coordinated specifically to delineate the temporal implications and cosmological ramifications of learning, the pictorial program of the Vienna manuscript is weighted in the frontispiece in which aspects of royal prerogative are represented.

The conspicuous display of a courtly environment in the beginning of the Vienna manuscript may be

characterized as an attempt to assert royal affiliation with the prestige of learning. Although the anonymity of the manuscript's owner and audience makes this characterization tentative, it is nonetheless congruous with the larger pattern of royal sponsorship of learning, especially in the form of madrasas, among the ruling military classes of the Seljuq successor states. It has been argued that the endowment of these institutions by the ruling military classes was as much a charitable activity as it was a religiopolitical strategy for establishing crucial bonds with the learned civilian elite through the distribution of stipendiary posts.⁴⁰ Aside from appropriating the prestige of the scholarly milieu for magnifying their status and image in the competitive environment of the politically fragmented and multicentered lands of the former Seljuq empire, rulers in the successor states were also

exhorted, in ethical writings, to align themselves with learning. In mirrors for princes, which distilled the ethical exigencies of ideal kingship into the pragmatic manuals of conduct, the acquisition of knowledge was posited as a distinct characteristic of the would-be ideal, or just, ruler.⁴¹ Thus, on both the public and the individual level, the assertion of royal affiliation with learning became a key factor in the promotion and maintenance of the proper kingly and courtly image.

In the context of this explicit and often overt attempt to establish links with the learned segments of society, the pictorial expression of royal affiliation with the agents and processes of knowledge also emerged as part of some manuscript illustration in the early thirteenth century. In the frontispiece to the *Kalīla wa Dimna* manuscript discussed earlier, for example, the detailed depiction of the transmission of the text culminates visually in the person of the king who is shown receiving the translated text (fig. 9 a-b). In other manuscripts, representations of authors or their students were excluded altogether from the composition of the frontispieces, giving way to exclusively royal imagery. Such is the case particularly with five of the six extant frontispieces to an originally twenty-volume copy of the *Kitāb al-aghānī* (Book of Songs), dating from between 1217 and 1219.⁴² These paintings which depict the ruler, quite possibly the *atābeg* Badr al-Dīn Lu'lu' of Mosul, in various guises of kingship, are very much in keeping with the tenor of the Vienna *Kitāb al-diryāq* frontispiece, even if not as detailed.

The evidence provided by extant manuscripts suggests that, in the first half of the thirteenth century, depictions of rulers, or patrons, and scholars in their respective environments constituted the majority of frontispieces. While the frontispiece and the subsequent painting in the 1228 manuscript of *De Materia Medica* both depicted the theme of knowledge transmission exclusively, for example, the frontispieces of the *Kitāb al-aghānī* gave primacy to displays of the royal theme. Only in the *Kalīla wa Dimna* frontispiece was a true equilibrium achieved between the representations of the scholar and the patron, thanks to the explicit depiction of textual transmission. It is, of course, entirely possible that the frontispiece of the Vienna *Kitāb al-diryāq* was also once part of a double-page composition in which the courtly scene was complemented on the opposite page by a representation of learning. Compositionally, however, the

extant painting showing a self-contained palace brimming with activities precludes the possibility that such a double-page frontispiece could have conveyed a unified scene of the transmission of knowledge, as is the case with the *Kalīla wa Dimna* frontispiece. In fact, the double frontispiece to a copy of al-Hariri's *Maqāmāt* (Paris, Bibliothèque Nationale, arabe 5847) dated 634 (1237) with the portrait of the author on the left and of the patron on the right, each with his respective audience, reveals that the inclusion of both scholar and patron in a single double-page composition did not necessarily amount to a representation of knowledge transmission.⁴³ Rather, these constitute two parallel but discrete images, creating the net effect of visually equating the image of a ruler holding audience in his court with that of the author reciting his work.

The various configurations of the scholar and patron in early-thirteenth-century frontispiece compositions communicated the idea of royal affiliation with learning by visually linking, associating, or equating the two parties. By the end of the thirteenth century, but especially at the beginning of the fourteenth century, such configurations gave way to a visual appropriation of the scholar by the ruler. This is evident, for example, in the frontispiece of the 1290 manuscript of the *Ta'rīkh-i Jahān-gushā* of 'Ala al-Dīn 'Ata Malik Juvayni (Paris, Bibliothèque Nationale, suppl. pers. 205) where the author is visually marginalized with respect to the patron (either Hulagu or Amir Arghun) as well as his royal horse and groom.⁴⁴ The domination of the royal theme is visible even in the frontispiece of the 1287 copy of the *Rasā'il* of the Brethren of Purity (Istanbul, Süleymaniye Library, Esad Efendi, 3638) where the scholars, though prominently depicted, are contextualized in a court-like setting complete with attendants wielding fly whisks.⁴⁵

The sequence of paintings in the Vienna *Kitāb al-diryāq*, with its apparent affirmation of learning for the purposes of courtly prestige and numerous yet rather conventionalized representations of the practice of learning, provides a profile of the semantic directions operative in manuscript illustration towards the middle of the thirteenth century and, at the same time, foreshadows the outcome of those directions at the end of the century. This apparent semantic transformation in the conceptualization of the frontispiece towards the end of the thirteenth century is not necessarily symptomatic of a diminishing inter-

est in the agents and processes of learning as such (since depictions of learning did not actually dissipate) but possibly an indication of an increasing concern for the assertion of royal prerogative vis-à-vis learning. The rise of court workshops probably had a role in this change; so did questions of dynastic legitimacy, especially in Mongol Iran. It is important to recognize, however, that the seeds of this shift towards the assertion of royal precedence in frontispieces were already sown in the early thirteenth century in tandem with both pragmatic and ethical association of kingship with learning. Sociopolitical realignments brought about by the consolidation and division of the post-Seljuq world into the Mamluk and Mongol polities after 1250 could only have hastened such a shift in pictorial emphasis. On the other hand, it is important to bear in mind that while court production appears to have favored and developed specific types of imagery relating to rulership in the illustration of manuscripts in the thirteenth century, these pictorial programs nonetheless retained inventive qualities that preceded the remarkable flowering of courtly illustrated manuscripts of the fourteenth century.

The two manuscripts of the *Kitāb al-diryāq*, separated in time by less than fifty years, are differentiated from each other by their approaches to the visual validation of learning, defined by their distinct framing of the text in view of their respective audiences. Whereas the approach in the Vienna manuscript can be characterized as an appropriation and abridgment of the themes of learning in return for amplifying the prestige of the royal image, the program of the Paris manuscript engages with the subject of the text on more than one level. It conveys the relevance of the pursuit of knowledge for society, underscores the pivotal role of the physician as mediator, and projects its visual and textual contents onto the framework of a cosmic continuum with possibly esoteric connotations. The Paris *Kitāb al-diryāq* is a true milestone not just because it stands at the beginning of a long tradition of illustrated manuscripts but especially because it is one of the most complete testaments to the intellectually conceived and popularly disseminated visual humanism of the late Seljuq period.

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NOTES

1. The Arabic term *diryāq* (or *tiryāq*) was derived from the Greek *theriaka*, or *theriac*, specifically an antidote to the bite or sting of a wild animal. As such, it was a particular type of antidote but, in time, it lost its specific meaning and the distinction between *theriac* and *antidote* became blurred. For a history of the *theriac* in ancient and medieval times, see Gilbert Watson, *Theriac and Mithridatium: A Study in Therapeutics* (London: Wellcome Historical Medical Library, 1966). Because the *Kitāb al-diryāq* also includes references to recipes that are not *theriac* in the strict sense of the term, the less restrictive term "antidote" will be used in this essay.
2. For the Paris manuscript, see Bishr Farès, *Le livre de la thériaque* (Cairo: Institut Français d'Archéologie Orientale, 1953). The date of the manuscript given in the colophon, the month of Rabi' I of the year 595 A.H., corresponds to 31 December 1198–29 January 1199. For the Vienna manuscript, see Kurt Holter, "Die Galen-Handschrift und die Makamen des Hariri der Wiener Nationalbibliothek," *Jahrbuch der Kunsthistorischen Sammlungen in Wien*, n. F. 11 (1937): 1–48; Dorothea Duda, *Die illuminierten Handschriften der Österreichischen Nationalbibliothek: Islamischen Handschriften 2* (Vienna: Österreichischen Akademie der Wissenschaften, 1992), pp. 46–69.
3. An Iranian origin for both manuscripts was first proposed by A. S. Melikian-Chirvani ("Trois manuscrits de l'Iran seldjoukide," *Arts Asiatiques* 16 [1967]: 3–51), who did not altogether deny the possibility of an Artuqid (i.e., Jaziran) provenance. For the Vienna manuscript, Kurt Holter offered Mosul as the likeliest location, and Bishr Farès attributed the Paris manuscript to the "School of Baghdad." Richard Ettinghausen accepted the Mosul attribution for the Vienna manuscript and leaned towards the possibility of the Jazira for the Paris manuscript (*Arab Painting* [Geneva: Skira, 1962], pp. 86 and 92). More recently, the likelihood of a Jaziran provenance for both manuscripts has been strengthened; Nahla Nassar, "Saljuq or Byzantine: Two Related Styles of Jaziran Miniature Painting," in *The Art of Syria and the Jazira, 1100–1250*, ed. Julian Raby (Oxford: Oxford University Press, 1985), pp. 85–98. See also Rachel Ward, "Evidence for a School of Painting at the Artuqid Court," in *ibid.*, pp. 69–84.
4. Guitty Azarpay, "The Eclipse Dragon on an Arabic Frontispiece Miniature," *Journal of the American Oriental Society* 98 (1978): 363–74; Eva R. Hoffman, "The Author Portrait in Thirteenth-Century Arabic Manuscripts: A New Islamic Context for a Late-Antique Tradition," *Muqarnas* 10 (1993): 6–20.
5. This manuscript was reassembled with missing folios and repaginated at some point in its history. A reconstruction of the original order of the extant and missing folios (and a concordance of the two manuscripts) is given in Duda, *Islamischen Handschriften 2*: 48–49. The double frontispiece, no longer at the beginning of the book, is now identified by page numbers 36 and 37. Two folios preceded the frontispiece—the first is missing and the second, preserved only as a fragment (currently pages 3 and 4), contains the beginning of the name of the scribe (Farès, *Le livre de la théri-*

- aque, pl. Ia-b). The name continues on the facing page (the recto of the right-hand page of the frontispiece; *ibid.*, pl. II).
6. *Ṣāhibuḥu wa kاتبuḥu ad'afu 'ibād Allāh subḥānuḥu Muḥammad ibn al-sa'id Abī'l-Fath ibn al-imām al-rashīd Abī'l-Ḥasan ibn al-imām al-mufīd.*
 7. "For the library of the learned imam, the most excellent, the most perfect, the brilliant, the glory of religion, the honor of Islam, the glorifier of imams, the king of scholars, Abū'l-Fath Maḥmūd, son of the imam Jamāl al-Dīn, son of the fortunate imam Abū'l-Fath, son of the rightly guided imam Abū'l-Ḥasan, son of the beneficent imam. May God double his greatness and increase his fortune" (*li-khizānat-i kutub al-imām al-'ālim al-afdal al-kāmil al-bārī 'izz al-dīn sharaf al-islām mu'iz al-a'imma malik al-'ulamā' Abī'l-Fath Maḥmūd ibn al-imām Jamāl al-Dīn ibn al-imām al-sa'id Abī'l-Fath ibn al-imām al-rashīd Abī'l-Ḥasan ibn al-imām al-mufīd dā'afa Allāhu jalālahu wa zāda iqbalahu*) current page number 38 (Farès, *Le Livre de la thériaque*, pp. 8-9, pl. V).
 8. *Kitāb al-diryāq li'l-hakīm al-fādīl Jālīnūs min jawāmi' al-maqāla al-ūlā min kitāb-i Jālīnūs fi'l-ma'jūnāt bi-tafsīr-i Yahyā al-Nahwī al-Iskandarānī raḥmatu'llāhu 'alayhi wa huwa al-bāz al-ashhab wa'l-'anqā' al-mughrib*; current page number 33 (Farès, *Le livre de la thériaque*, p. 3, pl. VI).
 9. Manfred Ullmann, *Die Medizin in Islam* (Leiden: E. J. Brill, 1970), p. 49; Penelope Johnstone, "Summ," in *Encyclopaedia of Islam*, 2d ed.; *idem*, "Galen in Arabic: The Transformation of Galenic Pharmacology," in *Galen: Problems and Prospects*, ed. Vivian Nutton (London: Wellcome Institute, 1981), pp. 197-212.
 10. Max Meyerhof, "Joannes Grammatikos (Philoponos) von Alexandria und die arabische Medizin," *Mitteilungen des Deutschen Instituts für Ägyptische Altertumskunde in Kairo* 2 (1932): 1-21, esp. 16-21. Meyerhof deemed the text to be a "mystical-magical product" of late Alexandrian "pseudo-scientific" literature (p. 21). To my knowledge, no modern edition of the text has been undertaken. See also Ullmann, *Die Medizin in Islam*, pp. 90-91.
 11. For medieval Islamic pharmacology and toxicology, see Manfred Ullmann, *Islamic Medicine* (Edinburgh: Edinburgh University Press, 1978), pp. 103-6; *idem*, *Die Medizin in Islam*, pp. 295-342. Sami K. Hamarneh, "A History of Muslim Pharmacy," in *Health Sciences in Early Islam: Collected Papers by Sami K. Hamarneh*, ed. Munawar A. Anees (Blanco, Tex.: Noor Health Foundation, 1984), pp. 73-97; Alain Touwaide, "L'integration de la pharmacologie grecque dans le monde arabe: une vue d'ensemble," *Medicina nei Secoli* n.s. 7 (1995): 159-89; Emilie Savage-Smith, "Ṭibb," *EI*, 2d ed., esp. pp. 456-57; Martin Levey, *Early Arabic Pharmacology* (Leiden: E. J. Brill, 1973); Johnstone, "Summ."
 12. Abū Bakr Muṭahhar Jamālī Yazdī, *Farrukhnāma*, ed. Iraj Afshar (Tehran: Amir Kabir, 1346/1967), pp. 331-43.
 13. Johnstone, "Galen in Arabic," p. 208.
 14. The Shi'i affiliation of both the owner/scribe and the patron is evident not only from the repetition of the term *imām* in their names, but also in the colophon where God's benediction is invoked for both the Prophet Muhammad and his "pure family" (Farès, *Le livre de la thériaque*, p. 9, pl. XXI).
 15. The nine physicians are named Mārīnūs (Marinos), Andrū-mākhūs (Andromachus [the Elder]), Andrūmākhūs (Andromachus [the Younger]), Afruqlūs (Proklos), Būtāghū-ras (Pythagoras), Abrāqlidīs (Herakleides), Jālīnūs (Galen), Maghnīs al-Homṣī (Magnus of Emessa), and Aflāghū-ras (Philagrios). The role and pictorial sources of author portraits in the early manuscripts are discussed in depth in Eva Hoffman, "The Emergence of Illustration in Arabic Manuscripts: Classical Legacy and Islamic Transformation," Ph.D. diss., Harvard University, 1982, pp. 148-86, 254 ff., and *idem*, "The Author Portrait." See also Oya Pancaroğlu, "'A World Unto Himself': The Rise of a New Human Image in the Late Seljuk Period (1150-1250)," Ph.D. diss., Harvard University, 2000, pp. 100 ff.
 16. The Arabic term for the disease in question, *judhām*, comprised both leprosy and elephantiasis, as the diagnostic distinction between the two was not known; Ullmann, *Islamic Medicine*, pp. 87-88.
 17. Ettinghausen, *Arab Painting*, pp. 67-70; Hoffmann, "The Author Portrait," fig. 1a-b.
 18. Michael Chamberlain, *Knowledge and Social Practice in Medieval Damascus, 1190-1350* (Cambridge: Cambridge University Press, 1994), pp. 69-90, 108-49; George Makdisi, "*Suhba* et *riyāsa* dans l'enseignement médiéval," in *Recherches d'Islamologie: Recueil d'articles offerts à Georges C. Anawati et Louis Gardet par leurs collègues et amis*, ed. R. Arnaldez and S. van Riet (Louvain: Editions Peeters, 1977), pp. 207-21.
 19. M. G. S. Hodgson, *The Venture of Islam*, vol. 2, *The Expansion of Islam in the Middle Periods* (Chicago: University of Chicago Press, 1974), pp. 126-31, 201-54, 281-85; Franz Taeschner, "Futuwwa," in *EI*, 2d ed.
 20. The pursuits of knowledge and morality are the two endeavors on which the perfection of the human soul was predicated in systematic ethical writings starting with the philosopher Miskawayh in the eleventh century and reiterated in the thirteenth century by the philosopher-scientist-statesman Naṣīr al-Dīn Ṭūsī (Miskawayh, *The Refinement of Character [Tahdhīb al-Akhlaq]*, trans. Constantine B. Zurayk [Beirut: American University of Beirut, 1968], pp. 36-37; Naṣīr al-Dīn Ṭūsī, *The Nasirean Ethics*, trans. G. M. Wickens [London: George Allen and Unwin Ltd., 1964], pp. 51-52).
 21. Miskawayh, *Refinement of Character*, p. 61.
 22. *Ibid.*, p. 62.
 23. Farès, *Le livre de la thériaque*, pp. 26-27.
 24. *Ibid.*, pp. 29-33.
 25. Azarpay, "The Eclipse Dragon."
 26. Willy Hartner, "The Pseudoplanetary Nodes of the Moon's Orbit in Hindu and Islamic Iconographies," *Ars Islamica* 5 (1938): 113-54; *idem*, "The Vaso Vescovali in the British Museum: A Study on Islamic Astrological Iconography," *Kunst des Orients* 9 (1973-74): 99-130.
 27. Tamara M. Green, *The City of the Moon God: Religious Traditions of Harran* (Leiden: E. J. Brill, 1992), pp. 144-61.
 28. Pancaroğlu, "'A World Unto Himself,'" pp. 205-50. See also Eva Baer, "The Ruler in Cosmic Setting: A Note on Medieval Islamic Iconography," in *Essays in Islamic Art and Architecture in Honor of Katharina Otto-Dorn*, ed. Abbas Daneshvari (Malibu, Calif.: Undena Publications, 1981), pp. 13-19.
 29. Perhaps the most splendid example was the Bab al-Tilsam (Talisman Gate) of Baghdad built in 1221 by the caliph al-

- Nasir li-Din Allah and destroyed in 1917. Two confronting dragons with wings and feet were carved onto the spandrels of the arched gateway and, seated between the two, a figure with long tresses was depicted grasping the tongues of the two beasts; Joachim Gierlichs, *Mittelalterliche Tierreliefs in Anatolien und Mesopotamien* (Tübingen: Ernst Wasmuth Verlag, 1996), pp. 30, 38, pl. 66. Given the two lions on the gate—one on either side of the entrance—the seated figure may be interpreted as a personification of the sun whose domicilium is in Leo.
30. Ullmann, *Islamic Medicine*, pp. 55–60; Michael W. Dols, *Medieval Islamic Medicine* (Berkeley: University of California Press, 1984), pp. 10–24.
 31. Johnstone, "Summ," p. 873.
 32. Ullmann, *Islamic Medicine*, pp. 107–14; Johann Christoph Bürgel, *The Feather of Simurgh: The "Licit" Magic of the Arts in Medieval Islam* (New York: New York University Press, 1988), pp. 33–37.
 33. Kathleen Malone O'Connor, "The Alchemical Creation of Life (Takwīn) and Other Concepts of Genesis in Medieval Islam," Ph.D. diss., University of Pennsylvania, 1994, pp. 21 and 53; see also pp. 52–55. Hermeticism, as a system of beliefs and practices, grew out of theological, philosophical, and occult writings of late antiquity attributed to the mythical Hermes Trismegistos (Hermes the Thrice-Greatest; a product of the joint cult of the Greek god Hermes and the Egyptian god Thoth in Hellenistic Egypt) who, in Islam, was known as Hirmis and identified with the Qur'anic prophet Idris. For the Hermetic tradition in Islam which incorporated various theurgic and divinatory sciences, see M. Plessner, "Hermes Trismegistus and Arab Science," *Studia Islamica* 2 (1954): 45–60; Pierre Lory, "Hermès/Idris, prophète et sage dans la tradition islamique," in *Présence d'Hermès Trismégiste*, ed. Antoine Faivre (Paris: Éditions Albin Michel, 1988), pp. 100–9.
 34. Manfred Ullmann, *Das Schlangenbuch des Hermes Trismegistos* (Wiesbaden: Harrassowitz Verlag, 1994).
 35. *Das Buch der Gifte des Ġābir ibn Ḥayyān*, ed. and trans. Alfred Siggel (Wiesbaden: Franz Steiner Verlag, 1958).
 36. For the history of Hermeticism in pagan and Islamic Haran, see Green, *City of the Moon God*, pp. 74–93, 162–90.
 37. Ibid., p. 177; O'Connor, "Alchemical Creation of Life," pp. 1 ff.
 38. Seyyed Hossein Nasr, *An Introduction to Islamic Cosmological Doctrines*, rev. ed. (Albany: State University of New York Press, 1993), pp. 44–74, 96–104.
 39. In addition to the painting of Philagrios, the Vienna manuscript also includes paintings of Proklos and Magnus depicted much in the same way; see Duda, *Islamischen Handschriften*, fig. 33 and 34.
 40. Chamberlain, *Knowledge and Social Practice*, pp. 91–107. See also George Makdisi, *The Rise of Colleges: Institutions of Learning in Islam and the West* (Edinburgh: Edinburgh University Press, 1981).
 41. A. K. S. Lambton, "Justice in the Medieval Persian Theory of Kingship," *Studia Islamica* 17 (1962): 91–119; idem, "Islamic Mirrors for Princes," in *La Persia medioevo: Atti del convegno internazionale, Rome, 1970*, *Accademia Nazionale dei Lincei, Quaderno* 160 (1971): 419–42.
 42. Volumes 4 and 11, Cairo National Library, *adab* 579; volumes 17 and 19, Istanbul, Millet Kütüphanesi, Feyzullah Efendi 1566 and 1565; volume 20, Copenhagen, Royal Library, cod. arab. 168. See Melikian-Chirvani, "Trois manuscrits de l'Iran seldjoukide"; David Storm Rice, "The Aghani Miniatures and Religious Painting in Islam," *Burlington Magazine* 95 (1953): 128–34; Bishr Farès, *Une miniature religieuse de l'école arabe de Bagdad* (Cairo: Institut Français d'Archéologie Orientale, 1948); and S. M. Stern, "A New Volume of the Illustrated Aghānī Manuscript," *Ars Orientalis* 2 (1957): 501–3.
 43. The two figures portrayed in this frontispiece have also been identified as representing al-Hariri, the author of the early-twelfth-century *Maqāmāt*, and his predecessor in the genre, the tenth-century author al-Hamadani; see Oleg Grabar, *The Illustrations of the Maqamat* (Chicago: University of Chicago Press, 1984), pp. 20–23. The identification of both figures as authors is doubtful since the figure on the right-hand page is depicted in princely guise as conveyed by his fur-brimmed headdress, cup, and static frontal pose—typical elements in late-twelfth- and early-thirteenth-century images of kingship. This is in contrast to the figure on the left-hand page whose turban, gesturing hand, and three-quarter pose epitomize contemporary portraits of the scholar engaged with his audience. See also Hoffman, "Author Portrait."
 44. Richard Ettinghausen, "On Some Mongol Miniatures," *Kunst des Orients* 3 (1959): figs. 1–2.
 45. Ettinghausen, *Arab Painting*, pp. 98–99.