9 The Paradise of Wisdom

Streams of tradition in the first medical encyclopaedia in Arabic

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The text and its author

The Firdaws al-hikma (the Paradise of Wisdom) was composed by 'Alī ibn Rabbān al-Tabarī who, as the *nisba* suggests, was born in northern Persia, on the southern shores of the Caspian Sea, and probably died in the second half of the ninth century. The patronymic Ibn Rabbān was interpreted by historian of medicine Ibn al-Qiftī (thirteenth century) as an honorific title for Jewish scholars conferred to al-Ṭabarī's father. This, however, is to be regarded as an ex post reconstruction, because al-Tabarī most probably was a Christian who later converted to Islam (hence the bitterness of his anti-Christian polemics in order to show the veracity of his faith). After his adhesion to a local rebellion, he was admitted to the Caliph's service in the new capital of Samarra, and served under al-Mu'taşim, al-Wātiq and al-Mutawakkil from 833 to 861. The Caliph al-Mutawakkil (reigned 847 to 861) made al-Tabarī his table companion, and probably played an important role in his conversion as well. Al-Tabarī was one of the many foreign intellectuals (highly educated scholars who used Arabic as their scientific language) with a multilingual background who went to Baghdad and played a crucial role in the massive transmission of ancient and late antique knowledge into the Arabo-Islamic culture.

The Firdaws al-hikma (the Paradise of Wisdom) was one of the topics dealt with in the second lecture in the series of four that Edward G. Browne delivered at the College of Physicians between 1919 and 1920, and then published in 1921 with the title Arabian Medicine.² Browne stressed the importance of the early date of composition, but basically considered al-Tabarī relevant only as teacher of greater physicians. In spite of the slightly dismissive tone, Browne grasped an important aspect of the Firdaws: it is not just a book of medicine; there is much more in it.³ The Arabic text was published by M. Z. Siddiqi in 1928, and the printed edition consists of more than 600 pages.⁴ Ten years after Browne's lectures, in a long article in *Isis* that includes the translation of the table of contents, Max Meyerhof stressed the early composition, but with a more positive general outlook on the work.⁵ He focused on the treasure of indirect tradition preserved in the *Firdaws*. Greek authors are largely represented, with more than 100 quotations from Hippocrates, along with Galen, Dioscorides, Aristotle, Theophrastus, Archigenes, Alexander of Aphrodisia, Democritus, Pythagoras and the 'Byzantine agriculture' (Vidanios Anatolios and Cassianos Bassos Scholatikos).

The Arabic physicians mentioned are all contemporaries of al-Ṭabarī: Ḥunayn ibn Isḥāq, Māsarǧawayh and Yuḥannā ibn Māsawayh. Of great documentary interest is the use of Indian sources and the summary of the Indian medical tradition included at the end of the book.⁶

The *Firdaws al-hikma* is arranged in seven parts $(anw\bar{a})$, consisting of 30 discourses $(maqal\bar{a}t)$ and 360 chapters $(abw\bar{a}b)$: all numbers have a calendrical or astrological echo. The contents of the seven parts give a general overview of the ample collection of information contained in the *Firdaws*:

- 1 general philosophical ideas mostly following Aristotle (categories, physics, elements, metamorphosis, generation and corruption)
- 2 embryology, pregnancy, anatomy and function of different organs, ages and seasons, psychology, external and internal senses, temperaments and emotions, antipathies, affections of the nerves, dreams and nightmares, evil eye, hygiene, dietetics
- 3 nutrition and dietetics
- 4 general and particular diseases arranged *a capite ad calcem*, muscles, nerves, veins, phlebotomy, pulse, urinoscopy
- 5 tastes, scents, colours
- 6 materia medica and toxicology
- 7 climate, water, seasons, cosmography and astronomy, discourse on the utility of medicine, summary of Indian medicine

Already from this synthetic description of the contents, one can notice the intention of being encyclopaedic and all-inclusive, which goes beyond the field of medicine and is embedded in the larger frame of the natural sciences. Philosophy and physics are given great attention and considerable space. Although the sources are not always explicitly mentioned, it is easy to recognise passages from Aristotle, the Alexandrian philosophers and other Greek authors.⁷

As the first all-inclusive medical compendium, the *Firdaws* shares, on the one hand, some traits and themes of the late antique medical tradition, both Greek and Syriac (Paul of Aegina, Oribasius and the Syriac tradition of the *Kunnāš*, or *Pandettae Medicae*); on the other hand, it already shows some of the structural features that would eventually make the Arabic medical encyclopaedia a model for many centuries to come.⁸ The choice of arranging simple drugs in alphabetical order still competes with other arrangements, attested in specific sections (the *manāfi ʿal-ḥayawān*, 'useful properties of animals', for instance).⁹ The list of diseases from head to foot consistently follows the order already imparted to the anatomical section. Each disease is associated with a treatment, and here the most appropriate drugs are indicated on the basis of their qualities and properties as described by Galen.¹⁰

Galenic pharmacology and the science of properties

Although in the *Firdaws* there is no alphabetical section on simple drugs, Galenic pharmacology finds its place in the therapeutic indications given for the specific

diseases.¹¹ Next to this, the *Firdaws* contains a long section on the useful properties of the parts and organs of animals. These sympathetic properties are not framed in the Galenic pharmacological theory of humours and faculties.¹² The order of the entries – every chapter treats the substances derived from a single animal – follows an intuitive zoological classification (predatory animals, non-predatory ones, small beasts, birds, insects and fish), rather than the more systematic approach given by the alphabetical order.

The core difference between the two kinds of properties, namely $man\bar{a}fi$ and $\hbar aw\bar{a}s\bar{s}$, is the causal relation behind them. In the $man\bar{a}fi$ or 'useful properties', the causal relation is transparent: the mule, for instance, since it a well-known sterile cross-breed, is used either to cure or to induce sterility. In contrast, the causal relation behind the $\hbar aw\bar{a}s\bar{s}$ or 'occult properties' remains unknown and mysterious.¹³

This kind of material in the sixth part of the *Firdaws*, with its peculiar and recognisable arrangement, can be traced back to the antique and late antique tradition on the properties of natural substances and objects, also very popular in the Hermetic and Pseudo-Democritean tradition. The early Abbasid centuries (ninth to tenth century) saw a great flowering of this genre, with the works of 'Īsā ibn 'Alī and Ibn Buḫtīšū', who, as al-Ṭabarī, were multilingual scholars from a Christian family of physicians. ¹⁴ The *Firdaws* contains as a result two different pharmacological traditions, although the 'properties' will find little place, if any, also in the later compendia of medicine. In later works, if animal substances are included, they are listed in alphabetical order and described on the basis of their Galenic properties. Such a decline of fortune led these sympathetic – or more neutrally non-Galenic – properties and their curious effects to move from technical literature to *belles lettres*, in particular the compilations of anecdotes and recipes on the wondrous and amusing aspects of nature. ¹⁵

The *Firdaws* offers a rare explicit definition of these properties. Here the two trends are defined by contrast: on the one hand, the faculty (*quwwa*, the Arabic for *dynamis* in the translations of Galen) that can be grasped with the senses; on the other hand, a property that remains hidden in the natural object, and emerges only when tried out.¹⁶

Occult properties of things

With the help of God I have already written what I wanted to write about the faculty (quwwa) of the bodies, the diseases and their own peculiar moments, and also other things about the tests, the urine, and other similar issues that the physician should not neglect. Now I will mention the faculty of the different things $(a\check{s}iy\bar{a})$, the signs of this faculty in the colours, in the flavours, and in the senses, with the permission and the help of God. In fact, each natural object has a faculty that can be perceived with the senses, but it also has an occult property $(h\bar{a}\bar{s}sa)$ that is unknown, whose depth can be grasped only by repeated experiences $(ta\check{g}arib)$, because the occult properties are a mystery hidden in the things. Like the occult property of the magnet that attracts iron and the particles of chaff.

Among the natural objects whose occult property is to make the bladder stones crumble, when they reach the bladder, there are things like burnt scorpions and wild celery seeds.

. . .

Galen mentioned that he had already tried out (*ğarraba*) this [i.e., to hang stag antlers against snakes and epilepsy], and that he had also tried out to tie wolf excrement on the leg of someone affected by colic with a thread made of the wool coming from a sheep whose abdomen had been torn by the claws of a wolf, and this is indeed very useful.¹⁷

Indeed, Galen included wolf excrement in his repertory of simple drugs, among the substances of animal origin. He even hung it on a man affected by colic – a chief therapeutic use of this controversial substance – but was partly sceptical about its effect. The quotation comes from the second part of the tenth book of the *Kitāb al-adwiya al-mufrada*, the Arabic translation of the *Book on Simple Drugs* (*De Simplicium medicamentorum temperamentis ac facultatibus*), where animal secretions, organs and tissues are dealt with:¹⁸

As for the excrement of wolf, there were physicians who used to give it to the man affected by colic to drink, and they administered it at the moment of pain, at the peak of the colic, or sometimes before the pain, especially when the patients could not breathe. I saw some who took the excrement and did not have any pain, or, if they had some, it was not acute. This consists in the fact that the physician takes the white part from the excrement – and this happens only when the wolf has eaten bones – and I was surprised by the weakness of this substance when a sick person is treated with it. Some other times it was hung on the sick person, and this was incredibly useful.

. . .

Sometimes the excrement of a dog is hung on someone suffering from intense pain with a thread made from the wool of a billy goat ravished by a wolf, and this is better for its usefulness.

In the corpus of the great physician Muḥammad ibn Zakariyyā al-Rāzī (died 925), we find a different example in which two different pharmacological approaches run in parallel. No trace of sympathetic or occult properties of natural substances can be found in the *Kitāb al-ḥāwī fī-l-ṭibb* (known in the West as *Liber Continens*). These were the notes of al-Rāzī, which were later organised in a large collection that contains 25 volumes. The list of simple drugs occupies three of them; many animal ingredients are included in the list, but there is no trace of 'non-Galenic' properties. Al-Rāzī, however, also composed a short essay on the occult properties of natural substances (*Kitāb al-ḥawāṣṣ*), of which I am preparing an edition. ¹⁹ This short text does not aim at completeness like the pharmacological section of the *Continens*. Its alphabetical list is rather a representative choice of

these particular properties from a considerable number of learned sources, mostly Greek along with a few contemporary authors.²⁰ His introduction is strongly polemical against those who refuse to take advantage of these kinds of properties, justifying this with the fact that their way of working is not transparent. In his counterargument, al-Rāzī used as an example the power of the magnet, as already seen in the Firdaws.21

Muḥammad ibn Zakariyyā' al-Rāzī said: 'I do know that there are people whose occupation is the accusation, the opposition, and the hastiness for the derogation of what they ignore: they are quick in censuring us while [in this way they are declaring themselves stupid.

We have observed in the composition of this book that there is no need for us to omit the things, in which we believe there is some usefulness, for the sake of people who are ignorant, and therefore against it.

It would have been unavoidable for them, if those had been people of reason and careful examination, to wait before rushing into the refusal of something that they have no proof against.

In fact, as far as we know, the proof is not like this, but this is necessary in itself. In conformity with our own information, this is not in this way.

In fact they constantly see that the magnet attracts iron, but if someone claims the existence of a stone that attracts copper, or a stone that attracts gold or glass they hastily deny it, and dismiss it as a silly construct'.

Contents of the *Firdaws*

The particular textual atmosphere of the *Firdaws* is created by the variety of topics touched upon. Here follows a selection of passages in English translation that represent some of the different textual and technical traditions collected in the Firdaws. From these readings emerges that the personal experience of al-Tabarī plays an important role, and this is documented in the frequent narrations about the way in which the author learnt about something. These personal annotations frequently mention his native region, where al-Tabarī witnessed some peculiar phenomena.

On comets

The first passage, from the first part of the *Firdaws*, deals with comets, or 'tailed luminaries', as they are literally called in Arabic. The topic and the narration are close to the Meteorologica of Aristotle. 22 This Aristotelian treatise has most probably been of inspiration for al-Tabarī, but a summary of all the different scholarly and philosophical positions that Aristotle lists is absent from the Firdaws, except for a hint in the first part of the passage:²³

As for the comets (lit., 'tailed luminaries'), they are indeed made of burning air, that remains in front of the luminaries for a few days, until you see that it joins the luminaries themselves, but it does not really join them because of the distance that is between the luminary and the [burning] air. For this reason comets point at a dry year with many winds, and God knows best. Aristotle mentioned that in ancient times, in the land of the Greeks, a comet appeared during the winter, and after this there was a terrible earthquake, the sea flooded the shores and many cities were destroyed. The cause of this were the violent winds that were blowing from different directions, and were hitting the sea all at the same time.

Classification of body parts and man as microcosm

The second passage, again from the first part, deals with physiognomy. The correspondence between the universe and man – in other words, the connection between macrocosm and microcosm – becomes the theoretical framework in which physiognomy is embedded. Since man, in his every part, mirrors the world and feeds on any kind of food, any resemblance with an animal has to be regarded as a revealing sign. These signs have an ominous nature, and they can tell the character of the one who carries them. Al-Ṭabarī adds a note from his personal experience when, in his homeland, he could observe a man who looked like a monkey and shared, in fact, all the peculiar traits of this animal, that is to say playfulness and lasciviousness:²⁴

And because man has the best balance among all the other living beings, he ranks above them, and resembles the angels with his intelligence (bi-nafsihī al-'aqila'). He resembles the other animals for the movement and the senses, the plants for the perception of the odour and in the growth of his hair, the stone for his flesh and his mightiness; he resembles the streams and the rivers for his veins and his [blood] vessels, the sea that makes decrease the water of the world [resembles] his bladder to which his best moistness goes; he resembles the thunder for the rumble of his stomach, the lightning for the flashes that appear sometimes in his eyes, the sun and the luminaries for his gaze and his senses; and he resembles the intermediary spirits for his intelligence, his speech, and the refinement of his thought. For this reason he is nourished with what animals, beasts, birds and fish are fed with. For this reason man is called microcosm (al-'ālam al-asġar), because he is nourished by all these different foodstuffs; but man, in spite of this, stands in an erect posture that goes vertically in the direction of his head with many different orifices, and for this reason only his head among the other animals becomes grey, because he is connected to all the parts of the world.

The experts of physiognomy said that, if one resembles in his looks and in his parts the constitution of wild animals, this is a heavenly omen (*miqdām ʿalawī*): someone who has the constitution of a fox will be a haughty impostor; someone who has the constitution of a bull will be hard-working and submissive; someone who has the constitution of a dog will be a grateful friend; someone who has the constitution of a rooster will be intelligent,

generous, jealous, and pugnacious; and likewise for all the other beasts and birds

I used to know in Tabaristan a man whose eyes, skin and member resembled those of a monkey, and in fact he loved to entertain himself and play games, and he coveted the coitus just like monkeys do.

Evil eye and talismans

The evil eye is treated as a common affection of the body, and the *Firdaws* records different opinions about its genesis and effects. The explanation of the negative influence of the eye is given in terms that closely recall physical and philosophical theories on eyesight and visual perception:²⁵

As for the evil eye: some wise Egyptians said that when a man looks at something pleasant, the soul lingers on it; if the object of observation produces a great marvel, then the gaze remains on it because it likes the object, and so the soul enters in great commotion for this. It wishes to remove the air that is between itself and the object with a subtle spiritual wave, until this impetus makes [the gaze] reach the thing that has amazed it so much, and thus [the gaze] strikes it with an invisible strength.

In the concluding part of the section on the evil eye, al-Ṭabarī refers to ancient talismans that could still be seen in Egypt and Syria: these were statues and objects, probably inscribed with magical signs, and then either buried or set up in an elevated place:26

Vestiges of talismans, made a long time ago, are said to be in Egypt and in Great Syria: some of them keep away the sand from the houses, some others prevent the river from flooding the corner in which this talisman is. These are the statues that have been erected, and the objects that have been inscribed and buried. Among them there are those that chase locusts and wild animals away. These are all reports whose truthfulness is well known.

This description perfectly matches what is told in the Great Book of Talismans of Apollonius of Tyana, fully preserved in its Arabic version in a unique manuscript (MS Paris BnF Ar. 2250).²⁷ The record that Apollonius himself made of his wanderings from town to town, along with the city talismans that he was asked to prepare, is frequently quoted in geographical and Hermetic literature in Arabic.²⁸

Celestial signs that show what will be

Along with the exposition of Aristotle's and Galen's positions on celestial phenomena in general, at the end of the composition, in the seventh part, the author of the Firdaws adds other sources and merges them with the records of his personal experience and observation.²⁹

The source for the first example is the *Book of Agriculture*. Here the moon or a number of celestial phenomena (winds, haloes around the moon, zodiac constellations, thunders and lightning) are associated with the months, in order to draw predictions about the weather. It is interesting to note – for the sake of the multilingual author and the context of composition – that the Aramaic and Coptic month names are mixed in this section. The *Book of Agriculture* probably refers either to the *Synagoge* of Vidanios Anatolios (fourth to fifth century, preserved only in fragments quoted in the indirect tradition in later works; the author was a Syrian from Berytos and his work was probably translated into Syriac as well), or to the *Geoponica* of Cassianos Bassos Scholastikos (sixth century, and then translated into Arabic both via Greek and via Pahlawi):³⁰

The author of the 'Book on agriculture' (*Kitāb al-filāḥa*): if you see that after the third or fourth night the moon is thin, this means that the wind will be persistent in this month; if you see that at sunrise the wind is serene, this means cloudless weather; if instead, at sunset, you see that the clouds are red, this means rain.

. .

When the Sagittarius appears weakened behind a veil, this means that the rain is close; when the horns of the moon are rough and tend to black, all of this means that the rain is close.

. .

If you hear the thunder and see the lightning in the four cardinal points, this means that it will rain in many countries, and that the winds will blow fast.

. .

If you see red, yellow, or black haloes [around the Moon], this means that the cold will be intense. If a fire remains suspended in the sky over the earth, this means that something unexpected will happen.

Al-Ṭabarī records an episode that he happened to see in his homeland, when he was a young man, still receiving his education. A column of fire lingered for a few days in the sky, and then destroyed the Fire Temple of the Zoroastrians (generically called infidels, *al-harābida*). This anti-Zoroastrian remark fits very well in the non-medical literary production of al-Ṭabarī, which focused on bitter religious polemics mostly, but not only, directed against Christians, in order to stress the sincerity and the fervour of his recent conversion:³¹

I saw in Ṭabaristān – and back then I was receiving my education from Abū Ṣalāt al-ʿAšāʾ – a fire that originated from al-Tīman and moved in the direction of Ğarbiyā, similar to a long and thick column; the king did not hesitate in giving the order to leave the country.

. . .

The king who was before him in Tabaristān saw a sign in it and asked those who were there for an interpretation. The fact was that a fire had originated on the mountain, and then had fallen upon the houses of some of his generals, without burning anything. Then it went to the dome of the Fire Temple (*bayt*

al-nār) which was there: a dark cloud rose, the winds blew and destroyed the infidels (al-harābida) and the servants of the temple; then the darkness cleared and the dome appeared in its devastation, and the fire they used to venerate was extinguished.

The author seems to have witnessed another powerful celestial sign. After the apparition of a comet, entire towns disappeared and the Caliph Hārūn al-Rašīd died (809 CE):³²

In my time a comet appeared, whose tail was pointing sometimes to the east and sometimes to the west; it remained in the sky for several nights, and after this a big city close to Fergana disappeared with its inhabitants and everything that was in it. In that moment also the king Hārūn [al-Rašīd] died.

In the last passage of this section, the author states that he reports facts that he has either witnessed himself, or that he has heard of: tales from supposed eyewitnesses are considered equal to personal experience. Here two 'collective' sources are mentioned. First people with practical experience (ahl al-tağriba), and then the Persian wise men who used to make predictions from observing the behaviour of children.33

Everything that I have mentioned about these things, either I witnessed it with my own eyes, or I heard about it, and this stands for eyewitnessing (immā 'iyān, wa-immā simā 'yaqūmu maqām al-'iyān).

The people with practical experience (ahl al-tağriba) say: if you see an intense redness in the sky towards the east in the month of $N\bar{\imath}s\bar{a}n$ – or $K\bar{a}n\bar{u}n$ al-Awwal – this means fertility, a quiet situation, and good things; if you see it in the two months called $Ti\check{s}r\bar{\imath}n$ and in the month of $\bar{A}d\bar{a}r$, this means war and drought. [...]

Some Persian wise men said that when both children and adult men crave for playing polo, for dancing, and for happiness in general, this means that the year will be fertile, with only a few diseases; and if children crave for playing war and pretend to fight like enemies one against the other, this means that there is tension among different countries; if, instead, they play a game in which they pretend to kill each other, pretending to hide and deceive, this means that spiteful people and robbers are coming.

If you see that an animal waves its tail a lot, this means travel and movement; when it asks with its eyes full of tears without any reason, or does not bite its flies, this means harm for its master.

On curious aspects of the nature of animals, waters and of some plants

The seventh section includes some short passages dealing with different natural objects whose properties are mentioned in the Firdaws: animals, plants, stones and waters

The first passage refers to the section on the useful properties of animals, to be considered as reliable medical evidence. Those who refuse them are incapable of recognising the grace of God in this aspect of nature: an intellectual position on nature that also works as a theological argument.³⁴

In the previous chapters, I have described the properties that are useful or harmful for men – true evidences for the true medicine (šawāhid ṣādiqa ʿalā ṣiḥḥat al-ṭibb) – and the ignorance of those who refuse them. Indeed, in the natural dispositions (tabā ʾī ʿ) of animals and the occult properties of plants and stones, their influence on each other is a great wonder that is rebuked only by someone who does not recognise the grace of God in this. I found some of the wonders of the natural dispositions of animals and bodies in books, and I have either heard about or seen some other ones.

Then there are the so-called natural dispositions of animals ($tab\bar{a}$ 'i' al- $hayaw\bar{a}n$), those peculiar reactions of sympathy – but mostly antipathies – that characterise the animal world. The learned man who told the author about his experiment with swallow chicks seems to have referred to him a piece of information circulating as an erratic block:³⁵

It is the nature of the elephant to perish from the cry of pigs; [...] while it is in the nature of the lion to perish from [the cry of] the camel, from the sound of drums, and from the cry of the white rooster. [...]

An educated man (*rağul ahl al-adab*) told me that he had taken a swallow chick, blinded it with a needle, and put it back in its nest. Then he had gone to check on it after a few days, and he had found out that it had recovered its sight.

The same story can be found in a pseudo-Galenic text that circulated together with the *Kitāb al-ḫawāṣṣ* of al-Rāzī. The title of the text is 'Discourse of the things that animals use against diseases', and it is a list of the strategies that some animals put in place when they feel sick (dogs, for example, eat green bees as an emetic; the lion eats a monkey; and so on):³⁶

Swallow chicks

If they become blind, then their mother takes some celandine, applies and rubs it on their eyes, and then they return to see as they used to.

فراخ الخطاطيف اذا عميت احتملت امتها المامير ان فوضعته على اعين فراخها ودلكتها به فابصرت كما كان

The wonders of waters (springs, wells, etc.) and stones are grouped together, although the liquid *mirabilia* are mentioned only very briefly:³⁷

Among the natural disposition of stones and waters there are innumerable wonders as well.

In Tabaristān I saw a water that purges the abdomen, and a water that flows from the top of a high mountain, and then flows back to that same place.

As for stones, the text discusses a much larger number of them. An interesting example is the famous 'eagle stone' – called in this way because in the Greek tradition eagle nests are the places in which it can be found – that protects the foetus during pregnancy.³⁸ Al-Tabarī also mentions a similar stone having an opposite effect. He adds that it was possible for him to lay his hands on both these stones in the house of a worthy man in his acquaintance, and that there is also a place in Persia – Daylam, on the shores of the Caspian Sea – in which stones with the same effect can be found:39

I saw a stone that, if hung on a pregnant woman, protects the foetus, and also another stone that provokes abortion. I acquired these two stones in the house of the generous al-Sirafi the Christian. I was told that also in the region of Daylam there are other stones that protect the foetus.

Among the wondrous plants that can serve as an example is a tree that cannot be burnt by fire. This tree is said to grow in Tabaristān and was prepared with water, in order to make it glow like fire, with a unique nuance of colour:⁴⁰

Among the trees there is one that does not burn in the fire; there is a kind of it in Tabaristān with which they make querns and hand mills. When this wood is left to soak in water and becomes soft, they let it lose the water it absorbed, and when it has dried a bit, they break and splinter it in the darkness of the night, and it radiates like the blaze of fire, and there is nothing else of this colour.

Concluding remarks

The Firdaws al-hikma mirrors a formative and extremely lively phase of Arabo-Islamic medicine and records part of a debate about the different streams of tradition inherited from the past. The Firdaws offers a panoramic window on the formative phase of the encyclopaedia of medicine, when different streams of tradition were competing not only for a place in the new genre, but also for their status in a new phase in the transfer of knowledge. The *Firdaws* is also influenced by the Abbasid culture of adab (belles lettres), a kind of literature that served to educate while entertaining and was varied and inclusive in nature.

Manāfi and hawāṣṣ (useful and occult properties of natural substances) and their use in medicine formed aspects of this debate. Different and competing pharmacological approaches coexist in the *Firdaws*, so close to each other that they could be used as opposite terms in the construction of a single definition, like in the case of *quwwa* (faculty or capacity) and $h\bar{a}ssa$ (occult and peculiar property).

In Arabic pharmacology, the 'science of properties' and its model were progressively marginalised in medical works, but some textual blocks found their way into *belles lettres* and *mirabilia* literature.

This complex stratification of materials, traditions and personal experience is — and not by chance — the product of a multilingual scholar, who took part in the intellectual and social life of the early Abbasid period. Al-Ṭabarī was one of those complex figures that catalysed the reception and the original reorganisation of all the different streams of knowledge received by the Arabo-Islamic milieu in the ninth and tenth centuries.

Notes

- 1 See Thomas (2012).
- 2 See Browne (1921).
- 3 See Browne (1921: 39): 'The "Paradise of Wisdom" [. . .] deals chiefly with Medicine, but also to some extent with Philosophy, Meteorology, Zoology, Embryology, Psychology and Astronomy'. See also ibid., 44: 'The book, indeed, except for the First Part [. . .] is little more than a Practitioner's Vade-Mecum, chiefly interesting as one of the earliest extant independent medical works in Arabic written by the teacher of the great physicians whom we have to consider'. See also Ullmann (1970: 119–22).
- 4 See al-Ţabarī (1928).
- 5 The editor of the *Firdaws* adds an appendix with the overview of the quotations from Greek and Indian medical authorities; see al-Ṭabarī (1928: Appendix 2). See also Meyerhof (1931).
- 6 Meyerhof focused on the explicit quotations, and much work still needs to be done on the use of the sources in the *Firdaws*.
- 7 For the quotations from the Galenic corpus, see al-Ṭabarī 1(928: Appendix 2). The fourth section gives the impression that it follows the Galenic summary and canon established in Alexandria, which was translated and met with great success in the Arabo-Islamic milieu. See Overwien (2013); Iskandar (1976).
- 8 See van der Eijk (2010).
- 9 See al-Tabarī (1928: 420–44).
- 10 For a more detailed discussion of properties and qualities in Galen, see the contribution of Peter Singer in this volume.
- 11 For each entry of the fourth section, there is a description of the disease on the basis of the four humours and their qualities. The knowledge of the humoral aetiology allows the therapy to be determined, which aims to re-establish the bodily balance perturbated by the disease. The drugs for the bladder, for instance, have to be dry and have a thin consistency, because its peculiar diseases are caused by coldness and the thickness of the parts. See al-Tabarī (1928: 241).
- 12 For an introduction to Galen's medical and philosophical ideas, see Hankinson (2008). In any case, a theoretical reference for such properties in Galen might be found in the concept of medicaments that act *tota substantia*.
- 13 See Raggetti (2014).
- 14 See Contadini (2013); Raggetti (2018a).
- 15 See Raggetti (2014).
- 16 Al-Ṭabarī (1928: 356). All translations of original text passages are by the author.
- 17 Al-Ṭabarī (1928: 356).
- 18 MS Escurial Ar. 794, f. 82v (Kühn 12.295,6–296,12).
- 19 See Ullmann (1972: 383).
- 20 While preparing the critical edition and English translation of the *Kitāb al-ḥawāṣṣ*, I have made a preliminary survey of the sources mentioned by al-Rāzī, arranging them

by field of expertise. As sources about medicine, al-Rāzī mentions Archigenes, Galen (Theriaca ad Pisonem, De antidotis, De simplicium medicamentorum temperamentis, In Hippocratis de natura hominis, Euporista), al-Ṭabarī, Ibn Māsawayh, Salmawayh, al-Kindī (Ihtiyārāt li-l-adwiya al-mumtahana al-muğarraba) and Māsarğawayh. As for the sources for the 'science of properties', al-Razī names Apollonius of Tyana (mentioned also for his book on talismans), Xenocrates of Aphrodisia and Hermes. Aristotle is the authority for zoology; agriculture is associated with different authors and two main streams of tradition, that is, the Greek and the Persian one. Mineralogical information is derived from Theophrastus, pseudo-Alexander and a not-yet-identified author from Antioch.

- 21 MS Cairo DAK Tibb Taymūr 264, p. 2. The pseudo-Aristotle On Stones includes a special section on magnets, which, along with the ordinary magnet attracting iron, also includes those for gold, silver, copper, lead, flesh, hair, wool, cotton and nails. See Ruska (1912: 154-9).
- 22 Aristotle (1952: 39–55).
- 23 See al-Tabarī (1928: 26-7).
- 24 See al-Tabarī (1928: 49-50).
- 25 See al-Tabarī (1928: 95–6).
- 26 See al-Tabarī (1928: 96).
- 27 See Raggetti (2018a).
- 28 See Coulon (2013); Raggetti (2019).
- 29 See al-Tabarī (1928: 518).
- 30 See Ullmann (1972: 291); Raggetti (2018b).
- 31 See al-Ţabarī (1928: 518–19).
- 32 See al-Ṭabarī (1928: 519).
- 33 See al-Ţabarī (1928: 520).
- 34 See al-Ţabarī (1928: 532-3).
- 35 See al-Ṭabarī (1928: 534).
- 36 MS Cairo DAK Tibb Taymur 264, pp. 40-1.
- 37 See al-Tabarī (1928: 535).
- 38 Such a stone is already mentioned in the Babylonian sources; see Stol (2000).
- 39 See al-Tabarī (1928: 535).
- 40 See al-Tabarī (1928: 536).

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Ulrike Steinert is a postdoctoral researcher in the Research Training Group 1876 'Early Concepts of Humans and Nature' at Johannes Gutenberg-University Mainz, Germany. Her research and publications focus on the history of Mesopotamian medicine and culture, the Akkadian language, women's health, gender and body concepts. She is the author of a study on the body, self and identity in Mesopotamian texts, entitled *Aspekte des Menschseins im Alten Mesopotamien. Eine Studie zu Person und Identität im 2. und 1. Jt. v. Chr.* (2012) and is currently preparing a monograph on *Women's Health Care in Ancient Mesopotamia: An Edition of the Textual Sources*.

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Sickness, Health, and Local Epistemologies

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The work on this volume as part of the project BabMed – Babylonian Medicine has been funded by the European Research Council (ERC) under the European Union's Seventh Framework Programme (FP7/2007–2013; Project No. 323596).

First published 2021 by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN and by Routledge 52 Vanderbilt Avenue. New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data A catalog record for this book has been requested

ISBN: 978-1-138-57112-9 (hbk) ISBN: 978-0-203-70304-5 (ebk)

Typeset in Times New Roman by Apex CoVantage, LLC

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Preface

This book unites contributions presented at an interdisciplinary workshop organised by the editor during her work in the BabMed project and held at Freie Universität Berlin in June 2016. Three additional chapters on Graeco-Roman medicine have been added to the collection to broaden its breadth and scope. The Berlin workshop aimed to bring together scholars from various historical disciplines as well as social and medical anthropologists investigating concepts of health and disease documented in historical sources of different times and places and in the traditional healing systems of present-day non-European societies. One thematic focus of the workshop was the question of how popular cultures, healing specialists and scholars in different times and places interpret, systematise and classify sickness in its multiple forms, manifestations and causes, and of how they represent this knowledge in oral and written discourse, in theoretical treatises, technical compendia and visual imagery.

Both historians of medicine and medical anthropologists encounter similar problems when studying medical systems, past and present. One major issue concerns the elucidation of culture-specific classification systems guiding the interpretation of what is to be considered sickness, and why. Only recently have historical disciplines grown more alert regarding the divide between modern biomedical disease classifications and the classification of sickness events that they observe in the textual sources of ancient cultures. Medical anthropology, however, has for a long time sought to develop theoretical approaches to come to terms with the relationship between notions of biological disease entities affecting human bodies in contrast with culturally differing experiences and meanings attached to sickness events. Medical anthropological research also emphasises that the understanding of ill health is shaped by not only cultural practices but also local epistemologies – culturally varying models and concepts about the human being, the body and personal well-being, an insight that is of close interest to medical historians working on premodern medical texts and on the transmission of medical knowledge. The workshop encouraged participants to address the topic from the perspective of their own research and disciplinary backgrounds, but also sought to stimulate the discussion of theoretical and methodological problems beyond disciplinary boundaries. The speakers were invited to reflect on the problems of interpreting different epistemologies of healing and culture-specific systems of classifying diseases, and to investigate how culture-specific knowledge concerning health and the human body shapes medical theories and culturally acknowledged sicknesses.

The results and discussions of the conference brought together in this book present a diverse and multi-dimensional collection of surveys and investigations on disease concepts and classifications, laying out philological, historical and anthropological approaches to explore perceptions, constructions and experiences of health and illness. The contributions offer perspectives from East Asian, Middle Eastern and Mediterranean societies, tracing both culture-specific disease concepts and health-related practices as well as cross-cultural patterns and tendencies in the classification of diseases.

I wish to thank all of the speakers and other participants of the conference for their presentations, fruitful comments and discussions that have resulted in this publication. I am also grateful to Markham Geller, Agnes Kloocke and all the BabMed team members and staff who provided administrative and technical support during the conference and would like to thank the TOPOI project and Freie Universität Berlin for hosting the workshop at the TOPOI house Dahlem. Special thanks go to Elizabeth Craik, Geoffrey E.R. Lloyd and Peter N. Singer for their willingness to contribute to the volume with pivotal chapters on Hippocratic medicine, Galenic classifications of mental conditions, and on methodological issues in the study of ancient medical systems. The Berlin conference and the publication of the volume as part of the BabMed project work have been funded by the European Research Council under the European Union's Seventh Framework Programme (FP7/2007–2013; Project No. 323596). Thanks are due also to Eugene Trabich for reading earlier drafts of all chapters and for his help with the copy editing of the volume. Moreover, I wish to thank the editor of the series 'Medicine and the Body in Antiquity', Patricia Baker, for accepting this book for publication in the series.

> Ulrike Steinert Mainz, September 2019

Abbreviations

AMT Thompson, R. C. (1923) Assyrian Medical Texts. Oxford: Oxford

University Press.

BAM Köcher, F. (1963–80) Die babylonisch-assyrische Medizin in

Texten und Untersuchungen. 6 Vol. Berlin/New York: de Gruyter.

BD Book of the Dead Bln Papyrus Berlin 3038

BM Signature of cuneiform texts in the British Museum

Brk Papyrus Brooklyn 47.218.75+86

BRM Babylonian Records in the Library of J. Pierpont Morgan

Bt Papyrus Chester Beatty VI

CAD Oppenheim, A. L. et al. (1956–2010) The Assyrian Dictionary of

the Oriental Institute of the University of Chicago. Chicago: The

Oriental Institute Chicago.

CMG Corpus Medicorum Graecorum CML Corpus Medicorum Latinorum

CT Coffin Texts

CT Cuneiform Texts from Babylonian Tablets in the British Museum

CTN Cuneiform Texts from Nimrud

Eb Papyrus Ebers H Papyrus Hearst

K Signature of the British Museum (Texts from Kuyunjik/Nineveh)
K. Claudii Galeni Opera Omnia, ed. C. G. Kühn, Leipzig: Knobloch,

1821-33

KAR Ebeling, E. (1919–23) Keilschrifttexte aus Assur religiösen Inhalts,

2 Vol. Leipzig: J. C. Hinrichs.

L London Medical Papyrus

L. Hippocrate, ed. and French trans. E. Littré, 10 vols., Paris:

Baillière 1839–61

LKA Ebeling, E. (1953) *Literarische Keilschrifttexte aus Assur*. Berlin:

Akademie-Verlag.

Loeb Classical Library, Cambridge, MA and London: Harvard

University Press and Heinemann

obv. Obverse

Ostr. Cairo Cairo Medical Ostracon

Pyr. Pyramid Texts

rev. Reverse

Sm Papyrus Edwin Smith

SM Galeni Pergameni Scripta Minora, 3 vols., Leipzig: Teubner: vol.

1, ed. J. Marquardt, 1884; vol. 2, ed. I. Müller, 1891; vol. 3, ed. G.

Helmreich, 1893.

TCL Textes cunéiformes. Musée du Louvre, Département des Antiquités

Orientales

VAT Signature of cuneiform texts in the Vorderasiatisches Museum

Berlin

