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*A mediaeval court physician at work:
Ibn Jumay's commentary on the Canon of Medicine*

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To Emilie

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Abstract

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Ibn Jumay's (d. c. 594/1198) commentary on the *Canon of Medicine* by Ibn Sīnā (d. 428/1037) occupies an important place in the history of medicine for it is the first *Canon* commentary written by a physician and thus stands at the start of a tradition extending over 500 years. In addition, it is a so-far neglected source for our understanding of mediaeval Islamic medicine. The present thesis analyses the commentary with the aims of (1) determining the methods by which the court physician composed his treatise and (2) understanding why Ibn Jumay' undertook to prepare a commentary on one of the most thorough medical compendia of the middle ages.

Chapter One presents the biography of Ibn Jumay', reveals that his religion had little impact on his writings and surveys his library which played a pivotal role in the composition of the commentary. *Chapter Two* investigates Ibn Jumay's methodology in the entire commentary; it reveals that with his philological and source-critical methods Ibn Jumay' wanted to establish an authoritative reading of the *Canon* and to demonstrate the high degree of his erudition. *Chapter Three* focuses on selected passages in the commentary in form of three case studies. Ibn Jumay's comments on anatomy/dissection, assorted *materia medica* and headaches demonstrate the court physician's reverence for ancient authorities and his quest to revive and refine their teachings. *Chapter Four* contextualises Ibn Jumay's methods and agenda by comparing them to those of other relevant scholars of the twelfth and thirteenth centuries.

The thesis concludes by arguing that Ibn Jumay's commentary was part of his revival of the art of medicine and his attempt to gain power in the medical tradition by attaching his name to one of the greatest scholars of his time — the *ra'īs* Ibn Sīnā.

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Abbreviations

P = *Ibn Jumay‘, At-Taṣrīḥ bi-al-maknūn fī tanqīḥ al-Qānūn*, Princeton University, Garret Collection, MS 556H

B = *Ibn Jumay‘, At-Taṣrīḥ bi-al-maknūn fī tanqīḥ al-Qānūn*, University of Oxford, Bodleian Library, MS Marsh 390

CC = Refers to the edition of P and B as presented in the key (see p. 244ff.)

CC P = Preface of the *Canon* Commentary

CC J = First *jumlah* of the *Canon* Commentary

CC I, II, III, IV, V = Second *jumlah* of the *Canon* Commentary comprising the comments on books I, II, III, IV, and V of the *Canon*

D = Ibn Sīnā, *al-Qānūn fī aṭ-ṭibb (The Canon of Medicine)*, ed. by Muḥammad Amīn aḍ-Ḍanāwī, 3 vols., Beirut: Dār al-Kutub al-‘Ilmiyyah, 1999¹

Note on transliterations, transcriptions, translations and dates

In transliterating Arabic words I follow the system of the new edition of the Encyclopaedia of Islam with the modifications adopted by the International Journal of Middle Eastern Studies, namely *q* instead of *ḳ* and *j* instead of *ḏj*. All Arabic primary source texts have been translated by the present author except where otherwise indicated. The original Arabic text is provided in the appendix whenever the text of a manuscript has been edited for the first time. All dates given are according to the Islamic calendar (AH)/Christian calendar (AD).

1. This modern edition of the *Canon* (Ibn Sīnā, *Canon (Beirut)*) has the disadvantage of including several random and usually misspelled English translations of Arabic medical terms. Nonetheless, the edition is widely available in the Arab world (and most Western libraries) and is much better structured and readable than the prominent Būlāq edition of the *Canon* (Ibn Sīnā, *Canon (Būlāq)*).

Introduction

Ibn Jumay' (d. c. 594/1198) was one of the most important physicians of the twelfth century. He was not only one of the private physicians to the Muslim war hero Saladin (Ṣalāḥ ad-Dīn, reg. 564-589/1169-1193), but also the first physician to have written a commentary on the most influential medical compendium of the middle ages — the *Canon of Medicine*. He thus stands at the head of a long tradition of *Canon* commentaries which continued well into the seventeenth century.² Despite this position, Ibn Jumay's *Canon* commentary has received little attention from modern scholars and has so far been neglected as an important element in the history of mediaeval Islamic medicine. By focusing on Ibn Jumay's *Canon* commentary, the thesis will address this neglect. More specifically, since we know very little about mediaeval Islamic physicians at work and their motivations, the thesis reconstructs what Ibn Jumay' did when working on his commentary and will question why he did it. What follows will thus add to our general understanding of mediaeval Islamic medicine and one of its prominent protagonists.

(a) Mediaeval Islamic medicine

'Mediaeval' Islamic medicine spanned roughly nine centuries. It started with Bedouin medicine in the seventh century and developed into other culturally or geographically defined 'medicines' such as Ottoman medicine in the fifteenth century.³ Mediaeval 'Islamic' medicine was not particularly Islamic if we take into account that it was shaped by a rather high percentage of non-Muslims like Ibn Jumay' who was Jewish. Mediaeval *Arabic* medicine

2. Siraisi, *Avicenna*, 6-7.

3. Pormann, and Savage-Smith, *Medicine*, 1ff.

may be an alternative term, especially in Ibn Jumay's case, as it shifts the focus to Arabic as the language in which medical treatises were written. However, Arabic was not the only language of importance in medicine. Persian, for example, was quite important for Ibn Jumay because many medical terms found in the *Canon* were Persian and needed to be translated. Ibn Maymūn (latinised Maimonides, d. 601/1204), a contemporary of Ibn Jumay, wrote his recipes in Judaeo-Arabic, that is Arabic in Hebrew script. The problems when using 'Arabic' medicine are therefore similar to using 'Islamic' medicine. The present thesis will use the conventional term 'mediaeval Islamic medicine', defining it as medicine as it was practised (or theoretically discussed) in lands in which Islam was the predominant faith.⁴

Mediaeval Islamic medicine is often summarised as a medical system essentially based on the writings of the Greek physician Galen (d. ca. 217) and thus referred to as 'Galenism' by Oswei Temkin.⁵ Moreover, it is usually mentioned that the four humours blood, phlegm, yellow bile, and black bile and their relation to the four primary qualities (wet or dry, and cold or warm), the four elements (fire, water, earth, and air), and the four major organs (heart, brain, liver and spleen) were of central importance to this medical system.⁶ As this thesis will show, however, Ibn Jumay may have made references to the humours, but considering the major themes of his discussions and concerns, the humoral system is only one field of study amongst many others and, in his case, can hardly be used as a summary of what mediaeval Islamic physicians were primarily concerned with. Instead of offering or adopting a summary of mediaeval Islamic medicine here, I will employ this thesis to give one detailed snapshot

4. I thus use the word Islamic in the sense of 'Islamicate', a neologism proposed by M. Hodgson to describe the non-religious cultural elements of society in which Islam was the predominant faith (Hodgson, *Venture*, 59f.). See also M. Dols in Ibn Riḍwān, *Egypt*, vii. Generally speaking, 'Islamic' or 'Islamicate' medicine was therefore different from the 'Medicine of the Prophet' or 'Prophetic medicine' (*aṭ-ṭibb an-nabawī*) which was inspired by Qur'ānic verses or by ideas expounded in Muslim tradition. See Perho, *Prophet's medicine*.

5. Temkin, *Galenism*.

6. Pormann, and Savage-Smith, *Medicine*, 10.

which may be representative of many, but by no means all, aspects of a very diverse chapter in the history of medicine.

Ibn Jumay‘ was writing his *Canon* commentary well after the Graeco-Arabic translation movement in the ninth century and the systematisation of the Greek medical heritage, both of which were very defining moments in the history of mediaeval Islamic medicine.⁷ Ar-Rāzī’s (d. c. 312/925) massive *al-Ḥāwī* (literally the ‘encompassing’ book which comprises more than 20 volumes in its first printed edition), al-Majūsī’s (fl. c. 372/983) *al-Kitāb al-Kāmīl* (the ‘perfect book’), and Ibn Sīnā’s (d. 428/1037) *Canon* were either fully or at least in parts available to Ibn Jumay‘. He thus found himself in an era in which mediaeval Islamic medicine was already very mature. Not only had he had the most prominent and thorough systematisations of medicine at his disposal, he also had access to several translations of treatises of his role-models Galen, Hippocrates and Dioscorides which had also been the basis for the writings of ar-Rāzī, al-Majūsī and Ibn Sīnā. Moreover, he was able to use a medical language and vocabulary which had developed over the centuries. Without the enormous efforts of translators such as Ḥunayn Ibn Ishāq (d. c. 259/873), Ibn Jumay‘’s work would have been inconceivable.

The output of the Graeco-Arabic translation movement and the systematisation of Greek thinkers have often led scholars of the nineteenth and twentieth century to the conclusion that mediaeval Islamic science was a mere conduit for Greek ideas and not a venue for innovation and change.⁸ While more and more scholars have shown that this conclusion is problematic, it is perhaps the scientific⁹ commentary which shows best that mediaeval Islamic science had the potential to challenge and extend previous knowledge. It is thus that

7. Pormann, and Savage-Smith, *Medicine*, 24.

8. Pormann, and Savage-Smith, *Medicine*, 1.

9. I use the word scientific in the sense of the German ‘wissenschaftlich’.

G. Saliba wrote about the importance of the commentary genre in the field of Arabic astronomy:

[O]f all the Arabic astronomical writings, the theoretical analysis of two of Ptolemy's works, namely, the *Almagest* and the *Planetary Hypotheses* ... was probably the most original research in Arabic astronomy.¹⁰

The most prominent contribution made in mediaeval Islamic medicine is also found in a commentary. Ibn Nafīs (d. 687/1288) criticised the Galenic notion that blood may either flow directly from one ventricle of the heart to the other or via the lungs. Ibn Nafīs stated that dissection proves Galen wrong and that there are no invisible passage ways between the two ventricles of the heart. The criticism is found in Ibn Nafīs' commentary on the anatomical portions of the *Canon of Medicine*.¹¹ 150 years after Ibn Jumay', commentaries on the *Canon* had thus become a platform for physicians to discuss their ideas and, in the case of Ibn Nafīs, their innovations.

(b) *The Canon of Medicine*

The title of the *Canon* translates literally as the laws of medicine (*al-Qānūn fī at-ṭibb*) and the comprehensiveness and authority of this medical compendium proved to be stultifying for generations of physicians and scholars. Its author Abū 'Alī al-Ḥusayn ibn 'Abdallāh ibn Sīnā (d. 428/1037), latinised Avicenna, was commonly known as the *ra'īs*, an epithet which literally means 'the head' and demonstrates the high esteem in which he was held.¹² The impact of his thorough medical compendium on Europe becomes apparent when we consider that more than sixty Latin editions of the complete or partial text of the *Canon* were printed in the sixteenth and seventeenth centuries.¹³ In the Islamic world, its prominence can be judged by

10. Saliba, *History*, 144. See also Seymore, *Ibn Riḍwān*, 104.

11. Meyerhof, *Ibn an-Nafīs*, 116. Savage-Smith, *Attitudes*, 102. Pormann, and Savage-Smith, *Medicine*, 47-8. Cf. also Fancy, *Pulmonary Transit*.

12. See Mahdi, *Avicenna* and Goichon, *Ibn Sīnā*.

13. Siraisi, *Avicenna*, 3.

the fact that only a few other books, such as the *Qur'ān*, received more attention in form of commentaries than the *Canon of Medicine*.¹⁴

The *Canon* was composed over a lengthy period of time as Ibn Sīnā moved westward from Gurgān, in northern Persia where it was begun, to Rayy and then to Hamadān even further southwest where he completed it.¹⁵ It is divided into five books and its highly organised and logical structure is the main reason why the *Canon* was able to gain a stultifying authority over generations of physicians.¹⁶ Each of the five books is generally divided into parts (*funūn*). Each part is again divided into chapters (*ta'ālīm* or *maqālāt*). Each chapter (*ta'līm* or *maqālah*) is divided either into sections (*fuṣūl*) or further subdivided into sub-chapters (*jumal*) which are then divided into sections (*fuṣūl*).

The first book of the *Canon* discusses the general principles of the medical art. The second book is on simple drugs, or *materia medica*, arranged alphabetically and is prefaced with a general discussion on the properties of drugs. The third book is devoted to diseases which afflict only certain parts of the body. It is arranged in order from head to toe, starting with diseases of the head and ending with chapters on diseases affecting reproductive organs and the lower limbs. The fourth book covers diseases not specific to any one part of the body and is divided into four parts: (1) on fevers, (2) on pustules, abscesses, ulcers, swellings, leprosy, smallpox, wounds, fractures, dislocations, (3) on poisoning and animal and insect bites, and (4) on cosmetics, obesity and emaciation, and care of hair, skin, nails, offensive odours etc.

14. Cf. Schoeler, *Text*, 286. For surveys of the literature produced in response to the *Canon* see Brockelmann, *Geschichte* (second edition), 457 (597), Brockelmann, *Geschichte* (supplement), vol. I, 824-827; Dietrich, *Medicinalia Arabica*, 76-99; Iskandar, *Wellcome Catalogue*, 33-64; Ullmann, *Medizin*, 154f.; Savage-Smith, *New Catalogue*, 242-318.

15. Savage-Smith, *Medicine*, 921.

16. On the structure of the *Canon* and how much Ibn Sīnā favoured the logical instead of the more clinical element, see Savage-Smith, *Medicine*, 925.

The fifth book is a formulary providing recipes for compound drugs which are referred to by name in the third and fourth books.¹⁷

The first book of the *Canon* was called the 'general principles of the medical art' (*al-umūr al-kulliyah fī 'ilm at-ṭibb*) and proved to be the most popular one. Circulating on its own, it became known as the *Kulliyāt* (literally 'Generalities').¹⁸ Given its importance, a short summary is justified. Part one is concerned with the elements, humours, temperaments, the anatomy of bones, muscles, nerves, arteries and veins, and the three faculties. Part two is on the general causes and symptoms of diseases, comprising sections on the six 'non-naturals' as well as pulse, urine and stool diagnosis. Part three covers hygiene and regimen in health and illness for children, adults and the aged, as well as effects of climatic change and medical advice for travellers. Part four discusses general methods of therapy including cathartics, emetics, enemas, fomentations, liniments, bloodletting, cautery and some surgery such as amputation and the relief of pain.

(c) *Commentaries on medical treatises*

Important and authoritative texts have always been commented upon and this tradition will continue as long as humans feel the urge to express their thoughts on those of others. Even though Ibn Jumay' may have written the first commentary on the *Canon*, he participated in a very old and established tradition.

Prior to Ibn Jumay', commentaries on medical treatises were already an established forum to discuss medicine. In fact, the most important and influential medical treatises were mainly commentaries. Like many previous commentators, Galen had commented extensively on the

17. Ullmann, *Medizin*, 152f. Savage-Smith, *Medicine*, 922. Savage-Smith, *New Catalogue*, 220ff.

18. There are two English translations of the *kulliyāt* which are based on Latin and Urdu translations of the *Canon*: Gruner, *Canon* and Shah, *General Principles*. For a translation based on the Arabic text, see Ibn Sīnā, *Canon (Jamia Hamdard)*.

Hippocratic Corpus. Unlike his predecessors, however, Galen became the most respected and authoritative commentator of Hippocrates for roughly 1500 years. Galen became the ‘new Hippocrates’ and, mainly through his comments on the *Hippocratic Corpus*, influenced the subsequent medical discourse like no other.¹⁹

Galen’s works were also subject to a vast output of commentaries. Alexandria in late antiquity brought forth many commentators who had an important influence on the formation of mediaeval Islamic medicine.²⁰ The Alexandrian Summaries (*jawāmi’*) would usually not confine themselves to summaries of Galen, but also commented on the text in question, altered it, or added to it. Boundaries between texts that offered comments as opposed to those which provided summaries were therefore not clear-cut.²¹ The tradition of commenting on Galen continued in the Arab world, and the vast number of extant commentaries on his work underline how important Galen was. The Egyptian ‘Alī ibn Riḍwān (d. 453/1061), for instance, was not only one of the most dedicated admirers of Galen, but according to Ibn Abī Uṣaybī‘ah also wrote eight commentaries on Galen,²² some of which are still extant.²³

Medical treatises not originally written in Greek were also subject to commentaries. Ibn Riḍwān, for example, had apparently started to comment on al-Majūsī’s *al-Kitāb al-Kamīl*,²⁴ while Ḥunayn’s *Questions on Medicine for Beginners* (*Kitāb al-masā’il fī aṭ-ṭibb li-al-muta‘allimīn*) had been commented on by Ibn Abī Ṣādiq an-Nīsābūrī (d. after 439/1048). A note in a manuscript of the latter commentary reveals that it was read by a medical novice to better

19. Pormann, and Savage-Smith, *Medicine*, 10.

20. See Pormann, and Savage-Smith, *Medicine*, 12ff.

21. Pormann, and Savage-Smith, *Medicine*, 15.

22. Ibn Abī Uṣaybī‘ah, ‘*Uyūn* (ed. Müller), 103-104. For his other surviving works see Sezgin, *Geschichte*, vol. III, 36-42, 81, 83, 87, 155, 156, 164 and vol. VII, 44-45. See also Seymore, *Ibn Riḍwān*, 22ff.

23. Schacht *et al.*, *Controversy*, 41.

24. Ibn Abī Uṣaybī‘ah, ‘*Uyūn* (ed. Müller), 104.

understand and comprehend the contents of Ḥunayn's treatise.²⁵ As we will see, commentaries played an important role in mediaeval education.

(d) *The genre commentary*

But what exactly is a commentary? Although Ibn Jumay' was the first physician to have written a commentary on the *Canon*, other scholars had previously commented on the *Canon* by recording their interpretations in the margins of *Canon* copies.²⁶ The most prominent was the Christian physician Ibn at-Tilmīdh from Baghdad (d. 560/1165)²⁷ whose comments became subsequently known as the Iraqi glosses (*Ḥawāshī 'Irāqīyyah*). Ibn Jumay' continuously referred to his own comments on the *Canon* as glosses (*ḥawāshī*) as well,²⁸ so if we consider his treatise a commentary, we ought to question why we do not consider Ibn at-Tilmīdh's glosses the first commentary written on the *Canon*. Why should we classify Ibn Jumay's treatise as a commentary and not simply as another conglomeration of glosses on the *Canon*?

A gloss is usually defined as an explanatory equivalent of a foreign or otherwise difficult word. It is either inserted between lines or written in the margin facing the word it tries to illuminate.²⁹ The format of the gloss thus distinguishes it from other forms of written expressions. Like a parasite, a gloss can only exist in the margins or between the lines of the text it aims to elucidate. Even though the commentary presumes the possession of the text on which it comments (and would, like a parasite, not exist without this text), it is confined to a

25. Pormann, and Savage-Smith, *Medicine*, 68.

26. For instance, a copy of the *Canon* (Oxford, Bodleian Library, MS Pococke 47) made in 520/1126 by an unnamed copyist contains his marginal corrections (Savage-Smith, *New Catalogue*, 223).

27. For his works and biographies, see Iskandar, *Autograph*, 177.

28. See below CC P, 6 (p. 109). Moreover, Ibn Jumay' refers to his comments as *ḥawāshī* in the chapter headings of his commentary. See P fol. 4a (B fol. 6a), P fol. 44a (B fol. 73a), P fol. 75a (B fol. 123a), P fol. 107b (B fol. 176a). Ibn Jumay' never used any other term for his comments aside from *ḥawāshī* and never referred to his treatise as a *sharḥ* or *tafsīr*.

29. See art. 'gloss, n.1' in the Oxford English Dictionary (second edition). Others define a gloss as referring to one word as opposed to a scholium which is defined as the more thorough explanation of a text passage. See for instance Strohmeier, *Galen*, 315.

self-contained treatise.³⁰ A gloss without its facing text is almost meaningless if compared to the commentary which preserves the text it comments on. It is therefore on the basis of format that Ibn Jumay's treatise ought to be classified as a commentary as opposed to glosses. But what exactly distinguishes a commentary from literary genres other than the gloss?

Almost all *Qur'ān* commentaries conform to a standard form in which the text to be commented on is first quoted and then interpreted. Such commentaries were usually referred to as sequential or 'linked' (*musalsal*) commentaries because they began commenting on the first *sūrah* and went to the last, thus 'linking' each part with what followed.³¹ The commentator moved systematically through the text, either commenting on each verse at a time or grouping consecutive verses and then commenting on a thus defined section of the *Qur'ān*. Even though the contents of individual comments varied widely, interpretations were usually concerned with the place a certain *sūrah* was revealed (i.e. in Mecca or Medina), grammatical peculiarities, variant readings, juridical implications, theological issues or mystical exegesis.³²

Commentaries on philosophical works were also prominent and influential in the middle ages. The Andalusian philosopher Ibn Rushd (latinised Averroes, d. 594/1198, and thus a contemporary of Ibn Jumay) became known as 'the commentator' in mediaeval Europe because of his commentaries on Aristotle. His commentaries are usually divided into three categories, following a convention common in late antiquity.³³ The first, the so-called short commentary (*mukhtaṣar*, literally epitome in Arabic) was essentially a summary of the field as well as a synopsis of the text in question, in which Ibn Rushd drew on post-Aristotelian ideas

30. For the analogy of commentaries and parasites, see H. von Staden, *Women*, 1.

31. McAuliffe, *Tasks*, 183

32. For examples of each type, see McAuliffe, *Tasks*, 183ff.

33. Gladigow, *Kommentar*, 287.

and offered his own views on the issues discussed.³⁴ The middle commentary (*talkhīṣ*, literally abridgement in Arabic) was a paraphrastic summary, but followed the original much more closely than the short commentary and sometimes included passages taken from the original.³⁵ One could argue that it is justified to call such treatises commentaries as Ibn Rushd commented on them by deciding which passages were important (and thus to be summarised in more detail) and which were to be neglected. The third category is the long commentary (*sharḥ* or *tafsīr*) which follows the conventional form outlined above in *Qur'ān* commentaries. It is this form which is immediately recognisable as a commentary as opposed to an epitome or summary. It has been suggested by some scholars that Ibn Rushd was inspired by the form of contemporary *Qur'ān* commentaries, but as G. Schoeler pointed out, it is much more likely that the long commentaries of late antiquity (e.g. by Alexander of Aphrodisias), or those written by his more immediate predecessor al-Fārābī (d. 339/950), influenced the form in which he composed his long commentaries.³⁶

Neither the so-called short commentary nor middle commentary follow the format of what will be defined as a commentary here. Some have argued that if a commentary does not follow the order of the treatise it elucidates, it should not be called a commentary but rather a collection of discussions concerning a text.³⁷ As the gloss was already defined according to its format, I will also define the commentary according to its format: A commentary is a self-contained treatise (as opposed to glosses recorded in the margins) and has the distinctive feature that its main body presents lemmata from the treatise it comments on, follows its order, and provides comments to each lemma presented.³⁸ Hence, Ibn Jumay' was the first

34. Ibn Rushd, *Middle commentary*, xiii. See also Rushd, *Three short commentaries*.

35. Gladigow, *Kommentar*, 287.

36. Gladigow, *Kommentar*, 287. For al-Farabī's commentary, see Fārābī, *Commentary*.

37. Gladigow, *Kommentar*, 48.

38. This definition corresponds to the first type of commentary as defined by S. Ihm, *Clavis*, 4: "Den lemmatisierten Text Satz für Satz begleitende Kommentierung in einer eigentständigen Schrift". K. Gyekye also applied the criteria I have outlined to define the genre commentary (cf. Ibn aṭ-Ṭayyib,

physician to have written a commentary on the *Canon*. By going through the *Canon* systematically (comparable to the method applied in ‘linked’ *Qur’ān* commentaries), he first presented the text passage he wished to clarify before offering his interpretations. Like Ibn Rushd, Ibn Jumay‘ was unlikely to have been influenced by *Qur’ān* commentaries, but rather by earlier medical commentaries such as those by Galen.³⁹

One characteristic feature of a thus defined commentary is the absence of a very strong line of argument. It plods systematically through a text and the conceptualisation of a particular topic is usually the responsibility of the reader.⁴⁰ The more a commentary ‘atomises’ the text by focusing on smaller and smaller units, the more it interrupts its natural flow and makes the task of conceptualisation difficult. We may thus speak about analytic commentaries if the commentator is predominantly concerned with smaller sections of a text (especially single words), as opposed to synthetic commentaries which are concerned with larger sections of a text and make the task of conceptualisation easier.⁴¹ Generally speaking, analytic commentaries may thus be much more difficult to read than synthetic commentaries which are more akin to essays on a certain treatise (such as the short commentary mentioned above) or glosses which closely accompany a text. As will become clear, Ibn Jumay‘ wrote an analytic commentary.

Eisagoge commentary, ix). See also Strohmeier, *Galen*, 258: “Übereinstimmend ist die äußere Form des ausführlichen Kommentars, bei der ein Lemma zitiert und ihm die Erklärung angehängt wird.” For a mediaeval notion of what a commentary is, see below p. 226 (Maimonides’ definition of a commentary).

39. Another example which will be discussed later (see p. 203ff. below) is Fakhr ad-Dīn’s (d. 606/1209) *Sharḥ al-kulliyāt* (Commentary on the Generalities [the first book of the *Canon*]). In terms of its structure, it is very similar to that of Ibn Jumay‘. Like Ibn Rushd, Fakhr ad-Dīn was most likely influenced by earlier philosophical commentaries.

40. H. von Staden, *Women*, 1.

41. H. von Staden, *Women*, 10.

(e) *The evolution from glosses to commentary*

Like the *Qur'ān* or the *Canon of Medicine*, 'the Book' (*al-kitāb*) written by the Arabic grammarian Sībawayhi (d. 180/796) was subject to numerous commentaries.⁴² Almost every grammarian commented on at least a section of this monumental work of Arabic grammar. The common method of teaching grammar was that a student read Sībawayhi's book in front of a teacher who explained and commented on the text. The student usually copied the teacher's explanations into the margins of his copy which then served as a starting point for commentaries on 'the Book'.⁴³ The gloss had become the cradle for these commentaries.

It had been a common ancient practice that students made glosses on texts they were studying. In Ancient Greece pupils made glosses on texts by Homer, recording the meaning of words which were not commonly used in colloquial Attic.⁴⁴ Similarly, it was common in Ibn Jumay's day that students of medicine sought the help of able teachers to explain texts to them and then recorded those explanations in form of glosses.⁴⁵ Ibn Jumay' informs us about a discussion he had with a Syrian physician regarding the trivial and enigmatic nature of Ibn at-Tilmīdh's glosses which were found in the margins of certain *Canon* copies. The physician tried to explain to Ibn Jumay' that the glosses ought not to be attributed to Ibn at-Tilmīdh but to his students:

So it happened that I [Ibn Jumay'] discussed with him the different views regarding this matter and he confessed many things I mentioned about the state [of Ibn at-Tilmīdh's glosses] and he apologised, saying that it was a group of his [Ibn at-Tilmīdh's] students who asked him about matters which were quite obvious and not in need of explanation, but he [nonetheless]

42. Carter, *Sībawayhi*.

43. Schoeler, *Text*, 285. Glosses on philosophical treatises, such as Ibn Sīnā's *al-Ishārāt wa-at-tanbīhāt*, were also gathered into new compositions. For a late seventeenth-century example see Gacek, *Osler Codex*, 11.

44. Gladigow, *Kommentar*, 37.

45. For students making notes on Sībawahi's *Book*, see Schoeler, *Text*, 285. For general remarks on glosses and their use in education see Schoeler, *Text*, 290. Ibn Abī Uṣaybi'ah (d. 668/1270) also informed us how his teacher corrected or annotated texts his students read to him (Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 243 and Strohmeier, *Galen*, 258).

explained them to them in terms of what aided their understanding. They wrote them [his explanations] down and attributed them to him. (CC J, 10)⁴⁶

The excuse presented here refers to the practice of students making glosses on texts they studied. Ibn Jumay' rejected this excuse because he knew of explicit statements that the glosses were written in Ibn at-Tilmīdh's handwriting.⁴⁷ Glosses were therefore not restricted to classroom use; eminent physicians such as Ibn at-Tilmīdh recorded their thoughts in the margins of their *Canon* copies and became known for doing so. It appears that Ibn Jumay' too had become known for annotating his copy of the *Canon* and was therefore asked by the anonymous addressee⁴⁸ of his commentary to send him his interpretations:

You [the addressee of the commentary] have mentioned what has reached you of my interpretation and endeavour in improving my copy of it [the *Canon*] and that I commented on it [with] many marginal glosses. So you asked me to compile a book for you and to copy into it [my] glosses on [the *Canon*] ... (CC P, 4)

Ibn Jumay's glosses and his commentary are therefore two related but different stages in his endeavour to comment on the *Canon*. The two stages differ most notably in their format, but also in their maturity and commitment. The gloss was a much easier format of interpretation because it could simply be placed next to the text without the commitment to make further annotations, to introduce it with prefatory remarks or formula, or to confess authorship. This ease of composing glosses, however, came at a certain price. Glosses were in a less accessible format than commentaries. It involved less work to copy a commentary than to extract glosses written in a given treatise and to record them in a separate treatise, indicating to which passage they referred. Even more demanding was to copy both the treatise commented upon and the glosses in its margins. Finally, writing glosses was less likely to have the same

46. The Arabic edition of passages from the *Canon* commentary can be found in the Appendix (see p. 256ff.).

47. See below p. 95.

48. It should be noted that the addressee was perhaps literary fiction. Ibn Jumay' may have used an imaginary addressee in order to remark that he had set out to improve his copy of the *Canon*.

impact as writing a commentary which may have brought more fame and authority to its author.

If commentaries and glosses differed in several obvious ways, why did Ibn Jumay' preface parts of his commentary with headings such as "glosses on the second book of the *Canon*" and "glosses on the third book of the *Canon*"?⁴⁹ He obviously did not distinguish between glosses made in the margins (*ḥawāshī*) and comments made in a commentary (*tafsīr* or *sharḥ*).⁵⁰ While the historian has the benefit of hindsight when attempting a classification of treatises according to format and agenda, their mediaeval authors usually had a different perspective. By repeatedly referring to the contents of his treatise as *ḥawāshī*, Ibn Jumay' indicates that he understood it to be mainly a conglomeration of glosses even after he transferred his glosses to what ought to be classified as a commentary. On the process of writing his commentary Ibn Jumay' remarked:

In the second part [i.e. following the introduction which is counted as part one],⁵¹ I have put down the most important of all the marginal glosses (*ḥawāshī*) I have made and whatever was worth putting down about the main body of the composition excluding interpretations which are not suited to be written down in the margins (*turar*, sg. *ṭurrah*)⁵² because this is most appropriate for your objective and most satisfactory in terms of your request.

I broadened the discourse in places where there is an excess of explanation [needed] in order to enlarge the size of the composition through this, while making its margins narrow.⁵³ I imitated its order by ordering its sections (*fuṣūl*) and discourses into individual sections, so that this may facilitate the process of looking up whatever you wish to uncover of it[s (the *Canon*'s) obscure meanings]. I gave it [this book] the title *Clarifying the Concealed by Correcting the Canon* (*at-Taṣrīḥ bi-al-maknūn fī tanqīḥ al-Qānūn*), so that this title is in conformity with its objective. I now begin with what you have requested. In God is strength. (CC P, 8)

49. P 44a (B 73a) and P 75a (B 123a). See also P 4a (B 6a) and P 107b (B 176a).

50. Fakhr ad-Dīn ar-Rāzī, for instance, called his comments *baḥṭh* or *tafsīr* (see below p. 203ff.).

51. See below p. 47 for an outline of the treatise.

52. Lit. 'Excluding that which is other than what is only appropriate for the margins'.

53. The last part is curious. By saying 'making its margin narrow', Ibn Jumay' perhaps intended to stress that he wrote copiously and that he used up almost all the space of the paper he was writing on.

Ibn Jumay' pointed out that his treatise imitated the order of the *Canon*, thus indicating that he went through the *Canon* systematically. Moreover, he included additional interpretations while he copied his glosses into the treatise which was to become the *Canon* commentary. Rather peculiar is Ibn Jumay's remark that he would only include comments in his commentary which are suited for the margins (*turar*) of a treatise. As we will see, there are longer passages in the commentary (such as his remarks on human dissection) which would not be suitable for the margins as they would indeed fill the margins of several folios, leaving no space to comment on other matters.⁵⁴ It therefore appears that Ibn Jumay' originally intended to keep his comments short but then changed his mind whenever he felt that longer comments were necessary.

Taking both Ibn Jumay's remarks and the actual contents of the commentary into account, it is rather obvious why Ibn Jumay' understood his comments as marginal glosses. A large number of terse and rather isolated comments bear witness that they were once found in the margins of Ibn Jumay's *Canon* copy.⁵⁵ Several comments may appear trivial and out of context because they are somewhat abandoned in their new habitat — the commentary — which makes it so much more difficult to see the surroundings and the context of the word or passage commented upon. As such, the *Canon* commentary is an example of an analytic commentary in which the text commented upon is usually highly atomised. To be sure, Ibn Jumay' did introduce his comments with short quotations from the *Canon* so as to indicate which exact passage or word he commented on. Yet, it is much easier to have the commentator's words facing the text in need of interpretation. Unlike Ibn Jumay's commentary, glosses do not require the reader to constantly go from one volume to the other,

54. See below, p. 139ff.

55. See below, p. 188ff.

but combine everything in one book and one view. Especially when it comes to short comments on single words, a gloss is a much more ‘user-friendly’ format.

Ibn Jumay’s commentary is an example of the transition from glosses to commentary. This hybrid nature explains why Ibn Jumay continuously referred to his comments as glosses. Yet, he did not title his treatise *Glosses on the Canon* but rather *Clarifying the Concealed by Correcting the Canon* (*at-Taṣrīḥ bi-al-Maknūn fī tanqīḥ al-Qānūn*).⁵⁶ As Ibn Jumay had stated, the title indicated what the purpose of the treatise was, but it may also imply that the court physician had understood his treatise to be more than a conglomeration of glosses.

(f) *Power and authority*

Friedrich Nietzsche argued that interpretation is an instrument to gain power.⁵⁷ Commentaries, just like glosses, summaries, or even translations, are interpretations⁵⁸ and it would thus follow that commentators try to gain power with their interpretation of the authoritative texts they comment upon. How valid is this observation in our context?

A commentator usually understands himself as being able to interpret a text and reveal its true or deeper meanings to a given audience.⁵⁹ Galen, for instance, claims that the primary and proper purpose of a commentary is to clarify or elucidate an ancient text. As H. von Staden put it:

In his exegetical practice, however, [Galen] ‘clarifies’ numerous lemmata in such a way as to establish not only Hippocrates’ scientific ‘truths’ but also implicit or explicit agreements between Hippocrates and himself. Such doctrinal consonances depend, of course, upon interpreting Hippocrates ‘correctly’ and Galen ... rarely left any doubt that he considered

56. I tried to render the rhyming Arabic title with an alliteration. More literal would be ‘The Explication of the Obscure through the Revision of the *Canon*’ (see Savage-Smith, *New Catalogue*, 242).

57. “In Wahrheit ist Interpretation ein Mittel selbst, um Herr über etwas zu werden”. Nietzsche, *Werke*, vol. III, 489 (cited via Gladigow, *Kommentar*, 49).

58. Cf. H. von Staden, *Women*, 4.

59. Cf. Gladigow, *Kommentar*, 35.

himself the best, most trustworthy commentator on Hippocrates.⁶⁰

In the sixteenth century, we hear very similar claims from Cardano who assured his reader that, as a result of his own efforts to disentangle the ‘true’ Hippocrates from the pervasive influence of the Galenic tradition, they would hear the authentic voice of Hippocrates for the first time. Apparently, Cardano did not realise that he too was unwittingly influenced by Galen who had made the same claims.⁶¹ Both commentators claimed to know the true interpretation of Hippocrates and thus exact their audience’s attention.

Commentators are usually members of cultural institutions or learned communities and have access to authoritative texts which they protect, divulge, or conceal. In the words of G. Most:

By writing commentaries, such professionals help regulate access to their institution and movement within them by reference to their own vision of the particular ideals of scholarship to which they, unlike some of their colleagues at least, subscribe, legitimated by appeal to the founding texts which authorize those institutions in the first place. And no doubt they simultaneously strengthen their own position within those institutions by advertising a peculiar access to those authoritative texts and thereby associating themselves with their prestige.⁶²

With a commentary, a commentator may thus dictate the standards for someone who wishes to gain access to the commentator’s profession or community. In Ibn Jumay’s case, this would mean that he may have written his commentary on Ibn Sīnā’s *Canon* in order to gain power in the medical field of his day and to set certain standards in the medical discourse. As we will see, Ibn Jumay’ was employed as a physician at the court of Saladin and it may well be that to maintain, improve, or legitimate his position at the court was one of the central reasons for Ibn Jumay’ to have written his commentary on the *Canon*. Such a motive is at least obvious in his treatise to Saladin in which Ibn Jumay’ explained to the ruler not only why the art of

60. H. von Staden, *Women*, 113-114.

61. H. von Staden, *Women*, 123.

62. Most, *Commentaries*, ix.

medicine is in a marked state of decline, but also what to do about this decline. He outlines the characteristics of an ideal physician and left little doubt, by being able to discern all of these characteristics, that he was among those physicians who can prevent a further decline of the art of medicine.⁶³ The *Canon* commentary had a similar message. Ibn Jumay‘ was able to understand, interpret and even correct a medical encyclopaedia written by one of the most important intellectual authorities; the commentary confirmed that Ibn Jumay‘’s position as a court physician in charge of life and death was justified.

Demonstrating erudition in a commentary may thus be one means of trying to gain power. Yet, it appears that the very act of writing a commentary is already an important step in this direction. The author about whose text one writes a commentary is usually an established authority, whether they are a human, divine, religious or secular authority.⁶⁴ By writing a commentary, the commentator is able to attach his evanescent name to one of the central stars in the cultural constellations that matter in the society of his day. Ibn Jumay‘ attached his name to Ibn Sīnā and it may well be the case that he, like other commentators, did not only try to establish himself on a par with with the *ra’īs* but to challenge or even replace his authority.⁶⁵

However critical a commentary may be, it is inevitable that the very act of commenting gives a certain amount of importance to the text commented upon. No one would consider commenting on a text which is deemed unimportant. Commentaries thus have an intrinsic tendency to defend and maintain the authority of the author they comment upon.⁶⁶ Yet, the exact opposite tendency is present at the same time: a commentary is always subversive of an authority in so far as it indicates either explicitly or implicitly that there are certain

63. Ibn Jumay‘, *Treatise*, §2 and §151-153.

64. Most, *Commentaries*, viii.

65. Cf. Kraus, *Reading*, 7.

66. Most, *Commentaries*, x.

difficulties in understanding the meaning of the text or that it can be enhanced by certain interpretations. In other words, a perfect text would not be in need of a commentary. In the case of commentaries on sacred texts, it is usually not admitted that a text of divine origin is not as perfect as it could be. Rather, the text is usually understood as a perfect entity and it is only the task of the commentator to reveal what is written between the lines, to explain how impurities may have been introduced into the text or that something is beyond the grasp of a reader or commentator. Pious commentaries on the *Qur'ān* do not question that God's word is lacking. It is the reader who lacks certain information that tradition, exegesis, or grammar can provide. As we will see, a similar air of infallibility or perfection surrounded authors of secular texts. The *Canon of Medicine* was unprecedented in its comprehensiveness which had a stupefying effect on many of its readers whose anecdotes tried to explain away its shortcomings and to depict it as an originally impeccable text.

Every commentator, consciously or unconsciously, therefore follows two opposing tendencies: a subversive tendency directed against the authority of the text and a defensive tendency which strengthens the authority of the text. Commentators can try to emphasise, ignore, or conceal whatever tendency is more suited to their needs. We will need to question which tendency was more predominant in Ibn Jumay's commentary. Was he more against Ibn Sīnā or more in favour of him?

Once a commentator succeeded in gaining acceptance by his readership, he may use his power to alter or completely change the meaning of an authoritative text according to his agenda: a written text is always vulnerable to interpretations which may be opposed to the original intentions of the author. For instance, teaching seventeenth-century physiology at Padua in 1713, Morgagni used his *Canon* commentary to convey contents entirely opposed or anachronistic to the treatise he was commenting on. He had reduced the more than five-

hundred-year-old *Canon* to a mere shell for his eighteenth-century teachings.⁶⁷ We may be tempted to judge such a commentary as a *misreading* of the *Canon*. From a historical perspective, however, the commentary is simply a certain *reading* at a given time and with a specific agenda. As C. Kraus put it:

No matter what the auctoritas of a commentator (and it can be considerable), a commentary is first and foremost an interpretation. Neither the meaning of a text nor the problems perceived as obstructing/complicating that meaning are there to be found [in the text]; both are created by readers.⁶⁸

In the following analysis, we are interested in the problems Ibn Jumay' created when reading the *Canon*. Moreover, we are also interested in determining how much Ibn Jumay''s reading may have differed from what Ibn Sīnā originally intended when writing the *Canon*. While we can expect Ibn Jumay' to express his explicit disapproval in certain situations, we must be prepared for instances in which Ibn Jumay' interpreted the *Canon* in order to propagate his own ideas while either consciously or unconsciously ignoring the fact that his interpretations were opposed to those expressed in the *Canon*.

(g) *The audience and locus of a commentary*

Commentaries are written to be read. When elucidating a text, commentators address an audience which — as they believe — requires assistance in understanding an authoritative text. We may think of students who are exposed to difficult texts and try to understand these texts in order to demonstrate competence and to advance in their professional career or their cultural status. One particularly important locus for commentaries is therefore educational establishments.⁶⁹ Almost all medical *Canon* commentaries written in Latin in the fourteenth to the seventeenth centuries originated in university lectures.⁷⁰ As Ibn Jumay' was said to have

67. Siraisi, *Avicenna*, 6.

68. Kraus, *Reading*, 4.

69. Most, *Commentaries*, ix.

70. Siraisi, *Avicenna*, 5.

taught students,⁷¹ we will need to consider the possibility that his glosses on the *Canon* originated in the ‘classroom’ or were intended for classroom use.

Commentaries may also be read by more advanced scholars. Ibn Jumay‘ read Ibn at-Tilmīdh’s glosses on the *Canon* and scholars following Ibn Jumay‘ read his commentary on the *Canon*.⁷² Yet, we may also think about readers who were neither aspiring nor experienced experts in the commentator’s field especially as several mediaeval commentaries were dedicated to high ranking patrons. Around 564/1169, Ibn Jumay‘’s contemporary Ibn Rushd was commissioned by the Almohad ruler Abū Ya‘qūb Yusūf to explain and clarify Aristotelian texts. When writing his middle commentary on *De Anima*, Ibn Rushd selectively chose those sentences and passages he felt would help the caliph and his court to understand and accept Aristotle’s teachings.⁷³ It is obvious, however, that dedicating a treatise to a patron did not mean that it was always read by the patron. Some commentaries were perhaps never expected to be read by those who commissioned them, but rather to be stored in their libraries where they could be consulted by students, scholars or interested amateurs.

As for medical commentaries, Galen stated that they ought to be written for the needs of the practicing physician. In the words of H. von Staden:

[Galen] argues that the principal criterion of selection should be usefulness for the practitioner of medicine Not all Hippocratic passages merit exegesis, Galen sometimes claims, since they do not all meet the criterion of utility. Furthermore, he suggests that, even in the case of ‘useful’ subject matter in the original text, the commentator should exclude all linguistic and philological questions, also those concerning etymology, dialect, syntax, and other features of grammar. Such questions, he believes, are appropriate in commentaries on poetry, but they subvert the true purpose of a commentary on a technical scientific text. Closely related is his view that questions concerning terminological precision should be excluded, in part because they lower the level of commentaries to technical texts. All the criteria are, however,

71. See below p. 32.

72. For commentaries on Ibn Jumay‘’s commentary, see below p. 51.

73. Ibn Rushd, *Middle commentary*, xiv.

repeatedly violated by Galen in his own exegetical practice.⁷⁴

As we will see, Ibn Jumay‘ was known as a passionate linguist and his numerous linguistic comments on the *Canon* did not necessarily follow Galen’s ideal criteria of selection. We therefore need to question if Ibn Jumay‘ intended his commentary to be of any use to the practitioner of medicine.

Commentaries are not only influenced by their intended readership, they are also written at certain places which will have an inevitable effect on how they are written. As G. Most put it:

Commentaries tend to be created at the sites of cultural authority within societies. Whether it is a matter of Babylonian temples or of Cambridge colleges, commentaries occur for the most part not at the margins or edges of a society but at the very heart of its institutions of cultural power; after all, the considerable expenditure of energy and labour involved in preparing and using them, as well as the availability of extensive materials of reference which they presuppose in their preparation (and often in their use), are most likely not to be distributed evenly throughout a society but instead to be concentrated in just such institutions (so that the rest of society can get on with other matters).⁷⁵

Ibn Jumay‘’s commentary was written at a site of high cultural and political importance. He may not have written the commentary at the court of Saladin, but his being a member of one of the most influential social communities of his day becomes obvious throughout the commentary. His access to an enormous array of written sources and the ability to converse with a number of people from countries as far away as Persia are important characteristics of the treatise. The commentary would have looked very different if it had not been written in the heart of one of the most metropolitan sites of the mediaeval Islamic world. The eleventh century had witnessed a complete reorientation of the Mediterranean trade routes and the

74. H. von Staden, *Women*, 134-135.

75. Most, *Commentaries*, ix.

relocation of the seat of the Fatimid government from Tunisia to Egypt meant that Alexandria and Cairo became important centres of trade and politics.⁷⁶

Even though geographical factors have an important impact, other circumstances, such as education, family or religiosity, may have had an equally important, if not more important, impact on commentators such as Ibn Jumay‘. The biography of Ibn Jumay‘ will therefore be the subject of the next chapter before we turn to a detailed investigation of the commentary itself in chapters two, three and four.

76. Goitein, and Lassner, *A Mediterranean Society: an Abridgment in One Volume*, 31.

I. The commentator

1. Ibn Jumay' s life

(a) Ibn Abī Uṣaybi'ah's account

Several mediaeval historians have written about Saladin's life (among them Qāḍī al-Fāḍīl, 'Imad ad-Dīn, Ibn Shaddād and Ibn al-Athīr),⁷⁷ but none of them appears to have mentioned his personal physician Ibn Jumay'. The only source which informs us about Ibn Jumay' s life remains the *Sources of Information about the Classes of Physicians* ('*Uyūn al-anbā' fī ṭabaqāt al-aṭibbā'*), written by Ibn Abī Uṣaybi'ah (d. 668/1270), a Syrian historian and physician in his own right.⁷⁸ Even though he was not a contemporary of Ibn Jumay' s, Ibn Abī Uṣaybi'ah still knew people who had known Ibn Jumay' personally. Among them was Ibn Jumay' s student Ibn Abī al-Bayān (d. c. 636/1238), who had taught Ibn Abī Uṣaybi'ah medicine.⁷⁹

Ibn Abī Uṣaybi'ah's account begins as follows:

Ibn Jumay'. He was the eminent master (*ash-shaykh al-muwaffaq*), the leading luminary (*shams ar-riyāsah*) Abū al-'Ashā'ir Hibat Allāh ibn Zayn ibn Ḥasan ibn Ifrā'īm ibn Ya'qūb ibn Isma'īl ibn Jumay' al-Isrā'īlī. He is counted among the most prominent physicians and most noteworthy scholars (*al-'ulamā' al-madhkūrīn*), the most outstanding of all (*al-akābir al-muta'ayyinīn*). He was versatile in the sciences (*'ulūm*), had a good knowledge of them, was very diligent and

77. See Lev, *Saladin*, 14-44 for a discussion of Saladin's historians.

78. Ibn Abī Uṣaybi'ah, '*Uyūn* (ed. Müller), vol. II, 112-115. For Ibn Abī Uṣaybi'ah see Vernet, *Ibn Abī Uṣaybi'a*. For secondary accounts about Ibn Jumay' which are all based on Ibn Abī Uṣaybi'ah or on accounts based on Ibn Abī Uṣaybi'ah see: Wüstenfeld, *Geschichte*, 101f., Leclerc, *Histoire*, vol. II, 53ff., Steinschneider, *Literatur*, pp. 178ff., Sarton, *Introduction*, vol. II/1, 432f., Meyerhof, *Mediaeval Jewish Physicians*, 444f., Rabin, *Skeleton*, 177, Ashtor-Strauss, *Saladin and the Jews*, 310f., Dietrich, *Medicinalia Arabica*, 107ff., Vernet, *Ibn D̲j̲āmi*, Ullmann, *Medizin*, 164f., Ibn Jumay', *Treatise*, 1-5, Nicolae, *Jewish Physicians*. For a general discussion of biographical dictionaries and how much they reflect intellectual and cultural developments in the Islamic world, see Qāḍī, *Books*.

79. For Ibn Abī al-Bayān see Vernet, *Ibn Abī'l-Bayān*. For his death date and the fact that he studied under Ibn Jumay', see below, p. 41.

persistent in the medical art, excellent in treating diseases (*ḥasan al-mu‘ālahah*) and had a very good writing style (*jayyid at-taṣnīf*).⁸⁰

While such a description suggests that we are dealing with one of the most important physicians of the twelfth century, it must be noted that such eulogistic introductions are commonplace in Ibn Abī Uṣaybi‘ah’s work.⁸¹ They are thus not highly reliable criteria for distinguishing between very eminent and less eminent physicians. The entry continues with biographical information about Ibn Jumay‘:

He read the art of medicine under the eminent master (*shaykh al-muwaffaq*) Abū Naṣr ‘Adnān ibn al-‘Ayn Zarbī and followed him for a while. Ibn Jumay‘ was born and raised in Fuṣṭāṭ, Egypt. He served al-Malik an-Nāṣir Ṣalāḥ ad-Ḍīn Yūsuf Ibn ‘Ayyūb [Saladin] and enjoyed his favour during his reign. He was high in rank at his [court] (*kāna raḥ al-manzilah ‘indahū*), of high standing (*‘ālī al-qadr*), and very influential (*nāfidh al-amr*). Saladin relied on him in the medical art, and Ibn Jumay‘ would mix the most esteemed of compound [remedies] (*at-tiryāq*) for him. Ibn Jumay‘ had meetings (*majlis ‘āmm*) for those who studied the medical art under him. He was very ambitious.⁸²

Ibn Jumay‘ lived in Cairo throughout his life and it appears that he never travelled further than Alexandria.⁸³ As for Ibn Jumay‘’s death date, Ibn Abī Uṣaybi‘ah did not provide any relevant information. The date 594/1198 is usually given in modern secondary sources, but there is no mediaeval source which specified this date.

The bibliographer Ḥājjī Khalīfah (d. 1067/1657) did not mention Ibn Jumay‘’s death date when he referred to him in relation to other commentaries on the *Canon*.⁸⁴ Likewise, F. Wüstenfeld

80. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 112.

81. For instance, other Jewish court physicians at Saladin’s court were praised in a similar manner. Ibn Shu‘ah is among the ‘choicest of scholars and most eminent of physicians’ (Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 116) and Maimonides is praised as the ‘first of his time in the art of medicine’ (Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 117).

82. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 112-113.

83. See his treatise on Alexandria (p. 52) and his description of birds living in the lower regions of Egypt (p. 129).

84. Ḥājjī Khalīfah (Kâtip Çelebi), *Kashf*, I, 255 (outlines contents of the *Irshād*), IV, 499 (mentions a *Canon* commentary which includes references to the shortcomings of the Iraqi glosses and Ibn Jumay‘’s corrections of them), IV, 500 (refers to Ibn Jumay‘’s glosses - apparently referring to those he made on the *Canon*).

(1840) and L. LeClerc (1876) did not give a date of death in their paraphrase of Ibn Abī Uṣaybi‘ah’s account.⁸⁵ In his first edition of the *Geschichte der Arabischen Literatur* (1898),⁸⁶ C. Brockelmann did not mention a death date either, but in his *Supplementband* (1937) the death date 594/1198 suddenly appears for the first time.⁸⁷ Brockelmann included M. Steinschneider’s *Die Arabische Literatur der Juden* (1902) in his updated biography, but Steinschneider had not mentioned a death date.⁸⁸ Likewise, M. Meyerhof remained silent about Ibn Jumay‘’s date of death when he wrote his article on the mediaeval Jewish physicians (published in 1938).⁸⁹ E. Ashtor-Strauss (1956) is the first to point out that the date of death is not certain, but does not discuss why Brockelmann (who is not referenced) suggested a date.⁹⁰ Later scholars fail to mention this uncertainty and simply follow Brockelmann’s suggested dating.⁹¹ It is unclear what Brockelmann’s sources were and we can only speculate that he inferred the death date from the fact that Maimonides became the leading court physician in 594/1198. Yet, it appears unlikely that Brockelmann would update his account due to a conjecture.

Ibn Abī Uṣaybi‘ah noted that Ibn Jumay‘ had a *majlis ‘āmm*, literally a ‘public session’. In the mediaeval Islamic world, it was usual for a teacher to sit in a public place such as a mosque, market, or the court of a palace, with students gathered around him in circles. The teacher would lecture on his subject, ask questions, and answer queries from the audience.⁹² It was also common that he would read texts, explain them or dictate them to his students. Ibn Jumay‘ probably held his ‘public sessions’ at Saladin’s court, but it is also possible that this

85. Wüstenfeld, *Geschichte*, 101f. and Leclerc, *Histoire*, vol. II, 53ff.

86. Brockelmann, *Geschichte (first edition)*, vol. I, 489.

87. Brockelmann, *Geschichte (supplement)*, vol. I, 892.

88. Steinschneider, *Literatur*, pp. 178ff.

89. Meyerhof, *Mediaeval Jewish Physicians*, 444f.

90. Ashtor-Strauss, *Saladin and the Jews*, 311.

91. Dietrich, *Medicinalia Arabica*, 107ff., Vernet, *Ibn D̲j̲āmi*, Ullmann, *Medizin*, 164f., Ibn Jumay‘, *Treatise*.

92. Pormann, and Savage-Smith, *Medicine*, 83.

happened somewhere else — for example at his shop (*dukkān*) near the candle market in Fustāt.⁹³

Ibn Abī Uṣaybi‘ah continued with an account given by his own teacher Ibn Abī al-Bayān:

I (Ibn Abī Uṣaybi‘ah) was told by *Shaykh* as-Sadīd ibn Abī al-Bayān that he studied the art of medicine under Ibn Jumay‘. He mentioned that Ibn Jumay‘ was very discriminating in the art of medicine, being well versed in its theory (*‘ilm*) and excellent in its practice (*a‘māl*).

I say that this is confirmed by what we find in his writings, for they are well composed, full of useful instructions, and well selected in terms of treatments. He was very knowledgeable in Arabic, meticulous about technical terms, and would not teach⁹⁴ without having Jawharī’s *Ṣiḥāḥ* in front of him, looking up every word he did not fully understand, and relying upon what Jawharī presented.⁹⁵

Ibn Abī Uṣaybi‘ah noted that many useful instructions can be found in Ibn Jumay‘’s writings, especially in terms of possible treatments. While such a comment may again be a literary *topos* to stress Ibn Jumay‘’s excellence as a physician, Ibn Abī Uṣaybi‘ah continued with Ibn Jumay‘’s most distinguishing hallmark: his love for philology. As we will see in Chapter Two, Ibn Jumay‘’s writings confirm that Ibn Abī Uṣaybi‘ah provided a very accurate description of Ibn Jumay‘ at work; the famous Arabic dictionary *Ṣiḥāḥ* (literally ‘what is authentic’) by the celebrated Arabic lexicographer Jawharī (d. c. 397/1007)⁹⁶ figured prominently in the *Canon* commentary.

93. See below, p. 35.

94. Newer editions have يقرأ (“he would not read”) instead of يقرئ. See Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. ‘Āmir an-Najjār), vol. III, 444.

95. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 113.

96. Kopf, *al-Jawharī*. Jawharī was of Turkish origin and spent a large part of his life on travel which allowed him to make linguistic observations among the Arabs of the desert. He settled in Nishapur (Nīsābūr) where he most likely compiled his dictionary.

The next paragraph helps to put Ibn Abī Uṣaybi‘ah’s eulogistic expressions into perspective. There appears to have been little doubt that Ibn Jumay‘ had to be counted among the most prominent physicians of his time:

I (Ibn Abī Uṣaybi‘ah) was once visiting Ṣāhib Jamāl ad-Dīn Yaḥyā ibn Maṭrūḥ in his house in Damascus. This was in the days when al-Malik aṣ-Ṣāliḥ Najm ad-Dīn the Ayyubid [ruled 637/1240-647/1249] was commander of the Egyptian and Syrian lands, and when Ṣāhib Jamāl ad-Dīn was his vizier in all the lands, as well as a man of the sword and pen, with 200 horsemen in his service.

As we continued with our conversation, Jamāl ad-Dīn deigned to say to me (Ibn Abī Uṣaybi‘ah): ‘No one preceded you in compiling your book on the classes of the physicians.’ He then said to me, ‘You have discussed our compatriots, the Egyptian physicians’, and I confirmed this. He continued: ‘It seems to me as if you have indicated that there is no one among the physicians of old like Ibn Riḍwān and no one of those coming after like Ibn Jumay‘.’ I replied: ‘This is correct, your lordship.’⁹⁷

By Ibn Abī Uṣaybi‘ah’s day, Ibn Jumay‘ was placed on the same level as Ibn Riḍwān (d. 453/1061), who was appointed chief physician of Egypt by the Fāṭimid Caliph of Cairo and was a renowned physician, medical author and polemicist.⁹⁸ In order to account for Ibn Jumay‘’s rise to fame, Ibn Abī Uṣaybi‘ah presented a story illustrating the medical acumen of the young Ibn Jumay‘:

I was told by a certain Egyptian that while Ibn Jumay‘ sat one day in his shop (*dukkān*) next to the candle market (*sūq al-qanādīl*) in Fuṣṭāṭ in Egypt, a funeral procession passed by. When he saw the procession, he called out to the mourners, telling them that their companion was not dead, and if they were to bury him, they would bury him alive. He [the Egyptian] said: ‘‘They kept looking at Ibn Jumay‘ in bewilderment due to what he had said, and they could not believe what he said. Then they said to each other: ‘What he said will not hurt us if we will test what he has said. If it is correct, then this is what we want. If it is not correct, however, nothing will change for us.’ So they talked to Ibn Jumay‘ and asked him: ‘Please explain what you have said to us!’ So he instructed them to go back home and to take off the shrouds from the dead person. He then said: ‘Carry him into a bathhouse!’ He then poured hot water over him and warmed up his body by wrapping him in warm compresses and immersing him [in hot water]. Then, they saw sensation returning to him and he moved very slightly. So he [Ibn Jumay‘] said:

97. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 113.

98. Schacht, *Ibn Riḍwān*.

‘Rejoice, he is restored to health!’ Ibn Jumay’ then completed his treatment until he [the allegedly dead man] woke up and was restored to health.” This was the beginning of his reputation for excellence in [this] art and science. He appeared to have worked a prophetic miracle (*mu’jiz*) but later he was asked: “How did you know that this dead person, while being carried and covered in shrouds, was actually alive?” He answered: “I looked at his feet and found them to be upright. Yet the feet of those who have died are splayed out (*munbasīṭah*). So I reckoned that he was alive which turned out to be true.”⁹⁹

The main purpose of the story is to illustrate Ibn Jumay’'s acumen and excellent diagnostic skills which led to his fame. The introductory remark is interesting from a historical perspective as we are informed that he had a *dukkān* next to the candle market. Such shops were usually run by pharmacists and it suggests that before Ibn Jumay’ was appointed court physician he earned his living as a pharmacist who would also offer his advice as a physician (as he did to the funeral congregation). As we will see in chapter three of this thesis, one of Ibn Jumay’'s strengths was his expertise concerning *materia medica*, and it is therefore likely that his shop was a pharmacy. If this was the case, it blurs the professional divisions between physicians and pharmacists and would serve as an example of a pharmacist who became an eminent court physician.¹⁰⁰

Ibn Abī Uṣaybi’ah ends the biographical section by citing some satirical poems written about Ibn Jumay’:

I [Ibn Abī Uṣaybi’ah] say: In Egypt, there lived a certain Ibn al-Munajjim al-Miṣrī, a famous poet with a sharp tongue, who wrote several lampoons of Ibn Jumay’ and [these are] among what was recited from him:

99. Ibn Abī Uṣaybi’ah, *‘Uyūn* (ed. Müller), vol. II, 113.

100. Cf. L. Chipman (Chipman, *World of Pharmacy*) who generally argues that pharmacists were different from physicians. Even though she emphasises that boundaries between pharmacists and physicians are not always clear-cut, we are left with the general image of practice-orientated pharmacists and theory-orientated physicians. She reinforces the differences between physician and pharmacist through comparisons such as those between Ibn Jumay’ and al-Kūhīn al-‘Aṭṭār (ibid., 19-25), neglecting that different agendas should be taken into account when comparing the different ways the two writers have of presenting their material. In other words, it is not the profession that is the reason why Ibn Jumay’ appeared in his treatises to be a more theory-orientated physician, but rather his agenda (see Nicolae, *Compendium*).

*Ibn Jumay' s a medical idiot
And the medicine of Jesus is reviled because of him.
He can't figure out what's in a flask
of ill urine, no matter how much he churns it up.
And yet, most amazing of all was the time
he asked the bereaved to pay him for killing the patient!*

He also wrote about him:

*Forget about Ibn Jumay' and his fakery
And his claims about medicine and geometry.
He is just a big joke
And a curse to every country he settles in.
He has made it his custom to drink
But he drinks like a narcissus.*

He also wrote about him:

*You lied and misspelled when you claimed
Your father is Jumay' the Jew [i.e. Ibn Jumay' al-Yahūdī].
For Jumay' the Jew is not your father
No, all the Jews were your father [i.e. Ibn Jamī al-Yahūd]!¹⁰¹*

It is difficult to determine how much these satiric poems tell us about Ibn Jumay'. Are they an indication that mediaeval doctors such as Ibn Jumay' were usually deemed to do more harm than good? Was Ibn Jumay' a particularly cunning and dangerous physician?

The second poem draws the rather strange image of Ibn Jumay' making it his custom to drink like a narcissus. If somebody made it his custom to drink, this would usually mean that he liked wine. Ibn Jumay', however, drinks like a flower (the choice of the narcissus was prompted by the rhyme). Considering that flowers do not drink with their mouths but with their nether parts, this can be interpreted as Ibn Jumay' 'drinking' with his buttocks and it can

101. Ibn Abī Uṣaybī'ah, 'Uyūn (ed. Müller), vol. II, 113-114.

be easily guessed that he is drinking sperm. Thus interpreted, the poem ridicules Ibn Jumay' as a homosexual.¹⁰²

In the last poem, Ibn al-Munajjim called the eminent court physician Ibn Jamī'¹⁰³ so as to ridicule him as the son of a promiscuous woman or harlot, for the name Ibn Jamī' translates as the 'son of everyone'. The poem thus plays with the names Ibn Jamī' and Ibn Jumay': "Your father is not Jumay' the Jew (*Jumay' al-Yahūdī*), but your father is all of the Jews (*jamī' al-Yahūd!*)" We could also vocalise it as "Your father is not *Jamī' al-Yahūdī* but *jamī' al-Yahūd*", but it would make no sense to ridicule the physician by saying that Ibn Jamī' is misspelled and that he should be spelled Ibn Jamī' (see opening line of the poem). The correct vocalisation must therefore be different from Ibn Jamī'.¹⁰⁴ C. Brockelmann already concluded that, despite its rarity, Ibn Jumay' must be the correct reading, but he did not consider the satiric poem in his speculation.¹⁰⁵

Such satirical poems are in contrast to the high praise Ibn Jumay' received in the first part of Ibn Abī Uṣaybi'ah's entry. This may be explained in two ways: Either Ibn Abī Uṣaybi'ah deemed it to be entertaining to present such literary caricatures of Ibn Jumay' or Ibn Abī Uṣaybi'ah included the material because he aimed to record all the information he had about a physician. Whether or not such information contradicted his own opinion was perhaps not relevant.

102. I take no credit for this ingenious interpretation which was suggested to me by Geert Jan Van Gelder. I am very grateful for his help with this curious piece of poetry.

103. The form Ibn Jāmi' with *alif* (as suggested by Vernet, *Ibn Dījāmi*) is not attested in treatises attributed to Ibn Jumay'. There are, however, references to a certain Ibn Jāmi' in the Cairo Genizah who was a religious scholar. He is not identical with Ibn Jumay', however. For an index with references to Ibn Jāmi' (יבן ג'מ'י) see Allony *et al.*, *ha-Sifriyah ha-Yehudit*, 458.

104. Against Steinschneider, *Literatur*, 180 who suggested that it can hardly be "Djomei" (i.e. Jumay').

105. Brockelmann, *Geschichte (supplement)*, vol. I, 892 (footnote 1). *Jumay'* is a diminutive of *jum'ah* and literally means 'Little Friday' (cf. the pattern *fu'ayl* in names such as Ḥusayn — i.e. little Ḥasan). See also Nicolae, *Jewish Physicians*, 8-9.

Ibn Abī Uṣaybi‘ah’s entry continues with a long elegy written on the occasion of Ibn Jumay‘’s death and ends with a list of books written by him. Both passages will be presented later on in parts two and three of this chapter.

(b) *Medical education: Ibn Jumay‘’s teacher and students*

Ibn Jumay‘ was not part of a family of physicians where knowledge was passed down from one generation to the next.¹⁰⁶ As we are told by Ibn Abī Uṣaybi‘ah, Ibn Jumay‘’s teacher was Ibn al-‘Ayn Zarbī (d. 548/1153 in Cairo).¹⁰⁷ We do not know to which religion Ibn al-‘Ayn Zarbī belonged, but according to his name, it is most likely that he was a Muslim. He came from ‘the people of ‘Ayn Zarbah’ (a city on the river Jayhān in southern Anatolia) and is therefore known as Ibn al-‘Ayn Zarbī. He spend some time in Baghdād where ‘he occupied himself with the art of medicine’ and with other sciences, most notably astrology. He then moved to Egypt where he served the Egyptian caliphs and became very prominent due to his knowledge in the medical art. Ibn al-‘Ayn Zarbī is reported to have had a large number of students who studied with him and who were all very capable and skilled in medicine. Ibn Jumay‘ was one of these star students who must have been attracted by the fame of Ibn al-‘Ayn Zarbī.

Ibn al-‘Ayn Zarbī wrote several treatises, the most important being his *Kitāb al-kāfi fī aṭ-ṭibb* (‘The All-Encompassing Book in Medicine’).¹⁰⁸ In his treatise to Saladin, Ibn Jumay‘ scathingly criticised book titles which imply that they provide everything which needs to be known. Among his examples is the book title *al-Kāfi*.¹⁰⁹ It appears likely that Ibn Jumay‘ criticised his own teacher with this remark. However, Abū Bakr Muḥammad ibn Zakarīyā’ ar-Rāzī (d.

106. For physician families in the Cairo Genizah see Goitein, *Mediterranean Society*, vol. II, 245. For instance, Maimonides’ son and grandson were also physicians (see Goitein, *Mediterranean Society*, vol. II, 244).

107. In the ‘*Uyūn*, he was introduced three entries before Ibn Jumay‘: Ibn Abī Uṣaybi‘ah, ‘*Uyūn* (ed. Müller), 107-108.

108. Ibn Abī Uṣaybi‘ah, ‘*Uyūn* (ed. Müller), 108. The treatise is still extant. See for instance Entry No. 72 in Savage-Smith, *New Catalogue*, 318-320.

109. Ibn Jumay‘, *Treatise*, §83.

312/925) also wrote a treatise entitled *Kitāb al-Kāfi* and it might well be the case that Ibn Jumay' intended to criticise the latter treatise.¹¹⁰

Otherwise, Ibn Jumay' is quiet about his teacher. Ibn al-'Ayn Zarbī is mentioned only once in the *Canon* commentary, but not in a negative context. Ibn Jumay' rather referred to the words and experience of his teacher to buttress his point.¹¹¹

It must be emphasised that Ibn Jumay' decided to follow a teacher and did not learn medicine completely by himself. As he expressed in his writings, he thought it always to be the best to follow a skilled teacher if one is available, especially when it came to anatomy, where not only mere book knowledge needed to be conveyed but also the skills of experienced teachers.¹¹² Ibn Jumay' differed in this respect from his Egyptian predecessor Ibn Rīḍwān who had stressed that autodidactic teaching is to be preferred or from some of his contemporaries.¹¹³

While Ibn Jumay' said little about his teacher, he said even less about his own students. His son Ṣanī'at al-Malik Abū aṭ-Ṭāhir Ismā'īl might have been one of his students, as he showed an interest in his father's work. He made a fair copy of what appears to have been Ibn Jumay's lecture outlines and put them together into a book which he entitled *Guidance for the Welfare of*

110. The treatise is only preserved in Judaeo-Arabic (see Entry No. 44 in Savage-Smith, *New Catalogue*, 172-5).

111. In this comment, Ibn Jumay' added a small detail to the biographical information given by Ibn Abī Uṣaybi'ah, namely that Ibn al-'Ayn Zarbī was active in a hospital while he lived in Baghdād. See below, p. 129.

112. See below, chapter three, section one.

113. Ibn Rīḍwān, *Egypt*, 30. On self-teaching in the Islamic world in general, see Makdisi, *The Rise of Humanism*, 217-231. The Cairo Genizah preserves a document which informs us about the self-teaching of Ibn Jumay's contemporary and co-religionist Hibat Allāh Nethanel ben Moses ha-Levi. Goitein summarised one of Hibat Allāh's letters found in the Cairo Genizah in which we are informed about his education: "His father, who was a doctor, bribed him with the very large sum of 25 dinars never to leave his house, not even for a visit to the public bathhouse, and to devote his time entirely to the study of medicine, language (i.e., classical Arabic and Hebrew), Talmud, and theology - in short, all an accomplished Jewish physician and scholar had to know. The letters sent by the young man during his confinement show that serious scientific interest had been aroused in him, although he complained bitterly about his separation from his boon companions." Goitein, *Mediterranean Society*, vol. II, 247-248 (Goitein references TS K 25, fol. 64 of the Taylor-Schlechter Collection held in Cambridge).

Souls and Bodies (Kitāb al-irshād li-maṣāliḥ al-anfus wa-al-aḡsād). Our source for this is Ibn Abī al-Bayān (d. c. 636/1238) who wrote in the preface of his own copy of the *Irshād* that Ibn Jumay‘’s son was the first to have made a fair copy of the *Irshād*.¹¹⁴ Ibn Jumay‘’s son might have done so for a number of reasons, but one of the most convincing seems to be that he was a student of his father.

Ibn Abī al-Bayān was another student of Ibn Jumay‘ as we are told by Ibn Abī Uṣaybi‘ah. He was born 556/1160 in Cairo and lived over 80 years (i.e. he died after 636/1238).¹¹⁵ We are also informed that Ibn Abī Uṣaybi‘ah was one of the students of Ibn Abī al-Bayān: “... and I read [one of Ibn Abī al-Bayān’s treatises] under him” (*wa-qara’ tuhu ‘alayhi*). Ibn Abī Uṣaybi‘ah was therefore taught by Ibn Jumay‘’s student.

(c) *Ibn Jumay‘ and the Cairo Genizah*

In his monumental work *A Mediterranean Society* on the fragments of the Cairo Genizah, Goitein commented that “Ibn Jumay‘ was regarded as the greatest medical authority of his century in Egypt.”¹¹⁶ His evaluation seems to be based on what Ibn Abī Uṣaybi‘ah reports — namely that Ibn Jumay‘’s importance was comparable to that of Ibn Riḏwān — for Ibn Jumay‘ was never mentioned by name in any of the documents discussed by Goitein. Goitein discussed one document, however, which might refer to Ibn Jumay‘. The document, which dates to the year 1182, is a deathbed declaration of Abū al-Faraj, a rich Jewish merchant who paid very high poll taxes and who somehow lost his fortune. He was unable to repay his friends who had helped him with considerable sums of money:

Please take notice that I owe to our lord, our master and teacher Moses [may his] R[ock] k[ee]p him], 2

114. For the manuscript, see below p. 44ff.

115. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 118-119.

116. Goitein, *Mediterranean Society*, vol. II 248. Ibn Jumay‘ is also mentioned in Goitein, *Mediterranean Society*, vol. I, 122, 253; vol. II, 248, 250, 258 (and in notes on pp. 576-577); vol. V, 101, 446-7 (and in notes on p. 534).

1/2 Egyptian dinars;¹¹⁷ Also to him another sum, on the claim of which he is trustworthy. To the sheikh al-Muwaffaq, [may his] R[ock] k[ee]p him], 4 1/6 dinars for the poll tax, which he paid for me; Also to him the price of wheat, for the claim of which *he is completely trustworthy*, up to 10 dinars.¹¹⁸

Smaller sums were owed to the Qāḍī ibn Sanā' al-Mulk, the Faqīh ibn Ṣawlah, and Abū al-Khayr of Haifa. Goitein commented that the first name, Moses, must refer to Maimonides and the epithet *Shaykh al-Muwaffaq* ('the eminent master') suggests Ibn Jumay', for Ibn Abī Uṣaybī'ah had given the same epithet to Ibn Jumay'.¹¹⁹ Although the document dates approximately to the lifetime of Ibn Jumay', we should not rush to the conclusion (as Goitein did) that this must necessarily refer to him. As Goitein admitted, *al-Muwaffaq* was a very common title and could have referred to many other people as well, among them Ibn Jumay''s contemporary Ibn Shu'ah, who had the same epithet. Goitein nonetheless argued that *al-Muwaffaq* must here refer to Ibn Jumay' as Ibn Shu'ah (d. 1183/4) was too old to care about the purchase of wheat mentioned in the fragment.¹²⁰ Yet, Goitein's identification remains speculative because several other contemporaries of Ibn Jumay' may have been called *al-Muwaffaq*.

If the Genizah deathbed declaration did indeed refer to Ibn Jumay', it would not tell us much about Ibn Jumay', except that he was wealthy.¹²¹ *Al-Muwaffaq* had lent the largest sum of

117. Goitein explains that a family could live modestly on a monthly income of two dinars (Goitein, *Mediterranean Society*, vol. V, 446).

118. Goitein, *Mediterranean Society*, vol. V, 445. Goitein indicated Hebrew passages in the otherwise Arabic documents by italics.

119. See above p. 31.

120. See Goitein, *Mediterranean Society*, vol. V, 156, note 156. For naming conventions and problems of identification see also *ibid.*, vol. II, 247. Nicolae, *Jewish Physicians*, 10.

121. We know rather little about wages, but there are some sources which can give us an idea of what Ibn Jumay' might have earned. D. Richards has analysed a fragment from the Cairo Genizah which contains a petition for a salaried post in Saladin's hospital (Richards, *Petition*). He argues that the salary of three dinars monthly was in the range of 'normal' salaries which could be expected by a normal physician working in a Cairene hospital at the time. On the other hand, 'Abd al-Laṭīf al-Baghdādī, court physician to Saladin in Damascus, received a monthly salary of 30 dinars which was later raised to 100 dinars (including added allowances). Other figures provided by Ibn Abī Uṣaybī'ah for prominent doctors in Syria range from 15 to 30 dinars a month (Richards, *Petition*, 304; see also Jadon, *Comparison*, 67f.). It is

money to Abū al-Faraj, a sum which was roughly equivalent to a year's income of a normal family, if we follow Goitein's calculations.¹²²

2. Ibn Jumay' s writings

Ibn Abī Uṣaybi'ah ends his biography of Ibn Jumay' with a list of his books:

Ibn Jumay' wrote the following books:

- *Book on the guidance of the welfare of souls and bodies (Kitāb al-irshād li-maṣāliḥ al-anfus wa-al-aḥsād)* which consists of four sections
- *Book on clarifying the concealed by correcting the Canon (Kitāb at-taṣrīḥ bi-al-maknūn fī tanqīḥ al-qānūn)*
- *Letter on the peculiarities of Alexandria, the conditions of its airs, waters and the like, as well as the conditions of its inhabitants (Risālah fī ṭab' al-Iskandariyyah wa-ḥāl hawā'ihā wa-miyāhihā wa-naḥwa dhalika min aḥwāliahā wa-aḥwāl ahlihā)*
- *Letter to the respected judge Abū al-Qāsim 'Alī ibn al-Ḥusayn on what to do if no physician is available (Risālah ilā al-qāḍī al-makīn Abī al-Qāsim 'Alī ibn al-Ḥusayn fī-mā ya'tamiduhu ḥaythu lā yajidu ṭabīban)*
- *Treatise on the lemon/lime and its syrups and medicinal uses (Maqālah fī al-laymūn wa-sharābihi wa-manāfi'ihī)*
- *Treatise on the rhubarb and its medicinal uses (Maqālah fī ar-rāwand wa-manāfi'ihī)*
- *Treatise on hunchbacks (Maqālah fī al-ḥudbah)*
- *Treatise on the treatment of colic and its toxic substance (Maqālah fī 'ilāj al-qawlanj wa-sammihī)*
- *Letter to Sayf ad-Dīn [al-Malik al-'Ādil] on royal remedies (ar-Risālah as-Sayfiyyah fī al-adwiyah al-mulūkiyyah)¹²³*

All of these treatises are extant and some have come down to us in more than one manuscript. I will first list all known extant manuscripts, following Ibn Abī Uṣaybi'ah's order, and will then add those treatises not mentioned in his list.

therefore quite reasonable to assume that Ibn Jumay' must have received a salary which was somewhere in between 15 and 100 dinars (provided that the salary rates in Cairo were comparable to those in Damascus). Given the importance Ibn Abī Uṣaybi'ah gives to Ibn Jumay', his salary would likely have been at the higher end of the spectrum.

122. Goitein, *Mediterranean Society*, vol. V, 446.

123. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 115.

(a) *Kitāb al-irshād li-mašāliḥ al-anfus wa-al-ajsād*

The *Irshād* is divided into four sections devoted to (1) the general principles of the medical art, (2) *materia medica* listed alphabetically, (3) pathology, and (4) compound remedies.¹²⁴ Ullmann remarked that the *Irshād* is not a particularly original treatise.¹²⁵ However, the succinct style of the treatise is unprecedented and is perhaps the most characteristic and unique feature of the *Irshād* and one that deserves more scholarly attention. Through its characteristic succinctness, the *Irshād* became very popular in the Islamic world, for it was still being copied in the 18th century¹²⁶ and is extant in nearly 30 manuscript copies. The treatise also circulated among Jews as there are several fragments to be found in the Cairo Genizah collection and the manuscript found at the Staatsbibliothek zu Berlin contains several annotations in Hebrew.¹²⁷

As I have argued elsewhere, the *Irshād* may have originated as a conglomeration of laconic lecture notes which Ibn Jumay' used as the basis for his public lecture sessions.¹²⁸ Alternatively, one can imagine that students were required to copy and then memorise individual parts of this compendium which provided the essential facts of medicine, stripped of all extraneous or distracting details commonly found in other, larger compendia such as the *Canon of Medicine*.¹²⁹ It is unclear whether Ibn Jumay' ever intended to publish his notes and, considering his critical attitude toward medical compendia which supposedly tempted

124. Ullmann, *Medizin*, 164. The only difference in basic arrangement between the *Irshād* of Ibn Jumay' and the *Canon* of Ibn Sīnā is that Ibn Jumay' does not distinguish between "particular diseases" and "diseases which are not restricted to a certain body part" (book three and four of the *Canon*, respectively). He summarises the treatment of diseases in the part on the "principles of preserving health" (*maqālah* three of the *Irshād*). Nicolae, *Compendium*.

125. Ullmann, *Medizin*, 164.

126. According to Şeşen, the manuscript Istanbul, Yeni Cami, 912 was copied in 1139/1726. See below, n. 149. The earliest complete copy dates to the sixteenth century; MS Huntington 19 (Oxford, Bodleian Library) was copied in 949/1542.

127. Ibn Jumay', *Irshād (Berlin)*. Marginal notes in Hebrew on fols. 2a, 78b and 79b. Magic squares with glosses in Hebrew are found on fol. 225b.

128. Nicolae, *Compendium*.

129. See Nicolae, *Jewish Physicians* and Nicolae, *Compendium*.

students to become lazy, it may well be the case that he would have been against it.¹³⁰ As already mentioned, Ibn Jumay‘’s son Ṣanī‘at al-Malik Abū aṭ-Ṭāhir Ismā‘īl took all of his father’s notes after he had died and wrote them down in a book which he entitled the *Guidance for the welfare of souls and bodies (Irshād)*.¹³¹ We can therefore attribute the contents to Ibn Jumay‘, although his son was responsible for the arrangement of the notes and for the preface. Ibn Abī al-Bayān noted that Ismā‘īl’s redaction of Ibn Jumay‘’s notes was at times unsatisfactory because certain passages were out of context and did not connect very well (*amākin lam yalḥaḡ ba‘ḍuhā bi-ba‘ḍ*). While copying the *Irshād*, Ibn Abī al-Bayān therefore made notes in the margins of his copy (Aleppo, Aḥmadiyyah, MS 1265) whenever he found this to be the case.¹³²

The following manuscripts are mentioned or catalogued:

- Berlin, Staatsbibliothek zu Berlin, MS 6287¹³³
- Gotha, Forschungsbibliothek Gotha, MS Or. A. 1934 item 6¹³⁴
- Paris, Bibliothèque Nationale de France, MS 2963¹³⁵
- Paris, Bibliothèque Nationale de France, MS 6564¹³⁶
- London, British Museum, MS 1360¹³⁷
- Dublin, Chester Betty, Arabic MS 4016¹³⁸
- Oxford, Bodleian Library, MS Huntington 19¹³⁹
- Oxford, Bodleian Library, MS Huntington 242¹⁴⁰

130. Ibn Jumay‘, *Treatise*, 18-21.

131. See above, p. 40.

132. Dietrich, *Medicinalia Arabica*, 107.

133. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21. Ullmann, *Medizin*, 164, note 3.

134. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

135. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

136. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

137. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

138. Dietrich, *Medicinalia Arabica*, 109.

139. Savage-Smith, *New Catalogue*, 324-326. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

140. Savage-Smith, *New Catalogue*, 326-328. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

- Oxford, Bodleian Library, MS Huntington 117¹⁴¹
- Oxford, Bodleian Library, MS Marsh 106¹⁴²
- Vatican, Bibliothecae Apostolicae Vaticanae, MS 155¹⁴³
- Vatican, Bibliothecae Apostolicae Vaticanae, MS V. 308¹⁴⁴
- Vatican, Bibliothecae Apostolicae Vaticanae, MS 878¹⁴⁵

- Bethesda, Maryland, MS National Library of Medicine, A 22¹⁴⁶
- Phoenix, Arizona, Ḥaddād Coll. MS 39¹⁴⁷

- Istanbul, Süleymaniye Kütüphanesi, Ayasofya, MS 3558¹⁴⁸
- Istanbul, Yeni Camii, MS 912¹⁴⁹
- Manisa, Manisa İl Halk Kütüphanesi, MS 1797¹⁵⁰
- Istanbul, Hamidiye, MS 1005¹⁵¹
- Safranbolu, Mehmed Paşa Kütüphanesi, MS 236¹⁵²
- Istanbul, Bayezıt Devlet Kütüphanesi, Veliyeddin Efendi, MS 2466¹⁵³
- Istanbul, Nuruosmaniye, MS 3491/2 (fols. 15a-98b)¹⁵⁴

- Cairo, Dār al-kutub, MS 485 *ṭibb*¹⁵⁵
- Aleppo, Aḥmadiyyah, MS 1265¹⁵⁶

141. Savage-Smith, *New Catalogue*, 328-329. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

142. Savage-Smith, *New Catalogue*, 329-331. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

143. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

144. Brockelmann, *Geschichte (supplement)*, vol. I, 892. See also Chipman, *World of Pharmacy*, 20, n. 25.

145. Brockelmann, *Geschichte (supplement)*, vol. I, 892. See also Chipman, *World of Pharmacy*, 20, n. 25.

146. Dietrich, *Medicinalia Arabica*, 109. See entry A22 in Savage-Smith, *Medical Manuscripts*.

147. Ḥaddād, and Biesterfeldt, *Fihris*, no. 39.

148. Brockelmann, *Geschichte (supplement)*, vol. I, 892. Şeşen, *Catalogue*, 34.

149. Ullmann, *Medizin*, 164, note 3. Şeşen, *Catalogue*, 33.

150. Şeşen, *Catalogue*, 33. This may be the same treatise as Istanbul, Yeni Cami, MS 912 for Şeşen lists both treatises as copied in 1139/1726 and gives identical physical descriptions. Only the length of the two manuscripts listed seem to differ.

151. Şeşen, *Catalogue*, 33; Ullmann, *Medizin*, 164, note 3.

152. Şeşen, *Catalogue*, 34.

153. Brockelmann, *Geschichte (supplement)*, vol. I, 892. Şeşen, *Catalogue*, 34.

154. Şeşen, *Catalogue*, 34.

155. Ullmann, *Medizin*, 164, note 3.

156. Dietrich, *Medicinalia Arabica*, 107-109 (nr. 44). Kataya, *Manuscripts*, 134-8.

- Aleppo, Aḥmadiyyah, MS 1275¹⁵⁷
- Damascus, Assad National Library, MS 6975¹⁵⁸
- Damascus, Assad National Library, MS 6858¹⁵⁹
- Bankipore, Patna, Oriental Public Library, MS 241,2141¹⁶⁰
- Bankipore, Patna, Oriental Public Library, MS IV, 55¹⁶¹

The *Irshād* is mentioned in the following Cairo Genizah fragments found in Cambridge:

- TS Ar. 42.9r is a book list which mentions the *Kitāb al-'irshād*.¹⁶²
- TS Ar. 40.91 are recipes for gastro-intestinal complaints and a reference is made to the *Kitāb al-'irshād*.¹⁶³
- In TS Ar. 52.214 Ibn Jumay' is mentioned alongside Ibn Sīnā, but no book title is given. Since Ibn Sīnā is mentioned, this may refer to the *Canon* commentary.¹⁶⁴
- TS Misc 36.148 is a book list which mentions *Kitāb al-'irshād*.¹⁶⁵

The *Irshād* was translated into Italian but the translation is highly unsatisfactory.¹⁶⁶

(b) *Kitāb at-taṣrīḥ bi-al-maknūn fī tanqīḥ al-qānūn*

The treatise comprises a preface (hereafter referred to as CC P) and two parts (*jumlāt*, sg. *jumlah*). In the preface, Ibn Jumay' explained the reasons for having written the treatise to his anonymous addressee. He continued with the first *jumlah* (hereafter CC J) in which he rejected several theories that appear to have been circulated by both critics and supporters of the *Canon of Medicine*. Ibn Jumay' also described in some detail how he had obtained several copies

157. Dietrich, *Medicinalia Arabica*, 109-110 (nr. 45). Kataya, *Manuscripts*, 180-2.

158. Hamarneh, and al-Ḥimṣī, *Fihris*, entry no. 47, 306f. Ş. Khiyamī, and S. Hamarneh, *Fihris*, 344.

159. Hamarneh, and al-Ḥimṣī, *Fihris*, entry no. 48, 307f. Ş. Khiyamī, and S. Hamarneh, *Fihris*, 344f.

160. Brockelmann, *Geschichte (second edition)*, vol. II, 488 (643), nr. 21.

161. Brockelmann, *Geschichte (supplement)*, vol. I, 892.

162. Baker, and Isaacs, *Medical and Para-medical Manuscripts in the Cambridge Genizah Collections*, 33.

163. Baker, and Isaacs, *Medical and Para-medical Manuscripts in the Cambridge Genizah Collections*, 23.

164. Allony *et al.*, *ha-Sifriyah ha-Yehudit*, 231.

165. Allony *et al.*, *ha-Sifriyah ha-Yehudit*, 348.

166. See Chipman, *World of Pharmacy*, 20, n. 25, for a short discussion of this translation.

of the *Canon* and how this enabled him to comment more fully on the *Canon*. The second *jumlah* comprises the comments (*ḥawāshī*) themselves and is divided into five parts (hereafter CC I, CC II, CC III, CC IV, and CC V), following the five-part structure of the *Canon*.¹⁶⁷ As we will see, Ibn Jumay⁶ commented most extensively on Books One and Two. Books Three, Four and Five are covered systematically, but his stamina to comment faded with each book.¹⁶⁸

We know of four extant manuscripts of Ibn Jumay⁷'s *Canon* commentary:

- Princeton, NJ, Princeton University, Garret Collection, MS 556H¹⁶⁹
- Oxford, Bodleian Library, MS Marsh 390¹⁷⁰
- Damascus, Assad National Library, MS 3141 *ṭibb* 16 (first two books only)¹⁷¹
- Istanbul, Nuruosmaniye, MS 3526¹⁷²

In comparison to the *Irshād*, the *Canon* commentary appears to have been much less popular based on the number of preserved copies. Yet, even though it is a relatively rare manuscript,¹⁷³ the treatise was transmitted throughout the centuries, starting with the time right after Ibn Jumay⁸'s death through to the sixteenth century.

The oldest extant copy is MS Princeton 556H (hereafter P). The text is written in a casual Naskh in black ink and there is frequent vocalisation in the beginning of the manuscript.

167. See above p. 11 for an outline of the *Canon*.

168. See below, p. 187.

169. Hitti *et al.*, *Garrett Collection*, 342. See also entry in Mach, and Ormsby, *Handlist*, 344. The copy is fully digitised and can be accessed on <http://arks.princeton.edu/ark:/88435/pz50gw161> (accessed 19 March 2012).

170. Savage-Smith, *New Catalogue*, 243-245. Brockelmann, *Geschichte (second edition)*, vol. II, 458 (598). Hitti *et al.*, *Garrett Collection*, 342.

171. Hamarneh, and al-Ḥimṣī, *Fihris*, entry no. 46, 303ff. Ş. Khiyamī, and S. Hamarneh, *Fihris*, 355. Physical description: 145 fols., 21.5x14.5cm, *naskh*. This appears to be the same copy which Brockelmann (Brockelmann, *Geschichte (supplement)*, vol. I, 826) lists as Dam. 'Um. 94,16.

172. Şeşen, *Catalogue*, 34.

173. Hitti *et al.*, *Garrett Collection*, 342.

Later parts are only occasionally vocalised. The hand is consistent except in the colophon. Passage headings from the *Canon* being commented upon are indicated by rubricated headings in red ink. A comment may be divided into different sections by red overlinings above the first word. The letter *ḥa'* and *'ayn* often have a minuscule letter underneath to indicate that they are undotted. Likewise, the letter *sin* is sometimes written with a *haček* over it to distinguish it from the letter *shin*. *Tā' marbūṭa* or attached pronouns are usually ligatured to a preceding *rā'*.

The treatise was copied in 600/1204, apparently from the autograph of Ibn Jumay' if we are to believe the colophon:

This is the end of the entire book as it was written by the author [Ibn Jumay'] and as he has finished it. To God belongs praise and glory eternally. It was copied in 'Abāssid Cairo during the reign of 'Ādil in a short period of time and completed in the last days of the month Sha'bān in the year 600 after Hijrah.

In another colour (brownish instead of black ink) and with a much thinner stroke is hastily added:

I copied the text from the autograph of its author but was unable to collate it due to other pressing needs and travels.¹⁷⁴

It is clear that this note was added at a later date because it is written with a different kind of ink. The writing is smaller than the rest of the treatise and it is difficult to determine whether or not it is written by the same hand. The note was either written by the copyist or by a later owner of this manuscript who wanted to increase its importance and value. Given the honest remark that the manuscript could not be collated and that the manuscript was copied in 600/1204 (that is only six years after Ibn Jumay''s supposed death in 1198), it is reasonable to

174. See p. 281 for the Arabic edition.

assume that the statement is authentic and that the treatise was indeed copied from Ibn Jumay's autograph.

While the copyist stated that he was unable to collate his copy with the original, the manuscript has clearly been corrected and probably even collated against another copy. Some words have been crossed out with a correction in the margin annotated *ṣaḥḥa* (e.g. fol. 7a and 15a). These corrections were probably done by a later hand. There are also many extensive marginal glosses written by several later hands (e.g. fol. 29b, 39a, 42a). These are primarily found on Ibn Jumay's comments concerning the first book of the *Canon*.

The Bodleian copy, MS Marsh 390 (hereafter designated as B), was copied approximately 150 years later on 18 Sha'ban 759/26 July 1358. The text is also written in a casual Naskh, but the hand is inconsistent and in some places another hand takes over (e.g. most notably on fols. 7a-8a, but also later on fol. 191a). The *tā' marbūṭa* is ligatured with a preceding *rā'*, and there are *alif-lam* and *alif-lam-alif* ligatures; the top stroke of the *kāf* is greatly extended, especially in the medial and final positions. Headings as well as passage headings from the *Canon* being commented on are in red ink. Unlike MS Princeton 556H (P), comments are not divided into sections by red overlinings.¹⁷⁵

The copy is not as complete as P since several of Ibn Jumay's comments on Books Four and Five are missing.¹⁷⁶ Moreover, it is often the case that B omits single words or several lines, the latter due to copyists skipping from one word to the same word on a later line (homeoteleuton). As B does not provide any material which can not be found in P, it follows

175. Savage-Smith, *New Catalogue*, 243-245.

176. Six short comments on the last two *maqalāt* of Book Four (CC IV, 120-125) and 23 comments on the first three *maqalāt* of Book Five (CC V, 1-23) are missing.

that manuscript B is either dependent on manuscript P or that it is based on another manuscript which, like manuscript P, was copied from Ibn Jumay's autograph.

There are two other copies which are less important due to their incompleteness or late date and were therefore not considered in the edition of Arabic texts found in the appendix. Incomplete and undated is the copy held at the Assad library which only preserves the introduction (CC P and CC J) and Ibn Jumay's comments on the first two books of the *Canon* (CC I and CC II). The second copy is listed by Şeşen and is dated 996/1588. It is supposedly kept in Istanbul, but I was unable to consult this copy. It appears to be complete if we compare its length and size with those of the other two copies.¹⁷⁷

There are five manuscripts preserving Fakhr ad-Dīn al-Khujandī ibn al-Mādah's (fl. end of thirteenth century) commentary on Ibn Jumay's commentary.¹⁷⁸ Moreover, three manuscripts preserve al-Khujandī's abridgement of Ibn Jumay's commentary.¹⁷⁹ Both the commentary and abridgement were mentioned by Ḥājjī Khalīfah (d. 1067/1657).¹⁸⁰ Moreover, the abridgement was itself subject to yet another commentary by Laṭīf Allāh al-Miṣrī (preserved in three manuscripts).¹⁸¹ It is beyond the scope of the present thesis to assess the contents of these treatises. They are mentioned here to demonstrate that Ibn Jumay's *Canon* commentary had an afterlife and was considered important enough to be read and commented on centuries after it had been written.

177. Şeşen, *Catalogue*, 34 gives the measures as 10.3cm x 23.9cm (9cm x 15.7cm). This compares to 23x16cm (16x11cm) of the Princeton treatise (P) which has 120 folios.

178. Şeşen, *Catalogue*, 34.

179. Şeşen, *Catalogue*, 35 and Brockelmann, *Geschichte (second edition)*, vol. II, 458 (598) and Brockelmann, *Geschichte (supplement)*, vol. I, 826. Hamarneh, and al-Ḥimṣī, *Fihris*, 305 states that this treatise was written 702/1302. The earliest copy dates to 743/1342 according to Şeşen, *Catalogue*, 35.

180. Ḥājjī Khalīfah (Kâtip Çelebi), *Kashf*, vol. IV, 500f.

181. Şeşen, *Catalogue*, 35. Again, it is unclear when this commentary was written. The earliest copy dates to 1096/1684 according to Şeşen.

(c) *Letters and smaller treatises*

All six of the letters (*risālāt*) and treatises (*maqālāt*) which Ibn Abī Uṣaybi‘ah attributed to Ibn Jumay‘, are preserved in the manuscript Istanbul, Topkapı 2136 which is undated.¹⁸² The letters and treatises will be listed in Ibn Abī Uṣaybi‘ah’s order.

- The *Letter on the peculiarities of Alexandria* is preserved on fols. 160a-205a.¹⁸³
- The *Letter on what to do if no physician is available* is preserved on fols. 74b-111b.¹⁸⁴
- The *Treatise on the medicinal uses of the lemon/lime* is preserved on fols. 112b-128b.¹⁸⁵ There is an uncatalogued copy of this treatise found in Damascus, which lacks part of the introduction and is undated.¹⁸⁶ Later, Ibn al-Bayṭār (d. 646/1248) quoted the entire treatise (without introduction) in his entry on the lemon in his *Comprehensive Book on Simple Drugs and Foods (al-Jāmi‘ li-mufradāt al-adwiyah wa-al-aghdiyyah)*.¹⁸⁷ The entry on the lemon was then translated into Latin and circulated as a separate treatise which is extant in several printed editions.¹⁸⁸ The treatise on the lemon is thus the only treatise by Ibn Jumay‘ which was translated into Latin (albeit in an abbreviated form and under someone else’s name).
- The *Treatise on rhubarb* is preserved on fols. 44a-74a.

182. This manuscript was consulted for the following summary of contents. For a description of the manuscript, see Şeşen, *Catalogue*, 34ff.

183. Cf. Şeşen, *Catalogue*, 36.

184. Cf. Şeşen, *Catalogue*, 36 who is not sure where the treatise begins and ends (42b - ?).

185. Şeşen, *Catalogue*, 35.

186. Ibn Jumay‘, *Lemon (Assad)*. The microfiche has the signature 661 m/f.

187. Ibn al-Bayṭār, *al-Jāmi‘*, vol. 2, pp. 118ff. Ibn al-Bayṭār, *Zusammenstellung*, vol. II, p. 452ff.

188. Ibn al-Bayṭār, *Limonibus*. The Bodleian library holds two copies of this early printed book.

- The *Treatise on hunchbacks* is preserved on fols. 15a-43b and is entitled *Reflections on the displacement of the spine (al-Istibṣār fī Zawāl al-fiqār)*.¹⁸⁹
- The last two treatises mentioned by Ibn Abī Uṣaybi‘ah — i.e. the *Treatise on the treatment of colic* and the *Letter to Sayf ad-Dīn on royal remedies* — must refer to one and the same treatise as Ibn Jumay‘ wrote a treatise to Sayf ad-Dīn¹⁹⁰ (entitled *ar-Risālah as-Sayfiyyah* in Topkapı 2136, fols. 10a-15a)¹⁹¹ in which he provides the recipe for a special medication against colic (*qawlanj*).¹⁹² A separate treatise on the topic is not known to exist. In contrast to the Būlāq edition of Ibn Abī Uṣaybi‘ah’s ‘*Uyūn*, manuscript versions have *bi-ar-risālah as-Sayfiyyah*,¹⁹³ that is Ibn Jumay‘ wrote a treatise on colic in the letter to Sayf ad-Dīn.¹⁹⁴ A. Dietrich was also aware that this is one and the same treatise, even though he stated that it was no longer extant.¹⁹⁵ Moreover, Dietrich mentioned five recipes attributed to Ibn Jumay‘ found in Konya, MS Yusuf Aja 4983 (fols. 123a-124a), under the title *ṣifat ma’jūn mulūkī (recipe of a royal paste)*, which Dietrich believes to be taken from the *Treatise on the colic* because Ibn Jumay‘ wrote it for his royal patron Sayf ad-Dīn.¹⁹⁶

There are three additional treatises preserved in Topkapı MS 2136 which are not mentioned by Ibn Abī Uṣaybi‘ah:

189. Şeşen, *Catalogue*, 34. The treatise must refer to what Ibn Abī Uṣaybi‘ah listed as the *Treatise on hunchbacks*.

190. There were several Ayyubid rulers called Sayf ad-Dīn. According to Dietrich (Dietrich, *Medicinalia Arabica*, 214), it is unlikely that this refers to al-Malik al-‘Ādil Sayf ad-Dīn who was Saladin’s brother.

191. Şeşen, *Catalogue*, 35.

192. MS Topkapı 2136, fol. 10a, lines 15 and 10b; see lines 9ff. for the recipe. *Qawlanj* can refer not only to what we today call colic, but to any intestinal obstruction.

193. ‘Āmir an-Najjār lists in his critical edition MS Topkapı 2860/71 (see Ibn Abī Uṣaybi‘ah, ‘*Uyūn (ed. ‘Āmir an-Najjār)*, vol. I, 107) and MS Dar al-Kutub Cairo 2104 (see *ibid.*, 101).

194. ‘Āmir an-Najjār (Ibn Abī Uṣaybi‘ah, ‘*Uyūn (ed. ‘Āmir an-Najjār)*, vol. III, 448) states that this variant is found in MS Topkapı 2860/71 and MS Dar al-Kutub Cairo 2104. For his discussion of these manuscripts see *ibid.*, vol. I, pages 107 and 101, respectively.

195. Dietrich, *Medicinalia Arabica*, 216.

196. Dietrich, *Medicinalia Arabica*, 214-215.

- The *Treatise on the nature of the Saqanqūr* (*Maqālah fī māhiyah as-Saqanqūr*) is concerned with the description of a certain species of lizard and is preserved on fols. 1b-9a.¹⁹⁷
- The *Treatise on vertigo* (*Maqālah fī ad-duwār*) is preserved on fols. 129a-165b.¹⁹⁸
- The *Treatise to Saladin on the revival of the medical art* (*al-Maqālah aṣ-Ṣalāhiyyah fī iḥya' aṣ-ṣinā'ah aṭ-ṭibb*) is found on fols. 206a-239a. Fāhndrich discussed this portion of the manuscript¹⁹⁹ in his edition and translation of the treatise.

Yet another treatise by Ibn Jumay' is mentioned by Şeşen under the title *al-Madhhab min al-mujarrab* (*Doctrines based on what has been experienced*) preserved in Balıkesir, Tursun Beg MS 78 (39 folios).²⁰⁰ I was able to find an uncatalogued copy of the same treatise at the Assad library in Damascus, MS 9751 (90 pages).²⁰¹ The title is almost effaced but appears to read *Kitāb mukhtaṣir al-muhadhdhab min al-mujarrab ... fī aṭ-ṭibb* (*Epitome culled from what has been experienced in medicine*). On page 90, the treatise ends with the words 'written by the Jew Ibn Jumay'. The treatise is in nine chapters and discusses diseases *capite ad calcem*.

3. Ibn Jumay's religion

Steinschneider suggested that Hibat Allāh ibn Jumay' is the same person as Hibat Allāh Nathanel, who was the leader of the Jewish community (*nāgīd*) in Cairo from 1161-65 (and who died in the 580s/1184-93 according to Ibn Abī Uṣaybi'ah).²⁰² Yet, Ibn Abī Uṣaybi'ah listed Ibn Jumay' and Hibat Allāh (ar-Raṭs Hibat Allāh) in two separate entries, noting that Hibat Allāh

197. Şeşen, *Catalogue*, 36.

198. Şeşen, *Catalogue*, 36; the reference to fols. 129b-160a is incorrect.

199. Ibn Jumay', *Treatise*, 1-4. Fāhndrich notes that fols. 212 and 221 have been interchanged.

200. Şeşen, *Catalogue*, 36. For the Tursun Beg collection see p. ص in Şeşen, *Catalogue*.

201. The manuscript is not foliated, but paginated.

202. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 116. Goitein, *Mediterranean Society*, vol. II, 244 and 247-248. Steinschneider, *Literatur*, 179.

had served the last Fatimid caliph as court physician. Even though both were called Hibat Allāh, they were not necessarily one and the same person, for Hibat Allāh was a common name. Moreover, Goitein noted that the Genizah findings do not support Steinschneider's identification.²⁰³ We may therefore conclude that Ibn Jumay' was not the leader of a Jewish community and we are thus left with only the few facts Ibn Abī Uṣaybi'ah provided about Ibn Jumay''s religion, i.e. that he was Jewish and that he had a Jewish name.

(a) *Jewish court physicians and Muslim rulers*

Ibn Jumay' was part of an established tradition in which Jews took very important roles as private physicians to influential Muslim rulers. Saladin was not an isolated case of an influential ruler who entrusted his life to the expertise of *dhimmīs*. Almost every caliph from al-Manṣūr (d. 158/775) onward had had non-Muslim physicians among their doctors.²⁰⁴

Documented Jewish court physicians included:

- the luminary Ishāq ibn Sulaymān al-Isrā'īlī (d. c. 343/955),²⁰⁵ court physician to 'Ubayd Allāh Maḥdī (d. 323/934)²⁰⁶
- the Andalusian Ḥasday ibn Shaprūt (d. 364/975), court physician and trusted advisor to the caliphs 'Abd al-Raḥmān III and al-Ḥakam II²⁰⁷
- the Andalusian Ibn Baklārish (fl. c. 493/1100), who devoted the *K. al-Musta'īnī* to his patron al-Musta'īn billāh Abū Ja'far Aḥmad ibn Yūsuf al-Mu'tamin billāh (reigned 478–503/1085–1109), the Hūdīd ruler of Saragossa, after whom the work was named²⁰⁸

203. Goitein, *Mediterranean Society*, vol. II, 576, note 16. Goitein references Ban'et, *Te'udot Min Ha-Genizah*, 83 (n. 44) who expresses his strong doubts about Steinschneider's remarks.

204. Stillman, *Jews*, 71.

205. Dietrich, *Ibn Biklārish*.

206. Dietrich, *Ibn Biklārish*.

207. Stillman, *Jews*, 55.

208. Dietrich, *Ibn Biklārish*. For *K. al-Musta'īnī* see Savage-Smith, *Ibn Baklarish*.

- Ibrāhīm ibn ‘Aṭā’, a court physician to the Zirid governors Bādis and al-Mu‘izz²⁰⁹
- the three important Egyptian Jewish leaders (Heb. *nāgīd* or Ar. *ra’īs al-Yahūd*) Judah b. Sa’adya (in office ca. 456-470/1064-78), Mevorakh b. Sa’adya (in office ca. 470-474/1078-82 and 486-507/1094-1114), and Moses b. Mevorakh (in office 505/1112-ca. 519/1126)
- the *nāgīd* Hibat Allāh, noted above as a court physician to the last Faṭimid rulers
- Maimonides, both a *nāgīd* and a court physician serving Saladin’s eldest son²¹⁰

There appear to be two main reasons why Jews occupied such prestigious medical positions. The ‘Abbāsīd caliph al-Muqtadir (reg. 295-320/908-932), who set up hospitals in Baghdad and whose vizier had a keen interest in public health provisions, allowed Jews and Christians to work only as tax administrators and physicians. *Dhimmīs* were thus forced to take up these professions.²¹¹ However, it was not always the case that Jews were banned from public offices, and the history of Jews living in lands under Muslim rule demonstrates that no office, except that of the ruler, seemed out of the reach of a talented and ambitious Jew.²¹² One example is the physician Sa’d ad-Dawlah who became vizier of the entire Ilkhanid state in 687/1289.²¹³ The stereotypical assertion that Jews could only work as tax administrators or physicians is therefore inaccurate. It is rather the case that several Jews became court physicians because it was a profession which was popular among their co-religionists who were at times banned from other professions.

209. Stillman, *Jews*, 46.

210. Stillman, *Jews*, 49-50. Note that Maimonides was not a court physician to Saladin as was claimed by Ibn Abī Uṣaybi‘ah (Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 117). This was convincingly argued by Lewis, *Maimonides*.

211. Pormann, and Savage-Smith, *Medicine*, 102.

212. Stillman, *Jews*, 57.

213. Stillman, *Jews*, 65.

The second reason for the success of Jewish court physicians was the positive public perception of both Jewish and Christian physicians. Al-Jāhīz (d. 255/868-9) recorded the following anecdote in his *Book of Misers* (*Kitāb al-bukhalā'*):

He [Abū al-Ḥārith Asad ibn Jānī] was a physician. Once business was slow, so someone said to him: 'It is a plague year, disease rampant everywhere, and you are a knowledgeable man with steadfastness, experience, and clear understanding. How does it come about that you have this dearth [of patients]?' To which he replied: 'For one thing, people know me to be a Muslim, and they have held the belief, even before I began to practise medicine, no indeed even before I was born, that Muslims are not successful in medicine. Moreover, my name is Asad, when it ought to have been Ṣalīb, Jibrā'īl, Yuḥannā, and Bīrā [that is, Christian or Jewish names]. My surname [*kunya*] is Abū l-Ḥārith, but it ought to have been Abū 'Īsá, Abū Zakarīyā', and Abū Ibrāhīm [that is, Christian or Jewish surnames]. I wear a shoulder mantle of white cotton, yet my shoulder mantle ought to be of black silk. My pronunciation is that of an Arab, when my dialect ought to be that of the people of Gondēshāpūr [a city famous for its Christian physicians].'²¹⁴

The anecdote captures vividly one of the common perceptions of non-Muslim physicians: Jews and Christians excelled in medicine while Muslim physicians had little hope to become successful. Popular stereotypes must have had an influence on the success of Jewish physicians, especially as influential rulers sought the help of those that were deemed most capable.

The success of *dhimmī* physicians also caused jealousy and polemics. By the mid-tenth century, the Muslim physician al-Kaskarī said: 'The physicians of the land were mostly Jews, fond of using falsehood and deceit.' Even if al-Kaskarī exaggerated the omnipresence of Jewish physicians, it is a clear indication that Jews had an important and well-established place in medicine.²¹⁵

Polemics were also brought forward by the thirteenth-century writer al-Jawbarī (fl. 640s/1240s), who wrote a chapter on Jews, attacking them in a particularly vile fashion. According

214. Pormann, and Savage-Smith, *Medicine*, 80.

215. Pormann, and Savage-Smith, *Medicine*, 102 = Pormann, *Charlatan*, 212.

to him, most Jewish physicians are not to be trusted as they may murder their patients. Al-Jawbarī tells us the story of a Jewish quack who was asked by a woman to kill her husband. To underline the abominable actions, al-Jawbarī adds that the quack first forced the woman to have sexual intercourse with him, pretending that the sperm is needed to produce the lethal drug.²¹⁶

The following anecdote is found in an anti-*dhimmī* treatise written in the late thirteenth and early fourteenth century:

I have been informed by the most unimpeachable sources that the physician Moses (Maimonides) was ill, and the Qāḍī al-Fāḍil paid him a visit. The Jew was a scholar and a gentleman. So he said to al-Fāḍil: “Your sense of decency has made you come and visit me. Let me advise you not to receive any medical treatment from a Jew, because with us, whoever desecrates the Sabbath — his blood is licit for us.” The Qāḍī thereupon banned Jews from practicing medicine or being employed in that capacity.²¹⁷

However, Jews were not in fact banned from practicing medicine until 851/1448 when Sultan Jaqmaq issued a decree that took the first concrete measures against Jewish and Christian physicians. The decree prohibited *dhimmī* physicians from treating Muslim patients. Until 851/1448 there had been some pious opposition to *dhimmīs* practicing medicine, but such sentiments had not until then had any wide-reaching consequences.²¹⁸

(b) Jewish physicians at the time of Ibn Jumay‘

According to M. Meyerhof’s count of Jewish, Christian, and Muslim physicians mentioned by Ibn Abī Uṣaybi‘ah, Christian physicians dominated in the 9/10th century, while Jews were less frequent and Muslims the exception. The picture then changed from the eleventh century onwards when Muslims entered the profession in much greater numbers and eventually

216. Pormann, and Savage-Smith, *Medicine*, 102.

217. Stillman, *Jews*, 276. For the Arabic, see Gottheil, *Dhimmis*, 396-97.

218. Stillman, *Jews*, 71.

dominated the field.²¹⁹ The latter trends are somewhat representative of Saladin's court physicians at the end of the 12th century as most of them were Muslims. In Damascus, Saladin employed seven Muslim physicians (the convert Ibn al-Muṭrān,²²⁰ 'Abd al-Laṭīf al-Baghdādī,²²¹ Ibn an-Naqqāsh,²²² Raḍī ad-Dīn ar-Raḥbī,²²³ Abū Sa'īd,²²⁴ Yaḥyā al-Bayyāsī,²²⁵ Aḥmad ibn al-Ḥājjib²²⁶), three Christian physicians (Abū Manṣūr,²²⁷ Abū an-Najm,²²⁸ Abū al-Faraj²²⁹) and one Samaritan physician (Ibrāhīm ibn Khalaf²³⁰). The Jew 'Afīf ibn Sukrah is said to have dedicated a treatise to Saladin but it is unclear whether or not he was a court physician.²³¹ In Cairo, there were two Muslim (ash-Shaykh as-Sadīd²³² and Ibn al-Quḍā'ī²³³) and five Jewish physicians (Ibn Junay,²³⁴ Maimonides,²³⁵ Ibn Tamām,²³⁶ Ibn Shū'ah,²³⁷ Abū al-Bayān²³⁸).²³⁹ It is worth

219. Meyerhof, *Notes*, 116-117. See also Pormann, *Charlatan*, 213.

220. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 175ff. See also Ibn Muṭrān, *Bustān al-aṭibbā' wa-rawḍat al-alibbā'*. *Facsimile Edition of the Manuscript Held at Malik Public Library*.

221. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 201ff.

222. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 162f.

223. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 192ff.

224. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 122. S. Jadon mentions a certain Sulaymān ibn Mūsā instead. However, she references a passage in which he is not mentioned. See Jadon, *Comparison*, 65, n. 16.

225. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 163.

226. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 181f.

227. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 183.

228. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 183.

229. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 183.

230. He is mentioned in Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 193 (in the entry of Raḍī ad-Dīn ar-Raḥbī).

231. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 164 (who mentions that he dedicated his treatise on colic to Saladin in 584/1188).

232. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 109ff.

233. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 117.

234. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 112ff.

235. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 117f. While Maimonides was a court physician, he was not a personal court physician to Saladin. See above note 210.

236. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 117.

237. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 116f.

238. Ibn Abī Uṣaybi'ah, *'Uyūn* (ed. Müller), vol. II, 115.

239. Cf. Jadon, *Comparison*, 65f. for a discussion of some of these physicians. S. Jadon either provides infrequent references to Ibn Abī Uṣaybi'ah's entries or too general page references (see her other article, Jadon, *Physicians of Syria*, 326, n. 18).

emphasising that there were no Christian physicians at Saladin's court in Cairo and apparently no Jewish physicians at Saladin's court in Damascus.

(c) *Life as a dhimmī court physician*

Life as a non-Muslim court physician had not only advantages (as is implied by al-Jāḥiẓ's anecdote) but also disadvantages which no doubt prompted some conversions. The Christian Ibn Muṭrān converted to Islam during the reign of Saladin,²⁴⁰ and among his incentives may have been the benefits which he was unlikely to have enjoyed as a Christian; it is hard to imagine that Saladin would have offered his wife's handmaid in marriage to a Christian, even if he were his personal physician.²⁴¹

Abū al-Ma'ālī ibn Hibat Allāh ibn Tamām was one of the five Jewish physicians at Saladin's court in Cairo. Ibn Abī Uṣaybi'ah tells us that "all of his children converted to Islam."²⁴² Moreover, Maimonides is often said to have pretended to convert to Islam so as to escape the threat of certain extremists while he was on his way to Egypt.²⁴³ Ibn Jumay' on the other hand never converted and whether he ever considered doing so is unknown.

One episode which may explain the appeal of conversion is the following about a contemporary of Ibn Jumay', al-Muwaffaq ibn Shū'ah (d. 579/1183)²⁴⁴ who was also among the five Jewish physicians at Saladin's court. He was seriously hurt in an encounter with a man called al-Khūbishānī:

240. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 176.

241. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 176. See also Jadon, *Comparison*, 68.

242. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 117.

243. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 117: "the *ra'īs* Mūsā [i.e. Maimonides] converted to Islam in the Maghreb, learned the *Qur'ān* by heart and occupied himself with the study of Islamic law". See Davidson, *Maimonides*, 17 and 20 for a discussion of Maimonides' conversion to Islam. See also Stroumsa, *Maimonides*, 16.

244. Ibn Abī Uṣaybi'ah wrote that he was a very entertaining character, "charming and very amusing. He used to sing and play the lute." Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 116-117.

Whenever he [al-Khūbishānī] saw Dhimmīs riding [on horses], he wanted to kill them, and so they used to avoid him. One day he saw Ibn Shū'ah while he was riding [on a horse]. He threw a stone at him, injured his eye and tore it out.²⁴⁵

It should be noted, however, that outright persecutions of *dhimmīs* were rare in the mediaeval Islamic world.²⁴⁶ Moreover, given the bad temper al-Khūbishānī exhibited in other situations, anyone could have been harmed regardless of his or her faith.²⁴⁷ In general, Jews and Muslims at the time of Ibn Jumay' appear to have had good relations. Goitein believed that the deathbed declaration mentioned earlier²⁴⁸ might even provide an "unexpected glimpse into interfaith relations toward the end of the High Middle Ages."²⁴⁹ He suggested that the document shows that Ibn Jumay' was part of a circle of intellectuals and notables which included the prominent religious scholar Ibn Ṣawlah and the judge Ibn Sanā' al-Mulk, both Muslims.²⁵⁰ However, the fact that a Jewish merchant owed money to notable Jewish physicians and Muslim scholars and jurists, does not necessarily mean that the Jewish party had close relations with the Muslim party. The Muslims and Jews to whom the Jewish merchant owed money might not have known each other, let alone be united by common spiritual or intellectual interests. Goitein's conclusion regarding 'unexpected interfaith encounters' is therefore highly speculative.²⁵¹ Clearly, Ibn Jumay' lived among Jews, Muslims

245. Ibn Abī Uṣaybī'ah, *Uyūn* (ed. Müller), vol. II, 116.

246. Another instance in which a court physician is insulted by a Muslim is given by Stillman, *Jews*, 63. The *nāgīd* Ibrāhīm b. 'Aṭā', personal physician of Zirid Amīr al-Mu'izz ibn Bādīs, was publicly insulted while bearing a message from his royal master to the great Mālikī scholar Abū 'Imrān al-Fāsī, who was very furious because the Jewish court physician was not wearing a Jewish badge. The zealous *faqīh* (jurist) then stained the Jew's turban on the spot. When the humiliated physician sought regress from his patron, he was rebuffed.

247. Ibn Abī Uṣaybī'ah mentions that al-Khūbishānī was in conflict with other people as well. Ibn Abī Uṣaybī'ah, *Uyūn* (ed. Müller), vol. II, 116.

248. See above p. 41.

249. Goitein, *Mediterranean Society*, vol. V, 448.

250. Goitein, *Mediterranean Society*, vol. V, 447: "All in all we find here two most prominent Jews and two illustrious Muslims belonging to a circle of close acquaintances who certainly were united by common spiritual interests. Abu al-Faraj was admitted to this group, as elsewhere in the Geniza we meet merchants seeking the company of intellectuals."

251. Goitein, *Mediterranean Society*, vol. V, 448. See also Nicolae, *Jewish Physicians*, 10.

and Christians, but there is no evidence to show that he was part of a “spiritual brotherhood which transcended the barriers of religion, language, and countries” as Goitein put it.²⁵²

(d) Ibn Jumay’s relations with Muslims and Christians

We know that many prominent Muslim physicians had Jewish students. Among them is not only the Muslim Ibn Riḍwān (whose star pupil was the Jew Ifrā’īm ibn al-Ḥasan who himself had a Jewish student),²⁵³ but also Ibn Jumay’s teacher Ibn al-‘Ayn Zarbī. For Ibn Jumay’, religion did not matter when he decided to follow the Muslim Ibn al-‘Ayn Zarbī for a period of his life. The question was not so much who was Jewish but who could offer him the best possible education.

Ibn Jumay’s attitude toward Christian physicians, however, was negative if we consider the implications of his treatise to Saladin in which he expressed the notion that Christians were intellectually lazy and hence opposed to medical progress (despite the fact that they dominated mediaeval Islamic²⁵⁴ medicine in the 8-10th century). Recounting the history of medicine and how it declined during the centuries after Galen, Ibn Jumay’ wrote:

After him [Galen], the community of the Christians emerged from and prevailed over the Greeks. The Christians considered it a fault to study intellectual matters, and their kings did not care about the art of medicine and failed to take care of its students. Students therefore ceased to commit themselves to the toilsome study of medicine and found reading Hippocrates’ and Galen’s works too tedious. [The art of medicine] thus fell into decline and its state deteriorated.²⁵⁵

252. Goitein, *Mediterranean Society*, vol. II, 241. See also Pormann, and Savage-Smith, *Medicine*, 113 and Rosenthal, *Physician*, 477 on the topic.

253. Pormann, and Savage-Smith, *Medicine*, 101. See also Steinschneider, *Literatur*, 175.

254. For the use of the term ‘Islamic’ medicine, see above p. 8.

255. Ibn Jumay’, *Treatise*, §75. Translation slightly altered.

That medicine did not fall into complete oblivion was, according to Ibn Jumay‘, due to Muslim rulers. He fails to mention, however, that the achievements of the translation movement and many of the early Arabic medical monographs were mainly due to Christian physicians:

[Medical] teaching stood on shaky ground until al-Ma‘mūn ‘Abd Allāh ibn Hārūn ar-Rashīd became Caliph who revived and spread it and favoured excellent physicians. But for him, medicine and other disciplines of the Ancients should have been effaced and obliterated just as medicine is obliterated now from the lands of the Greeks, which had been most distinguished in this field.²⁵⁶

It is very striking that the Christian physician Ḥunayn Ibn Ishāq, who was mainly responsible for the positive change Ibn Jumay‘ is alluding to here, is not mentioned in this context. He is only mentioned several passages later, but in a rather negative context:

[The decline of medicine] went so far that any of these would-be physicians of this art, after reading a small compendium such as ar-Rāzī’s *al-Manṣūrī* or one of the introductions such as Ḥunayn’s *al-Masā’il*, thought he knew medicine and embarked upon the treatment of the sick.²⁵⁷

Such silence regarding the positive achievements of Christians, while stressing that they were responsible for the decline of medicine after Galen, indicates that Ibn Jumay‘ was not a supporter of Christian physicians. This may also be a reason why there were no Christian physicians at the court of Saladin in Cairo. Speculations aside, certain is that Ibn Jumay‘ did not give much credit to Christian physicians in front of his Muslim patron Saladin.

Ibn Jumay‘ had three students we know of,²⁵⁸ all of whom were Jewish, except Samuel ibn Abbā ibn Yehūdāh, who converted to Islam in 558/1163. While it might be due to chance that

256. Ibn Jumay‘, *Treatise*, §78.

257. Ibn Jumay‘, *Treatise*, §84.

258. Ibn Abī Uṣaybī‘ah mentions only Ibn Abī al-Bayān as Ibn Jumay‘’s student. Steinschneider, *Literatur*, 178 also mentions the Karaites David ibn Salomo (born 1161) and Samuel Ibn ‘Abbas (Steinschneider, *Literatur*, 186) whose death date is unclear (see Steinschneider, *Literatur*, 192, note 13).

all of his students came from a Jewish background, this could also be due to Ibn Jumay's preference for Jewish students or to the reluctance of Muslims to study under a Jew.

E. Savage-Smith suggested that Ibn Baklarish's *K. al-Musta'inī* was used by Maimonides because he might have been part of a certain community of Jewish physicians who favoured Ibn Baklarish's treatise over other treatises. She ponders the possibility whether or not the fact that Ibn Baklarish was a Jewish scholar might have had any bearing on the dissemination of this treatise among Jewish circles. As Savage-Smith stressed, her speculations are based on a very small sample and only further research can decide whether Maimonides' preference for Ibn Baklarish was due to mere chance or whether there is more to the theory that there was a circle of Jewish scholars who preferred certain medical treatises written by Jews.²⁵⁹ At first sight, Ibn Jumay's circle of Jewish students may support Savage-Smith's theory.

Yet, Ibn Jumay's star student Ibn Abī al-Bayān had Muslim students, such as Ibn Abī Uṣaybi'ah, and Ibn Jumay's own teacher was a Muslim. Jewish physicians such as Maimonides and Ibn Jumay' may have sometimes favoured the teaching of their co-religionists and occasionally tried to restrict their teaching to their Jewish successors, but religious preferences might only be one reason. Other reasons include chance, personal relations, or certain social conventions (Muslim students may have preferred not to be taught by a Jew). It is evident that Muslim authoritative sources were not ignored by Jewish scholars; after all, Ibn Sīnā did not only markedly influence Maimonides' philosophical thoughts²⁶⁰ but also Ibn Jumay's medical writings. Religion only featured in certain situations such as Ibn Jumay's denigration of Christian contributions to science or the social disadvantages of non-Muslim physicians which prompted some conversions.

259. Savage-Smith, *Ibn Baklarish*, 129.

260. See Stroumsa, *Maimonides*, 154ff.

(e) *Anti-Jewish satire? Inter-faith obituaries?*

As we have seen, Ibn Abī Uṣaybi‘ah recorded poems which were critical of Ibn Jumay‘ and Ibn al-Najm al-Miṣrī’s poem of ‘Ibn Jumay‘ the Jew’ can easily be interpreted as a religious insult.²⁶¹ However, while we cannot exclude that Ibn al-Najm was anti-Jewish, it appears that he merely used the fact that Ibn Jumay‘ was Jewish to yield a better pun. Ibn Jumay‘’s co-religionists al-Muwaffaq ibn Shū‘ah²⁶² also wrote an insulting poem about our court physician which shows that the Muslim Ibn al-Najm was not the only one to have done so:

Oh you, who boast about medicine and geometry,
The falsehood [of your claims], Ibn Jumay‘, are more than obvious!

Even if you possess knowledge about medicine, your words are
not as useless as the medicine for the ailment assailing you.

What is needed for it (the ailment) is a doctor who is able to cure and
with a scalpel with a honed blade, two spans in length ...²⁶³

Yet, Ibn Jumay‘ was not only subject to mockery. In his entry on Ibn Jumay‘, Ibn Abī Uṣaybi‘ah presented an elegy which was written by a Muslim on the occasion of Ibn Jumay‘’s death:

I copied a *qaṣīdah* from the handwriting of Yūsuf ibn Hibat Allāh ibn Muslim which he himself had written. In it, he laments the death of the eminent master (*shaykh al-muwaffaq*) Ibn Jumay‘. It reads as follows:

*O Eyes shed now what tears you hold,
And when they’re done, shed blood!*

*It’s right to cry for a master lost and for
blessings of nobility and dignity he takes with him.*

*He was the best of men in learning and in mastery
The best at explaining ambiguity.*

261. See above p. 37.

262. See above p. 60.

263. The poem continues with further insulting remarks which are not very clear. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), 116-117.

*The most rightly guided in situations vague;
He saw what could not be seen and knew it better than all the rest.*

*His heart, his hand, his home most welcoming,
His face was like a morning when he smiled.*

*He was the most helpful of all those I sought in calamity,
the most helpful of all those I hoped could ease my pain.*

*If sacrificing a dove could bring him back, I'd
sacrifice a soul that lusts for approaching death.*

...²⁶⁴

Throughout the rest of the elegy (which reveals virtually nothing about the person Ibn Jumay' or his religion), the speaker continued to lament the loss of the great physician. A couple of years later, Ibn Sanā' al-Mulk sang the following praises of Maimonides and demonstrated how common it was for Muslim poets to praise Jewish court physicians:

*I consider Galen's medicine for the body only,
While Abū 'Imrān's [that is Maimonides']
is for the body and soul.*

*Were he to treat time with his wisdom,
He would surely cure it of the disease of ignorance.²⁶⁵*

All of these poems suggest that religious sentiments did not matter when Jewish or Muslim poets were praising or ridiculing the physician Ibn Jumay'.

264. Ibn Abī Uṣaybī'ah, 'Uyūn (ed. Müller), vol. II, 114. I am grateful to Adam Talib who assisted me in translating and interpreting some of the more obscure passages of this obituary.

265. Ibn Abī Uṣaybī'ah, 'Uyūn (ed. Müller), vol. II, 117. Translation by Stillman, *Jews*, 72.

(f) Wine: The influence of religion on medical writings

Ibn al-‘Adīm (d. 660/1262)²⁶⁶ tells us in his history of Aleppo that one of Saladin’s physicians in Damascus, ‘Afīf ibn Sukrah (d. after 584/1188),²⁶⁷ recommended the use of wine to Saladin:

Then Saladin became ill with colic and his illness became severe. So his Jewish physician Ibn Sukkarah visited him and said to him in secret: “Master, your cure lies in wine (*khamr*), and if you see fit to permit me I will bring it to you in my sleeve so that neither al-Lala nor Shadibakht [a freed Indian slave] nor any of God’s creatures knows of it.” He said: “Oh physician, I had thought you intelligent, but our Prophet, may God grant him blessings and peace, says that God has not placed a cure for my nation in that which He has forbidden to it [i.e. the nation]. Now what is to guarantee that I will not die after drinking it and so meet God with wine in my belly. I swear by God that even if one of the angels told me that your cure lies in wine I would not use it.” This was related to me by my father, from Ibn Sukkarah the physician.²⁶⁸

One of the literary intentions of this story is to provide an entertaining aetiology for the name Ibn Sukrah (literally ‘the son of the one who causes drunkenness’).²⁶⁹ The story is probably based on the fact that Ibn Sukrah wrote a “treatise on colic which he composed for al-Malik an-Nāṣir Ṣalāḥ ad-Dīn Yūsuf the Ayyubid. This was in the year 584.”²⁷⁰ As the treatise is not extant, we cannot confirm if the anecdotal evidence is supported by the regimen Ibn Sukrah suggested to Saladin. In his entry on Ibn Sukrah, Ibn Abī Uṣaybi‘ah did not mention anything about the incident reported by Ibn al-‘Adīm, which suggests that it is literary fancy which stresses the piety of Saladin.

266. Lewis, *Ibn al-‘Adīm*.

267. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 164 (who mentions that he dedicated his treatise on colic to Saladin in 584/1188). Steinschneider, *Literatur*, 194. Ashtor-Strauss, *Saladin and the Jews*, 311-312.

268. Freytag, *Chrestomathia*, 97. Steinschneider, *Literatur*, 194 (Steinschneider references page 17 in Freytag’s chrestomathy but it ought to have been page 97).

269. The name is usually transliterated without *shaddah* on the *kāf*, but the edition by Freytag suggests Ibn Sukkarah, literally ‘the son of the one who causes drunkenness’. See Steinschneider, *Literatur*, 194. Ashtor-Strauss, *Saladin and the Jews*, 311.

270. Ibn Abī Uṣaybi‘ah, *‘Uyūn* (ed. Müller), vol. II, 164.

The story presents us with the stereotypical notion that a Jewish physician, who was not forbidden to drink wine, could happily recommend wine to his patients.²⁷¹ This notion suggests that Jewish physicians had certain liberties which their Muslim colleagues might not have had and that the scientific and medical practice of Jews was less restricted by religious strictures. Is there any evidence to support such a notion?

Ibn Jumay' wrote freely about alcoholic drinks, yet we do not know what Ibn Jumay' would have suggested in a consultation with a Muslim. He mentioned alcoholic beverages in his treatise to Saladin, but merely to illustrate his argument:

For instance, if somebody does not know what Hippocrates said about treating pains of the eye, namely that alcoholic beverages (*shurb ash-sharāb aṣ-ṣirf*),²⁷² a bath, a bandage, bleeding and laxatives will ease the pain, how can he perform the proper treatment if necessary?²⁷³

With his letter, Ibn Jumay' did not tell Saladin what to eat and drink, but he tried to convince him that medicine is an important science and that physicians such as himself are needed to reform the health service. Yet, the passage shows that it was perfectly normal for both a Jewish physician and his Muslim audience to consider the example of Hippocrates who did use alcoholic beverages for treating the pains of the eye. This did not necessarily mean that this ought to be done (should Saladin ever have felt eye pain). The passage was intended to illustrate that only well-informed physicians could make responsible decisions, which might on occasion include the medicinal use of alcohol. Whether or not therapies involve the use of drugs considered to be forbidden (*ḥarām*) by orthodox Muslims, was not an issue which Ibn Jumay' felt necessary to discuss.

271. The *Qur'ān* bans the use of wine in certain passages, most importantly Sura 5:90-91.

272. For the use of *sharāb* as a euphemism for wine, see Chipman, *World of Pharmacy*, 24.

273. Ibn Jumay', *Treatise*, §51.

This does not demonstrate, however, that Jews like Ibn Jumay' wrote more freely about the subject than his Muslim predecessors. For instance, both ar-Rāzī (d. c. 312/925) and Ibn Sīnā (d. 428/1037) stated that getting drunk once in a while is not too dangerous.²⁷⁴ The dangers of wine were openly discussed among physicians, but it was generally agreed that it was beneficial.²⁷⁵ Religious caveats were not expressed.

Ibn Jumay's contemporary Maimonides was slightly different in this respect because he did mention religious problems surrounding the use of wine. While Maimonides might have been silent about the issue if he had simply mentioned wine in a theoretical context (as Ibn Jumay' did), he either appears to have had a bad conscience when suggesting the medicinal use of wine to a Muslim, or he wanted to present himself as erudite and sensible when considering the religious illicitness of wine. In his letter *On Asthma*, addressed to an unnamed noble-man, he wrote:

... concerning beverages: ... most of this regimen does not apply to Muslims, since wine is prohibited to them and the different kinds of date wine (*nabīdh*) are prohibited (*ḥarām*) to most of them. God has already safeguarded you against it, so there is no need to warn you about it.²⁷⁶

A similar passage is found in Maimonides' letter *On the Regimen of Health* to al-Afḍal (d. 621/1225):

Let not our master [al-Afḍal] censure his minor servant [Maimonides] for what he has mentioned in this his treatise about the use of wine and song, both of which the Law abhors, because this Servant has not commanded that this ought to be done, but mentioned what his Art determines.²⁷⁷

274. Ar-Rāzī's statements regarding wine (*khamr*) and intoxication are quoted by Ibn al-Bayṭār (Ibn al-Bayṭār, *al-Jāmi'*, vol. II, 72). In his poem on medicine, Ibn Sīnā states regarding date wine (*nabīdh*): "Be careful not to get drunk for a long time, and in case you do, [do it only] once a month. It is very useful only in very small amounts, and very harmful in large amounts." For the French trans. see Jahier, and Nouredine, *Poème*, 23.

275. See Waines, *Controversy*.

276. Maimonides, *Asthma*, 32f. Translation slightly altered.

277. Maimonides *et al.*, *Causes*, 151.

Elsewhere in his letter *On Asthma*, Maimonides suggested an alternative to wine:

Since the consumption of both large and small quantities of wine are forbidden in Islam, the physicians have taken pains to find a beverage that can replace it to a certain degree. This beverage is that consisting of honey seasoned with spices, for it can substitute for most of the excellent qualities of wine, except for the gladdening of the soul

I will give my master the recipe for such a drink which was composed by the elders whom I observed ... And I will add thereto those spices which fit your temperament and disease. Take chickpeas ...²⁷⁸

As Maimonides mentioned himself, such alternative recipes for wine are not novel. An earlier example had been recorded by al-Kaskarī.²⁷⁹ Despite all of these religious caveats, Maimonides was nonetheless in favour of prescribing wine due to its positive medicinal qualities. Maimonides was therefore not very different from his other Jewish, Muslim or Christian colleagues when he wrote that “the benefits of wine are very many when it is taken properly, for then it is a great factor in the preservation of health, and [in the cure] of many diseases.”²⁸⁰

In sum, Jewish and Muslim physicians all recommended wine for its medicinal properties and did not restrict their thoughts because of religious laws. In fact, it was the Jewish physician Maimonides who felt obliged to mention religious caveats when writing about wine. Thus, the stereotype alluded to in the anecdote about Ibn Sukrah at the beginning of this section, namely that Jewish physicians took liberties which Muslim physicians did not, is not supported by what we find in Maimonides', Ibn Sīnā's and ar-Rāzī's writings.

Just as wine is considered to be *ḥarām* by most Islamic authorities, there is a range of medicinal substances which were not considered to be kosher in Judaism. Ibn Jumay', however, paid as little attention to religious restrictions of his own faith as to that of others.

278. Maimonides, *Asthma*, 32f.

279. Pormann, *Hospitals*, 348ff.

280. Maimonides *et al.*, *Regimen*, 29 (translation slightly altered).

Just as the *Qur'ān* bans the use of wine, Leviticus 11:10-11 forbids the consumption of shellfish. This law did not deter Ibn Jumay' from including a recipe for cataplasm of crabs in his *Irshād*²⁸¹ and it is very likely that other illicit substances are found in Ibn Jumay''s writings because religious strictures did not appear to have had an impact on his writings. It needs to be pointed out, however, that even if Ibn Jumay' was more religious than it appears, the Jewish law (*halakha*) could be easily suspended when it came to healing someone.

(g) *Human dissection: Was Ibn Jumay' an advocate because he was Jewish?*

Ibn Jumay' had extremely positive attitudes toward human dissection. Whether or not he actually practised it, will be the subject of chapter three.²⁸² Here, the question to be addressed will be whether his positive attitudes were influenced by his Jewish creeds.

Bodily resurrection is a rather explicit belief propagated in the *Qur'ān*.²⁸³ Ibn Jumay''s contemporary, Maimonides, is well-known for his ideas concerning the afterlife, and unlike orthodox Muslims, he claimed that the dead body will simply decay after the soul separated from it.²⁸⁴ This was quite controversial as it meant that the body will not be used for any activities in paradise, such as eating, drinking, sitting, walking, or sexual intercourse.

Did Ibn Jumay' perhaps share Maimonides' controversial ideas? Even though there is little evidence for Goitein's spiritual brotherhood to which both Maimonides and Ibn Jumay' allegedly belonged, both physicians lived in Cairo and worked at the court. It is therefore possible that Ibn Jumay' was exposed to the ideas of his co-religionist Maimonides concerning the afterlife. Whether he shared them is uncertain, but if he did, then the dead body had no metaphysical or religious importance for Ibn Jumay'. This might explain why he could write

281. Chipman, *World of Pharmacy*, 23.

282. See below, p. 134.

283. See Borrmans, *Resurrection*.

284. Stroumsa, *Maimonides*, 165ff.

so freely about his appeal to dissect human beings. In her article on attitudes toward human dissection in mediaeval Islam, E. Savage-Smith argued that attitudes were generally positive and that there were no laws which banned it. However, two reasons might have deterred physicians from dissecting humans: (1) the general human reluctance to cut open human cadavers and the smell of decaying flesh which could easily develop in hotter climates and (2) the religious belief that the body or parts of it were needed for the afterlife.²⁸⁵ If the second reason was not important for Ibn Jumay', one could explain why it was easier for him as a Jewish physician (perhaps influenced by his Jewish colleague Maimonides) to advocate human dissection.

However, there are several problems with such speculations. Maimonides' deviant ideas concerning the afterlife are not necessarily Jewish. As S. Stroumsa has demonstrated, important passages in Maimonides' writings on the afterlife are taken from the work of Ibn Sīnā, who was not Jewish at all.²⁸⁶ Maimonides' ideas were therefore not influenced by Jewish scriptures or thinkers, but rather by the philosopher Ibn Sīnā. In fact, Maimonides had a controversy with several Jews regarding his beliefs about the afterlife, and his stance was not exclusively Jewish.²⁸⁷ Anyone, whether Muslim, Jew, or Christian, could have been influenced by Ibn Sīnā's philosophical notions regarding the body and its afterlife.

Even though Ibn Jumay' presented a rather forceful appeal for human dissection, he was by no means an isolated case, for several Muslim physicians exhibited similar attitudes.²⁸⁸ That he was willing to present his ideas to his Muslim patron Saladin, suggests that other, possibly

285. Savage-Smith, *Attitudes*, 108-109.

286. Stroumsa, *Maimonides*, 160-161.

287. Stroumsa, *Maimonides*, 165ff.

288. For several other examples see Savage-Smith, *Attitudes*.

more orthodox, Muslims were not appalled by such forceful appeals in favour of human dissection.

Ibn Jumay'’s medical writings are thoroughly secular, and his religious ideas appear to have been completely disconnected from his medical world which was mainly influenced by Galenic ideals. Galen dissected animals and was very much in favour of human dissection. Ibn Jumay'’s attitudes are therefore best explained if we take into account how much he tried to emulate his role-model Galen.

To conclude, there is no evidence that religion had much impact on the medical writings of Ibn Jumay'. If it were not for the fact that Ibn Abī Uṣaybi'ah recorded a poem about Ibn Jumay' the Jew and his obviously Jewish name (i.e. al-Isrā'īlī), we would not be able to tell which creed he adhered to. His treatises could have been written by a Muslim or a Christian physician as well. His attitude toward religion in the context of medicine is perhaps best summarised by his use of a proverb which was frequently found in religious treatises concerned with the medical advice of the prophet Muḥammad. In his treatise to Saladin, Ibn Jumay' wrote:

Deeds of corporal obedience and worship can only be performed when one is healthy. It follows that the guidance of the Sacred Law (*sharī'ah al-hādiyyah*) does not only unite the art of medicine and the religious sciences, but also gives precedence to the art of medicine: “Knowledge is twofold, knowledge of the body and knowledge of religion.”²⁸⁹ This explains the eminence of medicine sufficiently.²⁹⁰

289. Addressing a Muslim audience, Ibn Jumay' may have deliberately chosen this quotation which Muslim writers on medicine either attribute to the Prophet Muḥammad (d. 632), or to ash-Shāfi'ī (d. 819), the founder of the Shāfi'ī school of law, one of the four prominent Muslim law schools. See Savage-Smith, *Attitudes*, 70ff.

290. Ibn Jumay', *Treatise*, §10. Translation is that of the present author.

Unlike authors of religious medical treatises, Ibn Jumay' left little doubt that medicine had to be considered more important than religion.

Goitein's romantic depiction of the Mediterranean intellectual community in which he gives Ibn Jumay' a very prominent place, needs to be replaced with a more sober version of the situation. Ibn Jumay' was a secular physician and a devoted disciple of Galen. Moreover, he was heir to a tradition which was neither Jewish, Islamic or Christian but was rather the outcome of the learning and experience of earlier Jewish, Christian and Muslim physicians who were active in lands under Muslim rule.

4. *Ibn Jumay's library*

Books were indispensable tools for the mediaeval scholar.²⁹¹ Physicians were not an exception, and the size of a physician's library can be an indication of his erudition, prominence and importance. If a physician had access to many books, he had access to the knowledge and experience of his predecessors. The more he knew through reading books, the more his contemporaries respected him and possibly relied on him.

The contents of a library also reflect the material available at a given time and place. For Ibn Jumay's day, we have several sources providing information regarding the size of physicians' libraries. The Cairo Genizah preserves an auction protocol of approximately twenty books which belonged to a certain Jewish physician by the name of Abū Sa'd as-Sadīd.²⁹² Ibn Abī Uṣaybi'ah informs us that the Jewish physician Ifrā'īm ibn az-Zafān, a contemporary of Ibn Jumay', had a book collection comprising 10,000 volumes which was bought by Saladin's son, al-Afḍal (r. 582/1186-592/1196).²⁹³ Moreover, Ibn al-Muṭrān is said to have had more than

291. See Qāḍī, *Books*, 38.

292. Nicolae, *Jewish Physicians*, 25-26.

293. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 105-106.

10,000 volumes in his collection.²⁹⁴ The figure 10,000 is not to be taken literally but only as an indicator that the book collections were comparatively large.²⁹⁵ This is corroborated by the relatively small number of books sold at the auction which shows that books were an expensive commodity.²⁹⁶ Ibn Jumay' must have had more than twenty books at his disposal, but it is difficult to imagine that the number of medical books available to him exceeded one or two hundred items. While Ibn Jumay' displays an impressive array of sources in his *Canon* commentary, he cites slightly less than 80 authors and employed probably not more than 60 different treatises.

Determining the size of a library by looking at the authors a given physician has cited, is fraught with difficulties. First of all, it is not clear whether or not a citation is taken from a book in the possession of the physician. Ibn Jumay' may have never had a personal library. Saladin's famous secretary and counsellor al-Qāḍī al-Fāḍīl founded the Fāḍīliyyah Madrasa in Cairo which was allegedly endowed with a library containing more than 100,000 books.²⁹⁷ We do not know if there were any medical books in this library, which was founded for Islamic law schools, but the existence of such large libraries in Cairo indicates that the books Ibn Jumay' referenced may not necessarily have been in his personal collection, but rather part of a larger library to which he had access.

Furthermore, we cannot be sure that Ibn Jumay' had direct access to a treatise just because he cited it. For example, Ibn Jumay' quoted the Greek physician Ahron (fl. c. 6th century AD) in his comments on Book Three of the *Canon*.²⁹⁸ Shortly thereafter, he commented in another context that a certain issue is well-known among physicians, and referenced ar-Rāzī's *al-Ḥāwī*

294. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 178-179. Jadon, *Physicians of Syria*, 332.

295. For Amīn ad-Dawlah ibn Ghazāl's library of 20,000 books, see Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 237-238. Quoted in Jadon, *Physicians of Syria*, 325.

296. On the value of books, see Qāḍī, *Books* (especially p. 47).

297. Makdisi, *The Rise of Humanism*, 59.

298. CC III, 98. For Ahron see Sezgin, *Geschichte*, vol. III, 166.

in support of his statement. He stressed, however, that this reference was attributed to Ahron.²⁹⁹ We therefore need to question if Ibn Jumay' had quoted directly from Ahron in the first instance or if he had found the statement by Ahron in ar-Rāzī's *Ḥāwī* and simply copied it from there (without indicating that he quoted Ahron via the *Ḥāwī*). Even though Ibn Jumay' appears to be comparatively meticulous when citing his sources, his methods are far from consistent and it may be the case that some of Ibn Jumay's quotations were not directly taken from their source, but from another treatise (such as *al-Ḥāwī*) in which they were quoted.

If we have several quotations from one and the same treatise, it is reasonable to assume that Ibn Jumay' indeed had access to the treatise. Yet, we still would not know how complete his copy of a certain treatise would have been. Perhaps he had access only to a collection of excerpts. Ibn Jumay' quotes the *Ḥāwī* in several instances but we cannot be certain how complete his *Ḥāwī* was, as it is very likely that only parts of the *Ḥāwī* circulated due to its enormous size. The same might apply to Galen's treatises available to Ibn Jumay'. Maimonides' characteristic disposition to compose collections of excerpts taken from the works of Galen shows that 'incomplete' collections of verbatim quotes were quite popular.³⁰⁰ Even though Ibn Jumay' was strictly against such excerpted collections, especially in the case of Galen,³⁰¹ he might have had to resort to such collections when nothing else was available to him.

With all of these precautions in mind it is nonetheless possible to get a general idea of Ibn Jumay's library (or the books available to him) by surveying the sources he has used.

299. CC III, 103.

300. See below, p. 225ff. for a discussion of Maimonides' treatises.

301. Ibn Jumay', *Treatise*, §83-84.

(a) Galen, Dioscorides, Hippocrates and other Greek writers

We know from his treatise to Saladin that Ibn Jumay‘ argued for the return to the teachings of the ancients, in particular those of Galen and Hippocrates.³⁰² It is therefore not surprising to find Galen (d. c. 216 AD) the most quoted authority in the commentary with approximately 160 references.³⁰³ In about 60 instances, Ibn Jumay‘ simply referred to what ‘Galen said’, but the majority of references provide precise details regarding the title of the treatise cited and the number of the chapter quoted (e.g., ‘in the first [chapter] of his book on *Anatomical Procedures*’).³⁰⁴ The following 25 treatises by Galen are cited:³⁰⁵

- *R. ilā Ighlūqun (Therapeutics to Glaucon [Ad Glauconem de Methodo Medendi])*³⁰⁶
- *K. fī al-quwwah aṭ-ṭabī‘iyyah (On the Natural Faculties [De Naturalibus Facultatibus])*³⁰⁷
- *K. ‘amal at-tashrīḥ (also K. ‘Ilāj at-tashrīḥ) (On Anatomical Procedures [De Anatomicis Administrationibus])*³⁰⁸
- *K. manāfi‘ al-a‘ḍā’ (On the Usefulness of the Parts of the Body [De Usu Partium])*³⁰⁹
- *K. fī aṣnāf al-amrād (first part of the K. al-‘Ilal wa-al-a‘rād) (Differences of Diseases [De Morborum Differentiis])*³¹⁰
- *K. al-‘ilal wa-al-a‘rād (this book comprises Differences of Diseases, Causes of Diseases, Differences of Symptoms, Causes of Symptoms [De Morborum Differentiis, De Causis Morborum, De Symptomatum Differentiis, De Symptomatum Causis])*³¹¹
- *Tafsīr k. al-akhlāt (On Hippocrates’ ‘Humours’ [In Hippocratis de Humoribus])*³¹²

302. Ibn Jumay‘, *Treatise*, §84f. and §152.

303. CC I, 8, 22, 47, 57, 59, 63, 66, 69, 71, 74, 75, 77, 78, 83, 86, 88, 91, 92, 103-7, 109, 112, 123-5, 128, 165, 169, 173, 179-182, 185-192, 200, 202, 203, 230, 232, 235, 236, 241, 250, 255, 259, 269, 272, 274. CC II, 8, 11-13, 17, 24, 29, 30, 32, 36, 38, 42, 43, 46, 48, 51-53, 56, 62, 70, 75, 82, 89, 92, 96, 101, 104, 105, 122, 123, 127, 128, 141, 142, 154, 156, 157, 160-2, 164, 166, 171, 173, 178, 187, 188, 199, 203, 210, 211. CC III, 3, 20, 34, 39, 60, 68, 69, 132, 138, 162, 171, 174, 182, 187, 200, 201, 205, 206, 210, 222, 232, 242, 246, 269, 280, 282, 313, 335, 337, 339, 378, 379. CC IV, 15, 18, 44, 48, 56, 58, 59, 64, 65, 70, 76, 103. CC V, 13, 16, 17, 18, 21, 25, 31.

304. CC I, 57.

305. For the translation of the Latin titles, I generally followed Hankinson, *Appendix*.

306. CC I, 22, 124, 259. CC IV, 18. See also Sezgin, *Geschichte*, vol. III, 82f. Ullmann, *Medizin*, 45f.

307. CC I, 47. Sezgin, *Geschichte*, vol. III, 88f. Ullmann, *Medizin*, 40.

308. CC I, 57; CC III, 282. Sezgin, *Geschichte*, vol. III, 98. Ullmann, *Medizin*, 54.

309. CC I, 86; CC III, 337, 339. CC IV, 48. Sezgin, *Geschichte*, vol. III, 106ff. Ullmann, *Medizin*, 41.

310. CC I, 103, 106, 112. Sezgin, *Geschichte*, vol. III, 89. Ullmann, *Medizin*, 42.

311. CC I, 105. Sezgin, *Geschichte*, vol. III, 89. Ullmann, *Medizin*, 42.

312. CC I, 123, 125?, 169. Sezgin, *Geschichte*, vol. III, 35, 123. Ullmann, *Medizin*, 62.

- *Tafsīr k. al-ahwiyah wa-al-miyāh wa-al-amṣār* (also *Tafsīr k. fī al-Ahwiyah wa-al-miyāh wa-al-buldān*) (*On Hippocrates' Airs, Water and Places [not extant in Greek]*)³¹³
- *Tafsīr k. abīdīmiyā* (*On Hippocrates' 'Epidemics' [In Hippocratis Epidemiarum Libri]*)³¹⁴
- *Tafsīr k. al-amrād al-ḥāddah li-Buqrāt* (*On Hippocrates' 'Regimen in Acute Diseases' [In Hippocratis de Acutorum Morborum Victu]*)³¹⁵
- *K. an-nabḍ* (*K. fī an-nabḍ al-kabīr*³¹⁶ and *K. fī an-nabḍ aṣ-ṣaghūr*³¹⁷) (*On the Pulse for Beginners, Differences of Pulses [De Differentiis Pulsuum, De Pulsibus ad Tirones]*)³¹⁸
- *aṣ-Ṣinā'ah aṣ-ṣaghūrah* (*Art of Medicine [Ars Medica]*)³¹⁹
- *Tadbīr aṣ-ṣiḥḥah* (= *Tadbīr al-aṣiḥḥah*' in Sezgin) (*On the Preservation of Health [De Sanitate Tuenda]*)³²⁰
- *K. ḥīlat al-bur'* (*On the Therapeutic Method [De Methodo Medendi]*)³²¹
- *K. al-buḥrān* (*On Crises [De Crisibus]*)³²²
- *K. fī quwwā al-adwiyah al-mufradah* (*On the Powers of Simple Drugs [De Simplicium Medicamentorum Facultatibus]*)³²³
- *K. aghdhiyah* (= *K. fī quwwah al-aghdhiyah*) (*On the Properties of Foodstuffs [De Alimentis Facultatibus]*)³²⁴
- *K. jūdat al-kīmūs wa-radātihi* (= *K. fī al-kīmūs*) (*On Foods Productive of Good and Bad Humours [De Bonis et Malis Alimentorum Sucus]*)³²⁵
- *K. al-adwiyah al-muqābilah li-al-adwā'* (*On Antidotes [De Antidotis]*)³²⁶
- *K. al-mayāmir* (*On the Composition of Drugs according to Places [De Compositione Medicamentorum secundum Locos]*)³²⁷

313. CC I, 128, CC II, 70. see Sezgin, *Geschichte*, vol. III, 37, 123f. Ullmann, *Medizin*, 61.

314. CC I, 165, 200, 202; CC III, 335. Sezgin, *Geschichte*, vol. III, 34f., 123. Ullmann, *Medizin*, 61.

315. CC I, 250. Sezgin, *Geschichte*, vol. III, 33f., 123. Ullmann, *Medizin*, 51.

316. Sezgin, *Geschichte*, vol. III, 91. Ullmann, *Medizin*, 43, 90.

317. Sezgin, *Geschichte*, vol. III, 81. Ullmann, *Medizin*, 44. It is unlikely that Ibn Jumay' meant the smaller book on the pulse as becomes clear through his reference to at least 8 *maqālāt* - a subdivision not found in the smaller book.

318. CC I, 179, 181. In CC I, 182, 187 and 189 no specific source is mentioned but that the context suggests that *K. an-nabḍ* is quoted.

319. CC I, 203. Sezgin, *Geschichte*, vol. III, 80. Ullmann, *Medizin*, 45.

320. CC I, 232, 235, 236, 255. Sezgin, *Geschichte*, vol. III, 122. Ullmann, *Medizin*, 46.

321. CC I, 272, 20. CC IV, 15, 64, 65. Sezgin, *Geschichte*, vol. III, 96. Ullmann, *Medizin*, 45.

322. CC I, 274. CC VI, 56, Sezgin, *Geschichte*, vol. III, 95. Ullmann, *Medizin*, 43.

323. CC II, 12, 24?, 30?, 36?, 46?, 48?, 51?, 52?, 82, 96, 101?, 104?, 122?, 128, 142?, 156?, 162, 166?; CC III, 34, 69?, 379; CC IV, 70, 103; CC V, 21 (? = refers to passages in which Ibn Jumay' simply refers to 'fī kitābihi' but the context suggests that this must refer to *K. fī quwwā al-adwiyah al-mufradah*). Sezgin, *Geschichte*, vol. III, 109ff. Ullmann, *Medizin*, 47f.

324. CC II, 48, 52. Sezgin, *Geschichte*, vol. III, 117. Ullmann, *Medizin*, 47.

325. CC II, 62, 178. Sezgin, *Geschichte*, vol. III, 118. Ullmann, *Medizin*, 47.

326. CC II, 154, 160. Sezgin, *Geschichte*, vol. III, 121. Ullmann, *Medizin*, 49.

327. CC III, 39, 197, 201, 378. CC IV, 13, 16, 17. Sezgin, *Geschichte*, vol. III, 119. Ullmann, *Medizin*, 48.

- *K. fī al-mawādi‘ al-ālimah* (On the Composition of Drugs according to Places [De Locis Affectis])³²⁸
- *K. sharḥ al-fuṣūl* (On Hippocrates’ ‘Aphorisms’ [In Hippocratis Aphorismi])³²⁹
- *K. aṣ-ṣawt* (On the voice [De voce])³³⁰
- (pseudo Galen) *R. Jālīnūs ilā Qaynubs al-malik fī at-tiryāq*³³¹
- (pseudo Galen) *R. Jālīnūs ilā malikat ar-rūm fī tadbīr badanihi*³³²

Hippocrates (d. c. 370 BC) is mentioned far less frequently than Galen, with approximately 20 references.³³³ Ibn Jumay‘ appears to have had access to the following five Hippocratic treatises:

- *al-Fuṣūl* (the Aphorisms)³³⁴
- *K. al-akhlāt* (On the Humours)³³⁵
- *K. ṭabī‘āt al-insān* (On the Nature of Man)³³⁶
- *K. al-ahwiyah wa-al-miyāh wa-al-amṣār* (= *K. al-Ahwiyah wa-al-azminah wa-al-miyāh wa-al-buldān*) (On Airs, Water and Places)³³⁷
- *K. fī mā’ ash-sha‘īr* (= *al-Amrāq al-ḥāddah*) ([Regimen in] Acute Diseases)³³⁸

In one comment Ibn Jumay‘ remarks that he could not find a particular statement in all of Hippocrates’ books, and it is likely that he refers to the five books mentioned above.³³⁹

Hippocrates’ *Taqdimat al-ma‘rifah* (Prognosticon)³⁴⁰ and *K. Abīdīmiyā* (Epidemics)³⁴¹ are also

328. CC III, 60, 174, 187, 205, 206. Sezgin, *Geschichte*, vol. III, 90, 146. Ullmann, *Medizin*, 41f.

329. CC III, 68, 182. CC IV, 44 may refer to the *Aphorisms* and not the commentary. Sezgin, *Geschichte*, vol. III, 29f. Ullmann, *Medizin*, 50.

330. CC III, 132. Sezgin, *Geschichte*, vol. III, 103. Ullmann, *Medizin*, 54

331. CC II, 104. Ibn Jumay‘ explicitly stated that this is “a treatise attributed to Galen”.

332. CC II, 161. Ibn Jumay‘ explicitly stated that this is “a treatise attributed to Galen”.

333. CC I, 34, 122, 123, 124, 125, 127, 129, 143, 165, 200, 202, 207, 210. CC II, 56, 116. CC III, 188, 210. CC IV, 22, 44.

334. CC I, 127, 129, 210. Sezgin, *Geschichte*, vol. III, 28. Ullmann, *Medizin*, 28.

335. CC I, 123. Sezgin, *Geschichte*, vol. III, 35. Ullmann, *Medizin*, 30.

336. CC I, 124. Sezgin, *Geschichte*, vol. III, 37. Ullmann, *Medizin*, 27.

337. CC I, 143. Sezgin, *Geschichte*, vol. III, 36. Ullmann, *Medizin*, 27.

338. CC III, 210. Sezgin, *Geschichte*, vol. III, 33. Ullmann, *Medizin*, 29.

339. CC II, 56.

340. CC I, 202. Sezgin, *Geschichte*, vol. III, 32.

341. CC I, 165, 200; CC IV, 44 (Galen is not mentioned, so this may be a direct quote). Sezgin, *Geschichte*, vol. III, 34.

referenced, but only through the works of Galen, and therefore Ibn Jumay's knowledge of them was likely to be only second-hand.

Dioscorides' (d. ca. 90 AD) *K. al-adwiyah al-mufradah (On Simple Remedies)*³⁴² is quoted more than 80 times, mainly in Ibn Jumay's comments on the second book of the *Canon* which concerned medical substances.³⁴³ Interesting are Ibn Jumay's occasional remarks about using certain verified copies (*nusakh al-muṣaḥḥahah*)³⁴⁴ or old verified copies (*nusakh qadīmah muṣaḥḥahah*)³⁴⁵ of Dioscorides' *On Medicinal Substances*.

Other Greek authors quoted include the following (ca. 34 instances):

- Fūlūnis *tilmīdh* Buqrāt (= Polonius, a student of Hippocrates), *K. fī tadbīr as-ṣiḥḥah (On the Regimen of Health)*³⁴⁶
- Ahrun (= Ahron, fl. c. 6th century AD; all quotations seem to be taken from *al-Ḥāwī*)³⁴⁷
- Aristāṭālīs (= Aristotle), *K. al-Ḥayawān (Book on Animals)*³⁴⁸
- Iskandar (= Alexander (of Tralles), fl. c. 6th century AD), *Kunnāsh al-kabīr (Large Compendium)* (cited via *al-Ḥāwī*)³⁴⁹
- Urībāsiyūs (= Oribasius, fl. 4th century AD)³⁵⁰
- Falūs, Fīlūs, Bawlus (= Paul of Aegineta, fl. c. 640s AD), *Kunnāsh (Compendium)*³⁵¹
- Rufus (fl. c. 100 AD)³⁵²

342. Sezgin, *Geschichte*, vol. III, 58ff. Ullmann, *Medizin*, 257ff.

343. CC II, 7, 10, 11, 12, 12, 14, 15, 17, 24, 26, 29 (2x), 30, 32, 35, 36, 40, 42, 43, 46, 51, 53, 63, 71, 75, 76, 79, 82 (2x), 85, 86, 89 (2x), 92, 95 (2x), 96, 104 (2x), 111, 121, 122 (2x), 127, 128, 135, 136, 139, 142, 143, 152, 153, 155, 156, 157 (3x), 161 (8x), 163, 166, 171, 174, 179, 183, 184, 185 (2x), 186 (2x), 187, 188, 191, 198, 204, 205, 212 (2x), 215 (2x). CC III, 85, 210, 251, 256. CC IV, 106.

344. CC II, 11, 30, 35, 36, 186.

345. CC II, 212.

346. CC I, 122.

347. CC III, 98, 103. Sezgin, *Geschichte*, vol. III, 166. Ullmann, *Medizin*, 323.

348. CC I, 50, CC II, 33, CC III, 269, 334. Sezgin, *Geschichte*, vol. III, 349f.

349. CC III, 268 and CC III, 256 (which mention a book within the *Kunnāsh*). Sezgin, *Geschichte*, vol. III, 162f. Ullmann, *Medizin*, 85.

350. CC II, 8, 11, 25?, 45, 82 (via *Ḥāwī*), 150 (via Ibn Samjūn). Sezgin, *Geschichte*, vol. III, 152. Ullmann, *Medizin*, 83.

351. CC I, 266; CC II, 8, 30, 46, 59, 139; CC III, 72, 78, 80, 170, 369; CC IV, 88. Sezgin, *Geschichte*, vol. III, 168. Ullmann, *Medizin*, 86f. For a translation see Aegineta, *Seven Books*.

352. CC I, 199 (via ar-Rāzī), CC II, 130, 158. Ullmann, *Medizin*, 71f.

- ‘Authors of the Alexandrian Jawāmī’ (*aṣḥāb al-jawāmī*)³⁵³

Whether Ibn Jumay‘ had direct access to Arabic translations of these Greek treatises is uncertain. Most were probably known only second-hand and would not have formed volumes found in his library.

(b) *Medical treatises composed in Arabic*

For Ibn Jumay‘ the most important source originally written in Arabic was ar-Rāzī’s *al-Kitāb al-ḥāwī* (*The Comprehensive Book*), with more than 110 references.³⁵⁴ Similar to having multiple copies of the *Canon*, Ibn Jumay‘ seems to have had more than one copy of *al-Ḥāwī* (or single books thereof) as he remarked that he had checked a reference in “some copies of *al-Ḥāwī*”.³⁵⁵ Moreover, Ibn Jumay‘ appears to have had consulted other books by ar-Rāzī as well. The *Maqālah fī at-Ṭīn an-Naysābūrī* (*Treatise on the Clay of Nishapur*) is mentioned (CC II, 106) and Ibn Jumay‘ vaguely remarked that something can be found in ‘some of his (ar-Rāzī’s) books’ (CC II, 49).

Other Arabic medical writers employed by Ibn Jumay‘ include (listed chronologically; ca. 122 instances):

- Abū Jurayj (ar-Rāhib) (fl. c. 2/8. century)³⁵⁶
- Abū ‘Ubayd Abū Zayd (= Abū ‘Ubayd al-Qāsim b. Sallām, d. 224/838)³⁵⁷

353. CC I, 83, CC I, 77 (*K. fī muṣṣal al-rukbah*), CC I, 82 (*K. at-Tashrīḥ aṣ-Ṣaghīr*).

354. CC I, 104, 119, 165, 194, 197, 199, 203, 207, 213, 259, 270. CC II, 10, 11, 14, 15, 20, 30, 32, 34, 35, 37, 46, 48, 49, 53, 54, 58, 60, 67, 82, 87, 89, 90, 92, 94, 95, 100, 101, 102, 106, 116, 117, 129, 131, 133, 139, 145, 149 (2x), 151, 153, 155, 158, 169, 185, 186, 187, 189, 203, 209, 212, 217. CC III, 35, 51, 54, 61, 66, 67, 68, 69, 79, 80, 86, 96, 100, 103, 124, 125, 127, 132, 132, 153, 162, 164, 171 (2x), 194, 198, 199, 216, 253, 267, 268, 277, 279, 280 (2x), 313, 316, 342, 347, 348, 352, 365, 366, 369. CC IV, 9, 13, 20, 21, 22, 45, 49, 66, 91, 102. At times, Ibn Jumay‘ cites certain books from *al-Ḥāwī*: *Ṣaydalāh at-ṭibb min al-Ḥāwī* in CC II, 15, 58, 67, 94, 102, 139, 153, 158; *K. Istīnbat al-asmā’ min al-Ḥāwī* in CC II, 48, 54, 82, 133, 145, 149, 155, 212; *K. ad-Dawiyah al-mufradah min al-Ḥāwī* in CC II, 149, 151, 189.

355. CC II, 10. Another reference to Ibn Jumay‘ using multiple copies of *al-Ḥāwī* is CC III, 280 in which he remarks that he found a certain passage ‘in one copy’ of *al-Ḥāwī*.

356. CC II, 8, 11, 67 (all appear to be quoted via *al-Ḥāwī*). Sezgin, *Geschichte*, vol. III, 208f.

357. CC I, 60, 140, 200 (al-Gharīb al-muṣannaf), 234, 256, CC III, 61 (al-Gharīb al-muṣannaf), 164. Sezgin, *Geschichte*, vol. III, 348, 363ff.

- Ibn Māsawayh (= Abū Zakarīyā' Yūḥannā Ibn Māsawayh, d. 243/857)³⁵⁸
- Abū Ḥātim Sahl ibn Muḥammad as-Sijistānī (d. 250/864), *K. Khalq al-Insān (Creation of Man)*³⁵⁹
- Thābit ibn 'Umar (?), *K. Khalq al-Insān (Creation of Man)*³⁶⁰
- Sābūr Ibn Sahl (d. d. 255/869), *Aqrābādhīn (Formulary)*³⁶¹
- Ibn Sarābiyūn (fl. c. 256/870), *Kunnāsh (Compendium)*³⁶²
- Ḥunayn ibn Ishāq (d. 260/873)³⁶³
- Ḥubaysh ibn al-Ḥasan (called al-A'sam, fl. c. 246/860; he was a nephew of Ḥunayn ibn Ishāq)³⁶⁴
- Yūnus (probably Yūnus al-Ḥarrānī, fl. 3/9th century), *Aqrābādhīn (Formulary)*³⁶⁵
- Ishāq ibn 'Imrān (d. 296/907)³⁶⁶
- *K. at-Takmil* (only a book title is given by Ibn Jumay', but this is likely to be *Kitāb at-takmil fī al-adwiyah al-mufradah (The Perfect Book on Simple Remedies)* by Abū al-Faraj al-Bālisī (d. 334/946))³⁶⁷
- Ishāq ibn Sulaymān al-Isrā'īlī (d. c. 320/932 or 343/955?)³⁶⁸
- Ibn Juljul or Sulayman ibn Ḥasān (= Abū Dāwūd Sulaymān ibn Ḥasān ibn Juljul al-Andalusī, fl. late 10th century)³⁶⁹
- at-Tamīmī (= Abū 'Abdallāh Muḥammad ibn Aḥmad ibn Sa'īd at-Tamīmī, fl. 4/10th c.), *Murshid (The Guide)*³⁷⁰
- 'Alī ibn al-'Abbās al-Majūsī (fl. c. 372/983), *K. Malakī (The Royal Book)*³⁷¹

358. CC II, 8, 94, 129 (all via al-Ḥāwī). Sezgin, *Geschichte*, vol. III, 231ff. Ullmann, *Medizin*, 112f.

359. CC I, 60, 76, 77, 105, 223, CC II, 83, CC III, 67, 112, 159. Sezgin, *Geschichte*, vol. III, 367f.

360. CC I, 60, 77, CC II, 83, CC III, 150, 159, 203. I was unable to identify Thābit ibn 'Umar. There is a certain Abū al-Ḥasan Sa'īd ibn Hibat Allāh (d. 495/1101) who wrote a *Maqālah fī Khalq al-insān* but it is not clear whether or not this is the treatise Ibn Jumay' is referring to. See Ullmann, *Medizin*, 161 and Ibn Abī Uṣaybī'ah, *Uyūn* (ed. Müller), vol. I, 254.

361. CC III, 33. CC V, 12, 19, 22, 23, 30. Sezgin, *Geschichte*, vol. III, 244. Ullmann, *Medizin*, 300f.

362. CC I, 266; CC III, 60, 72, 309. Sezgin, *Geschichte*, vol. III, 240-242. Ullmann, *Medizin*, 102f. Sezgin suggests that Ibn Sarābiyūn died ca. 250/864; according to Pormann, and Savage-Smith, *Medicine*, he was active in the 870s. See also Pormann, *Sarābiyūn*, 234-236.

363. CC I, 200; CC II, 14 (via Ibn Samjūn). Sezgin, *Geschichte*, vol. III, 247-256. Ullmann, *Medizin*, 115ff.

364. CC II, 8, 138, 153 (all seem to be quoted via al-Ḥāwī). Sezgin, *Geschichte*, vol. III, 265ff. Ullmann, *Medizin*, 119.

365. CC III, 56, 69, 133, 266, 348. Sezgin, *Geschichte*, vol. III, 258.

366. CC II, 8, 49, 80, 141, 186. Sezgin, *Geschichte*, vol. III, 266-267. Ullmann, *Medizin*, 125f.

367. CC II, 49, 50, 61, 88, 94. Ullmann, *Medizin*, 163.

368. CC I, 203 (*K. fī al-Bawl*); CC II, 8, 11, 47 and 48 (*K. fī al-aghdiyah*), 150, 177. Sezgin, *Geschichte*, vol. III, 296. Ullmann, *Medizin*, 137f.

369. CC II, 14, 19, 163 (all via Ibn Samjūn); CC II, 35, 186 ('The book in which he mentions the drugs not mentioned by Dioscorides' = *Maqālah fī dhikr al-adwiyah allatī lam yadhkurhā Diyusqūridis fī kitābihi mim mā yusta'malu fī ṣinā'at at-ṭibb*); CC V, 15. Sezgin, *Geschichte*, vol. III, 309. Ullmann, *Medizin*, 229f.

370. CC II, 14, 19, 48, 50, 66, 68, 82, 91, 99, 113, 139, 155, 169, 200; CC III, 105, 229; CC V, 14. Sezgin, *Geschichte*, vol. III, 317f. Ullmann, *Medizin*, 269f.

371. CC I, 225. Sezgin, *Geschichte*, vol. III, 320-322. Ullmann, *Medizin*, 140ff.

- az-Zahrāwī (fl. c. 390/1000)³⁷²
- Ibn Samajūn (fl. c. 390/1000), *K. fī al-adwiyah al-mufradah (On Simple Remedies)*³⁷³
- Ibn Riḍwan (d. 453/1061)³⁷⁴
- Ibn Wāfid (d. 460/1068), *K. al-adwiyah al-mufradah (On Simple Remedies)*³⁷⁵
- Abū Ḥanīfah (= Abū Ḥanīfah Aḥmad ibn Dāwūd ad-Dīnawarī)³⁷⁶
- Ibn Janāḥ (= Abū al-Walīd Marwān ibn Janāḥ, Jewish physician, d. c. 431/1040), *Kitāb at-talkhīs (The Abridged Book)*³⁷⁷
- Ibn Jazlah (= Yaḥyā ibn ʿĪsā ibn Jazlah, d. 493/1100), *Minhāj al-bayān (The Clear Path)*³⁷⁸
- Ibn Zuhr al-Andalusī (d. 557/1162)³⁷⁹

(c) *Ibn Sīnā*

Ibn Jumayʿ was aware that the *Canon* was not the only treatise in which Ibn Sīnā talked about issues relating to medicine. In order to explain certain passages of the *Canon*, he referred more than 25 times to Ibn Sīnā’s *Shifāʿ (The Healing)*.³⁸⁰ Ibn Jumayʿ’s library therefore included one copy of the *Shifāʿ* and at least three copies of the *Canon* as will be shown below in chapter two.

(d) *Ibn at-Tilmīdh*

Ibn at-Tilmīdh’s marginal glosses are another important source for Ibn Jumayʿ when commenting. Even though in the preface Ibn Jumayʿ showed himself to be very critical of Ibn

372. CC I, 4. Sezgin, *Geschichte*, vol. III, 323-325. Ullmann, *Medizin*, 149ff.

373. CC I, 252; CC II, 14 (2x), 19, 33, 49, 64, 80, 116, 118, 119, 141, 150, 163, 202, 212; CC III, 195, 266, 279; CC IV, 70. Sezgin, *Geschichte*, vol. III, 316f. Ullmann, *Medizin*, 267.

374. CC I, 47; CC II, 114 (*K. Ḥānūt at-Ṭabīb*), 202; CC IV, 115. Ibn Abī Uṣaybiʿah, *ʿUyūn (ed. Müller)*, II, 99-105. Ullmann, *Medizin*, 158ff.

375. CC II, 117, 177, 186, 217. Sezgin, *Geschichte*, vol. III, 228. Ullmann, *Medizin*, 273.

376. CC II, 50, 64 (via Ibn Janāḥ and Ibn Samjūn, respectively). Vajda, *Ibn DJanāḥ*. Ullmann, *Medizin*, 257.

377. CC II, 50, 52, 70; CC IV, 31; CC V, 34. Vajda, *Ibn DJanāḥ*. Ullmann, *Medizin*, 272, 320.

378. CC I, 252; CC II, 12, 14, 23, 33, 50, 58, 116, 158; CC V, 11. Brockelmann, *Geschichte (second edition)*, vol. I, 485 (639). Ullmann, *Medizin*, 160.

379. CC P, 1; CC J, 1; CC III, 18. Arnaldez, *Kātib Čelebi*. Ullmann, *Medizin*, 162ff.

380. CC I, 16 (*K. Burhān min ash-Shifāʿ*), 19 (*K. Burhān min ash-Shifāʿ*), 25, 27, 32 (*K. an-nabāt min ash-Shifāʿ*), 44, 48, 50, 51, 52, 55, 70, 71, 72, 73, 82, 83, 88, 102, 149, 180, CC III, 240 (*K. al-Ḥayawān min ash-Shifāʿ*), 285, 329, 337.

at-Tilmīdh's glosses,³⁸¹ he quoted them more than 100 times in his commentary.³⁸² However, he rarely quoted Ibn at-Tilmīdh as the author of the glosses.³⁸³ Instead, he usually referred to the 'sāhib' (author) of the *Ḥawāshī 'Irāqīyah* (*Iraqi Glosses*), as if he were unaware of the author's name and only knew of their provenance (Ibn at-Tilmīdh was from Baghdad). Why Ibn Jumay' did so is uncertain. Perhaps the glosses were so famous that everyone referred to them as the *Ḥawāshī 'Irāqīyah* and Ibn Jumay' simply followed this convention. In any case, Ibn at-Tilmīdh's glosses were available to Ibn Jumay' through at least one *Canon* copy which included these glosses in the margins.

(e) *Dictionaries and unidentified sources*

Ibn Jumay' had at least two dictionaries in his library. Most important for Ibn Jumay' was *Tāj al-lughah wa-ṣṭḥāḥ al-'arabiyyah* (*The Crown of Language and the Correct Arabic*) by the celebrated Arabic lexicographer Jawharī (d. c. 397/1007) from Nishapur,³⁸⁴ but he also quoted *Mujmal fī al-lughah* (*The Summary of Language*) by Ibn Fāris.³⁸⁵

There are also other treatises or authors cited which are either difficult to identify or do not belong to the medical genre (ca. 16 instances):

- *Sharḥ fī al-Iskandar al-Afrūdīsī* (*Commentary on Alexander Aphrodisias*) (author unknown)³⁸⁶
- *K. at-Tashrīḥ* (*Book on Anatomy*) (unidentified; this could be Galen)³⁸⁷

381. See below p. 95.

382. CC I, 1, 4, 45, 48, 71, 73, 74, 82, 83, 156, 163, 168, 169, 177, 214, 215, 235, 252, 262, 263, 267, 274, 288. CC II, 20, 21, 31, 44, 47, 48, 50, 62, 69, 71, 77, 85, 91, 102, 107, 114, 115, 131, 133, 141, 157, 200. CC III, 14, 27, 37, 45, 48, 53, 60, 63, 70, 71, 73, 81, 82, 90, 91, 93, 126, 148, 164, 213, 216, 244, 245, 246, 248, 250, 261, 277, 297, 303, 304, 308, 328, 333, 336, 344, 346, 356, 363, 380. CC IV, 2, 3, 17, 24, 60, 84, 89, 90, 95, 100, 106, 110, 117, 122, 123. CC V, 8, 20, 24, 26, 29, 33, 34, 35, 36.

383. See CC III, 297.

384. See above note 96.

385. See below p. 117ff. for passages in the *Canon* commentary in which Ibn Jumay' quoted these two dictionaries.

386. CC II, 135. For Alexander of Aphrodisias, see Ullmann, *Medizin*, 65, 67, 94, 86, 171.

387. CC I, 89.

- Abū Naṣr al-Fārābī (d. 339/950)³⁸⁸
- Ibn Khālawayh (d. 370/980-1 in Aleppo, grammarian)³⁸⁹
- Ibn as-Sikkīt (apparently a grammarian)³⁹⁰
- Ibn Nuqāsh (?)³⁹¹
- Ibn Aḥmad at-Taraʿādhir (?)³⁹²
- *K. Anūlūṭīqā* (*Book of Analytics*, by Aristotle?)³⁹³
- *K. al-Qiyās* (perhaps *Analytica priora* by Aristotle)³⁹⁴
- *K. al-Lawn min al-amzāj* (*Book on the Colours from Humours*) (?)³⁹⁵

It is clear from the lists presented in this chapter that Ibn Jumayʿ had access to a wide range of sources. In comparison to Ibn Sīnā, who only rarely cited his sources, Ibn Jumayʿ made it one of his priorities to provide references to the majority of passages he discussed in his *Canon* commentary. How Ibn Jumayʿ made use of this material as an indispensable tool to comment on the *Canon* will be the subject of the next chapter, which introduces Ibn Jumayʿ at work.

388. CC I, 8, 21 (*K. al-Ḥurūf?*), 56. Sezgin, *Geschichte*, vol. III, 298.

389. CC III, 334.

390. CC I, 256.

391. CC I, 264.

392. CC III, 158.

393. CC I, 22.

394. CC I, 23.

395. CC I, 30.

II. Methodology of the commentator

Ibn Jumay‘*’s Canon* commentary provides us with insights into the working methods of a mediaeval physician. This chapter presents a categorisation of these methods according to the sources Ibn Jumay‘ employed. In order to comment on the *Canon*, Ibn Jumay‘ (1) consulted different copies of the *Canon*, (2) consulted treatises other than the *Canon*, and (3) relied on sources which were not written, such as oral sources or personal observations. Methods one and two are similar because Ibn Jumay‘ used written sources in both cases. Yet, comparing *Canon* copies was extremely important to Ibn Jumay‘ and thus deserves to be mentioned as a separate method. As we will see, one or a combination of these three methods can be found in any given comment.

1. Comparing Canon copies

In his commentary, Ibn Jumay‘ compared variant readings of several *Canon* copies. With over 220 instances,³⁹⁶ such comparisons are a characteristic feature of the commentary and there appears to be no other mediaeval physician writing in Arabic who made it his task so rigorously to record a substantial amount of textual variants and to discuss them in his treatise. Copyists (among them physicians who copied medical treatises for themselves) did occasionally record variants in the margins of the texts they copied, and Ibn Jumay‘ was no

396. CC I, 4, 16, 31, 32, 37, 39, 41, 42, 46, 48, 51, 52, 53, 59, 62, 68, 70, 76, 80, 82, 91, 98, 99, 111, 118, 119, 122, 125, 128, 146, 152, 156, 158, 163, 165, 166, 168, 169, 196, 200, 201, 208, 210, 211, 214, 215, 218, 220, 224, 225, 228, 232, 238, 242, 244-246, 260, 267, 275, 276. CC II, 3, 4, 5, 18, 20, 28, 30, 35, 36, 37, 39, 45, 46, 48, 60, 67, 77, 98, 104, 108-111, 116, 119, 121, 124, 125, 128, 129, 131, 133, 135, 140-142, 150, 158, 161 (5 instances), 165, 168, 169, 173, 177, 178, 180, 187, 189, 202, 207, 209, 210, 212, 215, 216. CC III 2, 3, 29, 35, 36, 37, 39, 43, 45, 58, 60, 65, 66, 72, 75, 89, 106, 112, 113, 116, 117, 122, 129, 141, 144, 145, 146, 148, 151, 152, 155, 158, 166, 169, 172, 182, 183, 186, 190, 192, 193, 195, 196, 200, 205, 212, 214, 230, 231, 232, 233, 240, 244, 245, 247, 253, 254, 256, 269, 272, 281, 287, 292, 301, 304, 319, 324, 329, 333, 342, 349, 350, 365, 367, 380, 381. CC IV, 3, 6, 8, 15, 18, 21, 30, 33, 40, 41, 47, 49, 50, 62, 65, 67, 70, 80, 90, 122. CC V, 1, 2, 3, 9, 13, 20, 23, 27, 31, 35.

different in this respect, for several short comments in his *Canon* commentary bear witness that they originated as glosses which Ibn Jumay' recorded in the margins of his *Canon* copy.³⁹⁷ Yet, Ibn Jumay' found his glosses concerning different variants to be important enough to constitute portions of the main body of his commentary. What were the reasons for his almost religious zeal to document and explain textual variants? Were his text-critical methods fundamentally different from those of his contemporaries working in fields other than medicine?

(a) *Controversies surrounding the Canon*

The critics

To understand why Ibn Jumay' wished to compare copies of the *Canon*, we need to take a closer look at the controversy surrounding the *Canon*. Ibn Jumay' wrote the *Canon* commentary at the request of a noble-man who had mentioned certain criticisms raised against the *Canon*. We cannot be sure if this noble-man ever existed, as it was a common literary device to address a fictitious addressee in order to expound a topic. Yet, the controversies alluded to were real and the introduction to the commentary is devoted to them. The treatise opens abruptly with the *Canon* condemnation by Ibn Zuhr (d. 557/1162):

My master, may God lengthen your days, when you consulted me in regard to the book of the *ra'īs* (master) Abū 'Alī ibn 'Abd Allāh ibn Sīnā which is called the *Canon*, you recounted what you have been told regarding the learned and excellent medical practitioner of Andalusia [Ibn Zuhr],³⁹⁸ namely that a merchant had brought from Iraq a copy of the *Canon* which had been subject to exceeding improvement of its [text] [i.e. as it had been collated with sound copies of the *Canon*]. He presented it to him to curry favour. Ibn Zuhr had not encountered this book before, but when he examined it, he found fault with it and rejected it and did not put it into his library. He set about cutting off its margins on which he would then write a copy of prescriptions for the patients who would consult him.³⁹⁹ (CC P, 1)

397. See above p. 21.

398. Ibn Jumay' later (in CC J, 1) identifies this Andalusian physician as Ibn Zuhr (see below p. 91). He must have meant Abū al-'Alā' Ibn Zuhr as Ibn Abī Uṣaybi'ah cites Ibn Jumay''s account (CC P, 1) in his entry on Abū al-'Alā' (Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 64).

399. This is the first of three passages of the commentary which have actually been translated and

Ibn Zuhr's criticism of the *Canon* was not an isolated case. Ibn Jumay' refers to another criticism, namely that the *Canon* was not suitable for novices due to Ibn Sīnā's use of very technical terms, drastically abbreviated explanations, or explanations of certain issues by simply alluding to them. This was thought to be very misleading and dangerous for the novice:

You also mentioned that it has been said that this book is not appropriate for novices when studying medicine due to its containing unusual terms, philosophical notions, as well as due to its author adopting awkwardly expressed abbreviations (*al-ikhtiṣār ash-shadīd al-'ibārah*) and the indication and explanation of various notions through allusion and intimation. Furthermore, you have mentioned that the *Canon* contains matters for which Ibn Sīnā should be criticised and which, if left as they are, become fixed in the mind of the novice as they are and that this is misleading and harmful for him. (CC P, 2)⁴⁰⁰

Another argument against Ibn Sīnā which was recorded by Ibn Jumay' is that Ibn Sīnā had never actually been a physician, and that he simply engaged in copying extracts from medical textbooks, being rather 'illiterate' in the art of medicine:

There are certain people who accuse its author of not being among those who busy themselves with the art of medicine. They say that he is not one of those who applied themselves to a careful examination (*naẓar*) of the art of medicine before compiling a book on it. Moreover, they say that he is merely giving a condensed abstract of what is in the books of their masters [i.e. the eminent physicians such as Galen] whenever he undertakes to compose anything. His situation is therefore comparable to the situation of a stranger (*ḥāl al-gharīb*) and non-Arab (*ad-dakhīl*)⁴⁰¹ who makes mistakes when reading and writing (*aṣ-ṣaḥāfī*). For things happen to him which doubtlessly happen to anyone who is in such a situation (CC J, 4.1)

discussed in secondary literature. The translation is that of Savage-Smith, *Medicine*, 925-926, very slightly adapted here. See also the translation of Iskandar, *Wellcome Catalogue*, 35-36.

400. Ibn Jumay' refutes these arguments in CC J, 2 (edition of Arabic text presented in appendix). He explains that diligent novices will not be harmed by the *Canon*, especially if they have the support of knowledgeable teachers. Ibn Jumay' adds that the *Canon* is very useful for experts as well because it aids the advanced reader in recalling what he once used to know.

401. According to Lane, *dakhīl* ("a guest") is also used to denote a word that is "adventitious, not indigenous, to the language of the Arabs" (Lane, *Lexicon*, 860), hence my translation as "non-Arab".

The supporters

Ibn Jumay' informs us that certain Egyptians thought that the flaws were only found in one particular copy of the *Canon* and that these flaws were introduced when the work was copied in Egypt:

Some people of our land thought that what is in this book in the way of deficiencies, such as we have already mentioned, are a particular feature of only one copy of it. They attributed this to an incident which happened to the first copy that reached this land from Ibn Sīnā.

The incident is that an Iraqi merchant reached Egypt in the first days of Āmir⁴⁰² (*al-ayyām al-Āmiriyyah*) [i.e. in the year 495/1101], having with him a copy of the *Canon*. He happened to fall ill in Egypt and was treated by one of our famous physicians. When he recovered from his illness, he showed the book to the doctor one day and the doctor admired it and asked the merchant if he could buy it or copy it, but he refused. The merchant then travelled to the city of *Tinnīs*⁴⁰³ and he had the book with him. One day during this time, the doctor wrote to its [the city's] judge (*qāḍī*), as a result of which the judge requested the book from the merchant. Even though the merchant refused, there came to pass an agreement between the two and matters were negotiated so that the merchant would allow him to borrow the book for a few days and the merchant was not able to argue against this [arrangement]. So the judge took the book and separated it into sections and distributed them amongst copyists who then hastily copied them in the [limited] period of time. He then returned the original to its owner while the copy was sent to the physician, but he did not collate the copy with the original.

They say that from this copy were made the copies which we have, along with whatever deficiencies and such were contained therein. However, what they believe about this is not correct because after this happened, many copies of this book reached us from Syria and Iraq, and we found their condition to be just like the condition of the copies of the *Canon* which were in our possession [already]. (CC J, 5)

We cannot be sure about all details of this story, such as the possibility of a traveller refusing to let somebody copy his books or the practice of disassembling manuscripts to copy them more quickly. Such details are likely to be anecdotal, given the purpose of the story. Yet, there is no reason to assume that the suggested dating is wrong and, from a historical perspective,

402. This must refer to Abū 'Alī al-Āmir al-Manṣūr ibn al-Musta'li who reigned from 495/1101-524/1130. See Bosworth, *Islamic dynasties*, 63.

403. See Abū 'Abd Allāh Ya'qūb ibn 'Abd Allāh, *Mu'jam*, vol. 1, 882. For a map and history of *Tinnīs*, see *The Book of Curiosities*, <http://www.bodley.ox.ac.uk/bookofcuriosities> (book 2, chapter 14).

it is interesting to know that the *Canon* reached Egypt within approximately sixty years of Ibn Sīnā's death. The story is also interesting in terms of what it tells us about Ibn Jumay' and his critical approach: driven by his scholarly rigour, Ibn Jumay' checked other manuscripts of the *Canon* that he happened to receive and was therefore able to show that the conclusion of this story was incorrect. The shortcomings of the *Canon* were not introduced through it being copied in Egypt.

Other defenders of the *Canon* thought, according to Ibn Jumay', that its errors and mistakes were due to Ibn Sīnā not having revised his rough draft. Ibn Jumay' is not convinced by this theory either and counters it by suggesting that copyists were responsible for certain mistakes:

As for that which makes you believe that its author made a rough draft and did not revise it, one might say in response that many who support this view and find the idea attractive are prompted to do so by what is found within it which deserves criticism, even though most [of what deserves criticism] that occurs in technical books (*al-kutub al-'ilmiyyah*) stems from the unfaithfulness (*takhalluf*) of their copyist and is not due to their author. This is particularly the case with large books, due to the fact that those copying them are usually ignorant in the subject as well as too lazy to correct the text copied against the original because the texts are usually very long.⁴⁰⁴ Indeed, such things promote errors on the part of a copyist. It is far off the mark to say that things such as these stem from an author who revises what he has composed and polished.

This is especially true for the second book, which he wrote on simple remedies, for whatever may be in it in terms of confusions (*tashwīsh*), [erroneous] modifications (*taghyīr*), omissions (*naqṣ*), corruptions (*tahrīf*), truncating the explanation of an idea (*qaṭ' bi-bādī ar-ra'y*), quotations which are out of context (*tahāfut al-aqāwīl*),⁴⁰⁵ unwarranted abridgements of meaning (*al-ikhtisār al-mujhif bi-al-ma'nā*), as well as references to things which he has not mentioned and the insertion of that which does not prove him correct — as will be shown if we eventually get to it — his partisans have found no better excuse for him, none that would be

404. Lit. 'This is particularly the case with large books, due to the ignorance of their copyist in the subject being compounded by laziness preventing their correcting [against another copy] because of the great length of the books.'

405. Lit. 'Taking apart of quotations' (for this meaning of *tahāfata* see Lane, *Lexicon*, 2897). For instance, when commenting on the first book of the *Canon*, Ibn Jumay' accuses Ibn Sīnā for quoting Galen out of context (CC I, 188).

better suited for him, than that he made a rough draft but did not make a fair copy of it. (CC J, 3)

All criticisms or appraisals recounted by Ibn Jumay' suggest that a substantial number of people, whether in favour of the *Canon* or not, were aware of its flaws and shortcomings.⁴⁰⁶ Those who favoured the *Canon*, however, based their criticisms on assumptions regarding the textual transmission of the *Canon* rather than on errors made by Ibn Sīnā himself. The reason why some people were willing to accept or invent defences as they were recorded by Ibn Jumay' seems to have been Ibn Sīnā's stupefying aura which was mainly due to his success as a philosopher. Niẓāmī-i 'Arūḍī wrote in his Persian treatise *Chahār Maqālah* (*Four Discourses*) at around 550/1155 that everyone who finds fault with either Ibn Sīnā or Aristotle "ranked himself with madmen, and proved himself to be of the number of those who lack intelligence."⁴⁰⁷

Ibn Jumay': Between criticism and praise

Ibn Jumay' took a middle position between criticisms such as Ibn Zuhr's condemnation and attempts to present Ibn Sīnā's *Canon* (as it was originally composed) as perfect. He responded to Ibn Zuhr's criticism:

I say that whatever Ibn Zuhr relied upon when condemning and censuring the book of the *ra'īs*, it was an act of obvious injustice because this book, even though its author put into it some affected expressions (*al-kalām al-mutakallaf*) and far-fetched metaphors (*al-isti'ārāt al-ba'idah*) which are not connected with the sciences and [even though] there is in it, as we have said, a certain amount of ambiguity (*ibhām*), omission (*naqṣ*), misspelling (*taṣhīf*), contradiction (*ikhtilāf*), confusion (*tashwīsh*) and corruption (*tahrīf*) — in sum, many passages are to be criticised — it is nonetheless a book which encompasses the principles and rules of medicine in a way that other large compendia do not.

406. It is interesting to note that a comparable debate between Ibn Sīnā's proponents and adversaries cannot be found in the initial reception of the *Canon* in Europe where, after its introduction into university teaching curricula in the thirteenth century, it was only occasionally criticised in the following two hundred years. This might be due to the authority that was enjoyed by Arabic treatises which had only recently reached the Latin world. See Siraisi, *Avicenna*, 6.

407. See Browne, *Four Discourses*, 817.

Moreover, there is in it a certain amount of succinctness, brevity, good writing style, organisation and ease to find in it whatever one needs to find, all of which are lacking from other large compendia. Consequently, its great faultiness is offset by those [qualities] it possesses, and its mistakes and imperfection are easily tolerated because of them. In short, amongst all the large compendia (*kanānīsh*) we have, there is none which can take its place or fill the gap it has filled.⁴⁰⁸ (CC J, 1)

Thus, while Ibn Jumay' was well aware that the *Canon* had several shortcomings, he also stressed its advantages and concluded that it is the best large compendium (*Kunnāsh*) available.⁴⁰⁹ Yet, Ibn Jumay' did not simply defend the *Canon* nor did he unquestioningly accept the ideas of Ibn Sīnā's supporters. He rejected the rough draft theory as well as the explanation of the corruption of the Egyptian *Canon* copies. So instead of un-constructively condemning or uncritically supporting the *Canon*, Ibn Jumay' wrote what we might call a fair and balanced book review on one of the most comprehensive medical compendia of the middle ages.⁴¹⁰ One of his most important methods in accomplishing this task was the comparison of different *Canon* copies.

The controversy surrounding the reliability of a text and the enterprise to compare different manuscripts of the same treatise, were not novel. Similar controversies surrounded Jawharī's *Ṣiḥāḥ*, one of the most widely used Arabic dictionaries in the middle ages. Numerous treatises were devoted to criticisms of its shortcomings and the exposure of errors, while others tried to defend the *Ṣiḥāḥ* and to maintain Jawharī's reputation as an infallible authority. According to one tradition, Jawharī did not finish a fair copy of his dictionary and only reached the letter *Ḍād*. His pupil allegedly completed the treatise by copying the remaining dictionary entries from the rough draft, which led to the numerous errors later scholars detected in the *Ṣiḥāḥ*.

408. This is the second of three passages of the commentary which have been translated and discussed in secondary literature. The translation is that of Savage-Smith (Savage-Smith, *Medicine*, 925-926) which has been modified by the present author who was able to consult a manuscript (P) not available to Savage-Smith. See also Iskandar, *Wellcome Catalogue*, 35-36.

409. For Ibn Jumay's own compendium (*Irshād*) see above p. 44.

410. Already Iskandar has likened the commentary by Ibn Jumay' to 'an almost modern critical book-review of *Kitāb al-Qānūn*' (Iskandar, *Autograph*, 180).

Doubts regarding this tradition were first voiced by Yāqūt (d. 1229) in his *Irshād* because he knew that complete copies of the autograph existed and that, according to certain traditions, the entire dictionary had been handed down by Jawharī.⁴¹¹ In the case of the *Ṣiḥāḥ*, however, later commentators and lexicographers discussed variant readings in different manuscripts and not the early critics.⁴¹²

Ibn Jumay' was known for constantly consulting Jawharī's dictionary, and it is likely that he was aware of the controversies surrounding the *Ṣiḥāḥ*.⁴¹³ The rough-draft theory seems to have been a *topos* in the discussions of both the *Canon* and *Ṣiḥāḥ*, while seeking information about the author's autograph was common as well. The dispute surrounding the *Ṣiḥāḥ* perhaps influenced Ibn Jumay' to the extent that he tried to apply the same critical methods in his subject area by comparing several copies of the *Canon*.

(b) *Ibn Jumay's quest for an authentic copy of the Canon*

As the comparison of *Canon* copies was crucial for Ibn Jumay', he discussed in considerable detail how he was able to obtain a number of *Canon* copies and what he intended to do with them. This section will present all passages in which Ibn Jumay' informs us about how he was able to gain access to these copies.

As a court physician in Cairo, Ibn Jumay' had several advantages, such as being able to ask travellers for information which was otherwise not readily available. In the following passage,

411. Moreover, it was pointed out that there were also mistakes to be found in the first part of the dictionary which had been edited by the author himself. See Yāqūt, and Margoliouth, *Irshād*, vol. II, 226 ff., 266 ff., 356; vol. V, 107; vol. VI, 419 f.; vol. VII, 268.

412. Kopf, *al-Jawharī*.

413. For the *Ṣiḥāḥ* in general and how Ibn Jumay' employed it, see below p. 117.

Ibn Jumay' is told by a group of Iraqis about the *Canon* copy of the Iraqi physician Ibn at-Tilmīdh (d. 560/1165)⁴¹⁴ who had collated his copy with Ibn Sīnā's autograph:

I asked a group of eminent men who came to us from Iraq whether anyone in their land happened to have a copy of the *Canon* in the handwriting of its author and, if they happened to have one, whether it was a draft of which Ibn Sīnā had not made a fair copy, as it is said, or if he had indeed made a fair copy.

One of them told me that in a certain school located [in Iraq], there is a copy of the *Canon* in the handwriting of the author, although he was not certain about its condition [that is, whether it was a draft or not].

Another [Iraqi] recounted that it [the copy in Ibn Sīnā's handwriting] belonged to Abū al-Ḥasan Hibat Allāh ibn Ṣā'id al-Baghdādī,⁴¹⁵ the physician who is known as Ibn at-Tilmīdh. He [the Iraqi] mentioned that Ibn at-Tilmīdh had corrected it with reference to the autograph (*dustūr*) of the author, examined it, and annotated it with glosses (*ḥawāshī*). He [also mentioned] that this copy is known for its soundness and that it was sold in Baghdad after Ibn at-Tilmīdh's death and brought to Syria ...⁴¹⁶ (CC J, 6)

Even though the travellers did not possess a copy of the *Canon*, they informed Ibn Jumay' about Ibn at-Tilmīdh's allegedly very sound copy that included glosses (*ḥawāshī*) and had ended up in Syria. This passage is the only other reference to the rough-draft-theory, which Ibn Jumay' seems to have rejected as an excuse for Ibn Sīnā's shortcomings.⁴¹⁷ When meeting the Iraqi travellers, Ibn Jumay' was still seeking further evidence regarding the final state of the *Canon*, but Ibn at-Tilmīdh's copy was the closest he could get to Ibn Sīnā's autograph.

The Iraqi Copy

Ibn Jumay' then related his encounter with an unnamed Iraqi who brought a *Canon* copy with him to Egypt. This Iraqi, apparently a physician, had read his copy in front of Ibn at-Tilmīdh

414. For his works and biographies, see Iskandar, *Autograph*, 177.

415. Iskandar gives his name as Ṣā'id ibn Hibat Allāh (ibn Ibrāhīm Abū al-Ḥasan Amīn ad-Dawlah ibn at-Tilmīdh), but Ibn Jumay' consistently gives the name as Hibat Allāh ibn Ṣā'id.

416. The last paragraph has been edited and translated by Iskandar, *Wellcome Catalogue*, 38. The passage continues in the manuscript with the remark that some people believed this copy to be a copy by Abū al-Ghanāyim who had collated his copy with that of Ibn at-Tilmīdh. This suggests that the Syrian copy could only have been a copy of Ibn at-Tilmīdh's copy.

417. For the other passage see CC J, 3 on page 90.

and had copied certain glosses (*ḥawāshī*) from Ibn at-Tilmīdh's exemplar which he thought were in his handwriting:

Then there came to our land in the days of Nāṣir (*ayyām an-Nāṣiriyyah*) [564-589/1169-1193]⁴¹⁸ one of the eminent men of Iraq. He had with him a copy of this book which he stated to have read in front of Hibat Allāh ibn Ṣā'id [Ibn at-Tilmīdh], whom we mentioned earlier and who had corrected his copy against the autograph (*dustūr*) of the author Ibn Sīnā.⁴¹⁹ The Iraqi had copied certain glosses (*ḥawāshī*) he found in the first book of Ibn at-Tilmīdh's copy, and they were in Ibn at-Tilmīdh's handwriting after the Iraqi had considered them carefully.⁴²⁰

I was very happy about this and, with this copy, I hoped to succeed in correcting the deficiency [of my copy]. My desire to see it became very strong due to my wish to correct the book and my longing to occupy myself through the [help of] Abū al-Ḥasan Hibat Allāh ibn Ṣā'id [Ibn at-Tilmīdh] with his statements regarding the different divisions (*funūn*) of medical science which he had perfectly mastered. I also desired to see it because I had not found anything else written by him except epigrams of poetry attributed to him which were recited by some groups from Syria, and they were very beautiful poetry.

When I found this copy of the aforementioned book, I studied it attentively and the glosses which came with it, but I found it to be just like the saying: 'What you hear about a Mu'aydī is better than what you actually see of him.' As for the copy, I did not find much difference between this copy and the copy which is with us [Ibn Jumay's Egyptian copy of the *Canon*]. (CC J, 7)

As for the glosses, I found obscure and difficult passages in the discourse of Ibn Sīnā which were worthy of annotations (*ḥawāshī*) but were devoid of them, overlooked, left out and neglected. Ibn at-Tilmīdh did not point out their dubious peculiarities (*ashkāl*) and difficulties, aside from what he [chose to] take up and explain, such as his discourse on the definition of medicine, that it is a science (CC J, 8.1)

418. An-Nāṣir refers to Saladin, i.e. Abū al-Muẓaffar Ṣalāḥ ad-Dīn al-Malik an-Nāṣir I Yūsuf ibn Najm ad-Dīn Ayyūb ibn Shādhī who ruled 564-589/1169-1193. Cf. Bosworth, *Islamic dynasties*, 70.

419. At first sight it might appear not entirely clear if the Iraqi collated his copy with the one of Ibn at-Tilmīdh (who had collated it with the autograph) or if the Iraqi's copy was collated with the autograph of Ibn Sīnā (see also CC J, 11 for the same wording). The Arabic *wa-saḥḥahaḥā* is ambiguous as it might refer to the Iraqi or to Ibn at-Tilmīdh. The latter is most likely because the phrase 'he had corrected it with the autograph of the author' always refers to Ibn at-Tilmīdh in other passages. See CC J, 6 and CC J, 8.

420. Lit. 'He [the Iraqi] [had] copied the glosses he found in the first book of the copy [of Ibn at-Tilmīdh] and they were in his [Ibn at-Tilmīdh's] handwriting after he [the Iraqi] had considered them carefully.'

In short, Ibn Jumay‘ was disappointed that this Iraqi copy was not very different from his own and expressed his frustration with an Arabic proverb.⁴²¹ Ibn Jumay‘ was particularly critical of the glosses Ibn at-Tilmīdh had made. His criticism is a common *topos* in introductions, as an author needs to explain why his treatise supersedes those of his predecessors.⁴²² Even though Ibn Jumay‘ wrote the first commentary and not only marginal glosses, he still called his comments *ḥawāshī* and thus needed to justify why his *ḥawāshī* were better than those of Ibn at-Tilmīdh.

The Syrian Copy

Ibn Jumay‘ continued with the story about yet another copy which an eminent Syrian physician brought to Cairo. The only difference in this copy was that it contained Ibn at-Tilmīdh’s glosses on the entire *Canon* and not just on the first book:

Then a man came to us from the eminent physicians of Syria in possession of yet another copy of the first book of the *Canon*, including the exact same glosses mentioned before. There was not even a slight improvement in this copy, which was similar in every way to the Iraqi copy. As for the other numerous glosses on its remaining four books — attributed to Ibn at-Tilmīdh — their condition was that of the comments on the first book [that is, they were also disappointing]. (CC J, 9)

This statement is followed by a rather lengthy discussion Ibn Jumay‘ had with the Syrian owner of this copy. The latter confessed that Ibn Jumay‘ was correct about his criticisms regarding Ibn at-Tilmīdh’s glosses but he tried to explain this by saying that the comments were actually made by Ibn at-Tilmīdh’s ignorant students.⁴²³ Ibn Jumay‘ argued against this explanation and, amongst other things, pointed to the fact that the comments were in Ibn at-

421. The proverb refers to the story of a man who came to a certain tribe of which he had heard many a great thing. This man, however, was deeply disappointed when he saw that his expectations of the Mu‘aydī were not met by his actual appearance. On this proverb, see Lane, *Lexicon*, 1971.

422. For a discussion of this literary *topos* (especially in medical literature) see Chipman, *World of Pharmacy*, 48. See Qāḍī, *Books*, 45 for the *topos* of replacing earlier works.

423. CC J, 10 has already been mentioned. See above, p. 19.

Tilmīdh's own handwriting.⁴²⁴ As we know today, Ibn at-Tilmīdh's copy of Ibn Sīnā's *Canon* did indeed include glosses, occasionally followed by the remark "in the handwriting (*khatt*) of Ṣā'id ibn at-Tilmīdh", for it is preserved in a manuscript now in the Biomedical Library at UCLA in Los Angeles.⁴²⁵

Ibn Jumay's method to 'correct the Canon and clarify the concealed'

After recounting how he looked for the most authentic and useful copies of the *Canon*, Ibn Jumay' explained how he used all the copies at his disposal in order to start his task of correcting the text of the *Canon*:

When the search for this book came to its very end and I was so exhausted that I had given up correcting my copy of the *Canon* on the basis of a single accurate source, I [had] assembled several copies of the *Canon* and [set out to] compare my copy [i.e. one of the copies made in Egypt]⁴²⁶ with all of these copies, among which was the copy that its owner stated to have read in front of Ibn at-Tilmīdh who had corrected it with the autograph (*dustūr*) of the author Ibn Sīnā.⁴²⁷

Of the statements (*aqāwīl*)⁴²⁸ contained in the *Canon*, what I found in my copy to be in agreement with the other copies⁴²⁹ but which was not correct, I sought to correct by consulting the source from which Ibn Sīnā, the author of the book, had taken the statements of the ancients and the masters of those writing [medical] compositions. And indeed, the version given by Ibn Sīnā contained oversights, misspellings, or corruption through his transcription (*naql*) of the statements. Therefore, whenever I found the correct statement itself, I corrected Ibn Sīnā's flawed statements on the basis of their source.⁴³⁰

Whenever I could not locate the [source of a] statement, I sought to correct it using the

424. See above, p. 95.

425. Iskandar, *Autograph*, 181 and 216. See also Iskandar, *Descriptive list*. The collection has now been moved to the Biomedical Library and is no longer in the University Research Library. See also above p. 44.

426. The reference to the copies made in Egypt and which Ibn Jumay' possessed can be found in CC J 5, see p. 89 above.

427. For this translation, see note 419 above.

428. By 'statement' I do not imply original statements by an author but rather everything an author writes, including quotations, paraphrases or other modifications of what other authors have written.

429. Lit. 'With them' (*'alayhi*) which refers to *jami'uhā*.

430. Lit. 'So when I found the [correct statement] itself and indeed it [the version given by Ibn Sīnā] contained oversights, misspellings, or corruption through his [Ibn Sīnā's] transcription (*naql*) [of the statements], I corrected those statements on the basis of it [the source].'

principles of the medical art which were unanimously agreed upon and the rules handed down from the authorities. I sought to do this to the best of my abilities. Whenever I found my copy not to be in agreement with the other copies, I tried to find a sound reading in these copies, or one most approaching soundness which was most similar and closest to the premises of the sources of the ancients and the general principles of the medical art.⁴³¹ (CC J, 11)

The passage informs us how Ibn Jumay‘ himself described his working methods. He mentioned (1) consulting different copies of the *Canon*, (2) tracing the sources of the *Canon* in order to correct it, and (3) relying on the general principles of the medical art. Methods two and three will be discussed in sections two and three of this chapter. As for the first method, Ibn Jumay‘ informs us that he was faced with two possibilities when comparing different *Canon* copies:

1. All copies agreed regarding a statement. If a statement seemed wrong to Ibn Jumay‘, he tried to find the source which Ibn Sīnā had used when formulating the statement. If Ibn Jumay‘ could not find the source, he reverted to using the commonly accepted principles in the field.
2. The copies did not agree. In this case, Ibn Jumay‘ selected the sound reading (if there was one) or that reading most in agreement with the general principles of the art.

The different *Canon* copies obtained by Ibn Jumay‘ are thus central in his task of commenting. We can infer from this and other passages that Ibn Jumay‘ had at least three copies at his disposal, i.e. (1) his own Egyptian copy, (2) the Iraqi copy and (3) a copy containing the glosses on all five books of the *Canon*:

431. Lit. ‘And what I found in this [Egyptian] copy not to be in agreement [with the other copies], from among them [i.e. from all the copies] I selected the sound [reading], if I found one, or the one most approaching soundness and most similar and closest to the premises of those sources [of the ancients] and the general principles [of the medical art].’

1. When criticising the story of how the Egyptian copies of the *Canon* got corrupted, Ibn Jumay‘ seemed to have compared more than three copies as he stated that he compared the *copies* from Iraq and Syria with the “*copies* which were in our possession”.⁴³² The latter copies were made from the *Canon* which reached Egypt at the beginning of the twelfth century. One of these Egyptian copies must have been Ibn Jumay‘’s personal copy which is mentioned here in CC J, 11.
2. As for the Iraqi copy, Ibn Jumay‘ must have copied it or bought it, as he stated that among the accumulated copies was also the copy which had been read in front of Ibn at-Tilmīdh.⁴³³
3. Ibn Jumay‘ must have had access to the glosses of all five books as he quoted them throughout his commentary.⁴³⁴ As Ibn Jumay‘ explicitly stated that these were only contained in the Syrian copy, it is likely that he had also bought or copied it.⁴³⁵

(c) *Comparing variants: Selected examples*

Having explained how Ibn Jumay‘ collected his *Canon* copies and what he intended to do with them, three selected examples will now be discussed in which Ibn Jumay‘ compared different *Canon* manuscripts.

432. CC J, 5. See p. 89 above. Another passage which suggests that he had more than three copies at his disposal is CC I, 208.

433. See p. 95 above.

434. See p. 83 above.

435. CC J 9, see p. 96 above.

Uḡḡuwān, zaʿfarān or arghawān

The following passage is a comment on the beginning of the third book of the *Canon*, in which Ibn Sīnā discussed diseases affecting the head. The comment focuses on certain medical treatments for such diseases:

The *raʿīs* said in it: “Narcissus (*narjis*), lily (*sawsan*), and camomile (*uḡḡuwān*).” And in another copy: “Saffron (*zaʿfarān*)”. And in another copy: “*Arghawān*”⁴³⁶. Camomile and saffron are both medicaments that bring about maturation and dissolve [the disease matter] and strengthen, and both medicaments are well-established (*mutamakkinān*) in this role.

As for *arghawān*, it appears to be a misspelling of saffron (*zaʿfarān*), but in the Iraqi glosses [we find]: “*Arghawān* is the flower of a tree known in Iṣfahān and elsewhere. Its colour tends to a light red and in spring the entire tree is covered with th[is] flower.” (CC III, 14)

As Ibn Jumayʿ presented three variant readings, he must have had consulted at least as many different copies of the *Canon*. He judged both *camomile* and saffron to be plausible variants, following established medical understanding of how these drugs work. He seemed sceptical about *arghawān* which appears to him misspelled, but he nonetheless provided the explanation of the Iraqi glosses (i.e., those of Ibn at-Tilmīdh as available in the Syrian copy). Presumably Ibn Jumayʿ did not want to pass judgment on the medicinal qualities of flowers from trees that were not found in Egypt and with which he was not familiar.⁴³⁷

436. Steingass *et al.*, *Dictionary*, 38 gives the word *arghawān* as meaning ‘a tree whose fruit and flowers are a beautiful red’. See also Kindī, and Levey, *Formulary*, 265 who identifies *arghawān* with the Judas tree, *Cercis siliquastrum* L.

437. Ibn Jumayʿ did not tell us what he thought about the origin of these variants. He might have speculated that Ibn Sīnā originally wrote *arghawān* which, though not available in Egypt, was known in Persia to have appropriate medicinal properties. Perhaps copyists, especially physicians, changed the term *arghawān* into something familiar to them and which would make sense in terms of its medicinal qualities — namely, saffron and *camomile*. For Ibn Jumayʿ as a physician from Egypt, saffron and *camomile* had the necessary medical qualities and thus made sense.

There are several other instances in the commentary in which Ibn Jumay' enumerated three variant readings.⁴³⁸ He never listed four variants, so we cannot be sure that he consulted more than three copies, even though the preface suggests that he might have done so.⁴³⁹

'Ubab or qubab

Most of the time, Ibn Jumay' provided only two variants, even though he compared one copy with some other copies. The following text-critical comment is a typical example of this, taken from the comments on Ibn Sīnā's discourse on urine analysis in Book One of the *Canon*:

The *ra'īs* said: “‘*ubab* (winter cherry berries)⁴⁴⁰ remaining in diseased kidneys indicate the length of the illness because they (‘*ubab*) indicate flatulence and viscosity (*li-dalālatihā*⁴⁴¹ ‘*alā ar-riyāh wa-al-lazūjah*).” In some copies we find *qubab* ‘domes’ written with *qāf*, but the first manuscript is correct, i.e. ‘*ubab* with ‘*ayn* and without a diacritical dot. They (‘*ubab*) are small bubbles (*nuffākhāt*) which are on the surface of urine. Hippocrates had mentioned them in the seventh [treatise] of his *Aphorisms*. He said: “‘*ubab* that are floating on top of [the patient’s] urine indicate that his illness is [located] in his kidneys. They warn of a long [illness].”⁴⁴² (CC I, 211)

Just as Ibn Jumay' had stated in his preface, he here verified a reading by seeking the authoritative source from which Ibn Sīnā drew his statement.⁴⁴³ His reference to Hippocrates can be classified as a source-critical comment⁴⁴⁴ and is used to bring more certainty about the two variants *qubab* and ‘*ubab*.

438. CC I, 91, 267, CC II, 60, CC III 59 (all three variants are judged to be correct), CC III 65 (all variants are judged to be incorrect), CC III 141 (one variant is judged as particularly sound), CC III 192 (only one variant is judged to be correct), CC III 200 (all variants are evaluated with reference to Galen), CC III, 232 (all three variants judged to be incorrect), CC III 342 (only one variant is judged to be correct).

439. See above p. 98.

440. Lane, *Lexicon*, 1931: “‘*ubab*: The berries of the *kākanaj* or *kākanj* tree ... it has also berries, intensely red, like beads of carnelian, smaller than the *nabīq* and larger than the *grape* ...”. *Kākanaj* is usually identified as *Physalis alkekengi* L. See Steingass et al., *Dictionary*, 1007, Maimonides, *Sharḥ asmā'*, no. 201, Tibi, *Opium*, 196, Lev, and Amar, *Materia Medica*, 553. Note that *Ullmann*, *Wörterbuch*, 548 vocalises ‘*ubub* instead of ‘*ubab*.

441. I am following Ibn Jumay' and his reading of the text. D has *li-dalālatihī* and is therefore not referring back to the ‘*ubab*.

442. Cf. the Arabic edition of the text by Tytler (Hippocrates, *Fuṣūl*, 62).

443. See CC J, 11, p. 97 below.

444. This major type of comment will be discussed later, see p. 107ff. below.

It appears obvious that the corrupt variant was introduced when texts were copied. For copyists who were not well versed in Hippocrates' *Aphorisms*, domes (*qubab*) would probably make more sense than the less common winter cherry berries (*'ubab*). Ibn Jumay's explanation (that *'ubab* are small bubbles) seems to be based on Galen's commentary of the Aphorism:

Bubbles (πομφόλυγες⁴⁴⁵) develop when flatulence distends the fluid (ύγρότητος). This happens in particular if the fluid is viscous.⁴⁴⁶

Ibn Sīnā paraphrased this when he wrote that "they [*'ubab*] indicate flatulence and viscosity". Such a paraphrase does obviously not help much to visualise what *'ubab* are. Yet with the help of Galen's interpretation, it is not hard to imagine that *'ubab* must be bubbles which develop if flatulence distends a fluid. As a matter of fact, domes (*qubab*) may be much more descriptive of such bubbles than *'ubab*, a term otherwise used to describe the berries of a tree. Ibn Jumay', however, rejected this variant because it was apparently not found in his copy of the *Aphorisms* or Galen's commentary on the *Aphorisms*.

Ibn Jumay's contemporary Maimonides mentioned *'ubab*⁴⁴⁷ as well, but his remarks are confined to an obscure paraphrase of Galen's interpretation, namely that *'ubab* "indicate heavy flatulence (*rīḥ ghalīzah*) inside the viscous humours (*akhlāt lazījah*) and they therefore warn of a long [illness]."⁴⁴⁸ It remains doubtful if Maimonides would have been able to explain

445. See also Ullmann, *Wörterbuch*, 548.

446. Galen, *Opera*, vol. XVIII A, 134, lines 9-11. I am grateful to Oliver Overwien for assistance with this passage.

447. In the manuscript of Maimonides' commentary on the *Aphorisms*, we find the term *'iyab* (defects), which is unrelated to either *'ubab* or *qubab*. It is likely that *'iyab* is only a corruption of *'ubab* arising through copyists' errors and that Maimonides originally intended *'ubab*. See Ms Hunt. 427 fol. 50b for the reading عيب (*'ayb* or *'iyab*). Schliwski, *Sharḥ Fuṣūl* (ed. p. 155 = trans. p. 276) has عنب (grapes), which he translates as cloud ('Wolke').

448. Ms Hunt. 427 fol. 50b. Cf. Schliwski, *Sharḥ Fuṣūl*, ed. 155 = trans. 276. The translation is that of the present author.

what *'ubab* were, let alone other people who taught Hippocrates' *Aphorisms* to children, as Maimonides reported.⁴⁴⁹

No variants

Another interesting comment in which Ibn Jumay' compares several *Canon* manuscripts is the following, on headaches caused by wine and their symptoms:

The ra'īs said: "Wine causes headaches without evaporation (*bi-lā tabkhīr*) and the cold reaches [the sufferer] quickly through spasms of his extremities."

I found it [this reading] in the copies I consulted, but this is a corrupt statement, far from the truth, and it is likely that this is due to the copyist not having been attentive. Correct is: "Wine causes headaches through evaporating (*bi-at-tabkhīr*) and the cold quickly reaches the sufferer through spasms of his extremities."⁴⁵⁰ (CC III, 29)

As we can see, Ibn Jumay' compared all of his copies but was unable to find variant readings. He attributed the corruption to a scribe who interchanged *lām* and *alif*. Ibn Jumay's decision to blame the copyist and not Ibn Sīnā appears rather biased, especially as all copies consulted prove to be corrupt.⁴⁵¹ In fact, in his preface, Ibn Jumay' admits that he would rather come up with a questionable explanation than attribute a mistake to Ibn Sīnā himself.⁴⁵² For our present comment, this means that even if Ibn Sīnā appears to have been the source of a minor mistake (but one which changed the meaning quite drastically), it is better to attribute the mistake to a copyist.

The decision appears less biased if we take into account that Ibn Jumay' had a very sceptical attitude towards Ibn at-Tilmīdh. As we have seen, the most authentic versions Ibn Jumay' could attain were those collated with Ibn at-Tilmīdh's copy, for Ibn at-Tilmīdh had made his

449. Schliwski, *Sharḥ Fuṣūl*, xx.

450. The idea appears to be that wine (being hot/warm) causes evaporation (like boiling water) and evaporation causes cooling. Cooling causes contraction of muscles or spasms.

451. For other instance, see CC II, 165, CC IV, 40, 55, 59 and CC V, 7 in which Ibn Jumay' believes that the mistakes were introduced by copyists and not Ibn Sīnā.

452. CC P, 6. See below (p. 109) for a discussion of far-fetched interpretations.

copy from Ibn Sīnā's autograph. Ibn Jumay', however, was doubtful that this could have happened without Ibn at-Tilmīdh introducing mistakes. This is evident from the following remark found in the preface:

Moreover, there are statements in them [Ibn at-Tilmīdh's glosses] which cast doubt on the alleged soundness of what he adopted when he corrected the copy against the autograph (*dustūr*) of the author. (CC J, 8.2)⁴⁵³

Ibn Jumay' therefore suggested that Ibn at-Tilmīdh's copy, as well as copies made from it (such as the Iraqi copy mentioned above⁴⁵⁴), were likely to be corrupt due to Ibn at-Tilmīdh's incompetence. Therefore, whenever Ibn Jumay' blamed mistakes on copyists, we can speculate as to whether he is thinking about Ibn at-Tilmīdh or about other copyists. In our present case (CC III, 29), we can imagine Ibn Jumay' being aware that the erroneous variant could not have been introduced by the other scribes copying Ibn at-Tilmīdh's text, as all copies consulted offer the same text, and it would be rather mysterious if all scribes independently introduced the same corruption.

Nonetheless, Ibn Jumay' would not always choose to excuse Ibn Sīnā by referring to the fault of copyists or Ibn at-Tilmīdh. For example, Ibn Jumay' identified an instance in which he thought that Ibn Sīnā introduced a mistake through an inaccurate quotation of ar-Rāzī's description of the cephalic vein.⁴⁵⁵ Even though it would have been a matter of whether to read 'aw' ('or') or 'ay' ('that is'), Ibn Jumay' decided not to explain away Ibn Sīnā's mistakes with text-critical remarks.

453. For the translation of the first paragraph of CC J, 8, see p. 95.

454. See p. 94 above.

455. CC I, 123, see below p. 113.

Textual-criticism in other medical treatises

A millennium earlier, Galen had blamed copyists for certain mistakes which he found in Hippocrates' *Aphorisms*⁴⁵⁶ and compared different manuscripts and analysed variant readings in his commentary of the *Epidemics*.⁴⁵⁷ It is therefore not surprising to find Ibn Jumay' emulating his role-model. Unlike Ibn Jumay', however, Galen was critical about the practical value of his philological endeavours. After discussing the variant readings of Dioscorides and Kapiton concerning a certain type of rain water, Galen notes that it will neither harm nor benefit those who drink this rain water (which was apparently used for medicinal purposes) whether the term is spelled with an additional letter or not.⁴⁵⁸

Galen's philological inclinations were not uncommon, for we know of several other Ancient Greek authors who used similar methods.⁴⁵⁹ Among the earliest Arabic-writing physicians who employed text-critical methods was Ḥunayn ibn Ishāq (d. 260/873), who used several Greek manuscript copies of a single work when translating Galen's treatises into Arabic.⁴⁶⁰ Ibn Jumay's contemporaries also showed a philological interest in medical texts but on a much smaller scale. Ibn Abī Uṣaybi'ah notes that Ibn al-Muṭrān made many corrections (*taḥrīr*) in the books he possessed but it appears that these were mainly conjectures and not textual variants found in other manuscripts.⁴⁶¹

Fakhr ad-Dīn ar-Rāzī (d. 606/1209) tried to re-interpret a statement in Ibn Sīnā's *Ishārāt* in which the *ra'īs* had rejected the theory that bodies are composed of an either finite or infinite

456. See for example his comment on IV, 61 (Galen, *Opera*, vol. XVII.2, 741), which is cited by Maimonides in his commentary on the *Aphorisms* (Schliwsky, *Sharḥ Fuṣūl*, 231).

457. E.g. Galen, *Opera*, vol. XVIIIB, 113 or Galen, *In Hippocratis Epidemiarum*, 289 and 407; I am grateful to Oliver Overwien for providing me with these references.

458. Strohmeier, *Galen*, 269.

459. See Mülke, *Autor*, 223ff.

460. See Ḥunayn ibn Ishāq, *Übersetzungen*, pp. 4, 12, 14, 19, 29, 32.

461. Ibn Abī Uṣaybi'ah, *Uyūn* (ed. Müller), vol. II, 178 (line 5 from below). See Rosenthal, and 'Abd, *Technique*, 33.

number of atoms. Fakhr ad-Dīn admitted that his suggestion lacked manuscript support but explained that “the omission of those (added) words was a clerical mistake either on the part of Ibn Sīnā himself, or on the part of some copyist, or Ibn Sīnā intentionally omitted the words, because the context made it unnecessary to mention them expressly.”⁴⁶² In his *Canon* commentary,⁴⁶³ Fakhr ad-Dīn did not discuss variant readings found in different *Canon* copies but there are instances in which Fakhr ad-Dīn ar-Rāzī discussed variants found in the margins of other treatises he consulted.⁴⁶⁴

In the following centuries, Ibn Nafīs (d. 687/1288) or Ḥājjī Khalīfah (d. 1067/1657) were also in favour of blaming mistakes on copyists.⁴⁶⁵ Ḥājjī Khalīfah recommended to authors of commentaries to be polite in the expression of their dissent, praising the civil and reverential attitude of certain outstanding commentators who tried to put the blame for the mistakes of their authors upon the copyists.⁴⁶⁶

(d) *References to other Canon passages*

Like comparing variants, there is also another method which did not rely on sources other than the *Canon* itself and should therefore be mentioned briefly in this context. In his comments, Ibn Jumay‘ repeatedly referenced other passages of the *Canon* which shed further light on the passage he was explaining⁴⁶⁷ or which revealed that the *ra’īs* was contradicting himself.⁴⁶⁸ Commenting on book two of the *Canon*, for instance, Ibn Jumay‘ often referred to relevant drug entries in the same book.⁴⁶⁹ Elsewhere in his commentary, he also referred to

462. Rosenthal, and ‘Abd, *Technique*, 34-35.

463. The commentary is discussed in more detail below, p. 210.

464. See below, p. 213.

465. For Ibn Nafīs’ blaming mistakes on copyists, see below footnote 624.

466. Ḥājjī Khalīfah (Kâtip Çelebi), *Kashf*, vol. 1, 89. Rosenthal, and ‘Abd, *Technique*, 35.

467. E.g. in comments on the first book: CC I, 31, 34, 35, 40, 55, 58, 67, 87, 110, 159, 209, 247, 257.

468. For contradictions Ibn Jumay‘ identified, see for instance CC I, 55 (see below p. 137) or CC III, 16.

469. CC II, 28, 39, 41, 43, 45, 67, 74, 157, 169, 170.

passages found in other books of the *Canon*.⁴⁷⁰ With such references, the court physician demonstrated that he had an intimate knowledge of the contents of the *Canon*.

2. Consulting written sources other than the *Canon*

If Ibn Jumay' judged a passage to be incorrect, he tried to find a more appropriate variant reading in other copies of the *Canon*.⁴⁷¹ If he was unable to do so, however, he sought the source (*aṣl*) which Ibn Sīnā had used when composing the *Canon*. This method implies that Ibn Jumay' did not think of the *Canon* as an original piece of scholarship but rather as a well-composed conglomeration of different source texts which sometimes happened to be misquoted. Ibn Jumay' saw his task as correcting these flaws by going back to the sources and reviving what the authorities had to say (most importantly Galen and ar-Rāzī).

In the commentary itself, we find well over 600 instances of Ibn Jumay' applying this method.⁴⁷² In several cases, Ibn Jumay' did not only cite his own sources but also made quite explicit remarks about the sources Ibn Sīnā had used. For instance, when Ibn Jumay' corrected a certain statement about how many muscles are found in the thorax, he remarked that one should 'look attentively at what is said about the muscles in the Alexandrian *jawāmi'* on the small book of anatomy (*K. at-tashrīḥ aṣ-ṣaghīr*) upon which the *ra'īs* [Ibn Sīnā] depends heavily'.⁴⁷³ Moreover, Ibn Jumay' made similar comments regarding ar-Rāzī's *al-Ḥāwī* (which was one of Ibn Sīnā's main sources) such as pointing out that it is obvious that Ibn Sīnā (who usually did not cite his sources) quoted a given passage from ar-Rāzī.⁴⁷⁴

470. E.g. CC I, 159, 209, 247, 257; CC III, 206.

471. See p. 97.

472. See above p. 77ff. (Galen ca. 160 references; Hippocrates ca. 20 references; Dioscorides ca. 80 references; other Greek authors ca. 30 references; ar-Rāzī ca. 110 references; Ḥawāshī ca. 100 references; Ibn Sīnā's *Shifā'* ca. 30 references; other Arabic authors ca. 120 references; other not clearly identified sources ca. 20 references).

473. CC I, 82.

474. CC IV, 9, 20. For more passages and translated examples see below pp. 113 and 169.

It is also often the case that Ibn Jumay' speculated about whether a mistake was already found in the source text (*aṣl*)⁴⁷⁵ Ibn Sīnā had used when composing the *Canon* or if Ibn Sīnā introduced the mistake.⁴⁷⁶ It is thus that Galen is often employed 'to establish what is found in the source text (*aṣl*)'.⁴⁷⁷ In other instances, Ibn Jumay' remarked that he could not find the source text at all⁴⁷⁸ or he suggested that Ibn Sīnā must have copied from a source text which was different from the one Ibn Jumay' consulted.⁴⁷⁹

(a) *Using sources to clarify or defend the Canon*

In his preface, Ibn Jumay' enumerated the things he wanted to comment on as follows:

All of this [i.e. passages found in the *Canon* contradicting its original sources and text critical observations, see CC J, 11], as well as what I found in the *Canon* in terms of odd expressions, remote loanwords, as well as expressions foreign to physicians, in sum, all that which is not frequently used among them [i.e. the physicians], difficult and problematic passages, and that which is contradictory in them, be it true or what [only] seems to be [true] according to the appearance of opinion: much of it I endeavour to explain, elucidating all the obscure and difficult [passages] as well as what appears to be contradictory and refutable. (CC J, 12)

While Ibn Jumay' repeated many of the criticisms he had already raised elsewhere,⁴⁸⁰ he emphasised here that he will explain difficult or problematic terms and passages. Such clarifying explanations make up an essential part of the commentary and the discussion of little bubbles on urine has already illustrated how Hippocrates was used to clarify a variant reading.⁴⁸¹ Another example will be discussed in chapter three when analysing Ibn Jumay's

475. When Ibn Jumay' mentions the *aṣl* he thinks about Ibn Sīnā's source text and not the *Canon* as can be seen in a couple of comments in which Ibn Jumay' identifies the *aṣl* as Galen's, Dioscorides' or ar-Rāzī's works. For ar-Rāzī as Ibn Sīnā's source, see: CC III, 352. See also CC I, 123, II, 53, 54, 58 (?), 101, 106, 149, CC III, 162, 253, 280. For Galen as Ibn Sīnā's source see: CC I, 91, CC II, 75, 101, 210, CC III, 39, 162, 280. For Dioscorides as source: CC II, 179, 198.

476. CC I, 199, II, 149, 171, III, 162.

477. CC I, 91.

478. CC II, 196.

479. CC II, 12.

480. See CC P, 2 (see above p. 88); CC J, 1 (see above p. 91) and CC J, 3 (see above p. 90).

481. CC I, 211. See above p. 101.

comments on cranial sutures.⁴⁸² In both cases, Ibn Jumay‘ did not correct the *Canon* but rather clarified its contents.

In some comments, Ibn Jumay‘ did not only aim to clarify the *Canon* but also to defend it against certain objections that Ibn Sīnā’s adversaries raised or which Ibn Jumay‘ hypothetically raised. As we have seen, Ibn Sīnā’s adversary Ibn Zuhr was explicitly named in the preface but we were also introduced to other people who accused Ibn Sīnā of various shortcomings.⁴⁸³ Ibn Jumay‘ described the latter group to his addressee and stressed in a rather apologetic tone that the commentary was in fact more intended for them and not for the addressee:

What prevented me from answering you were [not only] my absence from home and my journeys,⁴⁸⁴ but [also] my belief that a book like this [i.e. the commentary] should not fall into the hands of someone who is not like yourself, who intends to put it to good use and seeks justice — in toto, [someone] of excellent character traits. Rather, it might come into the possession of those, who are overcome by vice and seized by the habits of evil thought — and [alas], how many are like this! Particularly in this time, [many] are driven by [their] envy of the *Canon*’s author to deny Ibn Sīnā’s excellency and to despise him, while the common people and the ignorant think that Ibn Sīnā’s only aim with the *Canon* is to set out on a daring [but futile] enterprise (*at-ta‘ātib*) and to curry favour (*at-tashaffu‘*) and the like. In sum, [they believe that] in the midst of Ibn Sīnā’s good deeds are evil deeds, but this is obviously a poor judgement. (CC P, 5)

Moreover, [I did not answer your request as] many of those comments [of mine]⁴⁸⁵ indeed rely upon [rather] stretched (*ba‘īdah*) conjectures, explanations and interpretations which are necessitated and compelled because one has to think good of the *ra‘īs* — the author of the book — and defend his merit (*faḍīlah*) and find an excuse for him,⁴⁸⁶ no matter how stretched the intentions and examples of [my] discourse are.

482. See below p. 156ff.

483. See above, p. 87f.

484. Lit. ‘The state of not being sedentary’.

485. Ar. *ḥawāshī*. Ibn Jumay‘ refers to his own comments as *ḥawāshī* (e.g. the title of the second book of the commentary, *ḥawāshī al-kitāb ath-thānī min al-Qānūn*, P 73a/B 44a). He does not refer to Ibn at-Tilmīdh’s glosses in this instance (CC P, 6 = B 1b/P 1b) as he will only introduce them in a later passage (they are first mentioned in CC J, 6 = B 3b-4a/P 3a).

486. Lit. ‘Pursue a way out for him’.

The eminent masters and people [possessing a sense] of justice, a properly balanced temper, and nobility of natural disposition, know of the amount of trouble in [undertaking such an enterprise], and the pain involved in copying [excerpts] from a book, and the extreme effort in the production and connection of them. However, the wicked, envious, blameworthy, disturbed, and stubborn will nonetheless spot the obscure passages [in such treatises culled from the works of others] and [thus] mislead⁴⁸⁷ the mind of those who do not comprehend, the common people and those who are susceptible to dangerous influences⁴⁸⁸ of the followers of this [vicious] group. (CC P, 6)

So in sum, as for the person of disputation and argument, it is obvious what he is. For these reasons, I saw fit not to pursue my endeavour any further⁴⁸⁹ — until your letter arrived containing your questions and the repeated recurrence of this [topic]. I feared that you would have a bad opinion of me,⁴⁹⁰ knowing this, so I compiled this book and divided it into two parts. (CC P, 7)

Ibn Jumay‘ admitted in this passage that his glosses contain stretched interpretations, but stressed that such a biased approach is necessary and part of a polite, balanced and educated reply to the *Canon*. Only the stubborn (*al-‘inād*) will focus solely on criticising the obscure passages, while the educated will not criticise the *raʿīs*, but will give him the benefit of the doubt, knowing how difficult was Ibn Sīnā’s endeavour to excerpt from many treatises and to compile a book which is as well-composed as the *Canon*. We can therefore expect Ibn Jumay‘ to go to great lengths to explain errors and inadequacies in the *Canon* so that they would not reflect badly upon Ibn Sīnā himself.

In the body of the commentary, Ibn Jumay‘ was reluctant to admit that he proposed ‘stretched’ interpretations. In fact, he explicitly admitted this in only one instance. After quoting Ibn Sīnā and contrasting his statements regarding naturally coloured thick urine with those of Hippocrates and Galen, Ibn Jumay‘ concluded:

487. Lit. ‘The falsification of’.

488. Lit. ‘The arrows’.

489. Lit. ‘To draw clouds over [i.e. cover up] this issue’.

490. Ibn Jumay‘’s explanation of why he finally gave in to write the commentary is most likely a literary *topos* as he used the exact same phrase (i.e. ‘lest you may have a bad opinion of me ...’) in other treatises as well (Ibn Jumay‘, *Lemon (Topkapı)*, fol. 113a).

Hence, what the *raʿīs* [Ibn Sīnā] mentioned about [the differentiation between] these two types of urine is inadequate and is a corruption of the manuscript, although this might be a [rather] stretched (*baʿīdah*) interpretation. As it is always our habit to render [statements] correct, we say that [Ibn Sīnā] meant by saying “through the ease of passing” (*bi-suhūlah al-khurūj*) that the body becomes lighter through it [i.e. the act of passing the urine] and the ease of [urine] being taken away. Considering this interpretation, [the present passage] agrees with the sources [i.e. Hippocrates and al-Rāzī’s al-Ḥāwī]. (CC I, 207)

Instead of blaming the *raʿīs*, Ibn Jumayʿ re-interpreted Ibn Sīnā’s words so that they fit Hippocrates’ and al-Rāzī’s account of thick urine. Before suggesting his conciliating interpretation, Ibn Jumayʿ emphasised that it is his habit to render statements correctly. We can therefore assume that Ibn Jumayʿ commented in many other passages accordingly.

One such passage that features a ‘stretched’ (*baʿīdah*) interpretation appears to be Ibn Jumayʿ’ s comment on the very beginning of the *Canon* in which Ibn Sīnā defines medicine.⁴⁹¹ Ibn Jumayʿ comments on how to understand the phrase “medicine is a science” and rejects the interpretation that medicine is a theoretical art. The problem for Ibn Jumayʿ is that Ibn Sīnā thought that both the theory and practice of medicine could be learned without ever practicing medicine. Ibn Jumayʿ tried to explain this in his eyes rather problematic definition by suggesting that Ibn Sīnā defined medicine epistemologically and not in terms of its ultimate aim which is practice. As we will see in chapter four, we have to question if this truly reflects Ibn Sīnā’s notion of medicine. It appears that Ibn Jumayʿ projected his ideals on Ibn Sīnā’s definition of medicine and we could therefore count this comment as another instance of a stretched interpretation.

There are plenty of other examples in the commentary which would need to be discussed in detail if one wished to determine whether they are ‘stretched’ interpretations meant to uphold Ibn Jumayʿ’ s positive image of Ibn Sīnā.⁴⁹² Moreover, it must be questioned whether

491. See below, p. 205ff.

492. Examples include: CC I, 54 (defence of Ibn Sīnā’s approach to anatomy), CC I, 55 (Ibn Jumayʿ

some of the text-critical decisions are in fact stretched.⁴⁹³ Perhaps Ibn Jumay' was correct in believing that several mistakes were introduced by copyists copying the *Canon*. The possibility that copyists were responsible for correcting the *Canon* (rather than introducing errors) is never explicitly considered by Ibn Jumay'. Physicians who copied the *Canon* for their own use might have corrected errors introduced by Ibn Sīnā.⁴⁹⁴

(b) *Using sources to criticise the Canon*

Despite his positive attitude toward Ibn Sīnā, Ibn Jumay' remained critical, as can be seen in several instances in which he either implicitly or explicitly criticised the *ra'īs*. Criticisms ranged from exposing misspellings (*taṣhīf*) or corruptions (*taḥrīf*) introduced by Ibn Sīnā when copying from his source texts, to more serious accusations such as the mal-composition of certain drugs. In the following examples, Ibn Jumay' used authoritative sources to correct passages found in the *Canon*. In the first example, Ibn Sīnā is criticised implicitly while the later two examples demonstrate explicit criticisms.

Ibn Jumay' commented extensively on Ibn Sīnā's discussion of urine analysis, which was one of the most important means of diagnosis employed by mediaeval physicians. The colour and consistency of urine were particularly important to the physician as they were thought to indicate, for example, how long a disease would last or if it would prove to be fatal. Ibn Sīnā, when discussing the compound colours of urine (*alwān murakkabah*),⁴⁹⁵ had listed the olive oil

eliminates certain doubts), CC I, 60 (about the variants *mahbil* and *maḥbul*), CC I, 103 (hypothetical argument), CC I, 131 (hypothetical argument), CC I, 154 (an apparent contradiction is solved), CC I, 172 (two possible interpretations and Ibn Jumay' suggests that Ibn Sīnā must have meant the correct interpretation), CC I, 173 (defence of the pulse definition), CC I, 230 (lengthy quote from Galen to show Ibn Sīnā was correct), CC I, 243 (correct version probably found in one of the copies), CC II, 137 (defence of a statement which is apparently wrong), CC II, 139 (Ibn Sīnā must have meant another drug), CC II, 204 (Ibn Jumay' excuses Ibn Sīnā of this mistake), CC III, 143 (defence of how certain techniques are described).

493. See p. 103 above.

494. For instance, they might have changed *maḥbul* into *mahbil*. See above, p. 119.

495. D I, 188, line 17.

colour (*al-lawn az-zaytī*), defined it both in terms of its colour and consistency,⁴⁹⁶ and then discussed what it may indicate. Ibn Jumay' commented on the end of the passage in which Ibn Sīnā tried to summarise the different types of olive oil urine (*al-bawl az-zaytī*):

The *ra'īs* [Ibn Sīnā] said: "In sum, there are three sorts of urine resembling olive oil (*al-bawl az-zaytī*), namely that which is greasy throughout (*yakūn kulluhu dasiman*), that which is [greasy] only at the very bottom [of the urine flask], and that which is [greasy] at the very top."⁴⁹⁷

The author [Ibn Jumay'] responds: "The most eminent of physicians [Galen] said in the third [part] of his commentary on the third [book] of the *Epidemics*: 'We have seen the fat that floats on the top of urine many times, but as for urine that is fatty throughout, or has some fat in the middle [of the urine flask], we have never seen it and it is more appropriate [to say] that there is simply no fatty tissue in the bottom part [of a urine flask] as it is in the nature of every fatty substance to float on all other liquids.'" And he [Galen] said: "Even Hippocrates did not mention this urine in the *Prognosticon* (*K. Taqdimat al-ma'rifah*) even though he describes and explains every symptom of acute diseases very accurately."⁴⁹⁸ (CC I, 202)

It is very likely that Ibn Sīnā absentmindedly read Galen's account on olive oil urine and simply listed the three types despite the fact that Galen judged one of them impossible and had never seen the other.⁴⁹⁹ Instead of explicitly criticising Ibn Sīnā for failing to realise that fatty tissues can never be found in the bottom part of a urine flask, Ibn Jumay' simply contrasted Ibn Sīnā's statements with those found in his sources.

The next comment criticises Ibn Sīnā explicitly for mis-quoting his sources:

The *ra'īs* said: "Sometimes it is necessary for blood to be drawn off by bloodletting until one is unconscious, using (*min*) the cephalic vein (*al-qayfāl*) or the 'shoulder-vein', dorsally (*al-'irq al-katfī alladhī min khalf*). This is superior because it prevents the blood from rising to the head."

This statement has become corrupt through copying the phrase "or from the shoulder vein,

496. D I, 188, line 21. Ibn Sīnā defines this colour as "yellow, intermingled with beet root red (*silqiyah*), similar to olive oil due to the sort of residue (*ziwajah*) in it, the oily shimmering transparency, and [its] consistency [being] both thin and thick".

497. Cf. D I, 188, line 4f. from below.

498. Cf. the Greek passage in Galen, *In Hippocratis Epidemiarum*, 162, lines 20-27 = Galen, *Opera*, vol. XVIII, 740, line 5ff.

499. Another example in which Ibn Jumay' accuses Ibn Sīnā for not having read Galen attentively is found in CC I, 188.

dorsally” for it was taken from what ar-Rāzī said in *al-Ḥāwī*. To quote him verbatim, ar-Rāzī said: “My own [observation is this]: Bloodletting from the shoulder vein dorsally is more beneficial than its being done at the elbow (*al-mirfaq*) because it cuts off the flow of blood to the head. In this way, nosebleed is checked, unless this [bloodletting] is done from pulsating vessels.”

He has also said, to quote him verbatim: “My own [observation is] that for severe nosebleed, for which no medication is of any benefit, one should look for the cephalic vein (of the shoulder) and undertake bleeding there, for then the blood will be restricted to that location.”

It is to be understood from these two passages that bloodletting of the cephalic vein, which is adjacent to the shoulder, dorsally, cuts off nosebleed. This, however, is not to be understood from the statement of the *rāʾīs*, for he said that “or from the ‘shoulder-vein’, dorsally”. From this statement one would think it is another vein, different from the cephalic vein. But this is not so. And it is with this [correct] interpretation that one must understand it. His statement should thus be read in the following way and conform with the two statements [of ar-Rāzī]: “Sometimes it is necessary for blood to be drawn off through bloodletting until one is unconscious, using the cephalic vein, which is the ‘shoulder vein’, dorsally.” (CC III, 124)

Ibn Jumayʿ criticised Ibn Sīnā for his statement that the cephalic vein and the ‘shoulder-vein’ were two separate veins, when in fact they were one and the same. As in the previous comment, Ibn Jumayʿ listed the sources he thought Ibn Sīnā used when compiling the *Canon* and concluded with a convincing correction of Ibn Sīnā’s corrupted statement.

One of the strongest criticisms in the commentary is the following:

The *rāʾīs* said in it [referring to the *faṣl* discussed before]: “Myrobalan occurs in it [a before mentioned purgative with mastic and aloe] to inhibit the strong vapour which is created in the stomach”.⁵⁰⁰

“Myrobalan” (*halīlaj*): If it occurs in the composition of pills which are intended to clear the head in particular, [only] very small amounts will fumigate it [the head], for it [myrobalan] strengthens the orifice of the stomach [i.e. the sphincter] through its [myrobalan’s] capacity to constrict and to be astringent. And he [Ibn Sīnā] said about this that their [the composition’s] cleansing [properties] is due to it [myrobalan]. But this is an instance of mal-composition and skilled physicians (*ḥudhāq al-aṭibbā*) would never fall into [such an error] in their compounding of purgatives. But rather, the opposite must be the case:

This is to mix into the cleansing agents for the brain that which relaxes the orifice of the

500. D II, 33, l. 10.

stomach, supports the fumigation, and makes its properties reach the head quicker, such as saffron, because this [saffron] is one of those things which cleanse it [the head] much more intensely and thoroughly, so much so that Ibn Zuhr, the Andalusian, used to put in them [the cleansing agents] a small amount of garlic and often gave them [the cleansing agents] as a drink with wine or water in which he had steeped it [garlic] and heated it [the drink] until it simmered and started to boil, as this [the boiling of the drink] allows for their quick fumigation of the brain.

His [Ibn Zuhr's] doing so is analogous with how the masters of the ancient physicians mixed a little amount of fennel into medications for the bladder so that its absorption would be quicker. One should not object to such a statement by [saying that one should] mix nard (*sunbul*) together with mastic and aloe because, if he [who raised the objection] would consider this for himself, he would not find myrobalan to make the two [mastic and aloe] milder, as both are not very strong in constricting [properties] nor do they have a strong [impact] on the orifice of the stomach. It is more appropriate for myrobalan and other [remedies] which inhibit the strong vapours from rising to the brain, that one should apply them after the cleansing with these pills. This is obvious, and what is correct in this [matter] is very clear. (CC III, 18)

In sum, Ibn Jumay' accused Ibn Sīnā of the mal-composition of a certain cleansing agent because the *ra'īs* is apparently wrong about compounding myrobalan with mastic and aloe. Pills that are intended to cleanse the brain should not include myrobalan, but rather substances such as saffron or, as Ibn Zuhr suggested, garlic steeped in very hot wine or water. Most interesting is that Ibn Jumay' explicitly judged Ibn Sīnā not to be among the skilled physicians. Ibn Zuhr is quoted to give an example of what skilled physicians would do. One wonders, however, why Ibn Zuhr is mentioned at this point, since for Ibn Jumay' he probably belonged to the group of stubborn physicians who were not in favour of the *Canon*.⁵⁰¹ If Ibn Jumay' had wanted to defend the *Canon* at all costs, he would probably not have mentioned Ibn Zuhr in this context.⁵⁰² We can therefore conclude that Ibn Jumay' was well aware of the shortcomings of the *Canon* and, at times, showed his disapproval very explicitly and even referred to authors which were not in favour of the *Canon*. It must be stressed, however, that

501. See p. 110 above.

502. It is therefore unlikely that Ibn Jumay' aimed his commentary solely at adversaries of the *Canon* as he suggested in his preface (CC P, 5, see p. 109 above).

Ibn Jumay‘ rarely criticised Ibn Sīnā to the extent that he did in these three examples.⁵⁰³ In general, Ibn Jumay‘ is supportive of the *Canon* and does not dwell on its shortcomings.

(c) *Erudition and analogical reasoning*

If Ibn Jumay‘ could not trace Ibn Sīnā’s sources, he stated that he ‘sought to correct the *Canon* using the principles of the medical art which were unanimously agreed upon and the rules handed down from the authorities.’⁵⁰⁴ Therefore, whenever Ibn Jumay‘ discussed matters ‘well known among physicians’ or ‘well-known among physicians and apothecaries’,⁵⁰⁵ he did not trace Ibn Sīnā’s sources but simply referred to generally accepted facts that could be found in written treatises such as those by Galen. In chapter three, we will see that Ibn Jumay‘ employed this method quite frequently and often reached conclusions without buttressing them with specific references to other treatises.⁵⁰⁶ It thus follows that in these instances Ibn Jumay‘ employed his erudition which he had gained through his study of medical treatises.

Yet, Ibn Jumay‘ did usually more than simply remember and repeat what he thought were generally accepted facts. Whenever he was unable to find the source Ibn Sīnā had used when compiling his *Canon*, he had to decide which general principles would apply to a given *Canon* passage he was commenting on. Ibn Jumay‘ therefore had to employ what he elsewhere called ‘analogical principles’ (*al-uṣūl al-qiyāsiyyah*) in order to use his vast knowledge of medical treatises.⁵⁰⁷ When criticising Ibn Sīnā for the mal-composition of a cleansing agent, for instance, Ibn Jumay‘ demonstrated that he was able to apply his knowledge concerning one

503. For other critical comments, see Ibn Jumay‘’s discussion of human dissection (p. 144f. below) and materia medica (p. 164ff. below)

504. See above p. 97.

505. CC II, 108. For ‘what is well-known among physicians’, see, for instance, CC II, 149, 203, 208. For what ‘skilled physicians’ would do, see CC III, 18.

506. CC III, 26, 29, 30, 36, and 38. CC III, 38 mentions the phrase ‘well-known among physicians’ explicitly. For a full discussion of these passages see below p. 190ff.

507. For a more detailed discussion of this method, see below p. 181ff.

area to another area: just like fumigating agents of the brain can be enhanced by certain ingredients, so medications for the bladder can be enhanced as well.⁵⁰⁸

(d) Using Jawharī's dictionary

While Jawharī's (d. c. 397/1007) dictionary is just another written source Ibn Jumay' used when clarifying or correcting the *Canon*, it is the only non-medical treatise which takes a major role in the commentary. In his entry on Ibn Jumay', Ibn Abī Uṣaybi'ah wrote that Ibn Jumay' would not read anything without having Jawharī's *Ṣiḥāḥ* in front of him.⁵⁰⁹ It is not simply an anecdote that Ibn Jumay' constantly consulted the *Ṣiḥāḥ* (literally 'what is authentic'), a massive⁵¹⁰ dictionary of classical Arabic that was the most widely used Arabic dictionary of the middle ages.⁵¹¹ When writing his commentary, Ibn Jumay' consulted Jawharī's dictionary more than 80 times.⁵¹² On average, Ibn Jumay' quoted the *Ṣiḥāḥ* at least once on every folio when commenting on the first and fourth book of the *Canon*, and once on every other folio in his comments on books two, three and five.⁵¹³ Ibn Jumay' was indeed meticulous about elucidating technical terms or terms he did not fully understand.

508. See above p. 114.

509. See p. 34 above.

510. Modern editions are usually printed in 6 volumes, e.g. Jawharī, *Ṣiḥāḥ*.

511. Kopf, *al-Jawharī*. See above note 34.

512. CC I, 49, 60 (two times), 64, 77, 114, 118, 140, 141, 152, 161, 178, 200, 218, 234, 235, 237, 238, 240, 246, 247; CC II, 16, 20, 29, 50, 70, 76, 84, 95, 108, 110, 117, 131 (two times), 141, 159, 161, 180, 214; CC III, 3, 4, 6, 11, 12, 24, 28, 57, 59, 61, 62, 94, 107, 120, 127, 139, 149, 157, 203, 205, 215, 219, 240, 269, 276, 278, 310, 318, 334, 339, 349, 371, 374. CC IV, 4, 69, 71, 81, 93, 101, 108, 111, 112, 116, 119, 125. CC V, 4, 6.

513. There are 21 references on ca. 40 folios in CC I; 18 references on ca. 31 folios in CC II; 33 references on ca. 32 folios in CC III; 12 references on ca. 10 folios in CC IV and two references on ca. 4 folios in CC V.

Ibn Jumay' clearly indicated when he was referring to the *Ṣiḥāḥ* and usually introduced quotations with 'Jawharī said'.⁵¹⁴ The following is an example of how Ibn Jumay' made use of the *Ṣiḥāḥ* when commenting on Ibn Sīnā's discussion of the anatomy of the heart:

On the anatomy of the heart. The *ra'īs* said: "There is no [other] membrane [in the body] which comes close to the *thukhūnah* [of the pericardium]." I believe that this is *thakhānah*⁵¹⁵ meaning thickness (*ghilaz*) and toughness (*ṣalābah*). Jawharī said: "Something is solid (*thakhana*), i.e. it is tough (*ṣalaba*) and thick (*ghalaza*), and that this is solidity (*thakhīn*)." (CC III, 219)

Ibn Jumay' was not familiar with the verbal noun *thukhūnah* and suggested *thakhānah* as the correct verbal noun of the root *th-kh-n*.⁵¹⁶ In this example Ibn Jumay' appears to be concerned with rather minute linguistic details not necessarily important for the medical discourse, let alone for the anatomical understanding of the heart. In contrast, Ibn Nafīs in the following century was not distracted by such linguistic details, but rather criticised the anatomical details of the description.⁵¹⁷

514. At times, his references were detailed, such as 'Jawharī said in the *Ṣiḥāḥ al-'arabiyyah*' (e.g. in CC I, 77 commenting on the term *'ayn ar-rukbah* which is found in Jawharī, *Ṣiḥāḥ*, vol. VI, 2170 and in CC III, 61 on the term *al-lawā* found in Jawharī, *Ṣiḥāḥ*, vol. VI, 2486) or 'Jawharī mentioned in the *Kitāb aṣ-ṣiḥāḥ*' (C II, 16 on the term *sa'tar* found in Jawharī, *Ṣiḥāḥ*, vol. II, 685). In other cases, Ibn Jumay' only referred to the name of the dictionary. For instance, he would refer to 'the *Ṣiḥāḥ al-'arabiyyah*' in his comments on book one: CC I, 141 comments on *ghadd* found in Jawharī, *Ṣiḥāḥ*, vol. III, 1095; CC I, 152 on *ḍahītu* found in Jawharī, *Ṣiḥāḥ*, vol. VI, 2407; CC I, 200 on *ilhāk* and *wadak* found in Jawharī, *Ṣiḥāḥ*, vol. IV, 1629 and 1613 respectively; CC I, 235 on *shaghzabiyyah* found in Jawharī, *Ṣiḥāḥ*, vol. I, 157-8; CC I, 247 on *qathad* found in Jawharī, *Ṣiḥāḥ*, vol. II, 521. Ibn Jumay' also referred to 'the *Ṣiḥāḥ al-lughah*' (CC I, 140 comments on *ma'ma'ah* found in Jawharī, *Ṣiḥāḥ*, vol. III, 1286; CC II, 161 on *kan'ad* found in Jawharī, *Ṣiḥāḥ*, vol. II, 532) or simply 'in the *Ṣiḥāḥ*' (CC I, 60 comments on *mahbil* found in Jawharī, *Ṣiḥāḥ*, vol. V, 1846; CC II, 95 on *ḥndqūq* (?) which is not listed in Jawharī, *Ṣiḥāḥ*, vol. IV, 1465; CC II, 180 on *judjud* found in Jawharī, *Ṣiḥāḥ*, vol. II, 453; CC III, 4 on *tarā'ā al-jum'ān* found in Jawharī, *Ṣiḥāḥ*, vol. VI, 2348).

515. For *thakhānah* and *thukhūnah* (both attested infinitive forms) see Lane, *Lexicon*, 332.

516. It appears that Ibn Jumay' found *thakhānah* in the *Ṣiḥāḥ* even though this form does not appear in the quotation as presented by Ibn Jumay'. He must have forgotten to quote the verbal noun again in his quotation, as modern editions of the *Ṣiḥāḥ* provide us with the verbal noun *thakhānah* in the entry on *th-kh-n*. Jawharī, *Ṣiḥāḥ*, vol. V, 2087. Lane lists both forms *thukhūnah* and *thakhānah* as attested. Lane, *Lexicon*, 332.

517. Meyerhof, *Ibn an-Nafīs*, 116. Savage-Smith, *Attitudes*, 102.

While it might be true that some of Ibn Jumay's linguistic comments are rather pedantic and apparently of little use for the understanding of anatomy, other examples show that linguistic accuracy can be important. The following comment also concerns an anatomical term:

The *ra'īs* said: "Hence there is a duct (*urūq*) in women through which the sperm is pushed to the *mahbil*".

In the *Book of Man's Creation* by Abū Ḥātim Sahl ibn Muḥammad who is known as Sijistānī⁵¹⁸ [it is said]: "The womb (*raḥim*) has two closures (*ḥalqatān*).⁵¹⁹ One of them is at the orifice of the womb, at the outermost point (*ṭaraf*) of the vulva (*farj*). The other [closure] is that which closes upon the seminal fluid (*mā'*) and is opened for the menstrual discharge (*ḥayd*). What is in between the two is the *mahbil*." In the *Ṣiḥāḥ* (by Jawharī): "The *mahbil* is at the extreme end of the womb. It is called 'the way of the child' [i.e. birth canal] and it is in between the vulva and the womb." Thābit Ibn 'Umar⁵²⁰ said in his *Book of Man's Creation*: "Abū Zayd said that the *mahbil* is the resting-place [of the foetus] (*mustaqirr*)⁵²¹ in the womb. However, this is false for the *mahbil* is what is between the two closures."

The author believes that this is what the *ra'īs* meant, namely [that the *mahbil*] extends between the two closures, because the seminal fluid is pushed there and is then swallowed by the womb and its mouth closes upon it. I found in other copies *al-maḥbul*, but this is not applicable in this passage because *al-maḥbul* is the time of the mother being pregnant [i.e. gestation period]. Jawharī said: "One says in the *maḥbul* of so-and-so, meaning the time his mother was pregnant with him." (CC I, 60)

The fact that modern editions of the *Canon* still have *maḥbul* in this instance, i.e. 'the sperm is pushed to the gestation period',⁵²² illustrates why such linguistic comments can be useful for the understanding of the *Canon* and should not generally be dismissed as irrelevant comments. Other examples of comments concerned with anatomy are Ibn Jumay's

518. For Sijistānī (d. 250/864) see above p. 82.

519. Lit. 'Ring or opening'. See Lane, *Lexicon*, 630.

520. See above note 360.

521. See entry on *qarār* in Lane, *Lexicon*, 2501.

522. D I, 39, l. 9. Also found in the Bulaq edition of the *Canon* (Ibn Sīnā, *Canon (Būlāq)*, vol. I, 22, l. 5).

explanations of the terms *zard*,⁵²³ *qabā'il*,⁵²⁴ *‘ayn ar-rukbah*,⁵²⁵ *wāshijah*,⁵²⁶ *mawṣud*,⁵²⁷ and *ṭil'u*.⁵²⁸

In each comment Jawharī is cited specifically.

The majority of references to Jawharī are not concerned with anatomical terms, but range from technical terms for certain ball games⁵²⁹ to terms used for particular species of fish⁵³⁰ or the designation of winds not beneficial for the neck.⁵³¹ All instances illustrate that Ibn Jumay' could not overlook words in the *Canon* that he could not define or that were spelled in a way he did not recognise, or that he believed to be spelled incorrectly. It is likely, of course, that he did not discuss all such instances, as he had stressed that he would only present the most important findings,⁵³² but we can nevertheless imagine Ibn Jumay' constantly looking up words in Jawharī's dictionary when reading the *Canon*.

Even though the *Ṣiḥāḥ* is the most quoted dictionary in the commentary, it is not the only one. Ibn Jumay' also refers to the *Mujmal fī al-luġha* by Ibn Fāris' (d. c. 1004).⁵³³ Moreover, the example presented above (CC I, 60) shows that Ibn Jumay' used treatises such as Sijistānī's

523. Protrusions of the thin membrane or *pia mater* (*al-ghishā' ar-raġiq*) of the brain. CC III, 3 (123b/75a). Jawharī, *Ṣiḥāḥ*, vol. II, 480.

524. The different parts or bones of the cranium held together by its sutures. CC I, 64. Jawharī, *Ṣiḥāḥ*, vol. V, 1797.

525. Lit. 'Eye of the knee', i.e. the patella or knee-cap. CC I, 77. Jawharī, *Ṣiḥāḥ*, vol. VI, 2170.

526. Interwoven (as in "interwoven network of nerves"). CC III, 24. See below p. 189. Jawharī, *Ṣiḥāḥ*, vol. I, 347.

527. Closed (appears in the *Canon* in the context of closing the throat). CC III, 157. Jawharī, *Ṣiḥāḥ*, vol. II, 550.

528. *Aṭ-ṭāli'ayn* are the two renal veins (see Koning, *Trois Traités*, 639). CC III, 269. Jawharī, *Ṣiḥāḥ*, vol. III, 1254.

529. CC I, 235

530. CC II, 161.

531. CC III, 28. See below, p. 191.

532. Ibn Jumay' mentions this in the preface of the commentary: "In the second part I have put down the [most] important of all the marginal glosses I have made" (CC P, 8 = B 2a / P 2a).

533. Ibn Fāris was a philologist who was active in several places such as Baghdād, Hamadhān or Rayy (see Fleisch, *Ibn Fāris*). For references to him in the *Canon* commentary see CC I, 222. In CC III, 47, Ibn Jumay' refers to the *Jāmi' al-luġha* by Ibn Fāris. This probably refers to the *Mujmal* as well. The same applies to CC I, 233, in which Ibn Jumay' quotes the *Jāmi' al-luġha* again, but without giving its author. As some parts of the *Mujmal* remain in manuscripts, it is difficult to trace Ibn Jumay'"s sources.

Book of Man's Creation to define certain technical terms. Different types of treatises could thus serve as useful sources for Ibn Jumay's philological endeavours.

3. Exchange and experience

Books were not the only source Ibn Jumay' consulted for his *Canon* commentary. As this section will show, Ibn Jumay' gained some of the knowledge which he employed in his commentary through exchange with his contemporaries and through his own experience.

(a) Persian informants

As a Persian, Ibn Sīnā used a range of Persian terms in the *Canon*, and Ibn Jumay's commentary bears witness that Egyptian physicians found it at times difficult to understand medical terms of Persian origin.⁵³⁴ In more than 60 instances, Ibn Jumay' explained the meaning of Persian terms.⁵³⁵ More than half of the terms commented upon are found in the second book of the *Canon*, which is concerned with drugs. Ibn Jumay' did not cite a Persian-Arabic dictionary and it is unlikely that such bilingual dictionaries were available in twelfth-century Egypt.⁵³⁶ Ibn Jumay' was therefore dependent on what he was told by Persian speakers

534. Ibn Jumay' either refers to 'Persian' as *fārisī* (when talking about terms) or *'ajam* (when talking about people). Even though *'ajam* can refer to non-Arabs in general, it was commonly used to refer to Persians and Ibn Jumay' only mentions *'ajam* in the context of either Persian words or places. He does not mention *'ajam* when talking about terms of Indian or Greek origin. For all references to *'ajam* see CC I 269, 288; CC II 45, 67, 109, 163; CC III 32, 102, 115, 123, 216, 262, 296, 297, 299.

535. The following are comments on terms which Ibn Jumay' explicitly marked as Persian: CC I, 36, 120, 167, 226, 249, 252, 258, 260, 261, 269 (?), 285, 288 (in this comment, Ibn Jumay' also makes the linguistic observation that Persians may suffix their words with *-ast*). CC II, 14, 21, 30, 31, 32, 43, 45, 47, 50, 53, 60, 64, 66, 67, 91, 109, 110, 116, 118, 133, 161, 163, 176, 200, 207, 212. CC III, 15, 32, 85, 102, 115, 123, 135, 216, 217, 223, 262, 273, 287, 288, 296, 297, 299, 358. CC IV, 70, 72, 76, 85, 89. CC V, 8, 23, 29, 32.

536. The oldest still extant Arabic-Persian dictionary is *Lughat-i furs* by the poet Asadi Tūsī compiled in the 11th century. The second dates from 728/1329 (see Baevskii *et al.*, *Lexicography*, 52ff.). It appears that there were no Persian-Arabic dictionaries circulating in Egypt which Ibn Jumay' could have used.

(‘*ajam*’)⁵³⁷ he encountered in Egypt. It appears to have been his habit to consult groups of Persian speaking travellers and to ask them about medical terms he did not understand:

The *raʿīs* said [in the context of how purgatives are used to evacuate hot disease-matters causing headaches]: “It is said: the *Nīshūyiyah* should be a broth (*marqah*)” and in another copy: “*Nīshūqiyyah*”.

*Nīshū*⁵³⁸ is a Persian (*fārisī*) term and denotes, according to what I have heard from a group of Persian speakers (‘*ajam*’), a type of *ijjāṣ*⁵³⁹ or *qarāṣiyah*⁵⁴⁰ prunes (*ḍarb min al-ijjāṣ wa-al-qarāṣiyah*) which are small in size and very bitter, to be eaten when they are fresh and in [small] amounts (*muqaddaran*). They should be cooked in the same way you cook *ijjāṣ* and *qarāṣiyah* prunes. As for the difference of the two copies, there is no *qāf* in the Persian [term] which [i.e. the *qāf*] is due to the arabisation [of the word]. Both forms are permissible. (CC III, 32)

This is one of several passages in which Ibn Jumayʿ explicitly told us that Persian speakers were his source: In his comments on the first book, Ibn Jumayʿ told us that he “was informed by some Persian speakers” about the preparation of a certain Persian dish.⁵⁴¹ When commenting on the second book, he recounts that he “was informed by a Persian speaker from a city south of Herāt (*Harāh*)” about the correct spelling of a Persian term.⁵⁴² Moreover, in his comments on sowbread (‘*artanīthā*’),⁵⁴³ Ibn Jumayʿ relied upon what he was “told by some Persian speakers.”⁵⁴⁴ Finally, when commenting on the fourth and fifth book, Ibn Jumayʿ stated that Persian speakers provided him with information concerning certain birds.⁵⁴⁵

In the present example, Ibn Jumayʿ consulted a group of Persian speakers who informed him about the meaning of *nīshū*. The group may have provided its Arabic equivalents, but it is

537. The term ‘*ajam*’ refers to Persians, given the context, but could also refer to people from Central Asia who had knowledge of Persian.

538. According to Dozy, *Supplément*, vol. II, 750, *nīshū* (or *nīshah*) is a certain type of prune or apricot.

539. Cf. Dozy, *Supplément*, vol. I, 10.

540. Cf. Dozy, *Supplément*, vol. II, 335 and Ibn al-Bayṭār, *Zusammenstellung*, vol. I, 282.

541. CC I, 269.

542. CC II, 109.

543. Kindī, and Levey, *Formulary*, 302 who gives it as ‘*artanīthā*’ which he translates as ‘sowbread’ (*Cyclamen europaeum* L.).

544. CC II, 163.

545. CC IV, 119 and CC V, 8.

equally likely that Ibn Jumay' explained *nīshū* by comparing it to *ijjāṣ* and *qarāṣiyah* based on how the Persian speakers described *nīshū* to him. The last sentence of the example quoted above is also interesting in terms of how Ibn Jumay' understood and evaluated the transmission process of Persian terms into Arabic. The *qāf* was most likely introduced through a copyist who did not know the word *nīshūyiyah* and misread it as *nīshūqiyah*.⁵⁴⁶ Despite his concern about the correct spelling of many Arabic words, Ibn Jumay' seems to have had different attitudes toward preserving the correct spelling of Persian terms. Other examples of Ibn Jumay' sanctioning two spelling options include his remarks about the terms *damak* which has become *damaq* in Arabic,⁵⁴⁷ *fayjaydhih* and its Arabic variant *fayjaydhiq*⁵⁴⁸, the Persian term *sard* which is spelled *ṣard* in one Arabic variant,⁵⁴⁹ and the Persian *mārmahī* vs. Arabic *mārmahīj*.⁵⁵⁰ With regard to these terms, Ibn Jumay' remarked that the *qāf*, *ṣād* and *jīm* are only found in the arabised forms. All of these arabised (or corrupt) forms are judged as legitimate as the Persian forms.

In other instances, Ibn Jumay' parsed a Persian term, usually without informing his reader about the sources he had used.⁵⁵¹ If no treatise is referenced, it is likely that Ibn Jumay' based his insights on what Persians, or foreigners who had some knowledge of Persian, told him:

Jawz jandum. [Ibn Jumay' says:] This is *gawz gandum* [written] with an altered *kāf* (*kāf ma'dūlah*). It is a Persian term made up of *gawz* which means walnut (*jawz*) and *gandum* which means wheat (*hinṭah*). If arabised, it is sometimes written with *jīm* and sometimes with *gāf* [i.e. *kāf ma'dūlah*]. (CC II, 66)

546. It is also possible that replacing the *yā'* with a *qāf* was a common practice in order to Arabise Persian terms.

547. CC I, 258.

548. CC III, 61.

549. CC I, 36.

550. CC II, 161.

551. One exception is CC I, 252 in which Ibn Juzlah is named as the source.

Provided that the Princeton manuscript is an accurate copy of the autograph, Ibn Jumay‘ embraced Persian spelling conventions to distinguish *kāf* from *gāf* in this and other instances.⁵⁵² Ibn Jumay‘ had either seen this way of writing the *kāf* in other treatises or he may have been taught by a literate Persian about this convention. A more elaborate example of Ibn Jumay‘ parsing Persian terms is the following which also includes a reference to a Pahlavi term:

The *ra’īs* said: “As for fine purgatives which cleanse the head, they are *shabyārāt*.” *Shabyār* with *shīn* (dotted), and *yā’* after *bā’*, is a Persian term. It is made up of *shab* which means ‘the night’ and *bārah* which means in Old Pahlavi ‘the medicine’. They have dropped *hā’* through elision and they say *Shabyār*, the medicine which is best when taken at night. *Ashbyārāt* is its plural and its main ingredients are aloe and mastic. (CC III, 15)

Again, we can assume that Ibn Jumay‘ employed the help of a native speaker to interpret the meaning of this term. If Ibn Jumay‘ had based his explanation on a written account, he would have cited it. The Jewish pharmacist al-Kūhīn al-‘Aṭṭār (fl. 658/1260) explained the word *shabyār* in a strikingly similar way and it appears as if he had copied it from Ibn Jumay‘, unless both were using another written source which neither of them referenced.⁵⁵³ Other Persian terms parsed by Ibn Jumay‘ include *kad-khadhāh* (lord of the house),⁵⁵⁴ *tar-dhūgh* (sour clover milk),⁵⁵⁵ *giram-dānah* (snake maggots),⁵⁵⁶ *mār-māhī* (snake fish),⁵⁵⁷ *āb-zin* (water basin),⁵⁵⁸ and *zard-jawī* (yellow vessels).⁵⁵⁹

552. In modern Persian *gaf* is marked with an additional dash above the oblique, while mediaeval Persian manuscripts did not always distinguish between *gāf* and *kāf* (even though three dots below or above the *kāf* were not uncommon) nor was the dash above the oblique common. For this type of *kāf* in the *Canon* commentary see CC II, 21, 30, 45, 60, 116, 118. In CC II, 118 *kāf ma’dūlah* is contrasted to *kāf al-aṣliyyah*. Manuscript B does not distinguish between *kāf* and *gāf* but only has a normal Arabic *kāf*.

553. Chipman, *World of Pharmacy*, 34.

554. CC I, 167; i.e. *kad* = house; *khadhāh* = lord.

555. CC I, 260; i.e. *tar* = clover; *dhūgh* = fermented milk.

556. CC II, 116; i.e. *giram* = maggot; *dānah* = snake. Reference to Ibn Samjūn to explain this.

557. CC II, 161; i.e. *mār* = snake; *māhī* = generic for fish.

558. CC II, 207; i.e. *āb* = water; *zin* = basin.

559. CC II, 212; i.e. *zard* = yellow; *jawī* = vessels.

(b) Greek informants

In contrast to Persian terminology, Ibn Jumay' was only occasionally concerned with the explanation of Greek terms or the Greek origins of certain terms. In the following comment, Ibn Jumay' tells us that he consulted an Arabic-speaking Greek:

Fāwīnā (Peony).⁵⁶⁰ The author [Ibn Jumay'] says: A man who was among the Arabic speaking apothecaries from Greece (*ṣayādilat al-yūnānīn al-musta'aribīn*) told me that they consider the correct name of this medicament to be *fa'ūniyā* with the *nūn* preceding the *yā'*. (CC II, 177)

Fa'ūniyā does indeed correspond better with the Greek *παῖωνία* (*paionia*) than *fāwīnā*, and Ibn Jumay' was therefore well advised by following the suggestion of the Greek apothecary. Another passage which is concerned with spelling conventions is his comment on *asqūlūfindriyūn* (asplenium).⁵⁶¹ Ibn Jumay' commented that its leaves resemble worm-like creatures which are called *sqūlūfindrā* in Greek (i.e. scolopendra) and which are known for creeping into human ears.⁵⁶² The initial *alif* in *asqūlūfindriyūn*, according to Ibn Jumay', is therefore an addition. All of Ibn Jumay''s other references to Greek terms seem to be based on written sources. When trying to explain trochanter, for instance, Ibn Jumay' wrote that 'according to the ancients, the term *trūkhāntīr* refers to either of the two protuberances at the upper-most part of the thigh bone.'⁵⁶³ In his comments on *materia medica*, Ibn Jumay' frequently provided Greek synonyms which seem to be taken from Arabic translations of Dioscorides' works.⁵⁶⁴

560. D I, 632, l. 5 has *fāwāniyā*. Same spelling seems to be suggested by Maimonides, *Sharḥ asmā'*, no. 304, but *fāwāniyā* is an emendation by Meyerhof. See also Lev, and Amar, *Materia Medica*, 235.

561. Ibn al-Bayṭār, *Zusammenstellung*, vol. II, 31.

562. CC II, 41.

563. CC I, 85.

564. See CC II, 14, 33, 41, 43, 45, 46, 62, 70, 82, 96, 156, 163, 177, 212. In the following comments, Ibn Jumay' mentions explicitly that the terms he explains are of Greek origin: CC I, 111, 259 and CC III, 41, 85.

In addition to these interspersed comments on Greek terms, there is one instance in which Ibn Jumay' quoted another author in order to provide an Indian (*hindī*) synonym of a certain term.⁵⁶⁵ Syriac, Hebrew or Latin terms are not mentioned by Ibn Jumay'. His lack of interest in providing Hebrew synonyms is worth emphasising because it shows us yet again that Ibn Jumay''s Jewishness had no impact on his writings.

(c) *Syrian, Indian and Chinese informants*

Ibn Jumay' was not only conversing with Greek-speaking apothecaries and foreigners who knew Persian, but also with people from Syria. Earlier in this thesis, we have seen Ibn Jumay' engaging in discussions with a Syrian physician.⁵⁶⁶ The following is another example of Syrian sources:

Ṣafṣāf (willow).⁵⁶⁷ The *ra'īs* said about it in the section⁵⁶⁸ of its nature: "It is *khilāf*."⁵⁶⁹ The author [Ibn Jumay'] says: *ṣafṣāf* is of different varieties, and *khilāf* is one of them. Physicians have mentioned it in their books. In our time it is well-known under this name. It is similar to the *ṣafṣāf* with its twigs being straight and the short time it needs to grow. However, its leaves are longer and broader than the leaves of the *ṣafṣāf*. All along its branches come forth blossoms of a very elongated shape. Their colour is white-yellow and their scent tends to be like that of white liquorice. This [i.e. the coming forth of blossoms] happens before the leaves come forth. It does not bear any fruit.

The Syrians (*ahl ash-Shām*) call this *khillāf* with double *lām*. Sometimes they call it *bān*. They distill from its blossom a fluid which they use as a perfume just as one uses rose water. They produce oil from it and call it *bān* oil as well. Today, it is imported into our lands and planted in some of its gardens. (CC II, 181)

565. CC II, 113. See also CC II, 13, 23, 33 and 75 for references to Indian physicians (13), Indian merchants (75), the 'ūd of India (23), or an Indian tree (33).

566. See above p. 96.

567. Maimonides, *Sharḥ asmā'*, 41 (entry 393). Kindī, and Levey, *Formulary*, 262. Lev, and Amar, *Materia Medica*, 506.

568. For Ibn Sīnā's sections or tables (*alwāḥ*) of medicinal substances in book two of the *Canon*, see below p. 164.

569. D I, 642, l. 14.

There can be several explanations why Ibn Jumay' knew of this tree. Perhaps he discussed it with his Syrian colleagues, or with merchants who traded perfumes, or simply with local gardeners who planted this imported tree in Egypt.

Among Ibn Jumay's sources were also the accounts of Indian or Chinese merchants, here communicated through intermediaries:

Dār filfil (long pepper).⁵⁷⁰ The *ra'īs* said regarding its nature: "It is the first crop of the pepper [plant]." The author [Ibn Jumay'] says: I was informed by more than one trustworthy person who were among those who receive [goods] from Indian and Chinese merchants that long pepper is not a crop of the pepper tree and that white pepper is not the crop of the black [pepper] tree and that neither of them grows in the land from which black pepper is imported.

This comment, which argues that long pepper is not a crop of the pepper plant, will be discussed in more detail in another chapter.⁵⁷¹ It is given here to show that Ibn Jumay' supported his argument with the reports of merchants importing goods from China and India.

It is unclear where the next informant came from but he appears to be from a region bordering on China:

Sal ammoniac (*nūshādhir*).⁵⁷² The *ra'īs* said in the table of properties and its substitutes: *Faykānī* is a pure crystalline [substance].

This is *faykānī* spelled with a dot over the *fā'* (*fā' makhfufah*). It is a type of sal ammoniac (*nūshādhir*) found in mines. Its mines are between China and Kāshghar in a place known as Khotan (*Kūtan*) and it is formed inside the crevices of mountains which are situated above swampy waters. I was told about it by a man from the East (*ahl al-mashriq*) who was working in some sort of business relating to mining and dying [fabrics]. He mentioned that the aforementioned [*faykānī*] reached his mine and that he had seen it. (CC II, 147)

570. Kindī, and Levey, *Formulary*, 266.

571. See p. 174 below for a full discussion of this passage.

572. Kindī, and Levey, *Formulary*, 341.

In another passage the reference to a man from the East (*ahl al-mashriq*) clearly refers to an Iraqi,⁵⁷³ but the present passage demonstrates that Ibn Jumay' s informant was from Central Asia.

(d) *Egyptian informants*

Ibn Jumay' also referenced what Egyptians knew or said. In his comments on fish as medicaments, for instance, he discussed how Egyptians name a certain species of fish.⁵⁷⁴ Moreover, we can find comments about drugs 'not known in our land',⁵⁷⁵ how apothecaries named certain drugs,⁵⁷⁶ that some drugs were not considered lethal in Egypt,⁵⁷⁷ or that certain techniques were given a specific name by surgeons Ibn Jumay' knew.⁵⁷⁸ The next example (CC II, 107) includes a reference to what Alexandrians have told Ibn Jumay'.

(e) *Experience*

There are a few instances in the commentary in which Ibn Jumay' does not refer to what other people have written down or said. The following is an example of Ibn Jumay' telling us what he himself experienced in order to support his comment:

Yabrūh (mandrake).⁵⁷⁹ The *ra'īs* said: " ... except that the meaning of this term is either real (*mawjūd*) or fictitious (*ghayr mawjūd*), for many terms point to something which is fictitious. The appearance (*ṣūrah*) of true mandrake is dust-coloured wood, crumbly, and as large as a cabbage." The author Ibn Jumay' says: Mandrake grows abundantly in our land. I have rooted out [large] quantities of [mandrake] roots growing in Cairo and Alexandria, and I found their [the roots] consistency⁵⁸⁰ to be succulent, just as Dioscorides mentioned. I dried them and their dryness were just as the *ra'īs* mentioned, except for what he mentioned in regard to its being

573. CC III, 63.

574. CC II, 161.

575. CC I, 217

576. CC II, 61 and CC II, 95

577. CC II, 32.

578. CC III, 98.

579. Kindī, and Levey, *Formulary*, 330.

580. Lit. 'Form'.

crumbly, for they [the roots] are not like this. It is likely that what the *raʿīs* happened to have observed (*mushāhidah lahu*) of them [the roots] was old (*ʿatīq*) and decaying (*nakhr*).

I was told by a group of Alexandrians (*ahl al-Iskandariyyah*) who are farmers that what was unusual about them [the roots] was that some of them appeared to be of human shape. When I made repeated endeavours to obtain [such roots] from them, they mentioned that they find them only occasionally, because they do not have a characteristic mark [distinguishable] on the appearance of the plants on the surface of the earth, which would indicate which roots (of it, the plant) are like this [and have this human shape] and should therefore be rooted out. I was told by my teacher Abū Naṣr ʿIdnān ibn al-ʿAyn ibn Zarbī that he had seen a root of it [mandrake] in the hospital of Baghdād which was very much like a human in its shape, not deviating from it at all. Its shape was like that of a small child. The man who brought it was a Bādī (*ahl al-bādiyyah*), and he said he found it in the desert of Sinjār. I was also told about this by other people who have seen it. (CC II, 107)

Many legends surrounded the Mandrake root and Josephus (fl. c. 100) is only one of many prominent authors who had discussed the lethal effects of harvesting mandrake: its anthropomorphic form seems to have stimulated stories according to which the scream of the mandrake root kills those who harvest it.⁵⁸¹ Ibn Jumayʿ, however, seems to have been unaware of such legends (or did not believe in them) and fearlessly rooted out many mandrakes, all of which did not appear to have had the peculiar anthropomorphic form he was looking for. His Alexandrian contemporaries could not provide him with such roots either, but Ibn Jumayʿ still allowed that such roots might exist by adducing the oral reports of his teacher and several other people who had seen it.

There are also other accounts in which Ibn Jumayʿ corroborated his statements with personal accounts of what he had seen in Egypt. In the following, he described a very colourful bird:

The *raʿīs* said: "... is of the same colours as the *mutaqalbūn*."

He refers with this name to a bird known in our land as *Abū Qalamūn*. It is a bird which has many breeding places in the lower regions of Egypt in a place known as Yashmūr and what borders on it. The inhabitants of this land call it the cock of the water (*dīk al-maʿ*) and it has many colours with most of them being azure blue and green, and its colour adorns [the bird]

581. For Mandrake and Josephus, see Chipman, *World of Pharmacy*, 168, n. 125.

and changes according to the location of the viewer [i.e., it is iridescent]. On its head it has a stripe (*laṭ'ah*) in bright red, and it is among [the birds] which are held in captivity [i.e. as pets] due to its beauty and because it eats vermin. (CC I, 286)

As Ibn Jumay' did not cite any written sources, we may conjecture that his detailed description of the bird is based on his own experience seeing the bird. Dictionaries mention Abū Qalamūn but only as a striped, multicoloured textile.⁵⁸² Only a century after Ibn Jumay', Abū Qalamūn was mentioned as an Egyptian water fowl by Ibn Manẓūr (d. 711/1311) in his great dictionary *Lisān al-'Arab*:

Al-Qalamūn: silk gowns (*maṭārif*) with many colours ... *Abū Qalamūn* is a cloth that, when the sun shines on it, shows up various colours. I don't know why it is called thus. Someone who lives in Egypt said to me that *Abū Qalamūn* is a water fowl that shows up many colours, and that the cloth is likened to it.⁵⁸³

When it comes to certain plants, Ibn Jumay' was much more explicit about his sources. For instance, he told us: "as for the sowbread plant (*'arṭanīthā*),⁵⁸⁴ I happened to see it, and it is just as Dioscorides described it ..."⁵⁸⁵ and continued "as for calendula (*adhriyunah*),⁵⁸⁶ I have seen it many times in Alexandria growing in the days of spring."⁵⁸⁷ In another passage, he commented that he had seen a certain stone important for his discussion and added that he had found it to be the size of an egg.⁵⁸⁸ Another personal observation is found in his comments on tabasheer (*ṭabāshīr*)⁵⁸⁹ which Ibn Jumay' simply stated to have seen.⁵⁹⁰

582. See Huisman, *Abū Ḳalamūn*.

583. Ibn Manẓūr, *Lisān*, vol. XVII, 226. The bird also appears in the *Book of Curiosities* in the list of waterfowl in the chapter on Tinnis. See Chapter 2.14, fol. 35a, lines 17-19, in Savage-Smith, and Rapoport, *Book of Curiosities*.

584. Kindī, and Levey, *Formulary*, 302 who gives it as *'artanīthā*.

585. CC II, 14 = 76a-b / 46a.

586. Ibn al-Bayṭār, *Zusammenstellung*, vol. I, 21. He suggests *calendula officinalis*.

587. CC II, 14 = 76a-b / 46a..

588. CC II, 33 = 82b/49b.

589. Kindī, and Levey, *Formulary*, 300.

590. CC II, 102.

In all of these comments, Ibn Jumay‘ considered it important to state that he himself had observed certain things or that what he saw was either similar to the descriptions of his predecessors or slightly different (as in the case of mandrake where both Ibn Sīnā’s and Dioscorides observations are compared to those of Ibn Jumay‘). Often it is unclear, however, what exactly influenced Ibn Jumay‘ in his comments because he does not always inform his reader about how certain conclusions were drawn. Even in comments where it appears obvious that Ibn Jumay‘ only used books, it may well be the case that his experience as a physician led him to certain conclusions.⁵⁹¹

Ibn Sīnā’s statement that olive-oil like substances can float in the lower part of a urine flask was discussed above.⁵⁹² Did pure book knowledge lead Ibn Jumay‘ to challenge Ibn Sīnā’s remarks or did medical practice play a role as well? As Ibn Sīnā showed more interest in categorising medical knowledge, he had possibly never seen a specimen of olive oil urine and did not realise that his account would be immediately wrong in the eyes of physicians, such as Ibn Jumay‘, who may have followed Galen very seriously in their practice of urine analysis. Similarly, the criticism concerning the cephalic vein and the ‘shoulder-vein’ may have been triggered by Ibn Jumay‘’s medical experience.⁵⁹³ As a physician, recommending blood-letting from one of the most important veins in mediaeval Islamic medicine was probably very common.⁵⁹⁴ This again suggests that Ibn Sīnā was not very well informed about certain basics of the medical art, but rather was primarily concerned with its theory. To mention yet another example, it is probable that Ibn Jumay‘’s experience led him to his criticism that Ibn Sīnā made a mistake which skilled physicians would not make; physicians who regularly

591. For the question of how much experience influenced the writings of mediaeval physicians, see Horden, and Savage-Smith, *Year 1000*, in particular by Álvarez-Millán, *Practice*. See also Pormann, *Theory and Practice*.

592. See above, p. 101.

593. See above, p. 113.

594. Cf. Pormann, and Savage-Smith, *Medicine*, 118, note 15.

composed purgatives were likely to have been in a better position to spot Ibn Sīnā's mal-composition.⁵⁹⁵

4. *Summary of methods*

The methods Ibn Jumay' used in his *Canon* commentary can be categorised according to the sources he used:

1. Comparing textual variants of several copies of the *Canon*
2. Consulting written sources other than the *Canon*
3. Relying on oral sources or his own experience

Ibn Jumay' employed the first method in more than 220 instances.⁵⁹⁶ As for the second method, there are well over 600 instances in which Ibn Jumay' referenced authors of other medical or philosophical treatises.⁵⁹⁷ Moreover, Jawharī's dictionary also had an important role with more than 80 references.⁵⁹⁸ As for the third method, there are more than 60 instances in which Persian terms are explained. In roughly 20 instances, it is made explicit that Ibn Jumay' had gained knowledge of difficult terms by asking other people. In less than 10 instances, it was important for our commentator to write about his own experience. These numbers demonstrate that Ibn Jumay' most frequently employed methods which involved the comparison of his *Canon* copies and the application of his impressive book knowledge. Ibn Jumay' was no doubt primarily interested in establishing an accurate, authoritative and less erroneous text of the *Canon*.

595. See above p. 114.

596. References to each instance are given above, see p. 86.

597. See above p. 77ff.

598. See above p. 117.

Analysing Ibn Jumay'’s working methods has raised certain questions. Some comments have demonstrated that Ibn Jumay'’ relied on what he had heard or seen in twelfth-century Cairo. Other comments which at first sight look like pure arm-chair analysis, may be evidence of Ibn Jumay'’ employing his own experience as a physician. The next two chapters will continue to examine the question how much Ibn Jumay'’s commentary was influenced by his experience and profession as a physician.

Above anything else, however, the chapter has shown how much Ibn Jumay'’ relied on books. Yet, it remains unclear why Ibn Jumay'’ thought that some sources (especially those of Galen) are more reliable than Ibn Sīnā’s more recent rewordings. If he held the *ra’īs* in such high regard, as he stressed in his preface, why did he not trust him more than the ancient authorities who may have had outdated views on certain matters? In other words, when exactly did Ibn Jumay'’ trust Ibn Sīnā and when not? Finally, it is unclear for whom Ibn Jumay'’ had committed himself to such a labour-intensive task. Did he really write for a noble-man and, if so, why would such a patron be interested in the very technical nature of some comments we have encountered so far? With its three case studies, the next chapter will address these questions and give a more detailed and contextualised picture of Ibn Jumay'’ at work.

III. The commentator at work: Three case studies

1. Case study: Anatomy and arm-chair analysis

In his treatise to Saladin,⁵⁹⁹ Ibn Jumay‘ advocated the practice of human dissection in explicit terms:

He [the good physician] also requires the enumeration of the parts of the human body, part by part, and the knowledge, gained through experience (*ḥiss*) and observation (*mushāhadah*) of the characteristics of the nature of each with regard to the colour, the normal state, and the like; [and knowledge] of its structure, that is, its shape, its smoothness or its roughness, whether there is a cavity or duct in it and what this cavity or duct contains; of the extent of its size and the number of its component parts and the nature of each component, if it has component parts; of its position, that is, its position in the body and whatever association and connection there may be between it and other parts; and of its function and useful purpose or purposes for which it is needed.

Pursuit of these things by experience comes about only through the anatomical dissection of human bodies (*tashrīḥ al-abdān al-bashariyyah*). But the dissection of these bodies is not [done] with ease and convenience at all times. And it [human dissection] does not suffice for the knowledge of these matters unless it is preceded by extensive practice in the dissection of other similar animals whose parts for the most part are like the parts of man, such as apes, [and] in the presence of instructors who are skilled in it, as the excellent Galen clearly and concisely outlines.⁶⁰⁰

As E. Savage-Smith has pointed out, it is difficult to tell how much such thoughts represent merely a reworking of Galen’s writings and how much they reflect actual practices. Yet, it is evident that Ibn Jumay‘ considered it to be appropriate to include an appeal to undertake human dissection in his treatise to Saladin without expressing any moral or religious caveats about its practice. Ibn Jumay‘ was explicit about what should be learned from human or

599. The chronological order of Ibn Jumay‘’s *Canon* commentary and his treatise to Saladin is unknown.

600. Savage-Smith, *Attitudes*, 97. See also Ibn Jumay‘, *Treatise*, §25.

animal dissection. Experience (*ḥiss* - literally 'sensory perception') and observations (*mushāhadah*) will teach the physician the colour, feel, size, location and function of certain body parts. It is implied that written accounts cannot provide the physician with this learning experience.

Ibn Jumay'ʿs passage in his treatise to Saladin has led modern scholars to count the court physician among the most out-spoken advocates of human dissection in the mediaeval period.⁶⁰¹ As the *Canon* contains a lot of material on human anatomy, we may expect Ibn Jumay'ʿ to comment on the issue of human dissection and provide evidence that he did not only advocate human dissection but also used his experience as a dissector to comment on the *Canon*. Approximately 150 years after Ibn Jumay'ʿ, Ibn Nafīs employed his commentary on the *Canon* to introduce a new notion of the anatomy of the heart. According to Ibn Nafīs, *tashrīḥ* refuted Galen's and Ibn Sīnā's anatomical notion of the heart.⁶⁰² While *tashrīḥ* is an ambiguous term and can mean both anatomy and dissection,⁶⁰³ Ibn Nafīs' discovery is in harmony with our modern anatomical knowledge of the human heart. It thus appears to follow that he could only discover this fact because he had seen and dissected a human heart, instead of relying on the written accounts of Galen and Ibn Sīnā whose descriptions were not accurate.⁶⁰⁴ We have already seen that Ibn Jumay'ʿ had not much to say about the anatomy of the human heart except a small linguistic remark,⁶⁰⁵ but there may be revealing comments elsewhere in the commentary.

601. Savage-Smith, *Attitudes*, 97.

602. Savage-Smith, *Attitudes*, 102.

603. Savage-Smith, *Attitudes*, 68.

604. For another explanation why Ibn Nafīs posited the circuit, see below p. 162.

605. See above p. 118.

(a) *Anatomy in the Canon*

Human anatomy is discussed in Book One and Book Three of the *Canon*. Book One discusses only parts of the body which Ibn Sīnā understood as homogeneous, i.e. bones (cranium to foot), muscles (pectoral to those moving the toes), nerves (brain to sacral and coccygeal nerve), arteries (venous to descending artery) and veins (portal vein to descending *vena cava*). His discussion must be read in the context of part one of Book One, which begins with the chapters on (1) the definition of medicine, (2) elements, (3) temperaments, and (4) humours.⁶⁰⁶ Elements make up humours (which have certain temperaments), and humours make up homogenous parts of the body. Chapter five, the detailed discussion of human anatomy (or more precisely the homogenous parts of the body), is thus linked with the chapter on humours. Chapter six of part one is concerned with the three natural faculties which govern the homogenous parts. The anatomy of the homogenous parts is therefore not a central topic in the *Canon*, but only a chapter in the first part of the first book.

Book Three discusses compound body parts (such as the brain, heart or liver) in the context of certain diseases which can afflict these body parts. The order of the organs (from head to toe) dictates the order of book three, but the anatomy of these organs is only a small preface to the individual discussions about diseases affecting a particular organ, their symptoms, causes and possible treatments. Anatomy is thus spread out over the entire third book, starting with the anatomy of the brain (chapter 1), eyes (3), ear (4), nose (5), mouth and tongue (6), throat (9), pharynx, trachea, and the lung (10), heart (11), breast (12), oesophagus and stomach (13), liver (14), gall bladder and spleen (15), the six intestines (16), kidney (18), urinary bladder (19), testicles and sperm vessels (20), and ending with the anatomy of the uterus (21).

606. Cf. above p. 11ff.

(b) *Ibn Jumay's comments on Ibn Sīnā's introduction to chapter five*

Ibn Jumay's comments on chapter five (book one, part one) start with an approving remark regarding Ibn Sīnā's arrangement of anatomical topics: the *ra'īs* had not solely discussed anatomical structures, but also the reasons why each structure is designed the way it is. Galen had chosen a similar approach in his *On the Usefulness of the Parts of the Body*⁶⁰⁷ and it is thus hardly surprising that Ibn Jumay', as a staunch supporter of Galen, stressed the benefits of this approach. In particular, Ibn Jumay' emphasised that those studying the *Canon* will be motivated to learn more about anatomy because they are presented with a discussion of the usefulness (*manāfi'*) of every single part of the body.⁶⁰⁸

Ibn Jumay' did not comment on Ibn Sīnā's splitting up his presentation of anatomy and presenting it in two different books of the *Canon*.⁶⁰⁹ It is doubtful that he found such an approach advantageous, for he did not adopt it in his own medical compendium, the *Irshād*, which followed the *Canon* in many other aspects.⁶¹⁰ The discussion of anatomy was not buried in the context of humours, natural faculties and pathology as it was in the *Canon*, but was a central topic which took a prominent and independent place in the *Irshād*.⁶¹¹

After his general remarks on chapter five, Ibn Jumay' commented on the very first sentence 'organs are bodies made from the first temperament of the humours' (*al-a'dā' ajsām mutawalladah min awal mizāj al-akhlāt*),⁶¹² stating that this is contradicted by Ibn Sīnā himself

607. Galen, *Usefulness*.

608. CC I, 54 (ed. in appendix).

609. By contrast, Ibn Naffis criticised this arrangement a century later. He prepared a separate commentary on the anatomical sections of the *Canon* and opened his commentary with the following remarks: "We have brought together what he [Ibn Sīnā] said in the first book of the *Canon*, with what he said in the third book of this treatise, for in that way the discussion concerning anatomy will be together and [properly] organised." Savage-Smith, *Attitudes*, 99-100.

610. See Rabin, *Skeleton*, for a comparison of the *Irshād* with the *Canon*. For the *Irshād* in general, see above, p. 40. It should be noted that Ibn Jumay's son was responsible for the final draft of the *Irshād*.

611. See Rabin, *Skeleton*.

612. D I, 36.

when he claimed that organs are essentially made from nutriments. Ibn Jumay' went on to offer an interpretation which is too lengthy to be discussed here, but he essentially reconciled the two apparently disparate statements and abandoned the thought that the *ra'īs* had contradicted himself (CC I, 55).

Such purely theoretical comments continue with Ibn Jumay''s paraphrase of Ibn Sīnā's short definition of organs (CC I, 56) and Ibn Jumay''s criticism that Ibn Sīnā had overgeneralised when stating that all bones are homogenous (CC I, 57). According to Galen, whom Ibn Jumay' cited ostentatiously, not all bones are homogenous. The next comment (CC I, 58) is simply a gloss in which Ibn Jumay' remarked that Ibn Sīnā will explain certain details related to tendons later in the paragraph. This is followed by Ibn Jumay''s comparison of two variants found in the *Canon*, from which only one is in conformity with Galen's teachings which are cited by Ibn Jumay' (CC I, 59). The subsequent comment concerning the *mahil* was already discussed above (CC I, 60).⁶¹³ In the final comments on the opening section, Ibn Jumay' gave a brief explanation of a certain term Ibn Sīnā had used for menstruation (*qur'*) (CC I, 61) and discussed a variant which he deemed to be erroneous (CC I, 62).

What is interesting in this series of comments are the things Ibn Jumay' did not comment on. Even though Ibn Jumay' is keen to compare Ibn Sīnā's account with those of Galen (who is cited twice by Ibn Jumay'), there is no comment made on Ibn Sīnā's philosophical diatribes against Galen which are found in this same section. Hippocrates had maintained that both male and female contribute 'semen' because a child bears resemblance to both his mother and father. Aristotle, however, had categorically rejected this theory, reducing the role of the female to providing merely the passive material, the menstrual blood, which the male semen (as the sole carrier of the soul) forms into the foetus. Galen re-affirmed the original

613. See p. 119.

Hippocratic idea of equal contribution and supported it with the discovery of the ovaries which he called ‘female testicles’. Even though Ibn Sīnā accepted the existence of the ovaries, he applied Aristotle’s central hypothesis by shifting the importance back to the male semen. As stated in the *Shifā’*, only the male semen has the ‘principle of movement’.⁶¹⁴ Ibn Sīnā paraphrased the same argument in the *Canon* and pointed out that he disagreed with Galen because Galen had not given the male semen more importance in this respect.⁶¹⁵

Ibn Jumay’'s lack of interest in philosophy was probably the reason why he did not comment on Ibn Sīnā’s disagreement with Galen. When criticising Galen regarding the role of the male semen, Ibn Sīnā had stated that physicians should not argue about philosophical matters⁶¹⁶ and it appears that Ibn Jumay’ tacitly followed his advice. As will become clear in chapter four of this thesis, Ibn Jumay’ understood himself to be a physician and the nature of his comments (especially when compared with and contrasted to those of a philosopher) demonstrate that he was not particularly concerned about philosophical topics.

(c) *Attitudes toward human dissection: A hidden preface*

Ibn Jumay’'s theoretical comments on the opening section of the fifth chapter end rather surprisingly. Commenting on the section as a whole (and not on a particular sentence or word), Ibn Jumay’ set out to explain how knowledge of human anatomy should be gained:

The author [Ibn Jumay’] says: As for anatomical knowledge, it should be acquired through direct practice, that is by sense perception (*ḥiss*) and observation (*mushāhadah*). This is obvious and already the most eminent of physicians [Galen] had set out in a concise way that observation of what is revealed through the dissection of human bodies is not benefitting the novice unless he works under the following two conditions:

The first [condition] is that it [dissection] takes place in the presence of skilled masters, for

614. See Musallam, *Avicenna*.

615. D I, 39.

616. D I, 39.

whatever novice undertakes this by himself will only at best become a skilled butcher.

The second [condition] is that it [practicing human dissection] should only take place after a great deal of prior training in the dissection of other animals, whose members in some or most parts resemble human bodies, as it is indeed difficult for the novice to observe all that is required of the matters of dissection in human bodies. So even if the novice was under the supervision of a skilled master and happened to witness a human dissection once or twice, whatever he witnessed may not remain with him and consolidate in his mind if the aforementioned training [i.e. dissecting animals] has not preceded it.⁶¹⁷ (CC I, 63.1)

Ibn Jumay‘ did not apparently find a more appropriate place for these remarks on human dissection than as a conclusion to his comments on the first section of chapter five. This illustrates how different his agenda was from Ibn Sīnā’s. For Ibn Sīnā, anatomy stood in the context of his theoretical and philosophical considerations; there was no need to discuss more practical matters, such as the question of how anatomical knowledge should be gained. He only mentioned briefly in the preface of the *Canon* that anatomical knowledge ought to be based on experience (*ḥiss*) and dissection (*tashrīḥ*).⁶¹⁸ For Ibn Jumay‘, however, dissection was an essential question, and Ibn Sīnā’s silence may have prompted his detailed comments because he felt that concrete advice must precede a section on human anatomy.

Ibn Jumay‘’s remarks in the *Canon* commentary are similar to those found in his treatise to Saladin. In both the letter and commentary, Galen is said to have stated that the novice only benefits from the practice of human dissection if (1) he is under the guidance of skilled teachers and (2) has sufficient experience in the dissection of animals so as to be prepared should the occasion arise to dissect a human body. In the commentary, Ibn Jumay‘ adds that the novice needs a teacher lest he end up as a skilled butcher. While the remark about the butcher and the second stipulation concerning animal dissection is repeatedly found in

617. Lit. “If he happens to witness it [dissection] in them [human bodies] once or twice, even if he was under the supervision of a skilled master, it may not remain with him and consolidate in his mind if the aforementioned training has not preceded it.”

618. D I, 15. See also Savage-Smith, *Attitudes*, 92-93.

Galen's writings,⁶¹⁹ it is not found in conjunction with the stipulation of having skilled teachers.⁶²⁰ We are therefore not merely presented with a paraphrase of Galen's words, but most likely with the commentator's own interpretation of what the two conditions are under which human dissection must take place. Particularly interesting is how Ibn Jumay' phrased the second stipulation in which he introduced the remark about how frequently human dissection takes place. While Galen had not provided any specific numbers,⁶²¹ Ibn Jumay' stated that one can expect to witness dissection 'once or twice'. This refers to either the time period in which a novice is trained or to his entire lifetime. In either case, the numbers Ibn Jumay' provided here indicate that if human dissection was practised in twelfth-century Egypt, it was not something which was practised systematically or frequently.

The question as to how book knowledge relates to knowledge acquired through dissection is addressed in his remaining comments on the issue:

As for the written accounts concerning anatomy, their benefit is (as the most eminent of physicians [Galen] has taught us) that he who does not have a teacher but is trained in the practice of dissection will seek help from these written accounts. He will be like one of whom it is said:⁶²²

619. See Galen, *Usefulness*, p. 40, n. 182 and Savage-Smith, *Attitudes*, 90. E. Savage-Smith also presents a translation of an Arabic translation from the Greek which is very likely to have influenced Ibn Jumay's thoughts concerning the second stipulation (Savage-Smith, *Attitudes*, 89).

620. The summary of the two stipulations is, for instance, not found in *Jawāmi' Kitāb Jālīnūs fī at-tashrīḥ li-al-muta'allimīn* (Galen, *Alexandrian Compendium*, vol. I, 435-508) nor in *Jawāmi' Kitāb Jālīnūs fī at-tashrīḥ* (Galen, *Alexandrian Compendium*, vol. II, 50-126).

621. Some references to frequency are found in Galen, *Anatomical Procedures*, vol. I, 2-3 and perhaps Ibn Jumay' was referring to such instances. Galen wrote about seeing a skeleton after a grave had been flooded and another skeleton of a robber whose flesh had been eaten away by the birds. Otherwise, it may just be the case that Ibn Jumay' is alluding to Galen's phrases which stress how important it is to prepare oneself for the possible event of dissecting a human being: "I wish you to proceed to practise many times on the bodies of apes yourself, so that if it were to happen to you that you were able to dissect a human body, you would be able with little effort to disclose the parts one by one" (Savage-Smith, *Attitudes*, 88).

622. Lit. 'As for the written accounts concerning it, their benefit is - as the most eminent of physicians [Galen] has taught us - that he who has got training in the direct practice of dissection but without having found a teacher, will seek help from them [i.e. the written accounts], and he will be like one of whom it is said:'

Whoever does not find all that he seeks, he should [at least] seek part of it.

It is evident that this level of assistance through written [anatomical] accounts can only be expected from the accounts established by those people who themselves were trained, had hands-on experience and were completely skilled in it. Indeed, they are the ones whose accounts are likely to be in conformity with reality⁶²³ since they have laid down in their books what they have observed with the senses and have certain knowledge of.⁶²⁴ (CC I, 63.2)

Ibn Jumay' continued buttressing his thoughts with a reference to Galen, but the quotation of an Arabic proverb and Ibn Jumay''s approval of anatomical treatises written by experienced anatomists went beyond Galen. For Ibn Jumay', it was important to stress that students without a teacher can only trust the accounts of those who were 'completely skilled' in anatomy. It is clear that he here thought of Galen who had laid down in excruciating detail what he had seen. We have to question, however, why Ibn Jumay' put so much faith in the written accounts of Galen. A physician was surely able to gain more and more experience through dissecting animals without the help of reliable books. If experienced enough, such a physician must have been able to distinguish trustworthy accounts. However, Ibn Jumay' believed that such a physician could only become as skilled as a butcher. The written word of Galen who had recorded his anatomical experience needs to guide the novice or physician who must perceive the reality he experiences through Galen's eyes.

Ibn Jumay' thus gave more authority to certain books and the oral tradition than to experience itself. However, Ibn Jumay' did not go so far as to suggest that we can only rely upon Galen, but emphasised that we need to repeat the process of touching, seeing and locating what we see. Perhaps, if Galen had not emphasised the need to engage in dissecting animals and humans, Ibn Jumay' would have simply suggested following Galen's accounts

623. 'With reality', lit. 'With the things as they actually are'.

624. Cf. Ibn Nafis "For that reason, we have placed most of our reliance for the knowledge of the forms and positions of the parts and related matters on his statements [i.e. Galen's], except for a few things that we suppose were due to errors of the scribe or his information regarding it not being verified through observation." (Savage-Smith, *Attitudes*, 101)

without practicing dissection. However, as Galen was clear about the necessity of practice, Ibn Jumay' felt obliged to repeat such claims. The question then becomes to what extent Ibn Jumay' himself felt obliged not only to emphasise such claims in his writings but to put them into practice. We will return to this question later on.

In the following paragraph Ibn Jumay' introduced the scenario of what happens if one only reproduces written accounts without having any first hand experience of the matters one writes about:

As for the others who have only an inadequate idea of these matters [acquired] through written discourses (just like somebody who imagines the districts of Baghdad without seeing them and only knows them through books) and who write only for glory and satisfaction, one should not expect such value from their accounts.⁶²⁵ For the most eminent of physicians [Galen] said that the desire to learn anatomy through books is like the desire to learn the navigation of ships and the like through books. If they themselves have only a deficient idea of anatomical matters which they have laid out in their books, then what, pray tell me, will be the state of somebody who learns [this subject] from their accounts? (CC I, 63.3)

The passage strongly criticised authors of anatomical treatises who have never practised dissection. In order to stress how important observation and experience is, Ibn Jumay' choose to paraphrase Galen's example of navigating ships and introduced the example of describing Baghdad without ever having visited it (bringing Galen's example up to date, as it were). The latter is reminiscent of ninth- and early-tenth-century geographers who have sharply rebuked other authors for being "armchair" scholars who do not rely on material gathered during travels and their personal observations (*mushāhada*).⁶²⁶

So while Ibn Jumay' gave more authority to book knowledge and the oral tradition, he still felt the need to stress the importance of practice and observation with two very similar examples.

625. Cf. Galen, *Usefulness*, 119.

626. Silverstein, *Medieval Islamic Worldview*, 283f.

Is this rhetoric or did Ibn Jumay‘ follow his own ideals when he was writing about anatomy in his commentary on the *Canon*?

The passage continues with Ibn Jumay‘ reinforcing his argument concerning inadequate book knowledge:

Therefore, I do not consider it appropriate that novices studying anatomy neglect the accounts of the most eminent of physicians [Galen] and instead turn to the treatises of the unexperienced. Such accounts are of so little usefulness that it is not even worthwhile to occupy oneself with editing and revising them. (CC I, 63.4)⁶²⁷

Unfortunately, Ibn Jumay‘ did not provide any names of useless anatomical treatises. Did he count the *Canon* among such treatises? As the continuation of the passage suggests, Ibn Jumay‘ did not think that Ibn Sīnā had ever observed the anatomical structures he discussed:

For these reasons, I decided not to compare the *raʿīs*’ discourses on anatomical matters with those of the most eminent of physicians [Galen]. I abstained from calling attention to such differences between Ibn Sīnā’s and Galen’s accounts because this would have inevitably led to the discussion of matters that happen to those determined to discuss things without actually observing them. Among such matters would be shortened explanations, the abandonment of the sound method of arrangement, or slight corruptions of the original and similar things.⁶²⁸ (CC I, 63.5)

If Ibn Jumay‘ were to compare Ibn Sīnā’s and Galen’s discourses on anatomy, he would need to discuss Ibn Sīnā’s shortcomings (such as corrupting his sources) which would demonstrate that Ibn Sīnā had not witnessed the things he wrote about. Instead, Ibn Jumay‘ decided not to

627. Lit. ‘Therefore, I do not consider it appropriate for any novice to aspire to the study of anatomical matters from any of their accounts nor to turn away in this matter from the accounts of the most eminent of physicians regarding these matters. Since they [i.e. the accounts of those who have no experience] are of so little usefulness, there is no benefit in occupying oneself with editing and revising them.’

628. Lit. ‘For these reasons, I have seen fit to pass over in silence the comparison of the *raʿīs*’ discourses on anatomical matters with those of the most eminent of physicians [Galen] and the taking notice of what is in them [i.e. the differences between Ibn Sīnā and Galen] which would naturally involve things that happen to somebody determined to speak of things without [actually] observing them through the shortening of explanations, or abandoning the sound method of arrangement, or through slightly corrupting the original and similar things.’

draw any attention to the fact that Ibn Sīnā had not practised dissection. Yet, the commentator concluded his thoughts on human dissection as follows:

So I restricted myself only to the treatment of what is in obvious contradiction with what is well-known to physicians and what is included in the discourses of the most eminent of physicians [Galen] in his famous books. Then [I restricted myself to] what deficiency is disclosed in his [Ibn Sīnā's] own [mode of] expression; or [what is] insufficient or contradictory on the whole; and what is in need of explanation in terms of expressions or clarification of problematic words and what is similar to that. (CC I, 63.6)

After stressing that he would abstain from a comparison between the *Canon* and Galen's writings which may have revealed Ibn Sīnā's incompetence in the field of anatomy, Ibn Jumay' concluded that he must nonetheless discuss the most obvious contradictions. Ibn Jumay' thus contradicted himself: while he did not want to draw attention to Ibn Sīnā's shortcomings, Ibn Jumay' still wanted to discuss his most obvious shortcomings (which would obviously reveal that the *ra'īs* wrote about things he had never observed). This tension is best explained if we understand Ibn Jumay's comment as a polite but at the same time critical evaluation of Ibn Sīnā's authority to write about anatomy in the *Canon*.

The entire comment on human dissection served several purposes, such as outlining the nature of the comments Ibn Jumay' was about to make. Ibn Jumay's main purpose, however, was to legitimate himself as an authoritative commentator on the subject of anatomy. With his call for human dissection, Ibn Jumay' depicts himself as an obedient disciple of Galen, or perhaps even as a new Galen. Ibn Sīnā, on the other hand, is portrayed in a negative way and the comment implies that novices, aspiring physicians or scholars should not rely on the anatomical descriptions in the *Canon*. Ibn Jumay' abstained from making this point more explicit and employed an elaborate writing style to disguise his condemning criticism, for he generally tried to refute the argument that the *Canon* was useless for novices and experts.⁶²⁹

629. See p. 88 above.

Our commentator left little doubt, however, that he was able to identify Ibn Sīnā's shortcomings and that he, Ibn Jumay', was superior to the *ra'īs* in the field of anatomy.

Even though never explicitly stated, Ibn Jumay' also implied with his comments that he counted himself among those who had gained anatomical experience and had followed Galen's ideals. Only physicians with the necessary experience and skills in dissecting animals or humans can write (and comment) on the topic. With his comments on anatomy, and his decisions whether or not a certain anatomical statement is correct, Ibn Jumay's reader must have believed that he fulfilled the requirements of a physician skilled in anatomy. Ibn Jumay' thus depicted himself as someone who had been prepared for the rare occasion of a human dissection.

Whether or not Ibn Jumay' practised animal and human dissection, however, depends on whether or not he felt obliged to repeat Galen's ideals not only in theory but also in practice. Ibn Jumay' might have felt at ease repeating Galen's ideals without ever putting them into practice.

(d) Anatomists at work: the case of Ibn an-Nafīs and al-Baghdādī

E. Savage-Smith has dispelled the myth that religious strictures banned the practice of human dissection in mediaeval Islam.⁶³⁰ She surveyed the attitudes toward dissection in medical, philosophical, religious and legalistic treatises and showed that there were no strictures against its practice. As Savage-Smith stressed, however, she did not focus on how much a given medical treatise reveals about the practice of its author:

It is not the purpose of this study to explore the possibility that certain anatomical structures described in a given treatise might be interpreted as having required prior dissection in order

630. Savage-Smith, *Attitudes*.

to frame the description in the given manner.⁶³¹

As we have seen earlier,⁶³² Ibn Jumay' made some comments which drew on experience and given that he was one of the most outspoken mediaeval advocates of human dissection, his possible experiences as a dissector may have had an impact on his comments as well. The remaining sections of this case study will explore whether there are any indications in Ibn Jumay''s writings that some of his knowledge was gained through the practice of dissection, or whether his comments on anatomy must be best described as 'armchair analysis'. Before we turn to Ibn Jumay', however, it is necessary to mention two mediaeval physicians whose writings suggest that they were practicing anatomists.

Less than a century after Ibn Jumay', Ibn Nafis (d. 687/1288) used his *Canon* commentary to argue that there was no invisible passage between the right and left ventricle of the heart.⁶³³ Even though there has been some debate whether or not this could be a purely theoretical conclusion,⁶³⁴ this discovery can be interpreted as evidence for the practice of human dissection. There may be similar instances in which Ibn Jumay' deviated notably from what his predecessors had to say in a way that suggests knowledge gained through dissection.

More relevant to the environment in which Ibn Jumay' was working is 'Abd al-Laṭīf al-Baghḍādī (d. 1231), who was among the Muslim physicians who served Saladin at his court in Damascus.⁶³⁵ He is remembered in medical history for criticising Galen's description of the

631. Savage-Smith, *Attitudes*, 104.

632. See above, p. 128f.

633. For a detailed discussion of this topic see Savage-Smith, *Attitudes*, 98ff.

634. See below, p. 162, for a short discussion of N. Fancy's thesis. Fancy argued that Ibn Nafis' theory concerning the pulmonary transit is a mere anatomical corollary to his more significant physiological and psychological theories and not an anatomical discovery. Ibn Nafis argued in his *Canon* commentary that the spirit's substance would be ruined if thick blood of the right ventricle were to make it into the left ventricle. It can thus be argued that Ibn Nafis's discovery is purely theoretical and not necessarily prompted by human dissection.

635. Ibn Abī Uṣaybī'ah, *'Uyūn* (ed. Müller), vol. II, 201ff. See also Joosse and Pormann, *Decline*.

lower jaw bone as being composed of two parts. As I will be analysing Ibn Jumay's comment on the upper jaw bone, it is helpful to look at al-Baghdādī's case to get a better understanding of a mediaeval anatomist at work. Al-Baghdādī happened to be in Egypt during the famine in the year 597/1200-1201 and recorded the following:

In Cairo, in the month of Ramadan [commencing 5 June, 1200-1201], a human skeleton was found, the flesh of which had been removed ... ; this specimen was badly needed by Galen, who had been seeking in vain to view [a human] skeleton. Such a sight has been in demand by all those who cared to know more about anatomy.⁶³⁶

Galen, however, had not been seeking in vain to view human skeletons. Al-Baghdādī was not aware of Galen's treatise *On Anatomical Procedures* in which Galen said:

... it is still possible to see something of human bones. I, at least, have done so often on the breaking open of a grave or tomb. Thus once a river, inundating a recent hastily made grave, broke it up, washing away the body. The flesh had putrefied, though the bones still held together in their proper relations. It was carried down a stadion and, reaching marshy ground, drifted ashore. This skeleton was as though deliberately prepared for such elementary teaching. And on another occasion we saw the skeleton of a brigand, lying on rising ground a little off the road. He had been killed by some traveller repelling his attack. The inhabitants would not bury him, glad enough to see his body consumed by the birds which, in a couple of days, ate his flesh, leaving the skeleton as if for demonstration. If you have not the luck to see anything of this sort, dissect an ape and, having removed the flesh, observe each bone with care. Choose those apes likeliest man, with short jaws and small canines...⁶³⁷

Al-Baghdādī's remarks concerning Galen were inaccurate because Galen had observed human skeletons. It follows that al-Baghdādī had a distorted conception of how Galen wrote about anatomy; according to al-Baghdādī, one could only be correct about the anatomical features of a specimen if one had seen it. He did not consider the possibility that even if one thoroughly examined a specimen (as Galen had), one could still project preconceived ideas of how a specimen should look. In other words, humans see what they know. Galen examined

636. Jadon, *Comparison*, 73.

637. Galen, *Anatomical Procedures*, 3. The translation is made from the Greek version, but there were Arabic translations available in the middle ages.

human skeletons through the glasses of someone who was influenced by his extensive experience in dissecting animals. He was therefore unlikely to ‘discover’ something which contradicted his knowledge which he gained through the dissection of animal skulls, in particular those of apes who have a two-part mandible. A few human skeletons were unlikely to change his reinforced notion of how a mandible should look. There is nothing to suggest that al-Baghdādī had extensive experience in dissecting animals and he was therefore unlikely to have had similar preconceptions about skeleton structures.

Al-Baghdādī followed the practice of teaching anatomical concepts by referring to written texts. Like Ibn Jumay‘, however, he was aware that such an approach is problematic:

We saw an amazing thing once when a group of those who frequently visited me to study medicine had difficulty in comprehending me when I was explaining *The Treatise on Anatomy* to them and pointing out the shortcomings of verbal explanation in comparison with eye-witnessing [the organ of the body concerned].⁶³⁸

Al-Baghdādī expressed the same caveats as did Ibn Jumay‘ in his commentary and his treatise to Saladin: mere theoretical contemplation of anatomical matters was fraught with difficulties. Unlike Ibn Jumay‘, however, al-Baghdādī provided us with an account of how a chance finding helped him to overcome these difficulties:

We were told that at al-Maks there was a hill covered with human skeletons. We went to see them and found more than 20,000 human skeletons piled in accordance with their state of decay ...

Although Galen was an extremely able investigator [of his objects] and very careful in what he reported and said, what we saw and touched was more accurate than what Galen wrote. Moreover whenever Galen did not know the explanation of a theory he avoided it. For instance, all have agreed that the lower jawbone is composed of two bones that are firmly joined at the chin. When I say all, I mean Galen alone, for it is he who had practised anatomy, made it his particular subject matter and composed several books, most of which we possess; the rest of his works have not been translated into Arabic.

638. Jadon, *Comparison*, 73.

We saw that the lower jawbone was one bone, with no joint. I have seen this bone a great number of times, in over two thousand skulls. I have employed all means to assure myself of the truth, and I have never seen anything but a single bone. Then I was assisted by various groups of people who had repeated the same investigation, both in and out of my presence, and, like myself, they have never seen anything but a single bone. I also found other things [in the human skeleton which differ from what Galen had reported], and if God will permit me, I shall write a treatise on the topic comparing what I saw with what we know from Galen's works. I have also examined this same bone in the ancient tombs of Būṣīr ... and I have always found that the lower jawbone had no joint.⁶³⁹

While al-Baghdādī emphasised the shortcomings of purely theoretical anatomy, it happened only by chance that he was able to compare real anatomical specimens against Galen's descriptions. Al-Baghdādī did not follow Ibn Jumay's ideals of practicing dissection on animals, and al-Baghdādī may have simply continued with his theoretical teachings if he had not been told about the skeletal remains. It was therefore not unusual to repeat Galen's advice that practical observations were important, but unless chance allowed it, anatomical examinations were not necessarily undertaken.

(e) A summary of Ibn Jumay's anatomical comments

Ibn Jumay' remarked that he would restrict himself to the most important corrections and avoid a detailed comparison between Ibn Sīnā's and Galen's anatomical accounts. We might therefore expect that Ibn Jumay' commented less copiously on the anatomical sections in the *Canon*, but this is not the case.⁶⁴⁰ Ibn Jumay's comments on anatomy are not very different from his comments on other passages in the *Canon* and, generally speaking, they are concerned with explaining and correcting Ibn Sīnā's statements by referencing the sources which Ibn Sīnā had used or by comparing variant readings.

639. Jadon, *Comparison*, 73-74; "lower jawbone hand no joint" corrected to "lower jawbone had no joint".

640. In the Princeton copy, Ibn Jumay's comments on the anatomical passages of Book One of the *Canon* fill almost seven folios (P 12b-19a). Considering that the comments on the entire first book fill approximately 43 folios, it is clear that anatomy was an important topic for Ibn Jumay'.

Unlike his comments on *materia medica*, Ibn Jumay‘ did not include in his anatomical comments any explicit references to what he had seen or heard. His comments are thus fundamentally different from those of his contemporary al-Baghdādī. We can nonetheless ask if there is any evidence in his comments to suggest that he was an experienced anatomist, especially since his fervent calls for human dissection imply that he himself practised what he demanded from others. For instance, Ibn Jumay‘ may have corrected certain anatomical notions like Ibn an-Nafīs did a century later. On the other hand, there might be evidence that he did not practise dissection and did not practise what he preached.

Ibn Jumay‘ started off with relatively short comments in which he explained certain terms, clarified grammatical structures, and referenced Galen (CC I, 64-68), before he went into more detail when commenting on the sutures of the upper jaw bone in CC I, 69 (this passage will be discussed in detail below). Ibn Jumay‘ continued with discussing a variant in the passage on teeth (CC I, 70), corrected and explained three passages with reference to Ibn Sīnā’s *Shifā’* (CC I, 71-73), corrected Ibn Sīnā on the basis of Galen (CC I, 74), referenced Galen again with regard to the entire number of bones in the human body (CC I, 75), and discussed textual variants found in the passage depicting the anatomy of the shoulder (CC I, 76).

In his next comment (CC I, 77) Ibn Jumay‘ explained that Ibn Sīnā was wrong when defining *raḍfah* as the patella (knee-cap, literally ‘eye of the knee’, Ar. ‘*ayn ar-rakbah*’).⁶⁴¹ After citing different sources such as Galen, Jawharī and Sijistānī to corroborate his decision and indicating that the *Jawāmī* may have influenced Ibn Sīnā, Ibn Jumay‘ finally suggested — clearly in favour of Ibn Sīnā — that the mistake was not found in the original but slipped into the *Canon* through a copyist incorporating an erroneous gloss (which explained that *raḍfah* is

641. Lane (Lane, *Lexicon*, 1099) mentions the *raḍfah* as certain bones in the knee above which the patella (*dāghīṣah*) is found.

the patella). Ibn Jumay' concluded his comments on bones with another reference to Galen (CC I, 78) and another comment on the total number of bones (CC I, 79).

Ibn Jumay's comments on nerves, muscles and tendons begin with an interesting comment (CC I, 80). He provided two textual variants concerning the general nature of nerves and was dissatisfied with both, commenting that it is 'among the evident things in anatomy' (*min al-umūr al-bayyinah fī at-tashrīh*) that nerves never have the properties outlined by Ibn Sīnā. Interesting in this context is that Ibn Jumay' did not consider it to be necessary to quote any sources. This suggests that Ibn Jumay' found the mistake to be so fundamental and obvious that there was no need to dwell on this passage or to corroborate his arguments with written sources. After Ibn Jumay' concluded that neither textual variant is particularly good, he nonetheless proposed to drop one word from the first variant which would then give it a correct meaning. This demonstrates another instance in which Ibn Jumay' was willing to look for a favourable interpretation instead of criticising Ibn Sīnā (see CC I, 77 above). Ibn Jumay' continued with comments on technical terms (CC I, 81 and 84-85, 87), the number of muscles in the chest (CC I, 82), and criticised Ibn Sīnā's failure (*sahw*) to have followed Galen's descriptions accurately (CC I, 83, 85, 88). He concluded the section on muscles with his own thoughts on their total number in the human body, arguing that Ibn Sīnā left out certain muscles in his enumeration (CC I, 89).

The comments regarding nerves comprise various explanations of terms (CC I, 90, 93), a reference to Ibn Sīnā's source Galen (CC I, 91), and an illustrated comment on the optic chiasm (CC I, 92 - to be discussed below). Ibn Jumay's final anatomical comments on Book One of the *Canon* concern arteries and veins: he discussed a mistake made by Ibn Sīnā (CC I, 94) and explained technical terms (CC I, 95-97).

As for Book Three of the *Canon*, Ibn Jumay‘ commented on the anatomy of the brain (CC III, 4-5), the ear (CC III, 108), the nose (CC III, 119), the tongue (CC III, 127-128), the throat (CC III, 157-159), the larynx (CC III, 172), the heart (CC III, 219),⁶⁴² the liver (CC III, 269), the ‘six intestines’ (CC III, 285), the kidney (CC III, 303), the testicles and sperm vessel (CC III, 320-321), and the uterus (CC III, 329-331). Most of these comments are either short glosses or concern variant readings and the statements of other authors.

(f) *An illustrated comment on the optic chiasm*

If dissections were done, they must have been carried out quickly and under the right conditions (e.g. in the winter) if one was to avoid extreme smells. Even under optimal circumstances, there would have been not much time until the decay of tissues would make more accurate observations impossible.⁶⁴³ In the next example, I will consider an instance in which Ibn Jumay‘ may have supported his conclusions with what he had seen during a dissection of a brain. Ibn Jumay‘ included an illustration of the optic chiasm in his comment and the passage is thus likely to inform us about what he may have seen. Ibn Jumay‘ comments:

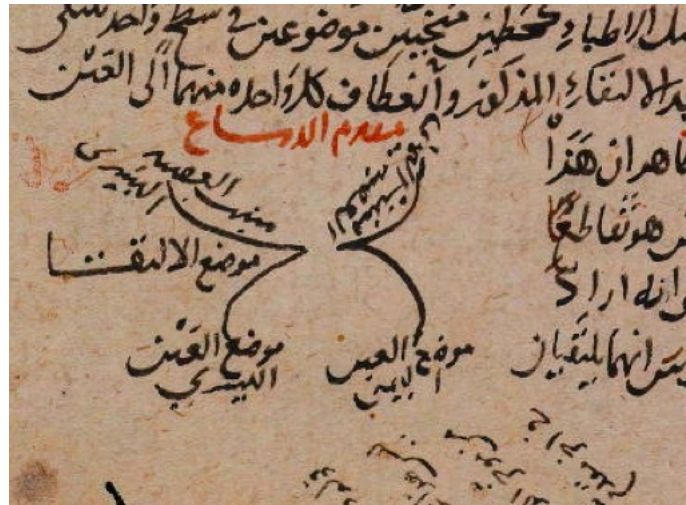
The *ra’īs* said: “Then the two [nerves] meet at a cross-like intersection” [i.e. the nerves of the eyes in the brain].⁶⁴⁴ As regards his statement ‘cross-like intersection’ some observers are mistaken regarding this passage when they imagine that he meant that the two actually cross each other. The matter is not like that. It is rather as the most eminent of physicians [Galen] has taught us: Like two lines drawing near to each other at one place, they meet superficially and they [then] bend outward without crossing each other. And so the configuration (*shakl*) of the two of them is set up after the aforesaid meeting: each of the two [nerves] bend toward the eye which is parallel to its [the nerve’s] place of origin. This is the configuration and it is obvious that [this] configuration resembles a cross-like intersection, but it is not a cross-like intersection as there is no intersection in the first place. His [Ibn Sīnā’s] subsequent statement proves true that he intended [to say what] we have just described: “[Physicians] other than Galen have mentioned that the two cross each other in a cross-like intersection without

642. See above p. 118.

643. Savage-Smith, *Attitudes*, 109.

644. D I, 78.

curving [i.e. they do not curve but rather intersect].”⁶⁴⁵ (CC I, 92)



P fol. 18b

Ibn Jumay‘ illustrated his comment with a drawing, which he entitled with ‘the anterior part of the brain’ (*muqaddam ad-dimāgh*). He indicated the origin of the right nerve and the origin of the left nerve and then depicted their pathways: They bend towards each other, but do not intersect at the point which Ibn Jumay‘ labelled with ‘place of meeting’ (*mawḍa‘ al-iltiqā*). The nerves then bend outwards until both terminate in the place of the eye (*mawḍa‘ al-‘ayn*), right and left respectively. Ibn Jumay‘ included this illustration because he felt that Ibn Sīnā’s account could be more easily misunderstood, and, indeed, the account in the *Canon* is ambiguous and confusing. The illustration and accompanying text illustrate clearly how Ibn Jumay‘ understood the anatomical features of the optic chiasm. The main point of his argument is that the nerves do not cross, even though they appear to cross.

We know today that Ibn Jumay‘ was not correct with this description. Some optic nerve fibres cross while others do not. However, this does not prove that Ibn Jumay‘ did not practise dissection because if he ever had examined a brain (whether human or not), he would not

645. D I, 78.

have been able to perceive with his eyes that certain nerve fibres cross while others do not. Even with a microscope, this would have been impossible. The 'discovery' of the optic chiasm is very recent. In the middle ages speculations of how these nerves crossed were subject to theoretical models or, as in the case of Galen, some practical experiments,⁶⁴⁶ but not anatomical observations.

Ibn Jumay's analysis is highly theoretical and, except the illustration, there is nothing to suggest that he tried to support his conclusion with anatomical observations. Ibn Jumay referenced Galen for his conclusion, and the illustration thus represents Galen's teachings.⁶⁴⁷ Moreover, illustrations of the optic chiasm were popular in the mediaeval Islamic world and the earliest illustration can be found in a copy made in 476/1083 of a treatise by Ibn al-Haytham who was based in Cairo, like our court physician.⁶⁴⁸ So even though Ibn Jumay's illustration is one of the earliest, it is likely that he had seen a similar illustration elsewhere and simply employed it for his purposes. Our commentator was therefore influenced by little else than his readings of Galen and, as a staunch supporter of Galen, was satisfied with simply providing Galen's verdict on the matter. Even if Ibn Jumay ever happened to examine a brain and dissected it, he only would have been able to project his Galenic knowledge of the optic chiasm on the specimen he was examining.

This instance therefore provides insufficient evidence for proving or disproving Ibn Jumay's practice of dissection. We cannot show that he never dissected human beings by pointing to

646. Galen describes an optical experiment with a piece of wood placed between his eyes. See Galen, *Usefulness*, 501.

647. Galen discusses the optic chiasma in *De Usu Partium* (Galen, *Usefulness*, 499-502; see also 30, 402, 439, 491, 498).

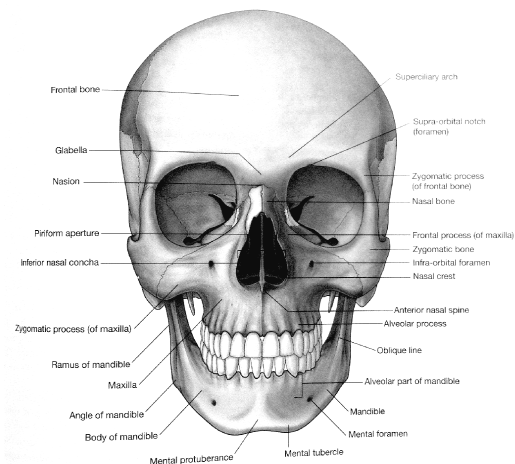
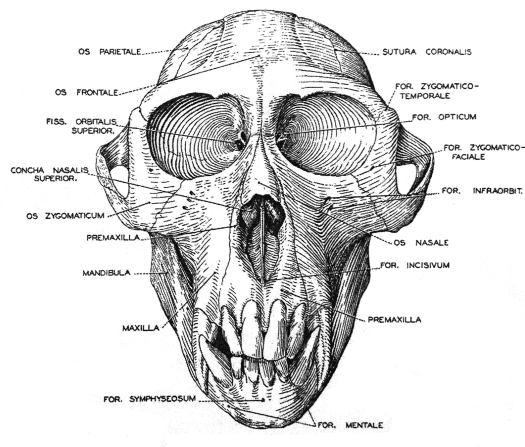
648. Savage-Smith, *Anatomical Illustrations in Arabic Manuscripts*, 152 and al-Haytham, *Optics*, vol. II, plate 1. The illustration is more detailed than the one provided by Ibn Jumay, but both illustrations show clearly that the optic nerves do not cross.

some modern facts which Ibn Jumay' contradicted in his anatomical expositions. He could not have observed those features without modern technology.

(g) On cranial sutures

The following section will analyse another passage which may provide evidence of Ibn Jumay' being influenced by 'witnessing' anatomical specimens. While it was impossible for him to discern different nerve fibres in the optic chiasm, he was certainly capable of examining bone structures with his naked eye. If Ibn Jumay' is mistaken when describing a human skull, for instance, we may count this as evidence that he did not follow his own call for how to acquire anatomical knowledge.

Unlike al-Baghdādī whom we mentioned earlier, Ibn Jumay' did not comment on the lower mandible. However, he included a long comment on the bones of the upper jaw (*al-fakk al-a'lā*). The following two modern illustrations depict the skull of a rhesus monkey⁶⁴⁹ and a human skull⁶⁵⁰:



Galen's description of the upper jaw reveals that he must have looked at the skull of an ape,⁶⁵¹

649. Bast *et al.*, *Rhesus monkey*, 46.

650. Richard Drak *et al.*, *Anatomy*, 813.

651. Galen did not know apes in the modern sense (the 'great apes') but only macaques, especially the Barbary macaques. He did not have access to chimps or gorillas.

because he detailed the pre-maxilla which is not found in humans (they only have a maxilla as can be seen in the illustrations above) but does occur in all members of the ape family. Ibn Sīnā had included a confusing description of the upper jaw and Ibn Jumay' took it upon himself to comment on this challenging passage. Do Ibn Jumay's comments suggest that he had seen what he explained?

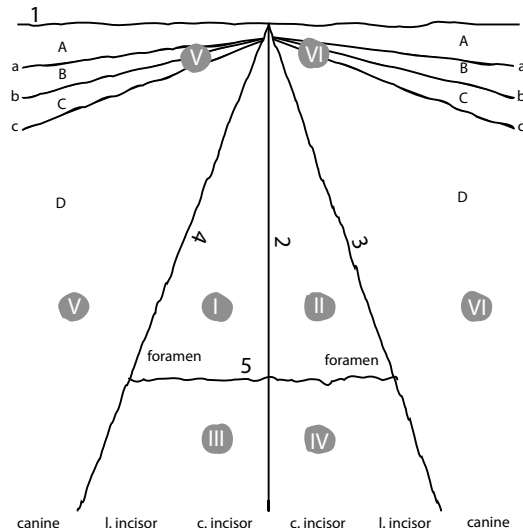
As usual, Ibn Jumay' began his comment by quoting a passage from the *Canon*. He then went on to explain that some people⁶⁵² had criticised Ibn Sīnā for incorrectly enumerating the different bones which make up the upper jaw (Ibn Sīnā had not provided any number of bones and thus left his enigmatic⁶⁵³ account wide open for interpretation). Ibn Jumay', however, rejected this criticism and stressed that Ibn Sīnā himself had stated that the total number of bones will become clear through his enumeration of the sutures delineating the bones.⁶⁵⁴ Ibn Jumay' therefore focused his comment on tracing all the sutures described by Ibn Sīnā and making clear which bones were delineated by these sutures. While more lucid than Ibn Sīnā's account, Ibn Jumay's comment is highly technical and convoluted. It essentially describes twelve different jaw bones by tracing their sutures. The following illustration⁶⁵⁵ summarises Ibn Jumay's wordy explanation of the twelve bones:

652. This appears to be a simple hypothetical criticism introduced by Ibn Jumay' himself. Such criticisms were a common literary device to introduce one's explanation ("some people may say ... but I say ...").

653. See Konings comment about Ibn Sīnā's description: 'la description de ces sutures n'est pas très claire' (p. 463).

654. CC I, 69.1 (ed. included in appendix).

655. In a similar form, such illustrations accompanied later *Canon* manuscripts. See Savage-Smith, *Anatomical Illustrations in Arabic Manuscripts*, 150.



Roughly speaking, bones⁶⁵⁶ I and II make up the bones of the nose while bones III and IV are located beneath the nose. Bones V and VI are subdivided into the bones in which the eyes are located (ABC) and the cheek bone (D). Bones V and VI therefore comprise eight bones and we get altogether twelve bones if we add bones I-IV.

Ibn Jumay’⁶⁵⁷’s comment on the sutures of the upper jaw bone illustrates nicely how the court physician flaunted his ability to explain enigmatic anatomical details; its stupefying effect on the reader is best illustrated by quoting the court physician verbatim:

We have categorised everything, and we say that he [Ibn Sīnā] while explaining the matter of the sutures, [was thinking about these] five. They are: The suture [1]⁶⁵⁷ [cutting] through the upper palate [lengthwise],⁶⁵⁸ and the three [sutures] [2,3,4] beginning from [the point] between

656. Ibn Jumay’ actually refers to them as ‘pieces’ (*qiṭa*) which he then subdivides into different bones (*a’zum*). Roman numerals refer to ‘pieces’ in the following description.

657. Latin and Roman numbers, as well as the letters A-D, refer to the illustration above.

658. I.e. the suture separating the frontal bone from the upper jaw. The term ‘upper palate’ refers to the upper jaw. Ibn Sīnā defined the suture (in our illustration number 1) by defining the boundaries of the upper jaw: “the upper jaw (*al-fakk al-a’lā*) is delimited from above by the suture which connects it and the frontal bone (*al-jabhah*) and traverses below the eyebrow (*al-ḥājib*) from temple to temple (*aṣ-ṣudgh*). It is marked off from below by the roots of the teeth (*manābit al-asnān*)” (D I, 45). Later on in his account, Ibn Sīnā mentions this suture as “cutting through the *upper palate* lengthwise”. Ibn Jumay’ quotes this phrase and thus refers to the suture defining the boundaries of the upper jaw. Jaw (*fakk*) and palate (*ḥanak*) are therefore used synonymously in the present context. Cf. also Lane on *ḥanak* (Lane, *Lexicon*, 659): “*Ḥunakān* are the upper and lower part of the mouth.”

the eyebrows, with the middle one of them [2] terminating between the central incisors, and the two [sutures] [3,4] on each of its sides [i.e. of the middle suture = 2] [terminating] between the canine tooth and the lateral incisors adjacent to it [i.e. the canine tooth]. And the lateral [suture] [5] through these three [sutures] prior to their termination in the roots of the teeth which was already mentioned [i.e. the termination of 2,3,4]. (CC I, 69.2)

Thus six pieces (*qiṭa'*) are defined in the jaw. The first two pieces [I, II]: Two [bones] are in between the three sutures beginning from [the point] between the eyebrows and the suture traversing them. These two are the two bones in which the two foramina of the palate (infra-orbital foramina) are located. The second two pieces [III, IV]: They are found in between the lateral [suture] and what is below it, i.e. where the three [sutures] terminate and the root of the teeth are. These are the two bones in which the central and lateral incisors are located.

These four bones are explained by the *ra'īs* in what he mentioned. As for the third two pieces [V, VI] which are on each side of these four [bones], he [Ibn Sīnā] explained that two sutures descend from the upper connecting suture [3,4, i.e. the sutura connecting the frontal bone and maxilla] which both make their way toward the region of the eye, and each of the two [3,4] branch into three branches [a,b,c] through which each of the third two pieces [V, VI] are divided into four pieces [A, B, C, D]. Three of them are located at the eye [A, B, C] and one [D] underneath it, i.e. the cheek bone in which the rest of the upper teeth are located [i.e. the molars]. (CC I, 69.3)

There are altogether 12 bones of the upper jaw which can be counted through these sutures. This is the number of bones which are particular to it [i.e. the upper jaw]. I say "particular to it" because some anatomists count among the sum of its bones the two nose bones and the bone which is known as the peg-bone (i.e. sphenoid bone) as the most eminent Galen has told us.

They are [i.e. the twelve bones]: The two bones in which two foramina⁶⁵⁹ of the palate are found and which are triangular-shaped [I, II], the two bones underneath the afore-mentioned in which the central and lateral incisors are [III, IV]; these two have teeth; the two cheek bones in which the rest of the upper teeth are located [V, VI = D, D], the six bones which are around the eyes [A, A, B, B, C, C]. This proves that the words of the *ra'īs* regarding this [matter] are not lacking anything but are rather completely sound. (CC I, 69.4)

When looking at the *Canon*, however, it is obvious that Ibn Jumay' read his understanding of the twelve different jaw bones into the account of Ibn Sīnā who was, for instance, more interested in writing about the different geometric angles formed by the sutures.⁶⁶⁰ Ibn Jumay'

659. Lit. 'Holes'.

660. D I, 45f. See also Koning, *Trois Traités*, 462ff.

also went beyond the contents of the *Canon* when offering an explanation about alternative bone counts (Galen is quoted to explain that some count the two nose bones and the peg-bone among the bones of the upper jaw, so that we reach the number fourteen or fifteen bones). However, Ibn Jumay' did not account for the number of bones suggested by Galen. Galen listed nine bones in his *On the Usefulness of the Parts*⁶⁶¹ and noted that this summarises what he had outlined in his *On Bones for Beginners*.⁶⁶² Also confusing is the fact that Ibn Jumay' had counted 14 jaw bones in his medical compendium, indicating that he included 'the bones of the nose' which are excluded in the number he provided in his *Canon* commentary.⁶⁶³ The different numbers indicate that there was no general agreement as to how many bones the upper jaw bone consisted of.

For our purposes, the description of the so-called pre-maxilla is important, as it could either prove or dis-prove that physicians were describing the skulls of humans and not of apes. Instead of the two bones in which the incisors are found (bones III and IV according to Ibn Jumay'), Galen only counted one bone as is true for the Rhesus monkey and other apes.⁶⁶⁴ Ibn Jumay' was therefore not describing the pre-maxilla of a monkey when he counted two bones. Yet, Ibn Jumay' was not the first to do so. Al-Majūsī had earlier divided the bone of the lateral and central incisors into two bones.⁶⁶⁵ Much earlier, Galen had also been aware of this possible

661. In *De Usu Partium*, Galen lists nine bones (Galen, *Usefulness*, 548).

662. See Galen, *Les os*, 54ff.

663. Rabin, *Skeleton*, 182 (fol. 8b in Ibn Jumay', *Irshād (Oxford)*). Ibn Jumay' thus followed al-Majūsī who had initially listed eight bones but then summarises that there are all-together 14 bones, adding the six bones of the cavities of the eyes in his summary (Koning, *Trois Traités*, 114-117). Like Ibn Jumay', al-Majūsī includes all six bones of the orbit of the eye while Galen only includes two. Both al-Majūsī and Galen count a set of bones below the nose which is not counted by Ibn Jumay'.

664. Galen, *Usefulness*, 548. The *pre-maxilla* is clearly visible in the cranium of the Rhesus monkey (cf. the illustrations above; Bast et al., *Rhesus monkey*, 46).

665. Koning, *Trois Traités*, 114-117.

division of the bone into two parts, but he did not follow it in his numeration.⁶⁶⁶ Ibn Jumay‘ therefore followed an established tradition which he (inaccurately) attributed to Galen.

While Ibn Jumay‘ did not describe the pre-maxilla of a monkey, he also did not describe the jaw bone of an adult human being. Following the numbering of our illustration, sutures two, three and four terminate in the fifth suture and do not reach the teeth, as explained by Ibn Jumay‘; bones III and IV are not separate in normal adult human skulls.⁶⁶⁷ Only the skull of foetuses and newborns still have four instead of one bone (apes have three bones as Galen had outlined).⁶⁶⁸ It follows that the examination of infant skulls could have been the impetus to count four bones.

As for our court physician, we can conjecture three different scenarios:

- Ibn Jumay‘ never saw an animal or human skull. He simply explained Ibn Sīnā’s passage through his knowledge of other texts which followed the same tradition as al-Majūsī.
- Ibn Jumay‘ examined infant skulls which have the exact same structure as described in the text. This would explain why he did not reject Ibn Sīnā’s notion of a two-part pre-maxilla.

666. Galen, *Les os*, 56.

667. In other words, Bones III, IV, V and VI are one bone which is the maxilla in modern terminology. See the illustration of the human skull above and Feneis, and Dauber, *Pocket Atlas*, 41.

668. The pre-maxilla or incisive bone in humans is made up of two pieces. It is the “embryonic bone that develops into part of the maxilla” (Feneis, and Dauber, *Pocket Atlas*, no. 3, 42). The sutures which mark these two bones are “only visible during development between the palatine process of the maxilla and the incisive bone. It [the incisive suture] normally extends from the incisive foramen to the space between the canine tooth and the second incisor tooth.” (Feneis, and Dauber, *Pocket Atlas*, no. 5, 42).

- Though not corroborated by what we find in the text, Ibn Jumay‘ may have examined adult human skulls and imagined a suture on his adult human specimen where no suture could be found.⁶⁶⁹

Speculations aside, Ibn Jumay‘’s detailed and complex comments about the upper jaw bones do not offer much evidence concerning whether or not one of the greatest mediaeval advocates of human dissection was an experienced anatomist or simply a hypocrite who failed to follow his own principles. The same applies to the other comments Ibn Jumay‘ made on the anatomical sections in the *Canon*. The court physician’s interpretations are first and foremost a testimony to a skilful *literary* commentator at work who tried to supersede the author of the treatise he was commenting on.

(h) Conclusions

N. Fancy has convincingly argued that Ibn Nafis’ discovery concerning the pulmonary transit is best explained by considering the context of his philosophical and theological ideas. If we neglect to contextualise Ibn Nafis’ new thesis, we ignore the obvious reasons which prompted Ibn Nafis to his conclusions. As Fancy reconstructed the matter, it was not the dissection of a human heart, but rather Ibn Nafis’ theoretical concepts of the soul and the heart that led to his ‘discovery’.⁶⁷⁰

Even though not mentioned by N. Fancy, Ibn Nafis may well have verified his theoretical conclusions through a chance dissection of a human heart, for he stated that ‘dissection (*tashrīḥ*) refutes what they [i.e. Galen and Ibn Sīnā] said’ about the passage between the heart ventricles.⁶⁷¹ Anatomy was first and foremost an intellectual endeavor and conclusions were

669. This may be parallel to Galen’s experience who reported to have seen several human skeletons. Yet, he was more influenced by his knowledge of animal skeletons when describing human anatomy in his treatises. See above p. 148.

670. Fancy, *Pulmonary Transit*, in particular pp. 254-258.

671. For Ibn Nafis’ statement see Savage-Smith, *Attitudes*, 102.

reached by reasoning or the comparison of texts, as in the case of Ibn Jumay' and Ibn Nafīs. Anatomical discourses were not prompted by sensory observations. Only in certain exceptional cases did chance sensory observations trigger a comment as in the case of al-Baghdādī. There is no evidence, however, that al-Baghdādī undertook systematic anatomical investigations of the entire human skeleton or body. As the *Canon* commentators Ibn Jumay' and his successor Ibn Nafīs show, anatomical theories were not supported by systematic dissections. Nonetheless, both commentators might have observed or even examined corpses, although such sensory input, if it did occur, was used only as a confirmation of pre-existing theories (as in the case of Ibn Jumay') or a confirmation of newly developed theories (as in the case of Ibn Nafīs).

While Ibn Jumay' was one of the most out-spoken advocates of human dissection in the mediaeval period, there is no conclusive evidence in his writings that he ever practised it. Yet, there is no evidence either that he did not practise it. We can therefore surmise that for Ibn Jumay', anatomy was first and foremost a matter of armchair analysis which, depending on how faithful Ibn Jumay' was to his own ideals, may have been complemented through the non-systematic and sporadic practice of human or animal dissection.

As we will see in chapter four, there was a reason why Ibn Jumay' was generally not interested in writing about his experience. He was opposed to recording 'particularities' in medical books and this included particular experiences such as those an anatomist may have had when dissecting animals or humans.⁶⁷² Instead of writing about particularities which he deemed to be too innumerable to fit into any treatise, he concerned himself with the general discussion of medical theory and practice. As the next case study will show, however, there

672. See p. 221 below for Ibn Jumay'"s thoughts about recording particulars in books.

were certain instances in which Ibn Jumay‘ was willing to rely on his particular experience and contradict the authority of his predecessors.

2. Case study: *Materia medica and the authority of the ancients*

(a) *Ibn Jumay‘’s comments on materia medica in the Canon*

Ibn Sīnā devoted the second book of his *Canon* to the discussion of approximately 780 *materia medica* (*al-adwiyah al-mufradah*, simple remedies). Each remedy is discussed in a separate entry which is subdivided into as many as 16 sub-sections (sg. *lawḥ*, pl. *alwāḥ*). The first four sub-sections concern (1) the name and nature (*māhiyyah*) of a drug, (2) the preferred form (*al-ikhtiyār*), (3) its natures and qualities (*ṭabā‘ī‘* and *kayfiyyāt*), and (4) [drug] actions and characteristic properties (*afāl* and *khawāṣṣ*). The subsequent sub-sections discuss the drug actions in individual parts of the body (such as the head) or when applied to treat certain diseases (such as fevers).⁶⁷³

In the preface, Ibn Jumay‘ stressed that the second book of the *Canon* is particularly flawed,⁶⁷⁴ and it is therefore not surprising to see more critical comments in this part of the commentary. Despite the critical nature of many of his comments, however, Ibn Jumay‘ did not allocate more space to his comments on Book Two than to Book One.⁶⁷⁵

Of the approximately 780 simple remedies, arranged in alphabetical order, Ibn Jumay‘ commented on 209 and did so consistently: entries beginning with the letter *alif* are not less

673. After outlining the first four sub-sections, Ibn Sīnā outlines (5) drug actions concerning beauty and physical appearance (*zīnah*), (6) drug actions on swellings and pustules, (7) ulcers, wounds and fractures, (8) joints and nerves, (9) organs of the head, (10) eyes, (11) respiratory organs, (12) alimentary organs, (13) excretory organs, (14) fevers, (15) poisons and (16) alternative drugs. D, I, 340-341.

674. See above, p. 90.

675. Most important in terms of the quantity of comments is book one, which is followed quite closely by book two and, by a larger margin, book three. See below, p. 187.

commented upon than later entries. Ibn Jumay' showed himself particularly interested in explaining terms of Persian origin because Ibn Sīnā, due to his provenance, discussed a considerable number of drugs of Persian origin.⁶⁷⁶

Among the comments on Book Two can be found the only comment in which Ibn Jumay' corrected the authorities Dioscorides and Galen. As in several other instances in Book Two, Ibn Jumay' corroborated his arguments not with written sources (as even the most authoritative sources prove to be incorrect) but with contemporary insights. It is notable that it is in Book Two that Ibn Jumay' recorded the most critical of his comments which are at times corroborated with sensory observations such as descriptions of certain plants.⁶⁷⁷ Ibn Jumay' had a particular interest in *materia medica* and sought to verify knowledge concerning them with the broadest range of sources available to him. Comments on Book Two thus stand in contrast to comments on Books One or Three in which Ibn Jumay' for the most part used written sources to verify statements. Perhaps Ibn Jumay's particular expertise when commenting on *materia medica* should not come as a surprise if we consider that Ibn Abī Uṣaybi'ah recorded that Ibn Jumay' used to run a *dukkān*, a common term for a pharmacy.

The following case study will consider Ibn Jumay's attitudes toward medical authorities when commenting on Book Two of the *Canon*. The focus will be (1) on the reasons why Ibn Jumay' gave more authority to some writers while giving less to others, and (2) on discerning certain criteria which Ibn Jumay' followed when forming his opinion about how reliable the various descriptions of *materia medica* were. While the *Canon* commentary will be the point of departure for this study, Ibn Jumay's treatise on the medicinal use of the lemon (or lime) will

676. See p. 121 above.

677. See p. 128ff. above.

also be surveyed, since it provides us with a more detailed testimony to how Ibn Jumay' himself defined his attitudes toward the authority of ancient writers, in particular Galen.

(b) *Ibn Sīnā's sources*

The following comment is representative of the majority of criticisms Ibn Jumay' made on Book Two. Ibn Jumay' will argue that Ibn Sīnā's entry on anchusa is corrupt in several places; we can distinguish three main criticisms:

(1) The first criticism concerns spelling ambiguities:

Anūkhalsā. The *ra'īs* said about it in the sub-section [concerning] its nature (*māhiyyah*): "It is donkey's lettuce and is called *shanjār* or *shankār* (anchusa)."⁶⁷⁸

What I [Ibn Jumay'] found in a very accurate copy of Dioscorides' book is that the name of this drug is *ankhusā* (anchusa),⁶⁷⁹ spelled with *nūn* voweled with *sukūn*, a dotted *khā'* voweled with a *ḍamma* and an undotted *sīn*. I found in another passage of this book *ankhūsā* and there is no difference between the two because the *ḍamma* becomes a *wāw* if doubled. The [reading] *ankhūsā* with *wāw* is also found in *al-Hāwī*.

I found in another copy of the *ra'īs'* book [the *Canon*] *anūkhūsā* and it follows that *anūkhalsā* and *anūkhasā* happened to become corrupted [variants] of this drug name. His statement that it is called *shanjār* and *shankār*, [applies to] when it is arabised, for if it is arabised, it is sometimes pronounced with *jīm* and sometimes with *kāf* because it is a Persian [word], and in Persian it is written with *kāf ma'dūlah* [کف] which has no counterpart in Arabic. Therefore some people write *shanqār* with *qāf* and others *shankāl* with *lām* (?).⁶⁸⁰

(2) The second criticism concerns a corruption of meaning:

He [also] said about it: "One variety of it with yellow leaves is red in colour." This statement is again corrupt and misspelled. Correct is: "It has extremely small leaves and a very red fruit." Dioscorides statement concerned a third type, which is another sort of *ankhusā* but much more yellow than the first two sorts. It is similar to the second type but it is not as yellow and its

678. For *shanjār* and *shankār* see Ibn al-Bayṭār, *Zusammenstellung*, vol. II, 108.

679. See Ibn al-Bayṭār, *Zusammenstellung*, vol. I, 96 who also identifies this plant with *shanjār* and *shankār* (*Anchusa tinctoria*).

680. The last part of the sentence does not make much sense. Manuscripts P and B both read *shankāl bi-al-lām*. Either Ibn Jumay' was suggesting that the *rā'* was mistaken for a *lām* (and forgot to explain this in more detail), or he made a mistake and the passage should read "and others read *shankār* with *kāf*".

fruit is properly red. Ar-Rāzī has mentioned in *al-Ḥāwī* another type which has yellow leaves and a properly red fruit. Likewise, he has mentioned the names of its types.

(3) The third criticism concerns a misattribution to Galen:

He [Ibn Sīnā] has also said about it in the sub-section [concerning] its nature: “Galen said that *anūkhulasā* [sic] is hot and dry.” However, Galen did not say this. Rather, he said that it has different strengths (*quwā*) and that in addition to that, it is cooling (*mubarrid*). He explains and illustrates this in the sixth [chapter] of his book [on Simple Remedies].⁶⁸¹ Ibn Sīnā said that this drug [*anchusa*] is donkey’s lettuce and *shanjār*. He mentioned *shanjār* in [his section on drugs beginning with the] letter *shīn*, [saying that] it has a soft ring (*al-ḥalaq at-tūl*) and that it is therefore cold in the first [degree] and dry in the second [degree]. And he mentioned donkey’s lettuce in the [chapter on the] letter *khā* and said that it has a hot nature, dry in the first of the second degree (*awwal ath-thāniyyah*).⁶⁸² Paulus (*Faylūs*) mentioned this in [his chapter on the] letter *hā*.⁶⁸³ He said about it that even though donkey’s lettuce is of a cold and wet nature, there are drying and slightly warming [properties] in it. In sum, his [Ibn Sīnā’s] statements about the nature of this drug are very erroneous. (CC II, 30)

As for the first criticism, one might wonder how Ibn Jumay’ knew that *Dioscorides*’ text represented the correct spelling and not the *Canon*. Ibn Jumay’ stressed that he had consulted a very correct or authenticated (*muṣaḥḥahah*) copy of *Dioscorides*, by which he referred to the quality and care with which it had been copied and collated.⁶⁸⁴ Ibn Jumay’’s sentiments about what sources are more authoritative than others are implicit: the older and more authentic a copy is, the closer it resembles the teachings of *Dioscorides* which are to be trusted. Age and authenticity can therefore be distinguished as obvious criteria Ibn Jumay’ relied upon when deciding between two statements or variants.

The second criticism was concerned with a statement which was similar to *Dioscorides*’ statement but had a different meaning. Ibn Jumay’’s judgement is again implicit: Ibn Sīnā

681. This refers to *On the Powers of Simple Drugs* [*De Simplicium Medicamentorum Facultatibus*]. See above note 78. Cf. also Ibn al-Bayṭār, *Zusammenstellung*, vol. II, 108.

682. For a general discussion of the degrees of *materia medica* see Langermann, *Revolt*.

683. This refers to Aegineta, *Seven Books*, vol. III, pp. 17ff, in which Paulus discusses simple remedies.

684. An authentic copy could have meant an old copy made from a highly accredited Arabic translation (perhaps the autograph of the translator) or simply a very careful copy, not necessarily old, but which due to its good transmission or collation was very close to the original.

copied from Dioscorides but presented his statements in a corrupted form (either by misquoting them or using a corrupt copy of Dioscorides' treatise). The *Ḥāwī* is quoted to show that ar-Rāzī is also following the correct reading of Dioscorides. Ibn Jumay' s criterion for following Dioscorides' authority is therefore obvious: Ibn Sīnā's statement reminded him of Dioscorides' words, but as it contradicted its meaning, it represented a corruption which had to be corrected. In this instance, Ibn Jumay' had two sources which contradicted Ibn Sīnā's account which was another reason why the majority (Dioscorides and ar-Rāzī) had to be followed.

The third criticism was directed against Ibn Sīnā for misattributing a statement to Galen. Galen had originally described the nature of anchusa as cooling (and not hot and dry as Ibn Sīnā stated). Furthermore, Ibn Jumay' pointed out that Ibn Sīnā stated that anchusa is to be identified with both donkey's lettuce and *shanjār*. However, *shanjār* is cold and dry (vs. hot and dry, as claimed by Ibn Sīnā) while donkey's lettuce, if one follows Paulus and Ibn Sīnā, is cold and wet. Ibn Jumay' thus argued that anchusa's nature needs to be cold, as stated by Galen. As in the previous passage, the authority of Galen or Paulus is trusted more than Ibn Sīnā's authority as it was clear to Ibn Jumay' that Ibn Sīnā presented corrupted versions of his sources.

The final paragraph of the comment CC II, 30 (not translated above) is concerned with the explanation of a technical term. This paragraph is irrelevant to the present discussion, except Ibn Jumay' s remark that if one was "to consider his [Ibn Sīnā's] statements on this drug [anchusa] and the statements of ar-Rāzī in *al-Ḥāwī*, it will become apparent that he [Ibn Sīnā] has taken this term ... from ar-Rāzī." As in other statements discussed earlier,⁶⁸⁵ Ibn Jumay' thought that Ibn Sīnā sometimes copied inaccurately from other accounts and it is therefore

685. See p. 107ff. above.

not surprising that Ibn Jumay' would give less authority to Ibn Sīnā's paraphrases or quotations than to Ibn Sīnā's original sources.

This particular comment (CC II, 30) encapsulates Ibn Jumay's fundamental principle when evaluating the *Canon*. The greatest authority was given to Ibn Sīnā's sources. Ibn Sīnā's paraphrases or reformulated statements, however well-organised or well-written they may be, needed to be tested against his sources.

(c) Ibn Sīnā's preference to extract from ar-Rāzī's Ḥāwī instead of using Galen's writings

Ibn Jumay' also presented more explicit statements as to why he gave less authority to Ibn Sīnā's or even ar-Rāzī's words. The following comment is concerned with snake (*ḥayyah*) as a medicament. After quoting Ibn Sīnā's statement on the issue, Ibn Jumay' stated that it is corrupt, referencing the source of the original statement by Galen which is quoted verbatim. Ibn Jumay' then pointed out that the corruption was already found in ar-Rāzī's *al-Ḥāwī* and cited the erroneous passage in question. Ibn Jumay' concluded with the following remark:

As for the *ra'īs*, it is evident throughout that he in most cases is very familiar with ar-Rāzī and favours him over that which is related by Galen and others, and copies whatever ar-Rāzī had said about the origins of a statement⁶⁸⁶ without revealing the source [that is, he does not disclose that he took the statement from ar-Rāzī and not directly from the original source]. Very often this leads him [Ibn Sīnā] to repeat the mistakes ar-Rāzī had made, and Ibn Sīnā thus follows ar-Rāzī's corruptions. It is therefore necessary to say in this instance... [Ibn Jumay' corrects the statement in accordance with Galen] (CC II, 101)

This again confirms Ibn Jumay's main principle: original sources are to be trusted over second-hand sources. Nonetheless, Ibn Jumay' was not simply concerned with pointing out that ar-Rāzī introduced the corruption. The main issue for Ibn Jumay' was that Ibn Sīnā followed second-hand accounts (ar-Rāzī's *Ḥāwī*) and favoured them over Galen's first hand accounts. As Ibn Jumay' argued in his treatise to Saladin, favouring compendia or other

686. Lit. 'He copied the attribution to whomever ar-Rāzī attributed something to.'

sources over Galen's original statements was the main reason for the demise of the medical art. Only a return to the sources (in particular Galen and Hippocrates) would prevent a further demise.⁶⁸⁷ Ibn Jumay's reason for not trusting Ibn Sīnā's authority is therefore clear. By using ar-Rāzī's instead of Galen's accounts, Ibn Sīnā was prone to copying corruptions introduced by ar-Rāzī. In Ibn Jumay's hierarchy, Galen, Hippocrates, and Dioscorides were given greater authority than ar-Rāzī, who at times corrupted the original. The least authority was given to Ibn Sīnā, because he did not only corrupt the original at times but also, without indicating it, employed second-hand accounts which may have been the source of further corruptions.

In his treatise to Saladin, Ibn Jumay' also condemned compendia for tempting their readers to "believe that the works of the ancients could be dispensed with" and for expressing in their title that they comprised everything needed to master the medical art.⁶⁸⁸ Even though the *Canon* is not mentioned explicitly, it can be inferred that it had to be counted among the compendia which were responsible for the demise of the medical art because they corrupted the sources of the ancients.⁶⁸⁹ Yet, as the entire endeavour of the *Canon* commentary proves, Ibn Jumay' was unwilling to ignore what he thought were the numerous merits of the *Canon*, which he hailed as one of the best compendia available.⁶⁹⁰ As a compendium, the *Canon* was therefore an exception for Ibn Jumay' which was different from the other abominable compendia. Thus, it would be misleading to say that Ibn Jumay' gave only little authority to Ibn Sīnā. Ibn Jumay's critical and condemning remarks in the commentary must be understood in their wider context, which is Ibn Jumay's attempt to write a balanced review in favour of the *Canon*. Nonetheless, there is no doubt that Ibn Jumay' ranked the statements of

687. Ibn Jumay', *Treatise*, 18-21.

688. Ibn Jumay', *Treatise*, 20.

689. See also Nicolae, *Compendium*.

690. CC J, 1. See above p. 91.

Galen, Dioscorides or ar-Rāzī higher than those of the *raʿīs*. With his educated response to the *Canon*, Ibn Jumayʿ wanted to create the impression that his authority was similar to those of the ancients because he was able to restore and revive their teachings which had sometimes been corrupted by modern authors such as ar-Rāzī or Ibn Sīnā. Just like Hippocrates or Galen revived the art of medicine in their day by going back to the sources, so did Ibn Jumayʿ in twelfth-century Egypt.⁶⁹¹

(d) *Ibn Sīnā's contribution or corruption?*

So far, we have discussed several instances in which Ibn Jumayʿ corrected Ibn Sīnā on the basis of earlier sources. The following comment is not different in this respect, as Ibn Jumayʿ argued that Ibn Sīnā had fused Dioscorides' descriptions of two separate drugs into one drug that Ibn Sīnā called Pigeon's and Camel's Herb. Yet, the comment is different as Ibn Jumayʿ criticised Ibn Sīnā for using what may have been contemporary or near-contemporary sources:

Pigeon's and camel's herb (*ri'y al-ḥamām wa-al-ibil*).⁶⁹² The *raʿīs* said about it in the sub-section [concerning] its nature: "The herb has berries like those of myrtle (*al-ās*) or berries which closely resemble them, but it is much more dust-coloured (*ghabarah*).⁶⁹³ Its pulp (*lubb*) is similar in colour [when compared to the pulp of myrtle berries] and its taste is like that of peeled lentils and they are not very sweet."

The author [Ibn Jumayʿ] says: Dioscorides has mentioned camel's herb (*ri'y al-ibil*) in the third [chapter] of his book.⁶⁹⁴ He said that it needs a lot of water and that many branches branch off it and its leaves are as wide as the index finger, just like the leaves of the terebinth tree (*pistacia terebinthus* L.) which bend outward. They are a little rough and on its branches are umbels (*akālīl*) like the umbels of dill. The colour of its flower is yellow and the seeds are like the seeds of fennel. Its root is approximately three fingers long and one finger thick. Its colour is white

691. For Ibn Jumayʿ describing the revival of medicine by Hippocrates and Galen see Ibn Jumayʿ, *Treatise*, 17ff.

692. For *ri'y al-ḥamām* (*verbena officinalis*) and *ri'y al-i'il* [sic] (*pastinaca sativa*) see Ibn al-Bayṭār, *Zusammenstellung*, vol. I, 498 and Ibn al-Bayṭār, *al-Jāmiʿ*, vol. II, 141. Cf. also Lane, *Lexicon*, 1109 who bases his description of *ri'y al-ḥamām wa-al-ibil* on Ibn Sīnā's account.

693. In his entry on *ghabarah*, Lane cross-references *ghubār* (dust) and *aghbar* (dust-coloured). See Lane, *Lexicon*, 2224.

694. See Ibn al-Bayṭār, *Zusammenstellung*, vol. I, 497 and Ibn al-Bayṭār, *al-Jāmiʿ*, vol. II, 141.

and it tastes sweet. It is edible. Its stalk is also, if it is tender.

He [Dioscorides] mentioned pigeon's herb (*ri'y al-ḥamām*) in the fourth chapter of his book. He said that it grows in places where there is water and that every year its length increases by approximately the span of a hand or a little bit more. It has a leaf with a distinctive colour which grows from the stem. Many can be found having one root and one stem [only].⁶⁹⁵

It is obvious from these two statements that [the names refer to] two different types [of plants] and not one and the same, as the *ra'īs* described them. They are described in the same way by the most eminent of physicians [Galen] who was then quoted by the *ra'īs* who did not follow Dioscorides's separate descriptions, because the *ra'īs* said that this plant has berries like those of myrtle. But neither Dioscorides, nor Galen, nor anyone else I know of, mentioned this. The same applies to his statement about their nature and properties; he said that it is hot in the first degree and moist in the second degree. Galen, however, said that camel's herb is slightly hot and pigeon's herb is dry.⁶⁹⁶ He [also] said that camel feeding on it [i.e. camel's herb] will not be harmed by the poison of reptiles (*hawāmm*).⁶⁹⁷ This feature was also described by the ancients [when they described] camel's herb. The *ra'īs* said that it can colour hair black, but not one of the ancients, nor anyone else among the authors on *materia medica* I know of, mentioned this feature. (CC II, 188)

The comment is not only a further example of Ibn Jumay' correcting the *Canon* with reference to the authorities Dioscorides and Galen, but also an illustration of how Ibn Jumay' dealt with drug properties he had never heard of or read about before. In the present comment, Ibn Sīnā described plant properties (having berries like those of myrtle) and actions (dyes hair black) which had not been mentioned by anyone else. Even though Ibn Jumay' did not condemn Ibn Sīnā's deviant descriptions, it is obvious that he did not follow them. If he had done so, he would have taken the trouble of offering an explanation which reconciled the teachings of the ancients with those of Ibn Sīnā.

The comment thus shows that Ibn Jumay' did not defend Ibn Sīnā's words if they could not be backup-up by what other authorities had written. Ibn Jumay' did not assume that Ibn Sīnā

695. Cf. Ibn al-Bayṭār, *al-Jāmi'*, vol. II, 141.

696. For pigeons herb being slightly dry, cf. Ibn al-Bayṭār, *al-Jāmi'*, vol. II, 141.

697. For the identification of *hawāmm* with "venomous or noxious reptiles" see Lane, *Lexicon*, 1109. See also Ibn al-Bayṭār, *al-Jāmi'*, vol. II, 141.

made a novel contribution by introducing deviant descriptions of plants or drug properties. Taking into account that Ibn Jumay' thought of Ibn Sīnā as merely excerpting from earlier treatises (while sometimes corrupting his sources), it is not very surprising that Ibn Jumay' did not consider the possibility that Ibn Sīnā was influenced by his own experience and therefore was challenging earlier authorities with his contributions. For Ibn Jumay', Ibn Sīnā simply made mistakes, especially in the second book of the *Canon* where the number of corruptions had led others to believe that it never went beyond the rough draft stage.⁶⁹⁸ It would be unreasonable for Ibn Jumay' to expect qualitative contributions in a treatise which he generally thought to comprise well-arranged excerpts from earlier treatises, and especially in a part of a treatise which he thought to be more corrupt than other parts.

(e) *Correcting mistakes made by many physicians*

Ibn Jumay' did not always deem older accounts to be more genuine and authoritative. In the following comment, he relied on the authority of Ibn Riḍwān (d. 453/1061):

Lupine (*turmus*).⁶⁹⁹ The *ra'īs* said about it in the sub-section [concerning] its nature: It is the Egyptian broad bean (*bāqilla*).⁷⁰⁰

The author [Ibn Jumay'] said: This is a false belief (*wahm*) which has previously been held by those writing on simple remedies, for they neither know the Egyptian broad bean nor have they encountered it. The moderns do not know about it [the Egyptian broad bean] except Abū al-Ḥasan 'Alī ibn Riḍwān who mentioned it in a passage in his book. It [the Egyptian broad bean] is the fruit of a plant which can be found in the rising waters [i.e. when the Nile bursts its banks] in the lower regions of Egypt. It is known by the inhabitants of this land as *jubūr* and *jāmisah*. (CC II, 202)

Ibn Sīnā must have copied his statement that lupine is equivalent to the Egyptian broad bean from an earlier treatise. Unfortunately, Ibn Jumay' does not identify this erroneous source and only refers to contemporary authors who are ignorant about the Egyptian broad bean. A

698. See above p. 90.

699. See Kindī, and Levey, *Formulary*, 249, Lane, *Lexicon*, 306, Ibn al-Bayṭār, *Zusammenstellung*, vol. I, 203.

700. See Kindī, and Levey, *Formulary*, 240 for *bāqillā* (*fabaceae*) with *alif* instead of *alif maksūrah*.

few decades later, Ibn Bayṭār (d. 646/1248) repeats Ibn Jumay's criticism in his entry on *bāqillā qibṭī* (Egyptian broad bean), in which he combined this criticism with Dioscorides' description. Like Ibn Jumay, Ibn Bayṭār is not specific about the source of this mistake.⁷⁰¹

Ibn Jumay was aware of this plant being given the Egyptian names *jubūr* and *jāmisah*.⁷⁰² In this instance, Ibn Jumay valued contemporary sources (which appear to be the source of the naming convention) and relatively recent accounts (those by Ibn Riḍwān) over older accounts (those used by Ibn Sīnā), for a plant native to Egypt can be best described by native inhabitants. Ibn Jumay's criterion when deciding to go with Ibn Riḍwān's reading is therefore the proximity of the object being described (Egyptian broad bean) to the person describing the object (in this case Ibn Riḍwān living in Egypt). We will encounter a very similar case in the next comment.

(f) *Correcting Dioscorides, Galen and Ibn Sīnā*

The following comment is based on Ibn Jumay's contemporary sources,⁷⁰³ in this instance accounts of several merchants or traders:

Dār filfil (long pepper).⁷⁰⁴ The *ra'īs* said in the sub-section [concerning] its nature: "It is the first crop of the pepper plant." The author [Ibn Jumay] says: I was informed by more than one trustworthy person who were among those who receive [goods] from Indian and Chinese merchants that long pepper is not a crop of the pepper tree, and that white pepper is not the crop of the black [pepper] tree, and that neither of them grows in the land from which black pepper is imported [i.e. India]. Furthermore, [I was told] that long pepper comes from the *fawfal* (betel nut)⁷⁰⁵ which is [imported] from the land of *Lāz*,⁷⁰⁶ in the administrative regions (*a'māl*) of *Qiṣṣ* and *Bahrūrā*; pepper is not [cultivated] in these [lands].

701. Ibn al-Bayṭār, *al-Jāmi'*, vol. I, 78-79. Ibn al-Bayṭār, *Zusammenstellung*, vol. I, 114-115. Ibn Jumay is not cited.

702. See also Ibn al-Bayṭār, *al-Jāmi'*, vol. I, 78-79.

703. The comment was already mentioned. See above p. 127.

704. Kindī, and Levey, *Formulary*, 266.

705. Kindī, and Levey, *Formulary*, 313.

706. Abū 'Abd Allāh Ya'qūb ibn 'Abd Allāh, *Mu'jam*, vol. IV, 341: "Lāz spelled with the letter *zā* is in the region of *Khawāf* and in the administrative regions (*a'māl*) of *Nīsāpūr*'.

Black pepper is among the *munībādāt* (?). They do not include long pepper or white pepper. White [pepper] is from the regions of China. In these [regions you can find] black pepper which is light and similar. Merchants do not import it [i.e. black pepper] due to its baseness. What the *ra'īs* has mentioned about this [i.e. that long pepper is the first crop of the pepper plant] is therefore not legitimate but rather misleading. However, this misleading suggestion (*wahm*) was not introduced by the *ra'īs*⁷⁰⁷ but was already made by Dioscorides and the eminent physician Galen who followed him, and everyone who came after them.⁷⁰⁸

The reason for this is that the ancients lived very far away from the places where these drugs grew. The reports which reached them from these [lands] were weak and deficient due to the distance. Many who recounted what the merchants had said were not faithful [to what they have been told] and not very educated. Through seeking profit, they [who are responsible for such flawed reports] were distracted from investigating things such as these. (CC II, 75)

The main criticism is that long pepper is not a crop of the pepper plant. Ibn Jumay' s evidence for this are the reports of merchants importing goods from China and India. He stressed that his opinion is based on several reports and provided geographical descriptions to support the authenticity (and authority) of these second or third-hand accounts. It was obviously important for Ibn Jumay' to provide as many details as possible as he was correcting the authorities Dioscorides and Galen. Despite focusing on their shortcomings, however, Ibn Jumay' put the blame entirely on unreliable informants.

The comment shows an exceptional instance in which Ibn Jumay' did not vote in favour of authoritative accounts. If he had been unaware of the accounts of the merchants, he would have found no fault with Ibn Sīnā's statement because it was in accordance with its sources (Dioscorides and Galen). Yet, Ibn Jumay' decided to follow contemporary sources as they were based on first-hand observations and not on Dioscorides' unreliable sources. Ibn Jumay' must

707. Lit. 'is not peculiar to the *ra'īs*'.

708. Even though Ibn Bayṭār appears to have been acquainted with at least one of Ibn Jumay' s treatises, he was not aware of his criticism regarding long pepper. He repeats the statements made by Dioscorides and Galen which Ibn Jumay' has criticised here. Ibn Bayṭār writes: "Dioscorides in his second book. It is said that pepper (*filfil*) comes from a tree which grows in India. The crop which appears first [i.e. 'its first crop' in the terminology of Ibn Sīnā] is long and similar to beans (*lūbiyā*). This [crop] is long pepper (*dār filfil*). In the pod (*jawf*) there are small millet-like (*shabīh bi-al-jāwars*) pits. Once the pod is ripe, it contains black pepper ... White pepper is weaker than black pepper for the former is not yet ripe." (Ibn al-Bayṭār, *al-jāmi'*, vol. III, 166. Ibn al-Bayṭār, *Zusammenstellung*, 261).

have assumed that at Dioscorides' time, information could travel from China to the Greek speaking world. However, the credibility of such reports was inferior to the credibility of Ibn Jumay's sources. The underlying assumption is that information was communicated much more reliably and efficiently in Ibn Jumay's days as people and knowledge could travel more easily in lands under Muslim rule. The proximity of the object being described to the person describing it appears again to be Ibn Jumay's criterion to do so.

(g) *Beyond Galen: On the lemon*

Ibn Jumay' revealed more about his critical attitudes toward his most authoritative source, Galen, in his treatise on the medicinal uses of the lemon or lime (*līmūn* or *līmū*; hereafter simply lemon).⁷⁰⁹ The treatise opens in a similarly abrupt manner as the *Canon* commentary, with Ibn Jumay' addressing the questions of his (perhaps fictitious) addressee:

Hibat Allah said: You mentioned, oh dearest brother and close friend, ... that you wondered about the allegations some people made about the Egyptians and their application (*taṣrīf*) of the lemon for various purposes and their use of it when treating diseases — despite the presence of alternatives with the [same] useful properties if used instead [of the lemon]. [You have wondered about] their false arguments they have raised against them [the Egyptians], namely that were the lemon to have had the many benefits they [the Egyptians] mentioned and conjectured, the ancient physicians would have mentioned it [the lemon] in what they have written down, and would have not neglected and overlooked the matter. You have asked me to expose the falsity of this duplicity in an epistle and I have written this letter to you lest you may think that I withhold something from you. In God I seek help and shelter against dishonour and debility.⁷¹⁰

709. See above p. 52 for this treatise. In what follows, the manuscript held at the Topkapı palace library will be abbreviated as T and the copy held in the Damascus as A. Even though both copies are undated, it appears that T is the older copy as it preserves more text than A. It is not clear whether we should read *līmū* or *līmūn* for T usually has *līmū* without *nūn*. This may well be a later corruption, especially if we consider that the Princeton copy of the *Canon* commentary has *līmūn* (CC IV, 12).

710. Ibn Jumay', *Lemon (Topkapı)*, fol. 113a (see [1] on p. 282). For an Arabic edition of the following translations, see the appendix (p. 282ff.). The number in square brackets refers to the paragraph in the edition. The translation and edition of the Arabic text are based on a preliminary edition and translation of the entire treatise which is currently being prepared by Alasdair Watson and the present author.

Egyptian physicians appear to have been criticised for using the lemon for medicinal purposes while neglecting to use other *materia medica* with similar properties. The central problem was that the use of the lemon prompted the question why the ancients (among them Galen) did not write about its medicinal properties and use. If lemons were useful, they would have mentioned them. As they ignored them, however, modern physicians should ignore them as well.

Ibn Jumay' strongly disagreed with such judgements and continued with his evaluation of the ancients:

I say, however, that the ancients — even though they have informed us about the fundamental principles (*uṣūl*) from which are derived the knowledge of everything one needs to know about the strength of drugs and their benefits, and which others have tested in terms of its soundness — [I say] that they did not mention all the varieties of drugs which physicians of all lands frequently use today and rely upon in most of their actions. In fact, they [the ancient doctors] did not comprehend all the benefits of the drugs they mentioned. Moreover, they also overlooked several benefits of drugs and did not mention them at all.⁷¹¹

Ibn Jumay' carefully outlined the areas in which authorities were to be trusted and where they needed to be superseded. In terms of fundamental principles, the ancients were to be trusted, particularly as these fundamental principles had been verified through various tests (sg. *imtiḥān*) by several other people. In terms of the particular application of these principles, however, the knowledge of the ancients may have been found wanting or even erroneous, especially when it came to new and hitherto unknown *materia medica*, or to particular properties not well understood by established medical writers. Ibn Jumay' provided a list of drugs not mentioned by Galen to prove his point:

The evidence for this is that the most eminent Galen, in his books which have reached us, did

711. Ibn Jumay', *Lemon (Topkapı)*, fols. 113a-113b and Ibn Jumay', *Lemon (Assad)*, 114 (manuscript is paginated). See [2] on p. 282ff.

not mention anything about the types of myrobalan (*halīlaj*),⁷¹² nor turpeth (*turbad*),⁷¹³ senna (*sanā*),⁷¹⁴ marking nut (*balādhūr*),⁷¹⁵ clove (*qaranful*),⁷¹⁶ colchicum (*sūranjān*),⁷¹⁷ Indian fig (*tamar hindī*),⁷¹⁸ camel thorn (*taranajabīn*),⁷¹⁹ *shūrkhisht*, dodder (*kashūth*),⁷²⁰ tabasheer (*ṭabāshūr*),⁷²¹ salep (*būzaydān*),⁷²² sandalwood (*ṣandal*),⁷²³ Leopard's bane (*durūnj*),⁷²⁴ behen (*bahman*),⁷²⁵ camphor (*kāfūr*),⁷²⁶ walnut (Indian?) (*jawzā*),⁷²⁷ galingale (*khūlanjān*),⁷²⁸ and all the other numerous drugs which would take too long to mention.⁷²⁹

Ibn Jumay' continued by naming a list of medical syrups not mentioned by the ancients. He referenced the otherwise unknown treatise *K. at-takmīl* (*Book of Perfection*) which appears to have been the source for his lists. Ibn Jumay' ended his examples with Chinese rhubarb (*ar-rāwand aṣ-ṣīnī*), stressing that not only Galen but also many contemporary physicians knew nothing of it, despite its many useful applications which Ibn Jumay' had outlined in his earlier treatise on rhubarb, as he pointed out.⁷³⁰

The next section tells us more about Ibn Jumay''s understanding of Galen's authority:

So if this is the situation for Galen [i.e. that he was unaware of Chinese rhubarb and other

712. Myrobalan was not known in Greece. See Kindī, and Levey, *Formulary*, 342.

713. Kindī, and Levey, *Formulary*, 249.

714. Senna cannot be traced earlier than the 9th/10th century. See Kindī, and Levey, *Formulary*, 286.

715. *Semecarpus anacardium* L. (from India). See Schmucker, *Materia medica*, 117. Referred to as 'marking nut' by Europeans. It was used by washermen to mark cloth and clothing before washing because it imparted a water insoluble mark to the cloth.

716. Kindī, and Levey, *Formulary*, 315. From India.

717. Kindī, and Levey, *Formulary*, 287. According to Levey, this drug was already mentioned by Dioscorides (*ibid.*, 288).

718. Kindī, and Levey, *Formulary*, 251 (*tamar hindī*).

719. Maimonides, *Asthma*, 67. See also Schmucker, *Materia medica*, 100.

720. Lev, and Amar, *Materia Medica*, 399.

721. Kindī, and Levey, *Formulary*, 300.

722. Lev, and Amar, *Materia Medica*, 475.

723. Kindī, and Levey, *Formulary*, 298.

724. Kindī, and Levey, *Formulary*, 267.

725. Dozy, *Supplément*, 123. Lev, and Amar, *Materia Medica*, 503.

726. Kindī, and Levey, *Formulary*, 321.

727. Kindī, and Levey, *Formulary*, 255.

728. Kindī, and Levey, *Formulary*, 265.

729. Ibn Jumay', *Lemon (Topkapı)*, fols. 113b and Ibn Jumay', *Lemon (Assad)*, 114. See [3] on p. 282ff.

730. Ibn Jumay', *Lemon (Topkapı)*, fols. 113b-114a and Ibn Jumay', *Lemon (Assad)*, 114.

important drugs], despite the fact that in him happen to be found knowledge, excellence, confirmation through his predecessors (*ḥuṣūl al-aqrār bi-taqaddumihi*), nobility, and that he is superior in this art and the servant in perfecting it [and] all of what it is capable [of achieving], then how, I pray you, will be [the situation] of someone who is not like him?⁷³¹

Despite all of his excellent characteristics, Galen was not perfect. He did not know everything, especially when it came to *materia medica*. Nonetheless, Ibn Jumay' outlined Galen's positive characteristics to stress his role as a model physician because physicians who strive not to emulate this role-model will not only be prone to all the shortcomings Galen may have had, but to many more. According to Ibn Jumay', it was incumbent upon a good physician to take what Galen and others have discovered and to add to this heritage:

Were it not for the fact that the ancient sages of superior insight only understood a little and recorded it, and then someone of sound thinking came after them, took hold of it, refined it and added to it — in toto, if good intelligence was not assisted by inferences and deductions, and clear thinking supported by new research (*istithmār*) and new discoveries (*istibāh*) — then the skills would have not become perfected and completed but rather would have become extinct and abandoned. It is therefore not surprising that the latter improves what the former has not perfected, and it is not impossible that the latter completes what the former neglected.⁷³²

Ibn Jumay' made a similar statement in his treatise to Saladin when interpreting Hippocrates' aphorism 'Life is short but the art is long', explaining that physicians must take what has been attained in medicine by 'thousands of men during thousands of years', trim it, add to it new discoveries, and thereby perfect the art of medicine.⁷³³ Both in his treatise to Saladin and his letter on the lemon, Ibn Jumay' put the stress on adding to and trimming previous knowledge and not on correcting previous knowledge. Ibn Jumay' therefore understood himself as *adding* to the teachings of the ancients (such as Galen or Dioscorides), while he would *correct* the teachings of the moderns (such as Ibn Sīnā or ar-Rāzī). Even though Ibn Jumay' corrected Dioscorides' statement concerning long pepper (which was repeated by Galen and then Ibn

731. Ibn Jumay', *Lemon (Topkapı)*, fols. 114a and Ibn Jumay', *Lemon (Assad)*, 115. See [4] on p. 282ff.

732. Ibn Jumay', *Lemon (Topkapı)*, fols. 114a-114b and Ibn Jumay', *Lemon (Assad)*, 116. See [5] on p. 282ff.

733. Ibn Jumay', *Treatise*, §126.

Sīnā), he stressed that Dioscorides was not to blame but his informants.⁷³⁴ Yet, when criticising modern authors such as Ibn Sīnā, Ibn Jumay' would at times put the blame solely on them. Ibn Jumay' thus accused Ibn Sīnā of the mal-composition of a purgative.⁷³⁵ There is no instance, however, in which Ibn Jumay' criticised Galen or other ancient authorities. In this way, Ibn Jumay' differed markedly from some of his prominent contemporaries such as al-Baghdādī, Ibn Rushd or Maimonides who openly criticised Galen for certain shortcomings.⁷³⁶

Despite his reverence for the ancients, Ibn Jumay' stressed how important it was not to be attached to old teachings:

... rather, it is incumbent upon him who wants to adorn himself with this art to strive for the refinement of what his predecessors have not refined by way of increased study and examination, and the will to advance - even if [it merely concerns] the easy and trivial matters.

So how can you ignore the contribution of the moderns and deny the best of those who came after, since they extracted from the wonders [of creation] that through which the orchard of the ancients came to bloom and blossom and discovered among the marvels [of creation] that through which their gardens became beautiful and adorned?⁷³⁷

He illustrated this with a range of *materia medica*,⁷³⁸ and ended his list of innovations by saying:

If I went on enumerating what has been handed down by them [the moderns] and their successes in gentle treatments (*muḥāsīn*) and what [they are] proud of - so that their [achievements] would become many, it would perhaps bring forth some irritation, and many people would err regarding these matters by saying that the present is always envied and

734. See above p. 174f.

735. See above p. 114.

736. For al-Baghdādī's criticism, see above p. 148. Maimonides, as we will see, was very critical of Galen and Hippocrates (see below, p. 225ff.). For Ibn Rushd see Bürgel, *Averroes 'Contra Galenum'* and Langermann, *Revolt*, 363. One of the most prominent earlier critics of Galen's medical works is ar-Rāzī (d. c. 312/925). Like Ibn Jumay', he had also stated that physicians should build upon the work of their predecessors. Whenever he criticised Galen, he referred to Galen who himself had criticised his predecessors. See Strohmeier, *Zitate*, 266-269 and Strohmeier, *Galen*, 273.

737. Ibn Jumay', *Lemon (Topkapı)*, fols. 114b and Ibn Jumay', *Lemon (Assad)*, 116. See [6] on p. 282ff.

738. Such as the 'herb of salvation' (*al-hashīsha al-mukhalīṣah*), theriacs and storax syrup (*sharāb al-kundur al-hindī*). Ibn Jumay', *Lemon (Topkapı)*, fols. 114b-115a.

blamed while the past is happy and blessed.

God's praise be upon him who said:

*People are enthusiastic about praising the old and blaming the new when it does not deserve it.
This is only because they envy the living and are attached to rotten bones.*⁷³⁹

Ibn Jumay' himself might appear 'attached to rotten bones' when criticising Ibn Sīnā's additional descriptions of drug properties which cannot be found in other treatises.⁷⁴⁰ As we pointed out, however, Ibn Jumay' did not consider the *Canon* to be a treatise which could introduce novel descriptions of drug properties. In other words, Ibn Jumay' must have thought that Ibn Sīnā wrote differently about medicine than did Galen, Dioscorides or himself. While Galen or Ibn Jumay' did at times write about their discoveries, Ibn Sīnā only systematised and summarised previous knowledge. Novelty in the *Canon* must therefore be corruptions of the original sources, not novel contributions.

A central question is still unanswered. Apart from certain criteria outlined (the age of sources, their authority, the proximity of subject and object in descriptions), it is unclear how Ibn Jumay' determined if *materia medica* have had the properties he himself or others attributed to drugs. In the treatise on the lemon, Ibn Jumay' described the method he considered appropriate for testing new drugs or properties of drugs:

It is necessary for the physician, when he comes to hear mention of a property or properties attributed to a drug which he does not know or a drug which he knows, that he does not hasten to deny these properties, for this is what the anxious and hasty, indeed the weak-minded and ignorant, person does. Rather, he should reflect upon it and thoroughly contemplate it and sufficiently examine its truth or falsehood and test it using the analogical principles (*al-uṣūl al-qiyāsiyyah*) and experimental methods (*aṭ-ṭuruq at-tajribiyyah*) which he has been spared the trouble of having to deduce by Galen who directed him to derive benefit from them and obtain results from them. Then, if its truth be proven, he should accept it, and if its impossibility is proven he should reject it. And if no clear result is obtained he should

739. Ibn Jumay', *Lemon (Topkapı)*, fols. 115a and Ibn Jumay', *Lemon (Assad)*, 116-117. See [7] on p. 282ff.

740. See above p. 166 regarding Ibn Sīnā's evaluation and descriptions of anchusa in CC II, 30.

review it and examine it to the utmost, for it often occurs that a certain property is attributed to something which at first apprehension one's understanding would reject and one's mind would shrink from accepting, but, on proper examination of its cause, and study of its justification and reason, its truth is proven and its reality is established.

An example of this is what Hippocrates has mentioned of the benefits of pouring cold water upon someone suffering from 'cold' tremours (*al-kuzzāz*) which should almost be rejected at first apprehension, due to its strangeness as being outside the realms of possibility and feasibility [i.e. as cold diseases should not be treated with cold matters], but when its secret is understood and its hidden meaning becomes clear, which is that the coldness of the cold water restrains the innate heat and opposes the motion of the animal pneuma which gathers in the innards (*bāṭin*) and intensifies and becomes hot and intense and powerful, [so that] cold tremours occur as it [the innate heat] recedes. It [cold water] therefore has a powerful effect on cold tremours and their causes. At this, the problem will be solved for the physician and he will affirm the property that has been attributed to the drug.⁷⁴¹

The passage is crucial for understanding Ibn Jumay' at work because it shows how important theoretical analysis was for our court physician. Even though he stressed the importance of *tajribah*, i.e. practical experience in the process of testing properties of drugs, his example suggests that practical experiments were not always conducted, but replaced by pure analogical reasoning whenever possible. The example does not talk about a series of practical tests in which people suffering from cold tremours were treated with cold water, but rather showcases a rational explanation of Hippocrates' treatments. Even though it appears counter-intuitive to treat a cold disease with cold water, Ibn Jumay' explains that cold tremours are in fact not caused by something cold (as might have been assumed by those who rush to conclusions), but rather by the decrease of too much heat. Cold water is thus adequate for the treatment of the underlying hot symptom which eventually leads to cold tremours.

Ibn Jumay' might have used a literary *topos* here: something counter-intuitive leads miraculously to the desired result. An explanation is offered which demystifies the miracle

741. Ibn Jumay', *Lemon (Topkapı)*, fols. 115a-b and Ibn Jumay', *Lemon (Assad)*, 117-118. See [8] on p. 282ff.

and proves how vital it is to have a thorough knowledge of medical theory and the ability to apply analogical reasoning in medical matters.

With his explanation of how to test new drug properties, Ibn Jumay' followed a very established tradition in which the majority of tests were not experimental but theoretical. It is also important that Ibn Jumay' used this example at the very end of his preface to the treatise of the lemon. Ibn Jumay' prefaced his treatise with a defence of his endeavour to devote an entire treatise to a new drug and at the very end of his preliminary remarks, he introduced the methods he saw fit to employ when writing about new drug properties. In the main body of the treatise, Ibn Jumay' then followed his model of analogical reasoning when describing the various humoral properties of the different parts of the lemon and how they were applied in various foods, drinks or syrups. For instance, Ibn Jumay' stated that the juice of the lemon is cold and dry and very good for cleaning:

We say that its nature is cold and dry in the second degree ... and very cleansing (*shadīd al-jalā*).
... As for it being cold and dry, this is indicated by the strength of its acidity. ... As for it being very cleansing, this is indicated by its obvious effect on the surface of human skin.⁷⁴²

Ibn Jumay' did not determine the nature of the lemon by testing it on, for instance, people suffering from warm diseases, but rather deduced his statement concerning its nature by comparing the lemon with other acidic remedies which are usually cold and dry. It appears, however, that he did not deduce its cleansing properties in the same theoretical way, but based his statement on the actual observation that lemons have cleansing properties. Nonetheless, Ibn Jumay''s statements remain very general throughout the treatise and he avoids any particular descriptions or case studies which may illustrate the effects of lemons he may have had observed. While Ibn Jumay' was likely to have used lemons in his practice of medicine, the general and universal nature of his statements hide any personal experiences

742. Ibn al-Bayṭār, *al-Jāmi'*, vol. IV, 118. Ibn al-Bayṭār, *Zusammenstellung*, vol. II, 453.

and observations almost completely. As we will see later, such an approach ties in with the notion that medical treatises should not report about particularities (such as the particular effects of lemons Ibn Jumay' may have had observed).⁷⁴³

Ibn Jumay' must have reasoned in the same way when it came to 'testing' drug properties as they were described by Ibn Sīnā in the *Canon*. While it thus appears unlikely that he actually conducted practical experiments, his practical experiences in administering drugs may well have reinforced his theoretical speculations and principles.

(h) Conclusions

Ibn Jumay's expertise lay in *materia medica*, and it is therefore not surprising to see him criticise authorities who also claimed expertise in this field. The case study showed how age, authorship and the authority of authors were crucial for Ibn Jumay'. Yet, age and authorship were not the only two criteria which influenced Ibn Jumay's hierarchy of trusted medical authors. Ibn Jumay' would discard ancient accounts in cases where more recent or even contemporary sources had good reasons to contradict the information passed down by the ancient authorities. If Ibn Jumay' had informants whom he deemed to be better informed about the plants or drugs they were describing, he trusted their accounts. Such instances were rare, however.

In order to throw more light on Ibn Jumay's methods in his *Canon* commentary, his treatise on the lemon was also consulted. There is no reason to assume that Ibn Jumay' worked differently when he was writing his *Canon* commentary. In both treatises it is evident that experience was not of primary importance to Ibn Jumay', but rather the principles and teachings as they were set up by the ancient authorities. Nonetheless, Ibn Jumay' was on occasion influenced by contemporary insights when writing his commentary. Even though he

743. See below p. 210.

did not appear to have tested drugs on his patients, he took into account reports from merchants or plants he had seen himself. So while the commentary is generally dominated by arm-chair analysis, there are instances in which Ibn Jumay^ʿ draws on his experience to contradict eminent authorities — very much like Ibn Nafīs or al-Baghdadī when they challenged traditional anatomical depictions.

3. Case study: Headaches and readership

(a) *Ibn Jumay's methodology in context: Comments on headaches*

All of the comments presented so far were carefully selected so as to highlight particular examples of Ibn Jumay' at work or his attitudes toward certain topics. Through this selection the impression may have been created that Ibn Jumay' commented steadily on issues pertinent to the clarification of the *Canon*. There are, however, a range of comments which illustrate that Ibn Jumay' was predominantly concerned with the discussion of minutiae or even nitpicking.

The following case study will provide an example of how Ibn Jumay' commented on Book Three, first part, second chapter, which is concerned with the ailments of the head (in particular headaches). The comments on Book Three make up approximately one fourth of the entire commentary and comprise almost 400 individual comments (comments on Books One and Two comprise 200-300 individual comments for each book); Book Three was therefore important for Ibn Jumay'. Yet, while one can imagine that a range of readers may have been interested in the comments highlighted in this thesis so far, doing so becomes increasingly difficult when considering this series of Ibn Jumay's comments which focus on very minute details.

The present case study addresses the question for whom Ibn Jumay' may have composed his comments on Book Three and the implications this has for the intended audience of the rest of the commentary. Why did Ibn Jumay' dedicate his time and attention to recording comments which appear trivial? Who could have been interested in reading such comments? Did Ibn Jumay' intend his commentary solely for his anonymous addressee who may have had no training in medicine, or (considering the possibility that the addressee was fictitious) did the court physician write for another audience that included more advanced physicians such

as himself? In either case, was it likely that his readers found the information presented in this section useful, especially when Ibn Jumay' concerned himself with minutiae as he generally did in his comments on Book Three?

When presenting a series of comments on Book Three of the *Canon*, another (at first sight unrelated) question will be posed: Is there a pattern which Ibn Jumay' followed when commenting (such as focusing on the beginning of certain chapters in the *Canon*)? Is it likely that Ibn Jumay' selected the passages he commented on with view to his readership? In other words, how much can his pattern of comments tell us about his intended readership?

(b) General patterns of comments

Before we look at the patterns of Ibn Jumay's comments on chapter two in the first part of Book Three, it is useful to outline the general patterns of his comments on the entire *Canon*. In the printed edition of the *Canon* used for this study (here after D),⁷⁴⁴ Book One comprises 311 pages, Book Two 414 pages, Book Three 840 pages, Book Four 393 pages and Book Five 172 pages. In his commentary, Ibn Jumay' devoted approximately 40 folios (=80 pages) to Book One, 30 folios (=60 pages) to Book Two, 32 folios (=64 pages) to Book Three, 8 folios (=16 pages) to Book Four, and only 4 folios (=8 pages) to Book Five.⁷⁴⁵ It is meaningless to compare the length of the printed edition with that of the manuscript version of Ibn Jumay's commentary because we will not be able to determine the percentage of the text commented upon. Nonetheless, the relative ratios of pages of the commentary to the pages of the printed text commented on reveal in gross terms the relative portions of the *Canon* that prompted Ibn Jumay's comments. Book One prompted the most thorough comments (80/311=25%), followed by Book Two (60/414=14%), Three (64/840=6%), Five (8/172=5%) and Four (16/393=4%). To put it differently, of the 228 pages of commentary by Ibn Jumay', 80 pages

744. See p. 7 above.

745. Foliation is that of the Princeton copy (P).

(35%) were concerned with Book One, 60 pages (26%) with Book Two, 64 pages (27%) with Book Three, 16 pages (7%) with Book Four and 8 pages (3.5%) with Book Five.

The over-all trend is therefore that earlier books are more thoroughly commented upon than later books. The same trend can also be seen within Book Three as Ibn Jumay' s thoroughness decreases gradually throughout the book. In the printed edition (D), a page contains approximately 360 words.⁷⁴⁶ In the first hundred pages (ca. 36.000 words), Ibn Jumay' commented on approximately 62 lines (ca. 744 words);⁷⁴⁷ this means that he commented on slightly more than 2% of the *Canon* text. On pages 400-500, Ibn Jumay' commented only on 36 lines (ca. 432 words)⁷⁴⁸ which is roughly 1% of the *Canon* text.

Despite a decrease in comprehensiveness, it must be stressed that Ibn Jumay' read or at least skimmed through the entire third book systematically. His comments do not only concern the very first line of a section but he often comments on sentences in the middle or the end of a section. There are no indications that Ibn Jumay' read and commented on Book Three before turning to Book One, or that he started with later parts of Book Three and then turned to earlier parts. Rather, he appears to have commented on the *Canon* in a successive order, getting gradually more tired of commenting.

(c) Discussion of individual comments

In what follows, all of Ibn Jumay' s comments (CC III, 24-39) on the second chapter in part one of Book Three are presented. Particular attention is given to the context in which Ibn Jumay' s

746. Page 6, for instance, has 30 lines = ca. 360 words (each line containing ca. 12 words).

747. D II, 6 (1), 7 (4), 8 (2), 10 (1), 11 (2), 13 (1), 14 (2), 19 (1), 22 (1), 24 (1), 31 (1), 33 (6), 37 (2), 40 (2), 42 (1), 43 (2), 44 (1), 45 (2), 47 (2), 49 (1), 50 (1), 53 (1), 55 (1), 56 (1), 57 (1), 58 (1), 59 (2), 61 (1), 62 (1), 68 (1), 74 (1), 76 (5), 77 (1), 78 (1), 80 (1), 84 (2), 88 (1), 89 (1), 95 (1), 97 (1) = 62 lines with each line containing ca. 12 words = 744 words.

748. D II, 401 (1), 402 (3), 404 (1), 408 (1), 409 (1), 410 (1), 414 (1), 415 (1), 422 (2), 431 (3), 434 (2), 435 (1), 436 (2), 437 (1), 443 (1), 444 (1), 449 (1), 450 (1), 453 (1), 456 (2), 458 (1), 462 (2), 464 (1), 490 (2), 495 (2) = 36 lines with each line containing ca. 12 words = 432 words.

has written his comments: The analysis of each comment is preceded by a short summary of the *Canon* passage which Ibn Jumay' must have read before commenting. The appendix includes a section (pages 287f.) which gives a visual impression of the passages Ibn Jumay' commented on (shaded in grey) and the ones he skipped.

CC III, 24

Ibn Jumay' started reading the second chapter (*maqālah*) on pains of the head (*awjā' ar-ra's*).⁷⁴⁹ After looking through the definition of headaches, he came to the causes for headaches (such as a change of temperament) and the different areas of the head where a headache might be located, at which point⁷⁵⁰ he felt compelled to explain the technical term *wāshijah*⁷⁵¹ (*rete mirabile*):

General discourse on headaches. The *ra'īs* said: "The organ which connects between it [the lower body] and the brain is a *wāshijah* of nerves" The *wāshijah* is an interwoven network (*mushtabikah*). Jawharī said about the *wāshijah*: "The bonds of kinship (*rahim*) are an interwoven network (*mushtabikah*)." The blood vessels and nerves intertwine (*washajat*), i.e. they are interwoven. (CC III, 24)

CC III, 25

Ibn Jumay' continued to read on and shortly afterwards commented on a short passage in the same paragraph.⁷⁵² For our purposes it will suffice to say that Ibn Jumay' lost himself in a

749. D II, 44ff.

750. D II, 45.

751. The 'rete mirabile' is a non-human anatomical structure that Galen was famous for having described and attributed to humans. It is a complex arterial network which is quite conspicuous in ungulates. It occupies the area where the 'Circle of Willis' is located in humans. The usual translation in Arabic (used by Ḥunayn) in Galen's *De usu partium* was *al-jawm ash-shabīh bi-ash-shabakah*. See Savage-Smith, *Galen*, 100, 106, 215f.

752. Paragraphs refer to the printed edition (D). The use of the term is thus entirely anachronistic; Ibn Jumay's *Canon* was not divided into paragraphs, even though it was very likely to have been subdivided by subtitles or red overlinings.

rather pedantic and tedious comment concerned with clarifying the context of the sentence. The rest of the section (*faṣl* 1) remains uncommented.⁷⁵³

CC III, 26

The commentary continued with the next section which is entitled ‘the division of types of headaches caused by bad temperaments’. Ibn Jumay‘ read Ibn Sīnā’s division of headaches according to hot, cold, dry and wet temperaments and commented on the passage⁷⁵⁴ concerned with moist disease-matters causing headaches:

On the types of headaches resulting from bad temperaments. The *raʿīs* said: “A moist temperament⁷⁵⁵ is only painful if there is a moist disease matter due to fumigation (*tabkhīr*), or if caused by a vapour (*rīḥ*) which interrupts the connection [to the brain].”

The moist disease matter may become large in size and cause pain when it expands, but he [Ibn Sīnā] did not mention that. The correct statement should read: “[A moist temperament is only painful] if there is a moist disease matter causing pain through expansion and its bulk, or through the occurrence of a vapour that severs the connection [to the brain].” (CC III, 26)

Ibn Jumay‘ was not content with Ibn Sīnā’s statement because he had failed to mention that moist disease-matters cause pain if they expand. It is unclear what Ibn Jumay‘’s sources were; apparently it was simply a well-known fact to Ibn Jumay‘.

CC III, 27

In the last paragraph of the present section, Ibn Sīnā discussed dryness as a cause for headaches and started with a list of processes that lead to dryness.⁷⁵⁶ Among them was the process of solidifying:

The *raʿīs* said: “Or natural solidifying”. The Iraqi glosses do not consider this addition to be good. However, if this addition is meaningful, it may [describe] the cold temperament of old

753. D II, 45-46.

754. D II, 47.

755. Lit. ‘The temperament that is moist through any form of moisture’.

756. D III, 47.

age. (CC III, 27)

Ibn Jumay' suggested that solidifying (or cooling and hardening) should be understood as a process associated with old age, perhaps as old age usually results in induration and inactivity.

CC III, 28

Ibn Jumay' did not comment on the following three sections and continued with section six which is the last section on the different reasons for headaches. The section is concerned with headaches caused by more than one cause ('compound causes'). After some general remarks, Ibn Sīnā introduced the first group of compound causes such as the swelling of joints or gibbosity, the latter being the subject of Ibn Jumay'"s next comment:⁷⁵⁷

Division of headaches resulting from compound [causes]. The *ra'īs* said: "The winds of gibbosity (*riyāḥ al-afrasah*)". The *alif* in this term [*afrasah*] is an addition and it appears like this in all of the medical books we know of, but it is a mistake which occurred in them [i.e. the medical books]. This has been mentioned and explained by Ibn Janāḥ in his book of abbreviation[s]. Correct is *farsah* with *sīn* or *farṣah* with *ṣād*.

Jawharī said: "*al-farsah* is a 'wind' (*riḥ*) which takes the neck and breaks it (*tafarasaha*)"⁷⁵⁸ — that is it smashes it. He also said: "*al-farṣah* is the wind which causes gibbosity (*ḥadab*)."⁷⁵⁹

Afrasah is not a plural noun because there is no *afalah* plural of *fa'lah* forms. It builds a plural on *fa'lāt*, such as *qaṣ'ah* and *qaṣ'āt*, *jafnah* and *jafnāt*, or on *fi'āl* such as *qaṣ'ah* and *qisā'*, or *ṣiḥfah* and *ṣiḥāf*, or on *fu'ūl* such as *bardah* and *burūd*. (CC III, 28)

Ibn Sīnā's use of the word *afrasah* prompted Ibn Jumay' to point out that the word is commonly misspelled in all of the medical treatises he consulted, referencing the Andalusian physician Ibn Janāḥ (d. c. 431/1040)⁷⁶⁰ as his source. To give a definition of the term, Ibn Jumay' turned to the authority Jawharī who had defined *al-farsah* as a 'wind' (or force) which

757. DD II, 49.

758. Jawharī, *Ṣiḥāḥ*, vol. III, 958.

759. Jawharī, *Ṣiḥāḥ*, vol. III, 1048.

760. See above p. 83.

causes a displacement of the cervical vertebrae (and thus leads to gibbosity).⁷⁶¹ Our court physician concluded the comment with a linguistic explanation why *afrasah* cannot be the plural of *farsah*.

CC III, 29

Towards the end of the section,⁷⁶² Ibn Jumay‘ criticised a passage vehemently by saying that it was ‘far from the truth’. The comment has already been translated and discussed above: wine causes headaches through being evaporated and this has severe consequences (in the form of spasms) for people with a cold temperament.⁷⁶³

CC III, 30

At the end of the next section (which is dedicated to the general discourse concerning the symptoms of different kinds of headaches), Ibn Sīnā discussed how the consistency of bile may help when deciding which therapeutic measures to take. It is only in the very last sentences that Ibn Jumay‘ felt obliged to correct Ibn Sīnā who had stated that a certain mild⁷⁶⁴ treatment is harmful for those who have a headache due to a certain rough (*ghalīz*) treatment of their bile. Ibn Jumay‘ indicated that this sentence had been dropped from some of the copies he consulted and then pondered if the problematic ‘rough treatment’ should simply be dropped, so that the sentence reads: “the mild treatment is harmful for those who have a headache due to their bile.” However, Ibn Jumay‘ rejected this by suggesting that it must read “thickening (*mughlaz*) treatment” instead of “rough (*ghalīz*) treatment”. He rephrased the sentence so that it stated that the mild treatment (which thins bile) harms those who need

761. See also Lane, *Lexicon*, 2367 for a discussion of the term *al-farsah*.

762. D II, 50. Note that Ibn Jumay‘ found this passage at the beginning of the next section (*faṣl* 6). It appears that the order in his manuscript was either corrupt or he made a mistake, as the headache he describes here fits into section 5 and not 6 when we follow the subdivisions of modern editions (see D II, 50).

763. See p. 103.

764. I.e. a treatment which thins out bile as will be explained later on.

their bile thickened. The sufferer requires a ‘thickening’ (*mughlaz*) and not a ‘rough’ (*ghalīz*) treatment.

CC III, 31

After not commenting on sections eight and nine (which are mainly concerned with the regimen suitable for headache sufferers), Ibn Jumay‘ suggested to change the title of section ten.⁷⁶⁵ The comment is simply of a cosmetic nature and does not warrant a more detailed discussion.

CC III, 32

Ibn Jumay‘ read on and found the technical term *nīshūqiyyah* in the middle of section ten. His comment has already been discussed⁷⁶⁶ as it showed that Ibn Jumay‘ was influenced by what other people, in particular contemporaries, had told him. The comment is interesting in the present context, for Ibn Jumay‘ was pre-occupied with applying his analytic skills in the comments discussed so far. It almost comes as a surprise that he interrupted his arm-chair analysis, made enquiries regarding the term *nīshūqiyyah*, and returned to his commentary to write down what he was told by a group of Persians — just to illuminate the meaning of one single word buried in the middle of a section concerning the treatment of headaches. However, it may have been simply the case that Ibn Jumay‘ already knew of the term because he had the discussion with the group of Persians prior to writing this comment. Thus, when he came across the term, he simply recalled what he had been told about it.

CC III, 33

Section eleven is concerned with the treatment of cold headaches by applying opposing qualities (such as hot materials) or materials stimulating phlegm or black bile. Ibn Sīnā first

765. D II, 55. As Ibn Jumay‘ did not count the very first section of the present chapter, he stated that he wishes to change the title of section nine.

766. See above p. 122.

discussed treatments with opposing qualities,⁷⁶⁷ then treatments with phlegmatic substances⁷⁶⁸ and finally treatments with bilious substances.⁷⁶⁹ It is in the context of the last category that Ibn Jumay' commented on the seed of clove (*qaranful*) which is to be used against cold headaches. The comment merely explains that *qaranful* was mentioned under the name 'beneficial seed' (*ḥubb aṭ-ṭayyib*) in the formulary of Sabūr Ibn Sahl.⁷⁷⁰

CC III, 34

Ibn Sīnā continued with a range of treatments (in particular liniments) for cold headaches.⁷⁷¹

Ibn Jumay' commented on the third prescription for a liniment.⁷⁷²

The *ra'īs* said in this [*faṣl*]: "Among the good liniments for everyone who chronically suffers from cold helmet-headaches and migraine, are liniments [made with] Egyptian Stone (*al-ḥajr al-miṣri*)."⁷⁷³

This stone is mentioned by Galen in the ninth [chapter] of his book on the potency of simple medicaments, where he says that it [can be found] in the land of Egypt and that the people use it for beating and bleaching linen. (CC III, 34)

As in many other instances, Ibn Jumay' demonstrated his knowledge of Galen's treatises and was able to reference the passage in which Galen had discussed the *Egyptian Stone*.⁷⁷⁴ It is curious, however, why Ibn Jumay' relied on Galen's almost one-millennium-old description of

767. D II, 57.

768. D II, 58.

769. D II, 58.

770. For Sabūr Ibn Sahl's formulary see Sābūr ibn Sahl, *Dispensatory*. *Ḥubb aṭ-ṭayyib* is not mentioned in the index, however.

771. D II, 58f.

772. D II, 59.

773. The Egyptian stone appears to have been virtually unknown in Egypt. Maimonides did not include it in his collection (Maimonides, *Sharḥ asmā'*) and it appears as if there are no references to it in the Cairo Genizah either (Lev, and Amar, *Materia Medica*). Moreover, in his long list of different stones, Ibn Bayṭār did not mention the Egyptian stone (Ibn al-Bayṭār, *al-Jāmi'*, vol. II, 6-12).

774. Galen, *Opera*, vol. XII, 198.3. Ibn Jumay' quotes Galen almost verbatim. I am grateful to Oliver Overwien who assisted me in locating this passage.

the *Egyptian Stone* instead of contemporary, oral sources. Perhaps the *Egyptian Stone* was not known in Egypt, but then it would still be curious why Ibn Jumay‘ did not point this out.

CC III, 35

Only a few words later, Ibn Jumay‘ spotted a problem concerning another liniment mentioned by Ibn Sīnā⁷⁷⁵ and commented on one of its ingredients:

Moreover, the *raʿīs* said in it [i.e. this section]: “Aloe (*ṣabir*), myrh (*mirr*), euphorbium (*furbiyūn*),⁷⁷⁶ castoreum (*jundubadastun*),⁷⁷⁷ bindweed (*afithimūn*),⁷⁷⁸ costus (*qust*),⁷⁷⁹ pellitory (*‘āqīr qarḥā*)⁷⁸⁰ and pepper should be rubbed [into the skin] with an old vintage wine.”

In another copy we find opium instead of bindweed, and I found the recipe of this liniment in *al-Ḥāwī*. Just as it is found here [in the *Canon*], we find it there as well, that is bindweed is given in the body of the text, while opium is written in the margin [of the book]. Opium, however, is more suitable.⁷⁸¹

This ingredient [opium] was already mentioned in another liniment for this ailment [i.e. cold headaches] which he mentioned prior to this liniment. But bindweed is not [totally] objectionable in this passage for the *raʿīs* himself said in the [passage dealing with the] general principles [relating to] the treatment of headaches: “Sometimes we dress the head after shaving it with a soothing drug for the type of humour which is in it [i.e. the head]”. (CC III, 35)

Ibn Jumay‘ was not only aware that ar-Rāzī discussed a similar recipe in the extensive *Ḥāwī* but also drew attention to a variant given in the margins of his copy of *al-Ḥāwī*. As Ibn Jumay‘ judged both bindweed and opium suitable for this purpose, one could argue that the comment is not essential as no one would have done anything ‘wrong’ if only bindweed had been used for the liniment. This presupposes, however, that the recipes were indeed applied in medical

775. D II, 59.

776. Kindī, and Levey, *Formulary*, 311.

777. Kindī, and Levey, *Formulary*, 254.

778. Kindī, and Levey, *Formulary*, 233.

779. Kindī, and Levey, *Formulary*, 232.

780. Kindī, and Levey, *Formulary*, 301.

781. Opium is also mentioned for the cure of headaches by al-Rāzī in *al-Manṣūrī*, p. 377, line 4 from below. I was not able to find the recipe in *al-Ḥāwī* (see Tibi, *Opium*, 106ff.).

practice and were not simply an object of theoretical speculation or a means of demonstrating the extent of one's erudition.

CC III, 36

Ibn Jumay' did not comment on the following three recipes⁷⁸² and one wonders if he really read through all of them as meticulously and critically as the previous ones. His comments began once again when he came to the section regarding dry headaches,⁷⁸³ with a short remark concerning textual variants:

The *ra'īs* said regarding the treatment of dry headaches: "As for dry headaches, which are caused through disease matter that is either yellow-bilious or bloody," [Instead of "yellow-bilious or bloody"] other copies have "bloody" and "black-bilious". And this [the latter] is the best reading because dry headaches from bloody disease matter do not exist. (*CC III, 36*)

Ibn Jumay' disagreed with Ibn Sīnā's statements regarding dry headaches and checked if there were alternative variants in his other *Canon* copies. Ibn Jumay's problem was that dry headaches cannot be caused by "bloody matters", which appears to be another theoretical assumption based on the general principles as laid out by Galen and others.

CC III, 37

Ibn Jumay' continued with a comment on the same section in which he quoted a gloss taken from Ibn at-Tilmīdh's comments, simply providing a synonym for another word. This shows that Ibn Jumay' must have checked Ibn at-Tilmīdh's glosses continuously (they were found in the margins of one of his *Canon* copies). Ibn Jumay' did not comment on the sections that followed (including headaches from winds, the sea, alcohol, sex, a blow, fall, bad regimen etc.).⁷⁸⁴ It appears as if his stamina had markedly decreased.

782. D II, 59-61.

783. D II, 61.

784. D II, 62-68.

After a rather long pause, Ibn Jumay' commented again on a technical term which was used by Ibn Sīnā. The passage commented upon is found in the middle of Ibn Sīnā's description of the treatment of headaches caused by fevers:⁷⁸⁵

The *ra'īs* said concerning the treatment of headaches caused secondarily through fevers and disease: "As for the bandaging of the extremities and rubbing them, and the application of *ḥamūr*." *Ḥamūr* with an undotted *ḥa'* and *fataḥ* [Ibn Jumay' wanted to make sure that *ḥamūr* is not read as *khamūr* (wines)] ... With it [*ḥamūr*] he [Ibn Sīnā] refers to a remedy which is known among the physicians [as useful] for redness (*al-ḥumrah*). (CC III, 38)

It is difficult to determine how many other terms in the preceding sections must have been difficult for readers who were ignorant of what is commonly 'known among physicians', but it is likely that Ibn Jumay' left several technical terms unexplained before commenting on *ḥamūr* which Ibn Jumay' explained as a medicament that is useful for *ḥumrah* (perhaps erysipelas).

After further silence,⁷⁸⁶ Ibn Jumay' commented on the very beginning of Ibn Sīnā's section on migraine:

On migraine (*ash-shaqīqah*). The *ra'īs* said in it [the *faṣl*]: '... and Galen has defined it [migraine] as the 'membrane which is in the middle'.'

This is how we found this passage in all of the copies we consulted. It is a statement devoid of any meaning and it is apparent that misspelling and corruption have occurred. Correct is: 'Galen defined it [migraine] as that which terminates at the cranial suture which is in the middle [of the skull]'. This is attested by Galen who said in the third [chapter] of his *On the Composition of Drugs*⁷⁸⁷: 'There may happen in one half of the head a painful ailment which is at times on the left side and at times on the right side. It [migraine] is determined [in its position]

785. D II, 68.

786. D II, 68 - 74 are not commented upon.

787. *Mayāmir* (pl. of *mīmar*, Syriac for treatise) refers to books 8-17 of *Kata Genos (De Compositione Medicamentorum Secundum Locus)*.

by the suture which runs the length of the head.”⁷⁸⁸ (CC III, 39)

(d) *Conclusions*

Ibn Jumay’s scrutiny and critical evaluation grew less rigorous with time as he worked through his commentary. The first book of the *Canon* attracted most comments followed by the second book which was concerned with Ibn Jumay’s area of expertise, *materia medica*. As for the third book, Ibn Jumay read or at least skimmed through it systematically. He did not generally restrict himself to the opening lines of a passage. In the present case study on headaches, for example, Ibn Jumay commented four⁷⁸⁹ times on the beginning of a section, four⁷⁹⁰ times on the middle of a section and six⁷⁹¹ times on the end of a section. Initially, the gaps between passages commented on followed a relatively regular pattern, but later became markedly larger.⁷⁹² It is perhaps only human that Ibn Jumay failed to show unwavering attention when reading through the very lengthy and technical passages of Book Three and increasingly limited himself to making seemingly random comments concerned with rather unimportant details. Yet, it must be asked for whom the latter parts of the commentary were written.

The comments analysed in this case study show that it was important to read the *Canon* alongside the commentary. Without the full text of the *Canon* which was not provided in the commentary, it is hard to imagine how a reader could fully appreciate Ibn Jumay’s comments.⁷⁹³ Moreover, Ibn Jumay himself had stated in his preface that the commentary

788. The passage quoted from Galen’s *On the Composition of Drugs* can be found in Galen, *Opera*, vol. XII, 591.8-11. I am thankful for the help of Oliver Overwien who assisted me in locating this passage.

789. D II, 45, 47, 49, 74.

790. D II, 45, 56, 58, 59.

791. D II, 47, 50, 53, 61, 62, 68.

792. Ibn Jumay did not comment on D II, 44, 46, 48, 51, 52, 54, 57, 60, 63-67, 69-73, 75.

793. As pointed out in the preface, Ibn Jumay’s commentary still resembles marginal glosses in many instances because it originated in the margins of Ibn Jumay’s *Canon* copy. Understanding Ibn Jumay’s comments without reading the *Canon* text is sometimes as difficult as understanding glosses without the facing text. See above p. 22f.

was written so that one could look up in it the comments on a certain passage and uncover the obscure meanings of a given *Canon* passage.⁷⁹⁴ This presupposes that Ibn Jumay‘ wrote his commentary for readers with access to the *Canon*. Possible addressees thus included (1) novices studying medicine, (2) practicing physicians, (3) scholars interested in the *Canon* or the work of Ibn Sīnā in general, and (4) patrons with an interest in the sciences.

Novices and practicing physicians

Ibn Jumay‘ stated in his preface that the *Canon* was suitable for novices and it follows that he may have deemed his commentary suitable for novices as well.⁷⁹⁵ If so, comments which correct or explain a term or passage according to what is ‘known among physicians’ (CC III, 38) were perhaps intended for novices. Likewise, in his comment on the definition of migraines (CC III, 39), Ibn Jumay‘ may have addressed a readership with a limited knowledge of Galenic writings. However, all of these possibilities remain rather unconvincing if we consider that the commentary, with its numerous and difficult discussions of minutiae, was unlikely to prove popular among novices. Novices would rather consult general introductory treatises, such as Ibn Jumay‘’s compendium on medicine, which was written in a much more accessible style and stripped of all irrelevant details.⁷⁹⁶ While Ibn Jumay‘ may have thought that very dedicated novices could have made use of his commentary, it is unlikely that he had written it especially for them.

794. See above, p. 21. CC P, 8: “I imitated its order by ordering its sections (*fuṣūl*) and discourses into individual sections, so that this may facilitate the process of looking up whatever you wish to uncover of it[s] (the *Canon*’s) obscure meanings[.]”

795. CC J, 2. For the criticism that the *Canon* is not suited for novices see p. 88 above (CC P, 2). Ibn Jumay‘ refutes this argument in CC J, 2 and stresses that the striving novice, who is assisted by other people (apparently teachers) can only benefit from the *Canon*.

796. For instance, Ibn Jumay‘’s discussion of migraine and its treatments in the *Irshād* (Ibn Jumay‘, *Irshād* (Oxford), fol. 65a) was much easier to read and understand than his comments in CC III, 39 on migraine.

Likewise, it is unlikely that Ibn Jumayʿ thought that his commentary would be of much practical use to physicians or pharmacists. The comments analysed here were of a theoretical nature and it is hard to imagine that they were intended to influence medical practice. Galen had stated that medical commentaries must be written for the practicing physician, but Ibn Jumayʿ was hardly adhering to such standards.⁷⁹⁷ He was more concerned with explaining technical terms, correcting passages or tracing the sources of Ibn Sīnā.

Scholars in general

Later super-commentaries and glosses on Ibn Jumayʿ’s commentary demonstrate that it was read by other scholars.⁷⁹⁸ While the motives and interests of these scholars must be the topic of future studies, the nature of the comments analysed here suggests that Ibn Jumayʿ was addressing scholars who were interested in an authoritative evaluation of the *Canon* by somebody with expertise in the medical field. In the series of the sixteen comments of this case study, Ibn Jumayʿ offered ten clarifications⁷⁹⁹ and six corrections⁸⁰⁰ of passages, and traced the sources Ibn Sīnā had used in five instances.⁸⁰¹ Even though all of the comments discussed here were disconnected from each other in terms of their contents and generally concerned with minutiae (and thus not a very entertaining read), they were all aimed at perfecting the knowledge found in the *Canon* concerning headaches. For those who accepted that Ibn Sīnā’s account on headaches was the most definitive and authoritative summary of the topic, Ibn Jumayʿ’s additions were certainly useful. Using his erudition and authority in the field, Ibn Jumayʿ guided his reader through the technical intricacies of the *Canon* and left little doubt that he was able to understand even the difficult and obscure parts of the *Canon*.

797. For Galen on the issue, see above p. 28.

798. See above, p. 51.

799. CC III 24, 25, 27, 31, 32, 33, 34, 35, 37, 38.

800. CC III 26, 28, 29, 30, 36, 39.

801. CC III 28, 33, 34, 35, 39.

He was surely hoping for an audience which could appreciate his attempt to bring the best summary of medicine available to a new level of perfection.

An anonymous patron

In her study 'Practice versus Theory: Tenth-century Case Histories from the Islamic Middle East', C. Álvarez-Millán investigated to what extent learned medical texts are a transparent account of reality. After comparing therapies of eye diseases, she concluded that the therapeutic advice so meticulously described in ar-Rāzī's medical compendium *al-Kitāb al-Manṣūrī fī at-ṭibb* was not paralleled in the physician's medical practice as depicted in the case studies found in the *Kitāb at-Tajārib*. One reason, she suggests, is that learned treatises such as *al-Kitāb al-Manṣūrī* served other purposes than did case studies, such as raising ar-Rāzī's professional status or the better organisation of his teachings.⁸⁰² As the title indicates, *al-Kitāb al-Manṣūrī* was dedicated in 290/903 to the Sāmānid prince Abū Ṣāliḥ al-Manṣūr ibn Ishāq, governor of Rayy⁸⁰³ and it is not difficult to imagine that ar-Rāzī wanted to impress his royal audience with his medical compendium.

Like *al-Kitāb al-Manṣūrī*, Ibn Jumay's commentary was probably written to demonstrate Ibn Jumay's erudition in front of his addressee and thus to maintain the court physician's authority and salary. While it has been pointed out that the anonymous addressee of the *Canon* commentary may possibly have been a literary device which Ibn Jumay used to introduce his commentary,⁸⁰⁴ there are several indications that the royal addressee was real.

If Ibn Jumay had intended his commentary for a well-educated noble man who was not himself a physician, we can understand his recurring remarks about 'what is known among physicians' as Ibn Jumay's self-legitimation as a physician. While in the present case study

802. Álvarez-Millán, *Practice*, 305-306.

803. Savage-Smith, *Medicine*, 915. Savage-Smith, *New Catalogue*, 154. Ar-Rāzī, *al-Manṣūrī*.

804. See above p. 87.

many comments were concerned with details of little interest to a patron (who may only have had a general interest in the *Canon*), the comments can also be interpreted as Ibn Jumay's demonstration of his erudition and intellectual power. A patron may not have judged Ibn Jumay's comments on headaches as a pedantic activity, but rather as evidence that he was capable of coping with even the most remote contents of the *Canon*. With his *Canon* commentary, Ibn Jumay' offered his addressee an authoritative account on the *Canon* debate which could be stored in a library and consulted if need be. What exactly Ibn Jumay' had to say on the sections concerned with headaches was probably less important than the fact that he did comment on them in an erudite manner.

IV. *The commentator in comparison*

1. *A physician at work?*

(a) *A physician's and a philosopher's commentary*

It was not necessary to be a physician in order to write a commentary on the *Canon of Medicine*. The philosopher and theologian Fakhr ad-Dīn ar-Rāzī (d. 606/1209)⁸⁰⁵ dedicated his commentary *Sharḥ al-kullīyāt* on the first book of the *Canon* to the physician ‘Abd ar-Raḥman ibn ‘Abd Karīm as-Sarakhsī who had given Fakhr ad-Dīn lodging while he was on his way to Bukhārā.⁸⁰⁶ The commentary was probably written around 580/1184 and is thus the only *Canon* commentary we know of that was written during Ibn Jumay’'s lifetime.⁸⁰⁷

This section will compare and contrast the *Canon* commentaries of these two scholars in order to throw more light on Ibn Jumay’ at work, examining the difference between his commentary and that of a philosopher. We will focus on Ibn Jumay’'s and Fakhr ad-Dīn’s comments on the definition of medicine and will assess how much their comments reveal about their professions as physician and philosopher. Moreover, we will have a look at how Ibn Jumay’ understood the role of the physician. Before we start, however, a general comparison of the two commentaries is appropriate.

805. Not to be confused with the physician Abū Bakr Muḥammad ibn Zakarīyā’ ar-Rāzī, d. c. 312/925.

806. Anawati, *Fakhr al-Dīn al-Rāzī*.

807. See Shihadeh, *Ethics*, 8. It is unclear when Ibn Jumay’ wrote his commentary on the *Canon*, but taking into consideration that the earliest extant copy was completed in 600/1204, it is not unreasonable to assume that Ibn Jumay’ wrote his commentary at roughly the same time as his contemporary Fakhr ad-Dīn. There is nothing to suggest that the two writers ever met or even knew of each other because Fakhr ad-Dīn was mainly active in the eastern realms of the Islamic world while Ibn Jumay’ probably never left Egypt.

The most distinctive feature of Fakhr ad-Dīn's commentary is his presentation of several investigations (*mabāḥith*) for selected passages he commented upon.⁸⁰⁸ For instance, Fakhr ad-Dīn presented six 'investigations' (fol. 6b-10a) in the course of commenting on different aspects of Ibn Sīnā's definition of medicine. These particular 'investigations' were not summaries of Ibn Sīnā's definition of medicine (which is only one sentence long), but rather refinements and discussions. While Fakhr ad-Dīn was known for his scathing criticisms of Ibn Sīnā's philosophical works, such as the *Ishārāt* and '*Uyūn al-akhbār*,⁸⁰⁹ it seems as if he was less critical about the *Canon*. As he himself expressed it in the preface of his *Canon* commentary:

I found him [Ibn Sīnā] to be capable of understanding the branches of this science [medicine] and its foundations, especially through the chapters of this book and its subdivisions. And I understood that he knew the bulk of what is excerpted from the science books and the rarities of [medical] wisdom which are found in the writings of the ancients and those coming after and which were not comprised in one [single] book of the ancients.⁸¹⁰

Like Ibn Jumay', Fakhr ad-Dīn favoured the *Canon* as a book which offered something earlier books did not. According to Fakhr ad-Dīn, the *Canon* offered in one single book an array of excerpts from the medical writings of the ancients and those coming after — an observation also made by Ibn Jumay'.⁸¹¹ Both commentators therefore stressed the essential nature of the *Canon* as a collection of excerpts taken from earlier treatises. Fakhr ad-Dīn judged Ibn Sīnā very positively in terms of his understanding of medicine and, throughout the commentary, there are several passages in which Fakhr ad-Dīn tried to defend Ibn Sīnā against possible objections.⁸¹² Ibn Jumay' was therefore not alone in holding his generally positive attitude toward the *Canon*.

808. See also Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 5b on his reasons for having written a *Canon* commentary (Arabic edition is included in the appendix; paragraph [1] on p. 285ff.).

809. See Anawati, *Fakhr al-Dīn al-Rāzī*.

810. Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 5b-6a. See [2] on p. 285ff. for an Arabic edition.

811. See CC J, 1 (p. 91 above).

812. E.g. Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 55b (l. 10) and fol. 64a (l. 10 and l. 6 from below).

Despite these similarities, the *Canon* commentaries by Ibn Jumay‘ and Fakhr ad-Dīn differ in a number of ways. With 191 folios in the Bodleian copy,⁸¹³ Fakhr ad-Dīn’s commentary is comparable in length to Ibn Jumay‘’s. However, the scope of Fakhr ad-Dīn’s comments is limited to the first book of the *Canon* and the Bodleian manuscript ends with his comments on Ibn Sīnā’s pulse section, thus leaving one third of the first book not commented upon.⁸¹⁴ In contrast to Ibn Jumay‘, Fakhr ad-Dīn did not aim to cover as much ground as possible. Ibn Sīnā’s discussion of the anatomy of bones, for instance, remains uncommented on by Fakhr ad-Dīn, while his comments on the pulse take up approximately a fourth of the entire manuscript (fol. 156b-195a). Consequently, some topics are covered in great detail while others are not touched upon at all.

(b) *Ibn Jumay‘ on medicine*

I will present Ibn Jumay‘’s comments on the definition of medicine in their entirety before comparing them with relevant comments from Fakhr ad-Dīn’s commentary. Ibn Jumay‘ began his comments as follows:

The first section (*faṣl*) in the first chapter (*ta‘līm*) in the first part (*fann*). On the definition of medicine. The *ra‘īs* said: “Medicine is a science (*‘ilm*)⁸¹⁵ from which one learns the states of the human body, in terms of what is healthy and what is not, in order to preserve health when present and restore [it] when it is lacking.”⁸¹⁶

By saying that “medicine is a science”, it appears that he [Ibn Sīnā] interprets it as a theoretical art (*ṣinā‘ah nazariyyah*). But this is not true because the ultimate aim (*ghāyah*) of a theoretical art is the attainment of knowledge alone. This means that one would have made all of its [medicine’s] subjects, fields and intrinsic characteristics which belong to it, pure intellectual matters (*ma‘qūlāt li-an-nafs*) so that the intellectual matters completely make up the medical art. This, however, is not applicable because its [medicine’s] ultimate aim is the attainment of health in the human body and all of its parts through its actions which are carried out in [this

813. Savage-Smith, *New Catalogue*, 245-248.

814. The fourteenth *faṣl* (‘On the properties of the pulse of somebody taking a bath’) is the last *faṣl* commented upon (Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 195a). The entire third *fann* (book one has three *funūn*) is therefore not commented upon.

815. In the present thesis, science is to be understood as the German ‘Wissenschaft’ or ‘field of learning’.

816. D I, 13.

art], such as regimen, administration of drugs, phlebotomy, use of the scalpel, cauterisation, and incisions. And this is the state of a practical art, just as Abū Naṣr al-Fārābī [d. 339/950] has outlined.⁸¹⁷

For this reason the *ra'īs* [Ibn Sīnā] himself raised the objection by saying: “As for he who says that medicine is divided into theory and practice, he has made it a science par excellence by saying that it is a science ... ” He [Ibn Sīnā] responded [to this objection by saying] that, if medicine is said to be divided into theory and practice, its theory needs to be [concerned] with the science of the fundamental principles and [its] practice with the science of how to apply [the fundamental principles]. Both of them, however, are a science. (CC I, 8.1)

Ibn Jumay'’s primary concern when commenting on the definition of medicine was to clarify that medicine has to be a practical art and not merely a science. His reason to do so was Ibn Sīnā's ambiguity about the role of medical practice when defining medicine. After the definition of medicine Ibn Jumay' quoted in his comment, Ibn Sīnā had written:

When it is said that in medicine there is that which is theoretical and that which is practical, it does not follow that one should think the meaning to be that one of the two divisions of medicine is the learning of science (*'ilm*) and the other division is the practice of it through practical work, as it is believed by many of the investigators into this subject. Rather it is right that you understand that the meaning is something different - namely, that it is not that only one of the two divisions of medicine is a science, but that one of the two is the *science* of the principles of medicine and the other the *science* of the generalities of practice.⁸¹⁸

Ibn Sīnā stressed that one ought not divide medicine into theory and practice, or, as he put it, “the learning of the science” and “the practice through practical work”. As E. Savage-Smith has pointed out, Ibn Sīnā may have attacked al-Majūsī's medical encyclopaedia with this criticism, as his *al-Kitāb al-Kamīl* had been divided into two books, one on the theory and the other on the practice of medicine. Ibn Sīnā, however, defined medicine as a two-fold science. The first science, which is concerned with the principles of medicine, is called ‘science’ (*'ilm*) or ‘theory’ (*naẓar*) and the second science, which is concerned with practice, is called ‘practice’ (*'amal*). For Ibn Sīnā, the ‘practice’ of medicine is therefore not defined by the

817. Cf. Fārābī, *Iḥṣā' al-'ulūm*, 91-101.

818. Trans. Savage-Smith, *Medicine*, 922. Italics and slight emendation by the present author.

medical ‘actions’ enumerated by Ibn Jumay‘, such as the administration of drugs, phlebotomy, or the use of the scalpel. Rather, ‘practice’ is a science which provides information of use when employing drugs or the scalpel. Ibn Sīnā left no doubt about this when he continued to defend his interpretation of medicine as a two-fold science:

We mean by the practical aspect of it, not the actual practice nor the application of bodily movements, but rather the part of the science of medicine in which the information is useful for a concept, that concept being related to the explanation of the details of practice. For example, it is said in medicine that inflamed swellings require that in the beginning there should be put on them that which is styptic and cools and thickens; then after that the styptics are mixed with emollients. After achieving a decrease in size, [treatment] is confined to emollients which resolve, except in swellings which are a result of matter which vital organs expel. So this information is useful to you as a concept which explains the particulars of practice. If you learn these two divisions, then you will achieve theoretical knowledge and practical knowledge, even if you never practise.⁸¹⁹

For Ibn Sīnā, the ‘practice’ of medicine was something which can be learned without ever practicing it: practice is not a skill but pure knowledge. Whether or not medicine ought to be practised is irrelevant in this context and so is the question about the ultimate aim of medicine.⁸²⁰ For Ibn Jumay‘, however, it was important to define the ultimate aim of medicine as the achievement of health through practical means. He therefore questioned Ibn Sīnā’s definition of medicine with the following rhetorical criticism:

So one could therefore say: “Surely, by ‘medicine’ he must in this instance mean the art itself, by which I mean [medicine’s] capacity (*quwwah*), or its inherent and essential property (*malakah*), to maintain health in the bodies and parts which are healthy and to restore it to those [parts] which are ailing, through its actions which function through this capacity or property. So if he [Ibn Sīnā] means this aforementioned capacity or property, then his statement which he mentions here is not consistent with them [the capacity and property] because the aforementioned capacity is [only] acquired by a person in two ways:

One of them is that all knowledge which the art of medicine encompasses — that is, the knowledge which is naturally seeking to attain nothing other than health, and which is divided into the science of [general] principles and the science of application, both of which were

819. Trans. Savage-Smith, *Medicine*, 922.

820. For the division of a science into theoretical and practical parts, see Ibn Sīnā, *The Healing*, 2 where Ibn Sīnā states that the art of philosophy is composed of a theoretical and a practical science.

mentioned by him [Ibn Sīnā] — is learned by him [an individual] either through inference or learning.

The other is that an individual needs to be able to act, based on what is known, on each and every particular. But this ability is [only] gained through continuous and extended practice of medicine, perseverance [in it], and getting accustomed to every single particular matter after acquiring this knowledge [of the general principles].”

In this vein Abū Naṣr al-Fārābī said that “the practical art is a capacity (*quwwah*) to act on the basis of what is known”. He [also] said that “medicine is a practical art based on sound principles, which seeks through its actions to attain health in human bodies and each of its parts, even though it [medicine] [also] aims for knowledge which is encompassed in medicine.”⁸²¹ *It is obvious that this knowledge by itself is not the art of medicine* because if it was attained by an individual but was not combined with the capacity to act [upon that knowledge] as mentioned earlier, neither of them [alone] [i.e. neither the knowledge of theory nor the ability to apply this knowledge] would be sufficient to preserve health in healthy bodies and body parts or restore it to those which are diseased, as he [Ibn Sīnā] summarised in his passage [i.e. the definition of medicine]. (CC I, 8.2)

The main point of Ibn Jumay’⁶’s rhetorical criticism is that medicine, when defined by its function or capacity (i.e. to maintain or restore health), must be a practical art and not a two-fold science for which actual medical practice is not necessary. This contrasts with Ibn Sīnā’s definition. Ibn Jumay’⁶ rejected a definition of medicine which negates that its ultimate aim can be reached only through practical means. Anyone who wishes to acquire the ability to maintain or restore health must (1) know everything comprised by the medical art, whether it concerns theoretical or practical matters, and (2) practice medicine persistently, over a long period of time. In other words, the art of medicine for Ibn Jumay’⁶ was not mere knowledge, but also the acquired skill to put this knowledge into practice. In the passage quoted above, Ibn Jumay’⁶ had referenced al-Fārābī’s definition of medicine to emphasise this practical dimension of medicine.

821. For al-Fārābī’s thoughts on practical arts, cf. Fārābī, *Iḥṣā’ al-‘ulūm*, 91-101.

After introducing his rhetorical but very elaborate criticism, Ibn Jumay' then argued against his own statements and defended Ibn Sīnā by saying:

We respond to such arguments by saying⁸²² that the *ra'īs* [Ibn Sīnā] did not, in this instance, interpret medicine in terms of its aim (*ghāyah*) to maintain health in the human body and all of its body parts through actions (as Abū Naṣr [al-Farabī] did when he said that “medicine is a practical art from its very beginnings, which, through its actions, seeks to maintain health in the human body and each of its body parts.”) Rather, [Ibn Sīnā defined medicine] in terms of its aim as a science. It lies in the nature of it [science] that it can only be obtained through the study of health in the human body and in each and every part of the body. You will find this explained and clarified in his statement: “If you know these two parts, you will have acquired theoretical knowledge and practical knowledge even if you have never practised it”.

His statement “even if you have never practised it” is sufficient evidence that it is sound what we have said about him. In this statement he followed the example of the most eminent of physicians, Galen, when he said that “medicine is the knowledge of matters related to and connected with health and disease and the state of human beings when they are neither healthy nor ill.”⁸²³ In this statement, the most eminent of physicians has interpreted medicine in the same way [as Ibn Sīnā]. So consider this interpretation and think about it. (CC I, 8.3)

Ibn Jumay' thus ruled out the possibility that Ibn Sīnā understood medicine as an essentially theoretical enterprise. Instead, he suggested that Ibn Sīnā had defined medicine merely from an epistemological point of view in terms of what can be known about medicine. However, we can be relatively certain that Ibn Sīnā would have disagreed with Ibn Jumay'’s interpretation which essentially tried to reconcile Ibn Sīnā’s definition of medicine with definitions of medicine which put more weight on its practice. In the *Irshād* or his letter to Ṣalāḥ ad-Dīn, Ibn Jumay' defined medicine a purely practical art by contrasting it to other sciences. Medicine may be much more sophisticated than other practical arts (such as gold smithery or carpentry), but it is still a practical art.⁸²⁴ It is therefore not surprising that Ibn Jumay'’s rhetorical criticism concerning Ibn Sīnā’s definition of medicine was so long, passionate and

822. For the very common phrase “if somebody says, we answer” as the introduction of a defensive argument, see Van Ess, *Theology*, 23.

823. Galen, *Three treatises*, 3. See also Pormann, and Savage-Smith, *Medicine*, 41.

824. Ibn Jumay', *Treatise*, §10. Ibn Jumay', *Irshād* (Oxford), fol. 4a-b.

detailed because he himself had defined medicine with view to its practice and had therefore a vested interest to defend his way of defining medicine.

Ibn Jumay'’s legitimation for accepting Ibn Sīnā's definition was its very close resemblance to that of Galen. However, Ibn Jumay' did not address the issue of why Ibn Sīnā placed so little importance upon the practice of medicine. Other medical writers, such as Galen (and Ibn Jumay' himself), assigned an important role to the practice of medicine, but there can be little doubt that Ibn Sīnā stressed the theoretical aspect of medicine over its practical aspect.

(c) *Fakhr ad-Dīn on medicine*

Fakhr ad-Dīn ar-Rāzī composed six investigations (*mabāḥith*)⁸²⁵ concerned with Ibn Sīnā's definition of medicine. He opened the first as follows:

“Medicine is a science (*ilm*) from which one learns the states of the human body, in terms of what is healthy and what is not, in order to preserve health when present and restore [it] when it is lacking.” Commentary: There are several investigations concerning this passage. The first investigation: Why did he say that medicine is a science through which the states of the human body are known? Why did he not say that medicine is a science summarising the states of the human body? The answer is that, in the second section of the book on proofs in the *Shifā'*, he adopted the term 'science' (*ilm*) to refer to generalities and 'knowledge' (*ma'rifah*) to refer to particularities.

If this is so, we say that what is discussed in medical books are always general matters. For instance, the types of fevers, its symptoms,⁸²⁶ causes, indications, and treatments are all general, according to what is mentioned in the medical books. The conditions of individuals are, [however], different, and for each type of temperament there is a particular treatment which benefits only him [i.e. the particular individual]. The purpose of the medical science is therefore to provide hot treatments⁸²⁷ for hot [tempered] people — although the science, with its general rules discussed in books, is the reason why the physician acquires particular knowledge (*ma'rifah*) about the states of bodies of particular individuals. Medicine is therefore

825. According to the mediaeval author of *Kitāb Naqd an-nathr*, *baḥth* (research) is the search for the *burhān* (the exact proof). See Van Ess, *Theology*, 25.

826. Lit. 'Antecedents'.

827. 'Hot treatments' have to be interpreted as treatments used against excess heat. Otherwise the current sentence does not make any sense from a humoral perspective. In order to reach equilibrium, opposing qualities need to be applied.

a general science about the matters which are common to them [i.e. the bodies or the states of the bodies] and human beings. The aim of this general science (*'ilm*) is the acquisition of general knowledge (*ma'rifah*) about the states of every individual and every single disease as it is. Understanding particular states [of human bodies] does not belong to the science of medicine but rather is separate from it. He [Ibn Sīnā] therefore said that medicine is a science through which the states of the human body are known, i.e. medicine is a general science through which is gained the understanding of particular states of particular bodies.⁸²⁸

Medicine, according to Fakhr ad-Dīn, is the *'ilm* (science) concerned with general descriptions such as those concerning the different types of fevers. However, medicine is not concerned with the *ma'rifah* (knowledge) of particulars such as the fever of a certain hot tempered person. A physician may acquire particular knowledge (*ma'rifah*) of certain diseases but this knowledge will be different from the general knowledge (*ma'rifah*) of such diseases as they are described in medical books. As such, the practice of medicine is not important for the science of medicine, for the former only concerns particularities. Theory may inform practice but not vice versa.

So far, Ibn Jumay' may have agreed with Fakhr ad-Dīn.⁸²⁹ Their views differed fundamentally, however, when it came to understanding medicine as a science (*'ilm*) as opposed to an art (*ṣinā'ah*). This becomes explicit when we compare their notions of what the aim of medicine should be. For Ibn Jumay', medicine is as an art and its aim is the maintenance or restoration of health through practical means.⁸³⁰ Medical theory (*'ilm*) and knowledge (*ma'rifah*) are important for Ibn Jumay', but only as a means to an end. Fakhr ad-Dīn, on the other hand, agrees with Ibn Sīnā in defining medicine as a science (*'ilm*). According to Fakhr ad-Dīn, the aim of this science is the attainment of general knowledge (*ma'rifah*). Medicine may be concerned with medical practice, but only in so far as medicine provides the theoretical background (or the *'ilm* of generalities which includes the *'ilm* of medical practice) which is

828. Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 6b-7a. See [3] on p. 285ff.

829. For Ibn Jumay'’s harmonising views regarding particularities see below p. 221.

830. See footnote 824 above.

needed for knowing how to practise medicine (the *maʿrifah* of how to deal with particularities).

Such discrepancies are also the reason why the motivations of both commentators to address Ibn Sīnā's definition were fundamentally different. Fakhr ad-Dīn did not attempt to harmonise his definition of medicine with that of Ibn Sīnā, as their definitions were similar. Fakhr ad-Dīn refined Ibn Sīnā's definition and clarified that, according to Ibn Sīnā's statements found in the *Shifā'*, 'ilm must be understood as the knowledge concerning generalities. Medicine is thus the knowledge summarising the conditions of the human body — it is not a comprehensive account of every single disease a particular individual may suffer from. Ibn Jumay', on the other hand, felt obliged to explain that Ibn Sīnā does not ignore the practical dimension of medicine. Compared to Fakhr ad-Dīn's comments, however, Ibn Jumay''s interpretation appears forced, despite its authoritative references to the prominent philosopher al-Fārābī (d. 339/950) which were used to buttress a more practical definition of medicine. It is indeed likely that Fakhr ad-Dīn (or even Ibn Sīnā himself) would have strongly disagreed with Ibn Jumay''s interpretation.

Fakhr ad-Dīn continued with some comments which are not directly relevant to our comparison; investigations two and three (fols. 7a-8b) are concerned with the question whether the human body leaves health or health abandons the human body. Investigation four (fols. 8b-9a) brings into discussion Abū Sahl al-Masīḥī (d. 401/1010)⁸³¹ who defined medicine as an art (*ṣinā'ah*). Fakhr ad-Dīn commented that al-Masīḥī's definition is similar to that of Ibn Sīnā because it too focuses on the preservation or restoration of health. Concerning the definition of medicine as an art, Fakhr ad-Dīn commented in passing on a

831. Abū Sahl ʿĪsā ibn Yaḥyā al-Masīḥī al-Jurjānī was a Christian physician and one of Ibn Sīnā's teachers. See Savage-Smith, *New Evidence for the Frankish Study of Arabic Medical Texts in the Crusader Period*, 99ff. and Ullmann, *Medizin*, 151.

gloss which he had apparently found in al-Masīḥī's treatise.⁸³² Like Ibn Jumay', Fakhr ad-Dīn paid close attention to the margins of the treatises he consulted.⁸³³ In this case, the comments in the margins suggested a variant which corroborated Fakhr ad-Dīn's notion of medicine as a science as opposed to an art.

In investigation five (fols. 9a-9b), Fakhr ad-Dīn criticised Ibn Sīnā for not mentioning the theories (sg. *naẓar*) concerned with *materia medica* or surgery in his definition. The comment does not add much to our discussion, but simply underlines Fakhr ad-Dīn's understanding of medicine as a theoretical discipline. In the final investigation (fol. 9b), Fakhr ad-Dīn referenced Galen's definition of medicine. As Ibn Jumay' used Galen's definition as well, it is useful to have a closer look at this passage:

The sixth investigation on how Galen defined medicine. He said that medicine is the knowledge of matters related to health and disease and the state which is neither health nor disease and, no doubt, the knowledge of food stuffs, drugs, causes and symptoms are included in this [definition].⁸³⁴ It [the definition] indicates these [things, i.e. food stuffs etc.] by implication (*taḍammuniyyah*) and also encompasses medicine for other living beings [e.g. animals].

It may be said that this definition is false in all its aspects. Firstly, it is too inclusive (*ṭard*); if everything was related to the three states considered medicine, then natural science would also be medicine because matter, movement, time and place are related in a certain way to these things. And indeed, the divine science would be medicine as well because God, the most high, praise be to Him, is related to these matters in actual fact with or without a mediator. Secondly, it is too exclusive (*aks*); the three states are not related to themselves because of the impossibility of a thing being related to its self. It would therefore follow that the science of health and disease and the middle state has nothing to do with medicine.

The answer to the first [objection] is that these matters are related to health and illness not in as much as they are health and illness, but in as much as they are created *ex nihilo* or contingent. However, we are only interested in these things in themselves, for their own sake.⁸³⁵

832. Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 9a. See [4] on p. 285ff.

833. Other copies of al-Masīḥī's works are mentioned on fol. 9a (line 4) and fol. 12a (line 8 from below).

834. Galen, *Three treatises*, 3.

835. Lit. 'We consider the things related to them *qua* being related to them.'

The answer to the second [objection] is that whatever is sought from health and illness, is formed from their definitions and their properties. Moreover, all of this [i.e. the two objections] is opposed to what I proposed [so far] and what Muḥammad Ibn Zakariyyā ar-Rāzī has outlined in his *Doubts [about Galen]* by [saying] that it [medicine] is a science of things which are necessary to preserve health and beauty, and repel disease as far as is possible for humans.⁸³⁶

Fakhr ad-Dīn introduced two objections regarding certain implications of Ibn Sīnā's definition of medicine which would lead it *ad absurdum*. He then refuted each of them and referenced Muḥammad Ibn Zakariyyā ar-Rāzī's *Doubts about Galen*, which he employed, however, in favour of Galen's definition.

The main difference between Fakhr ad-Dīn's and Ibn Jumay' s use of Galen was their agenda. Fakhr ad-Dīn discussed in a very philosophic fashion the implications of Galen's definition and defended it against possible criticisms. Fakhr ad-Dīn's language distinguished him clearly as a philosopher: he employed logical and philosophical concepts in his analysis, such as the indication by implication (*dalālah taḍammuniyyah*),⁸³⁷ the concepts of creation *ex nihilo* (*hādithah*) and contingency (*mumkinah*), and applied the methods of coextensiveness (*tarḍ*) and coexclusiveness (*'aks*)⁸³⁸ in his rhetorical criticism of Galen's definition. Ibn Jumay' on the other hand employed a reference to Galen to buttress his re-interpretation of Ibn Sīnā's definition.

Another difference between the commentators is the reference to literature critical of Galen. Ibn Jumay' did not use ar-Rāzī's *Doubts about Galen* in any part of his commentary. While it is possible that he did not have access to the treatise, it appears more likely that Ibn Jumay' did

836. Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 9b-10a. See [5] on p. 285ff. I am very grateful to A. Shihadeh who was so kind to help me with the interpretation of the following passage as well as suggest literature on technical terms.

837. *Dalālah taḍammuniyyah* is one of the three types of indications used in logic, the other two being *dalālah iltizamiyyah* (indication by nexus) and *dalālah muṭabiqiyyah* (indication by concord). See Van Ess, *Theology*, 26f.

838. For a discussion of *at-tarḍ wa-al-'aks* see Van Ess, *Theology*, 26f.

not want to engage in the tradition of criticising ancient authorities (the so-called *shukūk* tradition). While Ibn Sīnā's definition was at least subject to hypothetical critique, Galen was not to be criticised by Ibn Jumay'.⁸³⁹ While Fakhr ad-Dīn's reference to *Doubts about Galen* was not used to criticise Galen in this instance, he did employ literature which was critical of Galen.

Despite these differences, both commentators referenced Galen's definition for the same reason: its resemblance to the definition of Ibn Sīnā. If Galen had made medical practice an essential part of the definition of medicine, Fakhr ad-Dīn would have disagreed with him and Ibn Jumay' would have had difficulties in using Galen to corroborate his interpretation of Ibn Sīnā.

Fakhr ad-Dīn ended his six investigations with the following conclusion:

It is possible then to say concerning the definition of medicine that it is a summary of the sciences with regard to matters [e.g. the human body, *materia medica* or surgery] which make it possible to preserve health so that it is maintained and to bring it back if it is lost — as far as it is possible. In this manner, any of the aforementioned doubts can be resolved using this interpretation.⁸⁴⁰

While critical about certain details of Ibn Sīnā's definition, it is clear that Fakhr ad-Dīn mainly refined the definition of medicine according to his six investigations. Y. Langermann employed Fakhr ad-Dīn's summary statement, which he described as being absorbed in minutiae and having an overall critical tone, to characterise the nature of all six investigations which Langermann thought to be objections.⁸⁴¹ The present analysis suggests,

839. Even though Ibn Jumay' allowed that Galen did not know of certain things, he would never criticise him. See above p. 176ff.

840. Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, fol. 10a. See [6] on p. 285ff. This is followed by Fakhr ad-Dīn's last comment in this context. It concerns the passage following Ibn Sīnā's definition of medicine. The comment is not very relevant for our purposes as it simply paraphrases Ibn Sīnā's statements and reiterates that medicine as a science must not necessarily be related to the practice of it (Fakhr ad-Dīn ar-Rāzī, *Sharḥ*, *ibid.*).

841. Langermann, *Criticism*, 268.

however, that Fakhr ad-Dīn's investigations were mainly refinements instead of objections. Like Ibn Jumay', Fakhr ad-Dīn appears to have held Ibn Sīnā's *Canon* in high regard and would only criticise it if necessary. Moreover, while Fakhr ad-Dīn's discourse (just like that of Ibn Jumay') can be characterised as being overly concerned with minutiae or nitpicking, the details reveal how the two commentators defined medicine. As a court physician with an obvious interest in promoting the value of his medical practice, Ibn Jumay' was concerned about the role of practice when defining medicine. By contrast, Fakhr ad-Dīn demonstrated his skills as a philosopher who emphasised that medicine was a purely theoretical science and thus suited to be the object of his philosophic investigations.

(d) The role of the physician: Ibn Jumay's thoughts on Ibn Sīnā

While the comments on the definition of medicine illustrate how Ibn Jumay' defined medicine, it is still unclear how he defined the role of the physician. For instance, did he think that Ibn Sīnā was a physician?

Even though Fakhr ad-Dīn commented on the first book of the *Canon of Medicine*, he is not reported to have practised medicine. Hence no one, including himself, would have thought that he was a physician. Fakhr ad-Dīn's comments on the definition of medicine in the *Canon* demonstrate that he did not believe it to be necessary to be a physician in order to know everything there is to know about medicine as he defined it. Ideologically, there were therefore no problems for him in writing about medicine without being a physician. Moreover, Fakhr ad-Dīn wrote the commentary for a physician who was probably pleased to receive a philosophical *Canon* commentary dedicated to matters that he (as a physician) was not necessarily familiar with.

Comparing Fakhr ad-Dīn's and Ibn Jumay's comments, it is clear that Fakhr ad-Dīn's comments are more in harmony with the notion of medicine as presented by Ibn Sīnā than

Ibn Jumay's rather forced reading of the passage. This prompts the question whether Ibn Sīnā was so different from Fakhr ad-Dīn in terms of being a philosopher who wrote about medicine but never practised it. In contrast to Fakhr ad-Dīn, however, Ibn Sīnā claimed to have practised medicine, as we are told in his autobiography:

Next I desired [to learn] medicine and I read the books that have been written on this subject. Medicine is not one of the difficult sciences, and therefore I excelled in it in a very short time, to the point that distinguished physicians began to read medicine with me. I cared for the sick, and there opened up to me indescribable possibilities of therapy which can only be acquired through experience. At the same time I was also occupied with jurisprudence and would engage in legal disputations, being now sixteen years of age.⁸⁴²

That there are indescribable therapies which can only be learned through practice seems to contradict the very notion expressed in the *Canon* by Ibn Sīnā himself, namely that medicine is a two-fold science which can be learned without ever practicing it. Fakhr ad-Dīn would have had similar problems with such statements.

When Ibn Sīnā's autobiography turns into a biography, Ibn Sīnā's student Jūzjānī tells us more about Ibn Sīnā's work as a court physician and reveals some specifics about his medical practice:

He [Ibn Sīnā] carried out many experiments in his medical practice which he decided to record in the *Canon*. He had jotted them down in some quires, but they were lost before the completion of the *Canon*. For example, one day when he had a headache, he imagined that a substance was trying to descend to the membrane of his skull and he felt uneasy about a swelling which might occur there, so he ordered a large supply of ice to be brought; he crushed it and wrapped it in a cloth, with which he covered his head. He continued doing this until he overcame the area [of swelling], and prevented the spread of this substance, and so was cured. Another example is that of an emaciated woman in Khwārazm whom he ordered to take no medicine other than rose preserve made with sugar, until, in the course of time, she had taken one hundred *manns* [approximately 100 cups of sugar], and was cured.⁸⁴³

842. Gutas, *Avicenna*, 27. See also Abū 'Ubayd al-Jūzjānī, *Life of Ibn Sina*, 24-27.

843. Abū 'Ubayd al-Jūzjānī, *Life of Ibn Sina*, 74-75. Translation slightly modified by the present author.

Whether such accounts are anecdotal must be the topic of another study evaluating the question as to whether Ibn Sīnā was a practicing physician.⁸⁴⁴ In the present context, I will restrict myself to pointing out some reasons why the account given by Jūzjānī is dubious, before turning to Ibn Jumayʿs thoughts on Ibn Sīnā's status as a physician.

First of all, it is most likely that Ibn Sīnā would have agreed with both Fakhr ad-Dīn and Ibn Jumayʿ that medical books can never fully comprise an account about particularities.⁸⁴⁵ All three were generally opposed to the idea of recording particularities in their books, for none of them deemed it necessary to support their theoretical discourse with practical observations. Case studies are, however, a record of observed particularities.⁸⁴⁶ It therefore appears not to have been a mere accident, as suggested by Jūzjānī above, that the *Canon* did not include any case studies. If Ibn Sīnā had included long accounts of his private

844. Most recently, C. Álvarez-Millán has presented several convincing arguments against the notion of Ibn Sīnā as an innovative practicing physician. See Álvarez-Millán, *Case History*, 209ff. By contrast, H. Paavilainen recently published a study on mediaeval pharmacotherapy (Paavilainen, *Pharmacotherapy*) in which she assumes that the drugs Ibn Sīnā mentioned in his *Canon* were also used in his medical practice. Her reason for doing so is her theory that the *Canon* cannot be the result of mindless copying activities but rather the product of repeated observations of earlier physicians and those made by Ibn Sīnā in his medical practice. She follows J. Riddle who argued that our forefathers would not have “gone on using the same treatment and the same drugs if they had no effect whatsoever” (Paavilainen, *Pharmacotherapy*, 87). As Paavilainen shows in the case of nosebleed, for instance, Ibn Sīnā recommended drugs of which only “five percent are, in the light of present knowledge, ineffectual in the treatment of nosebleed” (Paavilainen, *Pharmacotherapy*, 217). In other words, allegedly 95% of the drugs analysed were effective. Paavilainen is very cautious about describing her methods and does so in a very detailed manner, but she does not question her assumption that the prescriptions and therapies as they are found in the *Canon* reflect medical reality. Moreover, Paavilainen's methods to evaluate the efficacy of mediaeval treatments are immensely flawed by her decision to “trust cumulative evidence” in too many uncertain cases (Paavilainen, *Pharmacotherapy*, 85ff.). Problematic are also her dismissal of the placebo effect, or her justification for ignoring differences between the medicinal properties of leaves or the roots of a certain plant. She tries to justify this with references to modern pharmacological literature which “indicates that plants frequently possess the same basic constituents in all or most of their parts, differing only in amount” (Paavilainen, *Pharmacotherapy*, 113). However, she fails to reference any modern pharmacological literature to buttress her claim and instead provides only one isolated example from a historical study on opium. In sum, many of Paavilainen's assumptions are problematic and call into question her general theory that certain passages in the *Canon* are based on observations Ibn Sīnā has made in his medical practice.

845. For Fakhr ad-Dīn ar-Rāzī, see p. 210 above. For Ibn Jumayʿ see p. 221 below.

846. For the most recent study on case histories in mediaeval Islamic medicine, see Álvarez-Millán, *Case History*.

observations, they would have appeared very much out of context in the highly theoretical discourse of the *Canon*.

Furthermore it appears questionable whether Ibn Sīnā, who presented and described the application of a range of usually very complex treatments in his *Canon*, would have considered recording the trivial observation that he was once successful in treating a pain with ice or that an emaciated person benefitted from him putting her on a fattening diet. Many compendia on medicine, including the *Canon*, discussed general descriptions of cold (or even ice-cold) liniments for headaches and usually included a section on regimen which suggested that emaciated people should be served a fattening diet.⁸⁴⁷

Finally, the vast amount of 100 cups of sugar Ibn Sīnā supposedly prescribed reminds one of anecdotes ridiculing charlatans, rather than noteworthy treatments brought to light by an eminent physician.⁸⁴⁸ It therefore appears as if Jūzjānī made a reference to Ibn Sīnā's allegedly lost case studies in order to counter possible criticisms that he was not a physician or not widely experienced. Several experienced physicians, such as ar-Rāzī (d. c. 925), wrote case studies in which they described how they treated people; case histories demonstrated medical skill.⁸⁴⁹ Perhaps at the time Jūzjānī was writing, criticisms circulated that were similar to the

847. C. Álvarez-Millán mentions that Ibn Sīnā did not mention the described procedure of applying ice to the head in his *Canon*, but that he did mention cold or warm liniments (Álvarez-Millán, *Case History*, 210). Furthermore, the treatment described in his 'case study' is nothing special as can be seen by other treatments of headaches with ice. One of them is described by Ibn Jumay'. His descriptions are not based on Ibn Sīnā's alleged innovation as the wording is rather different. See Ibn Jumay', *Irshād (Oxford)*, fol. 64b: "For headaches caused by non-material [imbalances], nothing is more useful than pouring cool rose oil on the top [of the head] after surrounding the head with something which hinders the flow of the rose oil from it quickly [such as towelling or bandaging]. The cooling should happen through the oil being held in a vessel and this vessel should be filled with very cold water or ice."

For the suggested treatments of emaciation in the *Canon*, see D III, 382.

848. See Álvarez-Millán, *Case History*, 211.

849. Álvarez-Millán, *Case History*, 206. For the possibility of Ibn Sīnā wanting to imitate ar-Rāzī's example of composing case histories, see Álvarez-Millán, *Case History*, 210. However, it appears most likely that Ibn Sīnā limited himself to copying from ar-Rāzī's works and was not very interested in his case studies, for he did not extract any of ar-Rāzī's case histories in the *Ḥāwī* for use in the *Canon*.

one Ibn Jumay‘ recorded: Ibn Sīnā was not a physician and one can therefore not trust the writings of someone who had never practised medicine.⁸⁵⁰ The (auto-)biography was perhaps addressing such rumours and its anecdotes appear to have had a convincing effect: the very learned Ibn Jumay‘ thought them to be credible enough to counter the claims of Ibn Sīnā’s adversaries. After having presented the criticism that Ibn Sīnā had never been a physician,⁸⁵¹ Ibn Jumay‘ wrote:

This contradicts what is found in his biography recorded by Abū ‘Ubayd Allāh al-Jūzjānī, his companion, [namely] that he occupied himself with reading medicine from the age of sixteen and distinguished himself with his learning from the competitors of his land at that time and he served with [his knowledge] certain kings. (CC J, 4.2)

To counter the allegations of Ibn Sīnā’s critics, Ibn Jumay‘ relied on the account of Jūzjānī. There are, however, several instances in the *Canon* commentary in which Ibn Jumay‘ appears to have changed his mind regarding this issue. Ibn Jumay‘’s comments on the practice of human dissection suggested that Ibn Sīnā was writing about a matter which he had never witnessed and was therefore not competent to write about.⁸⁵² Moreover, we have discussed instances in which Ibn Jumay‘ criticised certain statements which may imply that Ibn Sīnā was not a very skilled or experienced physician.⁸⁵³ When criticising Ibn Sīnā’s recipe for a certain drug, Ibn Jumay‘ remarked that it was “an instance of mal-composition and skilled physicians (*ḥudhdhāq al-aṭibbā’*) would never fall into [such an error] in their compositions of purgatives.”⁸⁵⁴ This contradicts the very positive depiction found in the (auto-)biography according to which Ibn Sīnā practised medicine already as a teenager. One has to wonder why Ibn Jumay‘ asserted in his preface that Ibn Sīnā was a physician while making critical remarks

850. See above p. 88. This would be a another plausible answer to the recently posed question as to where the myth of Ibn Sīnā as a successful and innovative physician came from. See Álvarez-Millán, *Case History*, 213.

851. See above p. 88.

852. See above p. 139ff., in particular p. 144.

853. See above p. 128ff.

854. See above p. 114.

in the main body of the treatise that confirm rather than contradict the very criticism he tried to refute — namely, that Ibn Sīnā was “not one of those who applied themselves to a careful examination of the art of medicine before compiling a book on it.”⁸⁵⁵

Perhaps Ibn Jumay‘ was merely contradicting the claim of Ibn Sīnā’s adversaries. When repeating the evidence from Ibn Sīnā’s biography, Ibn Jumay‘ did not augment it by saying that Ibn Sīnā was a skilled or widely practiced physician. Ibn Jumay‘ simply confirmed that Ibn Sīnā did practise medicine (to what extent is not specified) and that his erudition (not his practice) was remarkable when compared to that of his contemporaries.

This ambiguity raises the question who, in Ibn Jumay‘’s view, qualified as a physician. Could anyone who had written a book on medicine claim to be a physician, or only those of whom it had been reported that they were practicing physicians? According to Ibn Jumay‘’s interpretation of Ibn Sīnā’s definition of medicine, it appears that having a fair amount of experience in medicine is a requirement for being a physician.⁸⁵⁶ This is confirmed by what he wrote in his treatise to Saladin:

Yet, medicine is difficult⁸⁵⁷ ... because after the physician (*ṭabīb*) acquires all the knowledge mentioned above [Ibn Jumay‘ mentioned knowledge gained through human dissection, pulse and urine analysis, conditions of the body etc.], he needs to become skilful and train for a long time in the treatment of the sick. After the physician has gained sufficient knowledge and thoroughly commits it to his memory (so that he can recall it easily whenever he needs to), he must be able to apply it to individual cases ... (§42). It is impossible to act on the basis of knowledge of any art by only studying books written on that art. Books only contain general, common information. As regards specific information, i.e. characteristics of one single healthy or sick individual, books cannot contain them.⁸⁵⁸

855. See above p. 88.

856. See above p. 208. See also Ibn Jumay‘’s definitions of medicine in his treatise to Saladin (Ibn Jumay‘, *Treatise*, §4-10).

857. This is the opposite of what Ibn Sīnā claimed in his autobiography, namely that “medicine is not one of the difficult sciences” (see above p. 217).

858. Ibn Jumay‘, *Treatise*, §42 and 44. Translation modified by the present author.

While Ibn Sīnā, Fakhr ad-Dīn and Ibn Jumay‘ all appear to have agreed that books can not contain information about particular sick or healthy individuals, they disagreed on the issue whether or not skills learned through the practice of medicine belong to what they defined as ‘medicine’. Fakhr ad-Dīn and Ibn Sīnā stressed that theory is important for medical practice but not vice versa. ‘Medicine’ is pure knowledge and not defined by any practical aspect. For Ibn Jumay‘, however, theory and practice are much more closely linked and ‘medicine’ was for him the art of medicine: the knowledge and necessary skills (acquired through experience) to maintain or restore health.

It is possible that Ibn Sīnā, Fakhr ad-Dīn and Ibn Jumay‘ would not have disagreed on defining a physician as a craftsman who was concerned with the application of knowledge to particulars. Yet, they disagreed on what was required of those writing about medicine. Present evidence suggests that both Ibn Sīnā and Fakhr ad-Dīn believed that someone could be very learned in medical knowledge and able to write authoritative compendia on the subject without extensive practical experience.⁸⁵⁹ Ibn Jumay‘, however, left little doubt in his treatise to Saladin that a physician needed to be trained in the art of medicine. He expressed a similar opinion in his *Canon* commentary when he wrote that one cannot describe the districts of Baghdad without ever having visited them.⁸⁶⁰ For Ibn Jumay‘, a skilled physician was required to have seen and experienced the things he was writing about.

Given these conflicting notions, it is perhaps not surprising that Ibn Jumay‘ sometimes suggested that Ibn Sīnā was not among the experienced and skilled physicians. It must be

859. There is preserved today a manuscript of Galen’s *On [Medical] Sects for Beginners*, dated 407/1016, which appears to have on the title page Ibn Sīnā’s *ex libris* reading: “In the possession of Ḥusayn ibn ‘Abd Allāh Ibn Sīnā, the physician (*mutaṭabbib*)” (BnF MS arabe 2859, fol. 1a; see also Pormann, and Savage-Smith, *Medicine*, 42). If this signature is genuine, then Ibn Sīnā clearly viewed himself as a physician, but it is uncertain whether he intended the appellation physician to signify a scholar of medicine or a practitioner of medicine, or both.

860. See above p. 143.

stressed, however, that he made such remarks only very rarely. Medical experience was not the focus of the *Canon*, nor did Ibn Jumay‘ make medical experience the focus of his commentary. Looking at Ibn Jumay‘’s comments, one may argue that anyone sufficiently erudite could have written his commentary. Having gained medical experience is not necessary, for instance, to decide whether or not Ibn Sīnā was following Galen’s accounts. It may have benefited a commentator if he had ample experience in putting Galen’s directions into practice, but medical practice is surely not necessary to compare written accounts on a given matter.

Yet, it remains unclear whether Ibn Jumay‘ firmly believed that Ibn Sīnā was a practicing physician. For Ibn Jumay‘, the argument against Ibn Sīnā as a physician might have been an argument against the *Canon* itself, for he discussed the criticism that Ibn Sīnā was not a physician in the context of other criticisms against the *Canon*.⁸⁶¹ Despite Ibn Jumay‘’s possible doubts concerning Ibn Sīnā as an experienced physician, it would have been counterproductive to call attention to passages in the *Canon* which indicate that Ibn Sīnā was not a very experienced physician. It appears to have been incredible that the *Canon* could have had much authority if it was not written by a practicing physician, even if the very beginning of the *Canon* explained that one can know all there is to know about medicine (including its practice) without ever practicing it. For this reason, Ibn Jumay‘ may not have wanted to question Ibn Sīnā’s biography. For Ibn Jumay‘’s purposes, it was more appropriate to keep his criticisms to a moderate level, and to defend the *Canon* as one of the best medical compendia available. If this included believing in Ibn Sīnā as a practicing physician and not

861. See CC J, 4 above (p. 220). CC J, 1-5 are all comments concerned with the refutation of certain theories which were either too critical or too much in favour of Ibn Sīnā. See Ibn Zuhr’s criticism (p. 91), the theory that Ibn Sīnā never finished his rough draft (p. 90), or the theory how the Egyptian copies of the *Canon* got corrupted (p. 89).

merely an inexperienced arm-chair physician, Ibn Jumay⁶ appears to have been happy to accept this.

2. Maimonides' commentary on the Aphorisms

Ibn Jumay's most prominent contemporary was the Jewish theologian and philosopher Maimonides (d. 601/1204).⁸⁶² Maimonides was also a physician and the author of several medical treatises which proved popular among generations of later scholars.⁸⁶³ The majority of his writings (such as his *Medical Aphorisms*) consist of collections of excerpts and contain material which has been copied from other treatises and put into some kind of order under various headings.⁸⁶⁴ Maimonides also wrote a commentary which in this section we shall compare to the one by Ibn Jumay'.

Maimonides commented on Hippocrates' *Aphorisms* and there are some obvious differences between the *Aphorisms* and the treatise Ibn Jumay' commented on: Hippocrates' *Aphorisms* are much shorter, originally written in Greek and extensively commented upon by earlier authors (most notably Galen), while the *Canon* is much longer, originally written in Arabic and had only been sporadically annotated by Ibn at-Tilmīdh prior to Ibn Jumay's and Fakhr ad-Dīn's commentaries. Ibn Jumay' thus ventured into rather unknown territory while Maimonides built on a long tradition of previous commentaries. Despite these differences, it is nonetheless useful to compare the two commentaries by comparing and contrasting the working methods of their authors. Were Ibn Jumay's methods fundamentally different or were they largely comparable to those of his contemporary Maimonides?

862. See above note 56.

863. The great interest in Maimonides' medical works seems to be mainly due to his popularity as a theologian and physician. There are several editions and translations of Maimonides' medical works, but as some of them are rather unsatisfying, they are currently being edited and translated in their entirety. See Moses Maimonides, *Kitāb al-fuṣūl fī aṭ-ṭibb (Medical Aphorisms)*, xvii-xviii.

864. For an outline of the Aphorisms see Moses Maimonides, *Kitāb al-fuṣūl fī aṭ-ṭibb (Medical Aphorisms)*, xx-xxvii.

Maimonides' comment concerning the *'ubāb* on the surface of urine has already been discussed.⁸⁶⁵ This comment illustrates the general nature of Maimonides' commentary as an abbreviation of Galen's commentary on the *Aphorisms*. As Maimonides stated in his preface, he intended to paraphrase Galen's commentary with the aim of shortening and thus providing a better companion for those wanting to study the *Aphorisms*.⁸⁶⁶ In the case of *'ubāb* and his confused paraphrase, however, Maimonides was not very successful in providing a better companion to the *Aphorisms*. To be sure, not all of Maimonides' paraphrases blurred Galen's original statements, and some actually challenged Galen's and Hippocrates' statements. In most cases, however, Maimonides simply shortened Galen's original commentary and further research is likely to show that Maimonides' mutilation of Galen's statements concerning the *'ubāb* was not an isolated case. In contrast to Maimonides' technique of shortening original statements, Ibn Jumay' provided with his commentary additional information to the treatise commented upon rather than summarising the comments of earlier authors or Ibn Sīnā's statements. Each commentary was therefore written with a different purpose in mind. While Ibn Jumay' tested Ibn Sīnā's statements against the authoritative accounts which Ibn Sīnā had used as his source, Maimonides generally tried to abridge Galen's comments on the *Aphorisms*.

Regarding the genre of commentaries, Maimonides made some interesting remarks in his preface when outlining the four reasons for writing a commentary (*sharḥ*).⁸⁶⁷ The first three reasons are to (1) explain complicated passages, (2) clarify presupposed theories upon which the author builds, and (3) discuss various possible interpretations of the text commented

865. See p. 113 above.

866. It is difficult to tell Maimonides' and Galen's commentary apart unless Maimonides indicates his own remarks clearly or sets them apart from those of Galen. *Qāla al-mufassir* ('the commentator says') does not mean that we are presented with Maimonides commentary, but rather with his paraphrase of Galen. The edition of Maimonides' commentary by C. Schliwski (Schliwski, *Sharḥ Fuṣūl*) does not help in telling Maimonides' and Galen's words apart. Schliwski only provides the source when Maimonides explicitly remarks 'Galen says' etc. In the comment on *'ubāb*, for instance, no reference to Galen is given even though the passage is taken from Galen's commentary.

867. Schliwski, *Sharḥ Fuṣūl*, 165f.

upon. Reasons one and two can be compared to Ibn Jumay's motivations when he explains a passage or identifies the sources upon which Ibn Sīnā builds, while his defences of Ibn Sīnā may be grouped as alternative interpretations (third reason). The fourth reason, according to Maimonides, is to expose mistakes in the treatise commented upon. If a commentary mainly exposes mistakes, however, Maimonides argued that such a treatise ought not to be called a commentary, but rather of a refutation (*radd* or *tanbīh*).⁸⁶⁸ As already mentioned, Maimonides described his own treatise as a summary of Galen's commentary, but stressed that he would also criticise Hippocrates' *Aphorisms* where necessary.⁸⁶⁹ Following Maimonides' classification then, Ibn Jumay's treatise on the *Canon* would also be a commentary, as critical comments are only made occasionally.

As we have seen, Ibn Jumay was critical of Ibn Sīnā but, due to the latter's authority, tried to give him the benefit of the doubt. Maimonides, however, appears to have been strictly against such biased approaches. He scolded Galen for taking sides with Hippocrates and for not pointing out if an aphorism was wrong. Instead, Galen would present a correct statement, arguing that Hippocrates actually meant the same. To Maimonides such comments were unacceptable and not to be called comments at all.⁸⁷⁰ We can therefore imagine that Maimonides would have disagreed with Ibn Jumay's less critical approach.⁸⁷¹ Maimonides expressed his critical position as follows:

At times, [Galen] explains [Hippocrates'] statements by correcting what is entirely meaningless in the first place. For instance, in his commentary on *De septimanis* when Hippocrates says that land surrounds the water, Galen interprets this by saying that it is quite possible that [Hippocrates] meant that water [actually] surrounds the land. He did all of this so as not to say that Hippocrates was wrong or mistaken in this statement. Even worse were the instances

868. Schliwski, *Sharḥ Fuṣūl*, 3.

869. Schliwski, *Sharḥ Fuṣūl*, 170.

870. Schliwski, *Sharḥ Fuṣūl*, 167.

871. See above p. 108ff. for Ibn Jumay's approach. It should be noted that Maimonides also expressed criticisms of Galen in other treatises. For Maimonides disagreeing with Galen in philosophical matters, see Meyerhof, and Schacht, *Maimonides Against Galen, on Philosophy and Cosmogony*.

when Galen found a statement which was obviously wrong, but which he could not explain away: he would claim that such [statements] were [only] attributed to Hippocrates and inserted into his discourse or that it is a statement of Hippocrates such-and-such, but not the prominent Hippocrates himself - as he had done in his commentary on *De natura hominis*. All of this is taking sides (*ta'aṣṣub*) with Hippocrates and even if Hippocrates is among the greatest and most eminent physicians, taking sides is not a virtue even if this happens to be in favour of the most eminent.⁸⁷²

At first sight, it appears remarkable that Maimonides presented such critical remarks. However, if we take a look at Maimonides' commentary itself, Hippocrates or Galen are only occasionally criticised, and it seems most likely that the polemics in the introduction are more of a *topos* which was frequently used by authors who wanted to belittle the works of earlier writers so as to justify their new contribution.⁸⁷³ Ibn Jumay' did exactly the same with his belittling statements about Ibn at-Tilmīdh, thus explaining why his *Canon* commentary is necessary.⁸⁷⁴

In his preface, Maimonides also stated that he will add to his paraphrase of Galen "things that had happened to me" (*mā waqa'a lī*).⁸⁷⁵ The first comment which deviated notably from the usual paraphrases of Galen's commentary is Maimonides' comment on Hippocrates' remark that if a youth has thin stools (*kānat baṭānuhu fī shabābihi laynatan*), they will be dry when he is old, but if a youth has dry stools, they will be thin when he is old:

When I sought to to verify this, I learned that this matter is not generally true and that it is without doubt a false judgement. The truth is, as I believe, that Hippocrates saw one or two people who were like this and thus came to his superficial judgement, just as he does in other places of the *Epidemics* where he observed the state of one or two people and then drew his conclusions about a certain matter.

If you do not want [to accept] this [criticism] and if you prefer to turn an untruthful statement

872. Schliwski, *Sharḥ Fuṣūl*, 4-5 (German translation 168).

873. Freimark, *Das Vorwort als literarische Form in der arabischen Literatur*, 40. Chipman, *World of Pharmacy*, 50.

874. See above, p. 94f.

875. Schliwski, *Sharḥ Fuṣūl*, 170.

into a truthful statement by introducing premises and hypotheses, then you should consider what Galen has remarked about this aphorism.⁸⁷⁶

Such a critical attitude is remarkable in that Maimonides apparently tested written accounts against real life experience. It is also comparable to Ibn Jumay's approach when he refuted the claims of Dioscorides and Galen on the grounds of what several people had told him.⁸⁷⁷ The difference is, however, that Maimonides was much more polemical than Ibn Jumay who had still tried to defend Dioscorides and Galen by stressing that they should not be held responsible for their mistake. Moreover, Maimonides supported his refutation of Hippocrates with his own personal observations (i.e. "when I sought to verify this") while Ibn Jumay contradicted the authorities Dioscorides and Galen by explicitly referring to the accounts of his informants.

It would appear, however, that Maimonides was not extremely critical of the medical writings of others, for his polemic approaches are random and rare. This is especially so in his *Commentary on the Aphorisms* in which he is generally content with reproducing Galen's comments. Being much less specific than in the case of hard or soft stools, in six other passages Maimonides criticised Hippocrates for deriving certain general statements from particular circumstances.⁸⁷⁸ In four instances he criticised Galen's attempts to explain away blatantly wrong assumptions,⁸⁷⁹ while chiding him once for forgetting to explain the pivotal point of an aphorism.⁸⁸⁰ Elsewhere Maimonides questioned if Galen's intuition or flawed logic had led him to conclude that male foetuses develop in the right ovaries while female foetuses

876. Schliwski, *Sharḥ Fuṣūl*, 38 (German translation 195).

877. See above, p. 174.

878. Schliwski, *Sharḥ Fuṣūl*, 210, 250, 252, 259, 264, 266.

879. Schliwski, *Sharḥ Fuṣūl*, 265, 278-279 (Galen tried to argue that this aphorism was erroneously attributed to Hippocrates), 279, 281.

880. Another interesting passage is Maimonides' remark that Galen forgot to explain the pivotal points of an aphorism (Schliwski, *Sharḥ Fuṣūl*, 204). Maimonides then explains what he thinks is one of the most important principles in medicine, i.e. that you should not stop with one treatment even if it does not show an immediate effect.

develop in the left ovaries.⁸⁸¹ None of these instances, however, suggest that Maimonides questioned written accounts by referring to real life experience.

With his occasional criticisms Maimonides might nonetheless strike us as less biased and more critical of authorities than Ibn Jumay'. Ibn Jumay' pointed out in the *Canon* commentary, that only the stubborn (*al-'inād*) will pick the obscure passages and argue about them, while the educated will look for other interpretations.⁸⁸² Therefore, he might have rated Maimonides' occasional attempts to criticise Hippocrates as stubborn, while probably coming to the conclusion that Maimonides should not have criticised eminent masters if he was not even able to reproduce their teachings faithfully. Passages such as Maimonides' mutilated paraphrase of Galen's comments on 'ubab could have met Ibn Jumay's severe criticisms, as he wrote at length against authors who tried to abbreviate the works of Galen and Hippocrates in order to save time. According to Ibn Jumay', treatises such as Maimonides' commentary were the cause of the decline of medicine as they caused physicians to become lazy and misinformed.⁸⁸³ We may therefore conclude that, if Ibn Jumay' and Maimonides ever read each other's treatises (many of which were probably written after Ibn Jumay's death), they would have disagreed on several issues.

To conclude, Ibn Jumay's and Maimonides' methods to comment differed in many ways and methods such as comparing textual variants, parsing technical or foreign terms, or the critical comparison of original statements and how they have been expressed by later authors, are almost completely absent from Maimonides' commentary or other medical works. However, the two commentators were not radically different in the way they wrote their commentaries. While they had different attitudes toward criticising Galen, Galen was undoubtedly the most

881. Schliwski, *Sharḥ Fuṣūl*, 249.

882. See above, p. 110.

883. Cf. Ibn Jumay', *Treatise*, 20-21 and Nicolae, *Compendium*.

important medical authority for both commentators.⁸⁸⁴ Moreover, both Maimonides and Ibn Jumay' were critical of the treatises they read and did not merely reproduce what their predecessors had written, but tested it against their own opinions which may have been based on other treatises, experiences, or simply their logic.

884. In other treatise, Maimonides cites an impressive range of Galenic sources. He cited well over 50 Galenic treatises in his *Medical Aphorisms* (Moses Maimonides, *Kitāb al-fuṣūl fī aṭ-ṭibb (Medical Aphorisms)*, 131-139) as compared to 25 treatises cited by Ibn Jumay' in his *Canon* commentary (See above p. 77).

3. Original contributions? ‘Originality’ put into context

In his article on Ibn at-Tilmīdh’s glosses on the *Canon*, A. Iskandar expressed the hope that the further examination of these glosses might reveal certain innovations which have gone unnoticed by modern scholars. Iskandar was particularly interested in Ibn at-Tilmīdh’s possible thoughts on the human heart and pondered if he had preceded Ibn Nafīs by centuries in criticising the notion of a passage way between the right and left ventricles of the heart:

In his marginal commentaries, Ibn at-Tilmīdh provides very interesting and sound linguistic comments, though at times his remarks are trivial. Far as they all are from making any original contribution to medicine, yet it is in commentaries that authors sometimes express opinions different from those of their predecessors. It would be worthwhile, therefore, to look for the other manuscripts of Ibn at-Tilmīdh’s own copy of *Kitāb al-Qānūn* and to publish his marginal commentaries, if any, on the pores which Galen had claimed existed in the interventricular septum, as well as his views on the flow of blood, all of which were readily accepted by Ibn Sīnā.⁸⁸⁵

The present analysis of Ibn Jumay’s work was partly motivated by hopes similar to those of Iskandar. Ibn Jumay’s commentary appeared to have been a likely place where so-far undiscovered innovations were to be found. As regards the anatomy of the heart, however, we have seen that Ibn Jumay made only one relatively trivial linguistic comment.⁸⁸⁶ As he continuously referenced Ibn at-Tilmīdh’s glosses, we can be relatively certain that Ibn Jumay would not pass over in silence substantial comments which introduced new and controversial notions. We can therefore conclude that Ibn at-Tilmīdh did not criticise the then commonly accepted anatomical description of the human heart.

The quest for mediaeval innovations which have gone unnoticed so far is, however, problematic because it can easily be interpreted as contributing to a ‘Whiggish’⁸⁸⁷

885. Iskandar, *Autograph*, p. 235-236.

886. See above p. 118.

887. This refers to the ideology of the Whig Party which permeates Lord Macaulay’s famous *History of England* in which we are presented with a tale of gradual progress toward England’s glorious present.

interpretation of history: With their original contributions, Ibn an-Nafīs, al-Baghdādī or even Ibn Jumay‘ may be depicted as actors in a tale of gradual progress leading away from ignorance (e.g. the belief that there are invisible passages between the ventricles of the heart) toward our glorious present (in which we can be certain that there are no passages in a healthy heart of a human adult). In Ibn an-Nafīs’ case, however, it is not clear if he influenced later European anatomists with his ‘discovery’.⁸⁸⁸ Similarly, it is not clear what impact Ibn Jumay‘’s *Treatise on the lemon* had on the formation of modern medicine. Though not concerned with criticising Greek notions of human anatomy, the treatise was the first of its kind to give a comprehensive account of the medicinal applications of lemons. As Ibn Jumay‘ pointed out, ancient physicians were not aware of these properties and if it had not been for Ibn Jumay‘’s treatise which became popular enough to be translated and printed, mediaeval Europe would probably have remained ignorant about the medicinal use of the lemon as well. Nonetheless, it is far from clear how European physicians were influenced by the *Treatise on the lemon*. While it appears very likely that neither Ibn an-Nafīs’ nor Ibn Jumay‘’s discoveries had any direct and traceable effect on the formation of modern medicine, further investigations concerning the impact of mediaeval physicians on modern medicine must be the topic of other studies. Here we are only interested in contextualising the contributions of Ibn Jumay‘ in the light of a few other contributions made by notable mediaeval physicians.

With his study on Ibn an-Nafīs, N. Fancy has demonstrated that one of the largest ‘discoveries’ in the history of mediaeval medicine is almost meaningless if it is not put into its proper context. Once contextualised, the discovery that there is no passage way between the two ventricles of the heart ceases to be a miraculous “happy guess”⁸⁸⁹ or a demonstration how enlightened the mediaeval Islamic world was in regard to human dissections. Instead, the

888. Savage-Smith, *Europe and Islam*, 47.

889. Meyerhof, *Ibn an-Nafīs*, 118.

discovery becomes a rational conclusion at which Ibn an-Nafīs arrived through forming a new theory based on his philosophical theories and religious beliefs.⁸⁹⁰

Another problem with the quest for discoveries is that it rates discoveries according to their importance in the tale of medical progress which led out of the dark ages and into the era of modern medicine. However irrelevant Ibn an-Nafīs' discovery may have been to later anatomists, the discovery is still a very important landmark in the progression of human knowledge which arrives at a more 'accurate' understanding of the human body throughout the ages. The modern values inherent when stressing the importance of Ibn Nafīs' discovery become apparent if we compare his discovery to one of Ibn Jumay's discoveries. As we have seen, Ibn Jumay' discovered that Dioscorides and Galen were wrong about their description of a certain sort of pepper, or about ignoring the importance of the medicinal uses of lemons. Neither of these two discoveries appears to be as important as Ibn Nafīs' or al-Baghdādī's corrections concerning human anatomy, because neither of these discoveries is of much relevance for the history of medical progression. Ibn Nafīs' discovery is in harmony with our modern anatomical understanding of the heart; Ibn Jumay's discoveries are far more subjective and may even be wrong according to biomedical standards. If we consider, for instance, his claims of what diseases lemons may or may not cure, it is obvious that Ibn Jumay's discoveries are less sensational than 'correct' anatomical discoveries.

Yet, Ibn Jumay's discoveries are important if we consider them in their own right and context. As such they are as relevant as the discoveries of Ibn an-Nafīs or al-Baghdādī – that is, if we consider it to be relevant that their 'discoveries' required the ability to challenge previous knowledge and to introduce new concepts.⁸⁹¹ It is also telling that neither Ibn an-

890. Fancy, *Pulmonary Transit*, 4-6 and 254-258.

891. Comparing Ibn Nafīs' discovery to those of Ibn Jumay' may strike us as a rather uneven comparison, especially if we compare the importance of their discoveries for the treatise in which they occur. Ibn Nafīs' new theory about the pulmonary transit had a central position in his thinking and was

Nafīs, or al-Baghdādī nor Ibn Jumay‘ appears to have repeated the ‘discoveries’ of the others. Even though Ibn Jumay‘ was outspokenly in favour of human dissection, he did not discover that Galen was wrong about the passage ways between the ventricles of the heart nor is he known to have made any other ‘contribution’ to anatomical knowledge. As we have seen, Ibn Jumay‘ had no interest in systematically checking his anatomical knowledge against his sensory observations. Moreover, Ibn an-Nafīs did not criticise Ibn Sīnā for describing the lower jaw bone as two-part, like al-Baghdādī did. Ibn an-Nafīs also appears to have had no interest in systematic anatomical investigations, and his discovery was less anatomical than logical, even though he may have tried to corroborate his new theory with the actual dissection of a human heart.

In sum, not the mediaeval discovery of a certain modern fact is important from a historical perspective, but rather the context of such a discovery. If we were to look for innovations and discoveries as isolated instances in the history of medicine, we would ultimately search for further material to illustrate the history of medical progress (a ‘Whiggish’ approach). If we were to follow such an approach to history, we would be obliged, however, to justify why we do not include, judged from a modern perspective, less spectacular discoveries such as those by Ibn Jumay‘ concerning black pepper.

interrelated with many other concepts (Fancy, *Pulmonary Transit*, 254-258). Thus, if we were to consider the importance of a discovery to the treatise in which it was made, Ibn Nafīs’ discovery would be more fundamental than, for instance, Ibn Jumay‘’s discovery concerning a certain kind of pepper.

V. Conclusion

The *Canon of Medicine* by Ibn Sīnā is undoubtedly the most thorough and monumental systematisation of ancient and mediaeval medicine. As such the *Canon* is one of the greatest achievements of mediaeval Islamic medicine and it was nothing less than this summary and culmination of more than one thousand years of medical knowledge that Ibn Jumayʿ made the subject of his commentary. As its first medical commentator, he set out to clarify and correct the *summa* of medicine.

As outlined in his treatise to Saladin, Ibn Jumayʿ thought that the art of medicine had markedly declined because of the spread of compendia that corrupted the teachings of the ancients. While the *Canon* is not explicitly mentioned, it can be inferred that it had to be counted among the abominable compendia that claimed to encompass everything there is to know about medicine and that tempted the student to become lazy and to ignore the original writings on which compendia were based. In his preface to the *Canon* commentary, however, Ibn Jumayʿ hailed the *Canon* as one of the best compendia available. Why did he not condemn the *Canon* as a compendium which had contributed to the decline of medicine? It seems that Ibn Jumayʿ realised that it would have been futile to abandon all compendia because his contemporaries were unlikely to have returned to the more cumbersome and convoluted treatises of Galen or other authorities. Compendia addressed the need for systematisation and what the *Canon* offered to fulfil this need could simply not be ignored. Being aware of Ibn Sīnā's achievement, Ibn Jumayʿ did therefore not condemn the *Canon*, but proclaimed the *Canon* as one of the best compendia available which systematised medical knowledge succinctly and made it easy for the physician to remember what he once knew. However, Ibn

Jumay' did point out the *Canon's* shortcomings and left no doubt that he intended to clarify and correct the medical compendium by explaining its shortcomings and correcting it according to the teachings of the ancients.

Ibn Jumay's commentary was therefore more than just a clarification and correction of the *Canon*. It was a reaction to the corruptions compendia had introduced. In his *Treatise to Saladin on the Revival of the Art of Medicine*, Ibn Jumay' compared his situation to that of Hippocrates and Galen who were faced with the decline of medicine and the corruption of medical teachings. According to Ibn Jumay', Hippocrates and Galen solved the problem by going back to the sources and thus reviving the art of medicine in their days. Ibn Jumay' tried to do the same in twelfth-century Egypt and many of his comments on the *Canon* reveal to us how the court physician set about reviving the art of medicine.

With his writings, Ibn Jumay' thus tried to establish himself as a scholar among the likes of Hippocrates and Galen. As for his *Canon* commentary, Ibn Jumay' did not only try to attach his name to the great systematiser Ibn Sīnā, but also to supersede the authority of the *ra'īs* in the field of medicine. As Nietzsche might have put it, Ibn Jumay' tried to "gain power"⁸⁹² as an important scholar who was not only able to understand and explain the best medical compendium available, but also to correct it. The foregoing chapters have been an in-depth study of this attempt to gain power and to revive the art of medicine.

Ibn Jumay's biography as recorded by Ibn Abī Uṣaybi'ah introduced to us the man behind the commentary, but revealed little about the court physician's endeavour to comment on the *Canon*. That Ibn Jumay' was among the first to have written a very educated response to the *Canon* was comparatively irrelevant to his biographer, who had been a student of Ibn Jumay's

892. See above p. 23.

student. Ibn Abī Uṣaybi‘ah had probably only heard of, but never read, the *Canon* commentary which he simply listed as one of the treatises written by the physician. In his biography, Ibn Jumay‘ is depicted not only as an erudite scholar but also as an astute observer as illustrated by the anecdote that he saved a man from being buried alive. It was perhaps only natural, expected and not spectacular that a man such as Ibn Jumay‘ turned his attention to commenting on a hotly debated treatise. In particular, Ibn Jumay‘’s skill-set was well suited for his endeavour to comment on the *Canon*: The *Canon* was full of technical and foreign terms and Ibn Jumay‘, who probably had Jawharī’s dictionary within reach at all times, must have felt an urge to explain the meaning of difficult terms. Ultimately however, Ibn Abī Uṣaybi‘ah’s account only provides us with a few details about the commentator Ibn Jumay‘. We need to turn to the commentary itself to get a more detailed picture of the commentator at work.

Ibn Jumay‘ opened his commentary on the *Canon* with repeating the criticisms his ‘master’ had heard about the *Canon*.⁸⁹³ It is unlikely that Ibn Jumay‘ invented his addressee to expound on these criticisms and we can therefore assume that one of Ibn Jumay‘’s most fundamental reasons for having written his commentary was to provide a balanced response to the criticisms mentioned by his master and perhaps to safeguard him against reaching biased and uninformed conclusions in the *Canon* debate. However, if this had been Ibn Jumay‘’s only motivation, it would not explain why the commentary is so long and detailed. Surely, a few examples and explanations (in the style of a letter) would have sufficed. Perhaps Ibn Jumay‘ would have simply written such a letter if he had not already started to annotate his copy of the *Canon* with several marginal glosses. Word of these glosses must have spread, as Ibn Jumay‘ indicated, and consequently the court physician’s addressee appears to have desired a copy of these glosses for himself.

893. CC P, I-III.

It is evident that Ibn Jumay' thought that his copy of the *Canon* was corrupt and was therefore very eager to correct it with the help of other copies. Apparently well before the request of his patron arrived, Ibn Jumay' made enquiries about the autograph of the *Canon*. Once Ibn Jumay' had access to other copies of the *Canon* (including copies of Ibn at-Tilmīdh's annotated copy), it became apparent that Ibn Jumay' could no longer hope for a sound copy against which he could correct his own. The court physician made it clear that the glosses of Ibn at-Tilmīdh were of such low quality that they would be of little help to correct or explain passages in the *Canon*. Thus, after having put himself above his predecessor Ibn at-Tilmīdh, Ibn Jumay' presented his own *hawāshī* and corrected the *Canon's* shortcomings by comparing different *Canon* copies and by checking the original sources which Ibn Sīnā had used while composing his compendium. Ibn Jumay' thus wrote a commentary intended to clarify and correct the *Canon*. The *Canon* and Ibn Jumay's supplement (in the form of a commentary) brought Ibn Sīnā's systematisation of medicine to a new level of perfection. It is here where we can clearly see Ibn Jumay's tendency to defend the authority of Ibn Sīnā while at the same time undermining it. The *Canon* is not to be discarded (as Ibn Zuhr did) but it needed to be perfected. With his commentary, Ibn Jumay' understood himself to be as knowledgeable in medical matters as the *ra'īs* Ibn Sīnā himself. It is thus that Ibn Jumay' was able to decide which variant was more correct (and originally intended by Ibn Sīnā) and to identify the *Canon's* unnamed sources and reconstruct the original teachings in places where Ibn Sīnā supposedly deviated from them. Just as Galen removed the corruptions which had been introduced to Hippocrates' teachings over the centuries, so did Ibn Jumay' reconstruct Ibn Sīnā's original statements and bring them in accordance with the teachings of the ancients.

Ibn Jumay' dedicated a lot of his time to commenting on variant readings found in his copies of the *Canon*. Besides demonstrating Ibn Jumay's ability to restore the original readings of a passage, discussing variants served another purpose as well. There were instances in which all

variants demonstrated that Ibn Sīnā was responsible for a mistake, thus proving wrong the notion that the *raʿīs* was infallible. Just as the *Qurʾān* was deemed perfect by many, some believed in a perfect *Canon* which (unlike the *Qurʾān*) got corrupted through being copied. It was exactly this somewhat divine authority of the *Canon* which Ibn Jumayʿ proved invalid through his discussions of variants. The *Canon* was not perfect. Yet, Ibn Jumayʿ was generally in favour of Ibn Sīnā and there are numerous instances in which he preferred to blame copyists instead of the *raʿīs* himself. It was therefore in a subtle and decidedly polite manner that Ibn Jumayʿ was promoting his own superiority by demonstrating his ability to clarify, correct and reconstruct the words of the fallible *raʿīs* who sometimes corrupted his sources.

Explanations of foreign or technical terms were yet another important part of Ibn Jumayʿs work. As he wrote in the preface of his commentary, one weakness of the *Canon* was its language. It is therefore not surprising to see the linguistically inclined court physician commenting extensively on the language of the *Canon* and demonstrating his ability to demystify many difficult terms. Jawharī is cited to give Ibn Jumayʿs comments more authority as readers may have had their problems accepting a philological explanation provided by a court physician with no linguistic credentials. The same holds true for the explanations of Persian terms; native speakers were the source for Ibn Jumayʿs comments on Persian terms. In a way, Ibn Jumayʿs tendency was to simplify and arabise the *Canon* and to make it more comprehensive for the non-medical and non-Persian readership. Technical or Persian terms were thus either demystified for those intimidated by them, or explained to those who may have thought that Ibn Sīnā used the wrong terms. Yet again Ibn Jumayʿ was able to demonstrate his intimate and well-informed understanding of the terms Ibn Sīnā had used in the *Canon*.

The three case studies presented in chapter three have demonstrated clearly what Ibn Jumayʿ was and was not interested in when writing the commentary. Even though it could have been

expected from one the most prominent mediaeval advocates of human dissection that he discussed some of his anatomical findings when commenting on Ibn Sīnā's anatomical discourse, Ibn Jumay' was not interested in doing so. We did not see the anatomist Ibn Jumay' at work. Rather, we saw a commentator propagating the ideal of human dissection and criticising those who wrote about anatomy without first-hand experience. We saw a commentator at work who used both his intellect and Galen to throw more light on Ibn Sīnā's anatomical discourse. There was no evidence provided in the commentary that the court physician was an experienced dissector (or that the opposite must have been true). Just like his contemporary Fakhr ad-Dīn ar-Rāzī, Ibn Jumay' saw no virtue in this context in writing about particularities such as the structure of a certain bone he may have had observed. Rather, he was interested in clarifying and reviving the general principles of human anatomy as laid out by the eminent Galen. With his comments on human dissection Ibn Jumay' wanted to repeat Galen's claims and display his own competence in the theoretical anatomical discourse, suggesting that Ibn Sīnā's anatomical discussions were inferior to both his own and those of Galen.

The second case study demonstrated that Ibn Jumay' was not interested in criticising Galen or other ancient authorities. While he was capable of politely (and at times vehemently) criticising Ibn Sīnā, it is clear that Ibn Jumay' had a different attitude towards more ancient authorities. Ranking the importance of his sources, we have seen that Ibn Jumay' gave least authority to Ibn Sīnā. It may be implied that Ibn Jumay' saw himself to be the legitimate successor of Hippocrates, Dioscorides and Galen, for he was not only very well versed in their writings but also tried to bring their teachings to greater perfection. As is apparent in his critique of compendia, as well as the examples discussed in the case study, Ibn Jumay' looked down on Ibn Sīnā's or ar-Rāzī's corruptions of the ancient authorities. Ibn Jumay' thus followed Galen, who left little doubt that he considered himself to be the best and most

trustworthy commentator of Hippocrates. Likewise, Ibn Jumay' understood himself not only as interpreting the ancient authorities correctly, but also as being able to correct the teachings of the moderns accordingly.

The third case study addressed the question of Ibn Jumay's intended readership. As exemplified by the comments on headaches, the commentary was not a very entertaining read, nor a summary of Ibn Jumay's ideas concerning the *Canon*, nor a platform where he solely discussed his ideas, innovations or theories related to the *Canon*. Furthermore, Ibn Jumay's comments were usually not of much practical use and it is therefore unlikely the commentary was addressed to novices or practicing physicians. Instead, Ibn Jumay' is likely to have addressed a patron and like-minded scholars in front of whom he could showcase his competence to interpret and correct the *Canon*. Writing for a patron brought financial and social benefits, especially if one was able to interpret and correct an authority like Ibn Sīnā and thus demonstrate his power over other physicians who were probably less conversant in the *Canon* or the works of Galen. Rulers such as Saladin (who could theoretically be the anonymous addressee of the *Canon* commentary) or other high-ranking court officials were looking for only the best physicians to whom they could entrust their lives and the lives of those at the court. In this context, Ibn Jumay's comments such as those on headaches can be viewed not as a conglomeration of discussions concerned with minutiae but rather as the attempt to certify that Ibn Jumay' was the best physician available. Moreover, with comments such as those on the definition of medicine or human dissection, Ibn Jumay' depicted himself not only as an erudite scholar, but also as an experienced physician who could be trusted when it came to practicing the art of medicine and saving the lives of those who lived at the court.

It remains to be asked if, by writing his commentary, Ibn Jumay' succeeded in reviving the art of medicine and establishing himself as a respected scholar among the likes of Ibn Sīnā, Galen

and Hippocrates. The present thesis has shown that, whether through his interpretation of Ibn Sīnā's definition of medicine, his stance on human dissection, or the innumerable text critical comments, Ibn Jumay' has clarified and corrected the *Canon* in several instances. Ibn Jumay' was particularly concerned with Galen's teachings and the court physician would go into great detail if he felt that Ibn Sīnā had not properly represented the views of Galen. Yet Ibn Jumay' was not only concerned about restoring Galen's writings, but also those of other authorities including Ibn Sīnā himself. Ibn Jumay' wrote more than one thousand comments in order to refine the medical compendium of the *ra'īs*. We can therefore say that Ibn Jumay' brought the all-encompassing compendium to a new level of perfection and thus succeeded in reviving those medical teachings which he felt were inadequately represented in the *Canon*.

As for Ibn Jumay's importance as a scholar, we compared his contributions to those of some other relevant physicians. Whilst Ibn Jumay's methods and achievements are comparable to those of historical celebrities such as Ibn an-Nāfīs or Maimonides, it is unlikely that they will ever be as well-known as the theory that there are no passages between the ventricles of the heart or the medical excerpt collections of a famous theologian. Moreover, it is clear that scholars have forgotten the achievements of Ibn Jumay' over the centuries. It is hoped, however, that this thesis will go some way towards bringing back to memory a long forgotten court physician who worked assiduously to be remembered in history. While he will not be mentioned among luminaries such as Galen or Hippocrates, Ibn Jumay' was nonetheless successful in attaching his name to one of the greatest stars of medical history, the *ra'īs* Ibn Sīnā. Having written a well-researched, balanced and critical *Canon* commentary, Ibn Jumay' needs to be given a permanent place in the history of medicine as the author of the first medical commentary on Ibn Sīnā's seminal *Canon of Medicine*.

VI. Appendix

1. Key to the references to the Canon Commentary (CC)

P = Princeton, NJ, Princeton University, Garret Collection, MS 556H⁸⁹⁴

B = Oxford, Bodleian Library, MS Marsh 390

The commentary is divided into individual comments which usually start with a quote from the *Canon* (marked with *qāla ar-ra'īs*) and Ibn Jumay's subsequent comments. The following division (which has been used throughout the thesis) follows this general division with a few exceptions. If two or more comments refer to the same sentence or are very closely linked in other ways, they may be grouped together as one comment. This happens most frequently in the division of Ibn Jumay's comments on Book Two of the *Canon*. For instance, CC II, 161 refers to Ibn Jumay's comments on Ibn Sīnā's entry on fish (*samaka*). Ibn Jumay' cites eleven different sentences from Ibn Sīnā's entry and comments on each. These eleven short comments will, however, be presented as one comment in the following division as they are closely related to each other.

Certain comments may not refer to a particular passage in the *Canon* and are not introduced by a quote (see Ibn Jumay's remarks on human dissection, CC I, 63). Moreover, the preface (CC P) and first *Jumlah* (CC J) are general comments on the *Canon* and do not refer to particular passages in the *Canon*. In such instances, the division adopted will follow units of meaning or divisions as suggested by manuscript P through red overlinings.

894. The complete manuscript is available online at <http://arks.princeton.edu/ark:/88435/pz50gw161> (accessed 11 April 2012).

The following key provides references to the primary source text. Throughout the thesis, “CC” is used to refer to Ibn Jumay’s *Canon* commentary. For instance, “CC J, 1” refers to the first entry in section CC J (First *Jumlah* of the Commentary), namely “P 2a B 2a-b”. The numbers following P and B refer to the foliation in the Princeton and Bodleian manuscripts respectively. “P 2a B 2a-b” thus refers to folio 2a (recto) in the Princeton manuscript and folios 2a (recto) - 2b (verso) in the Bodleian manuscript.

CC P (The Preface of the Commentary)

1	P 1b	B 1a	5	P 1b	B 1b
2	P 1b	B 1a	6	P 1b-2a	B 1b
3	P 1b	B 1a	7	P 2a	B 1b-2a
4	P 1b	B 1a-1b	8	P 2a	B 2a

CC J (First *Jumlah* of the Commentary)

1	P 2a	B 2a-2b	8	P 3a-3b	B 4a-4b
2	P 2a-2b	B 2b	9	P 3b	B 4b
3	P 2b	B 2b-3a	10	P 3b	B 4b-5a
4	P 2b	B 3a	11	P 3b-4a	B 5a-5b
5	P 2b-3a	B 3a-3b	12	P 4a	B 5b
6	P 3a	B 3b-4a	13	P 4a	B 5b-6a
7	P 3a	B 4a			

(The second *Jumlah* of the Commentary comprises CC I-V:)

CC I (Comments on the First Book of the *Canon*)

1	P 4a-4b	B 6a-7a	16	P 7a	B 10b-11a
2	P 4b	B 7a	17	P 7a	B 11a
3	P 4b-5a	B 7a	18	P 7a	B 11a-b
4	P 5a	B 7a-b	19	P 7a-7b	B 11b
5	P 5a	B 7b	20	P 7b	B 11b-12a
6	P 5a	B 7b-8a	21	P 7b	B 12a
7	P 5a-5b	B 8a	22	P 7b-8a	B 12a-12b
8	P 5b-6a	B 8a-9b	23	P 8a	B 12b
9	P 6a-6b	B 9b-10a	24	P 8a	B 13a
10	P 6b	B 10a	25	P 8a	B 13a-13b
11	P 6b	B 10a	26	P 8a-8b	B 13b
12	P 6b	B 10a	27	P 8b	B 13b
13	P 6b	B 10a-10b	28	P 8b	B 13b
14	P 6b	B 10b	29	P 8b	B 13b-14a
15	P 6b	B 10b	30	P 8b	B 14a-14b

31	P 9a	B 14b	88	P 18a-18b	B 30a
32	P 9a-b	B 14b-16a	89	P 18b	B 30a-30b
33	P 9b-10a	B 16a-16b	90	P 18b	B 30b
34	P 10a	B 16b-17a	91	P 18b	B 30b
35	P 10a	B 17a	92	P 18b-19a	B 30b-31a
36	P 10a-10b	B 17a	93	P 19a	B 31a
37	P 10b	B 17a	94	P 19a	B 31a
38	P 10b	B 17a-17b	95	P 19a	B 31a-31b
39	P 10b	B 17b	96	P 19a	B 31b
40	P 10b	B 17b	97	P 19a	B 31b
41	P 10b-11a	B 17b-18a	98	P 19a	B 31b-19a
42	P 11a	B 18a	99	P 19a-19b	B 31b
43	P 11a	B 18a-18b	100	P 19b	B 31b-32a
44	P 11a-11b	B 18b-19b	101	P 19b	B 32a
45	P 11b	B 19b	102	P 19b-20a	B 32a-32b
46	P 11b	B 19b	103	P 20a	B 32b
47	P 11b-12a	B 19b-20a	104	P 20a-21a	B 32b-35a
48	P 12a	B 20a-b	105	P 21a-21b	B 35a-36a
49	P 12a	B 20b	106	P 21b-22a	B 36a-36b
50	P 12a-12b	B 20b	107	P 22a	B 36b
51	P 12b	B 20b	108	P 22a	B 36b
52	P 12b	B 20b-21a	109	P 22b	B 37a
53	P 12b	B 21a	110	P 22b	B 37a
54	P 12b	B 21a	111	P 22b	B 37a
55	P 12b-13a	B 21a-22a	112	P 22b	B 37a-37b
56	P 13a	B 22a	113	P 22b-23a	B 37b-38a
57	P 13a-13b	B 22a-22b	114	P 23a	B 38a
58	P 13b	B 22b	115	P 23a-23b	B 38a-39a
59	P 13b	B 22b	116	P 23b	B 39a
60	P 13b	B 22b-23a	117	P 23b	B 39a
61	P 13b	B 23a	118	P 23b	B 39a
62	P 13b-14a	B 23a-24a	119	P 23b-24a	B 39a-39b
63	P 14a-14b	B 23a-24a	120	P 24a	B 39b
64	P 14b	B 24a	121	P 24a	B 39b
65	P 14b	B 24a-24b	122	P 24a	B 39b-40a
66	P 14b	B 24b	123	P 24a-24b	B 40a
67	P 14b	B 24b	124	P 24b	B 40a-40b
68	P 14b-15a	B 24b-25a	125	P 24b	B 40b
69	P 15a-15b	B 25a-26a	126	P 24b	B 40b
70	P 15b	B 26a	127	P 24b-25a	B 40b-41a
71	P 15b	B 26a-26b	128	P 25a	B 41a
72	P 15b-16a	B 26b	129	P 25a	B 41a-41b
73	P 16a	B 26b-27a	130	P 25a	B 41b
74	P 16a	B 27a	131	P 25a-25b	B 41b-42a
75	P 16b	B 27a-27b	132	P 25b	B 42a
76	P 16b	B 27b	133	P 25b	B 42a
77	P 16b-17a	B 27b	134	P 25b	B 42a
78	P 17a	B 28a	135	P 25b	B 42a
79	P 17a	B 28a-28b	136	P 25b	B 42b
80	P 17a-17b	B 28b	137	P 25b	B 42b
81	P 17b	B 28b-29a	138	P 25b	B 42b
82	P 17b	B 29a	139	P 25b	B 42b
83	P 17b-18a	B 29a-29b	140	P 25b-26a	B 42b-43a
84	P 18a	P 29b	141	P 26a	B 43a
85	P 18a	B 29b	142	P 26a	B 43a
86	P 18a	B 29b-30a	143	P 26a	B 43a
87	P 18a	B 30a	144	P 26a	B 43a-43b

145	P 26a-26b	B 43b	202	P 35a	B 57b
146	P 26b	B 43b	203	P 35a-35b	B 58a
147	P 26b	B 43b	204	P 35b	B 58a-58b
148	P 26b	B 43b-44a	205	P 35b-36a	B 58b-59a
149	P 26b	B 44a	206	P 36a	B 59a
150	P 26b	B 44a	207	P 36a-36b	B 59b
151	P 26b	B 44a	208	P 36b	B 60a-60b
152	P 27a	B 44a-44b	209	P 36b	B 60b
153	P 27a	B 44b	210	P 36b	B 60b
154	P 27a	B 44b	211	P 36b	B 60b
155	P 27a	B 44b	212	P 36b	B 60b
156	P 27a	B 44b	213	P 37a	B 60b-61a
157	P 27a-27b	B 45a	214	P 37a	B 61a
158	P 27b	B 45a	215	P 37a	B 61a
159	P 27b	B 45a-45b	216	P 37a	B 61a
160	P 27b-28a	B 45b-46a	217	P 37a	B 61a-61b
161	P 28a	B 46a	218	P 37a	B 61b
162	P 28a	B 46a	219	P 37a-37b	B 61b
163	P 28a	B 46a-b	220	P 37b	B 61b
164	P 28a-28b	B 46b	221	P 37b	B 61b
165	P 28b	B 46b-47a	222	P 37b	B 61b-62b
166	P 28b	B 47a	223	P 37b	B 62b
167	P 28b	B 47a-47b	224	P 37b	B 62b
168	P 28b-29a	B 47b	225	P 37b	B 62b
169	P 29a	B 47b	226	P 37b	B 62b
170	P 29a	B 47b	227	P 38a	B 62b
171	P 29a	B 47b-48a	228	P 38a	B 62b
172	P 29a-29b	B 48a	229	P 38a	B 62b
173	P 29b	B 48b	230	P 38a	- omitted -
174	P 29b	B 48b	231	P 38a	B 63a
175	P 29b	B 49a	232	P 38b	B 63a
176	P 29b-30a	B 49a-49b	233	P 38b	P 63a
177	P 30a-b	B 49b-50a	234	P 38b	P 63a-63b
178	P 30b	B 50a	235	P 38b	P 63b
179	P 30b	B 50a-50b	236	P 38b	P 63b-64a
180	P 30b-31a	B 50b-51b	237	P 38b	P 64a
181	P 31a-31b	B 51b	238	P 38b	P 64a
182	P 31b	B 51b-52a	239	P 39a	P 64a
183	P 31b	B 52a	240	P 39a	B 64b
184	P 31b	B 52a	241	P 39a	B 64b
185	P 31b-32a	B 52a	242	P 39a-b	B 64b
186	P 32a	B 52a-53a	243	P 39b	B 64b-65a
187	P 32b	B 53a-53b	244	P 39b	B 65a
188	P 32b-33a	B 53b-54a	245	P 39b	B 65a
189	P 33a	B 54a	246	P 39b	B 65a-65b
190	P 33a	B 54b	247	P 39b	B 65b
191	P 33a-33b	B 54b-55a	248	P 39b-40a	B 65b
192	P 33b	B 55a-55b	249	P 40a	B 66a
193	P 33b	B 55b	250	P 40a	B 66a
194	P 34a	B 55b	251	P 40a	B 66a
195	P 34a	B 55b	252	P 40a	B 66a-66b
196	P 34a	B 55b	253	P 40a-40b	B 66b
197	P 34a	B 56a	254	P 40b	B 66b
198	P 34a	B 56a	255	P 40b	B 66b-67a
199	P 34a-34b	B 56b	256	P 40b	B 67a
200	P 34b	B 56b-57b	257	P 40b-41a	B 67a-68a
201	P 35a	B 57b	258	P 41a	B 68a

259	P 41a	B 68a	275	P 43a	B 71a-71b
260	P 41a	B 68a-68b	276	P 43a	B 71b
261	P 41a	B 68b	277	P 43a	B 71b
262	P 41b	B 68b	278	P 43a	B 71b
263	P 41b	B 68b	279	P 43a	B 71b
264	P 41b	B 68b-69b	280	P 43a-43b	B 71b-72a
265	P 41b-42a	B 69b	281	P 43b	B 72a
266	P 42a	B 69b	282	P 43b	B 72a
267	P 42a	B 69b-70a	283	P 43b	B 72a
268	P 42a	B 70a	284	P 43b	B 72a
269	P 42a	B 70a	285	P 43b	B 72a
270	P 42a-42b	B 70a-70b	286	P 43b	B 72a-72b
271	P 42b	B 70b	287	P 43b	B 72b
272	P 42b	P 70b-71a	288	P 43b	B 72b
273	P 42b-43a	B 71a			
274	P 43a	B 71a			

CC II (Comments on the Second Book of the *Canon*)

1	P 44a	B 73a	34	P 50a	B 83a
2	P 44a	B 73a	35	P 50a	B 83a
3	P 44a	B 73a-73b	36	P 50a	B 83a-83b
4	P 44a	B 73b	37	P 50a	B 83b
5	P 44a	B 73b	38	P 50a	B 83b
6	P 44a-44b	B 73b	39	P 50a-50b	B 83b
7	P 44b	B 73b	40	P 50b	B 83b
8	P 44b	B 73b-74a	41	P 50b	B 83b
9	P 44b-45a	B 74a-74b	42	P 50b	B 83b-84a
10	P 45a	B 74b-75a	43	P 50b-51a	B 84a-84b
11	P 45a-45b	B 75a-75b	44	P 51a	B 84b
12	P 45b-46a	B 75b-76a	45	P 51a-51b	B 84b-85b
13	P 46a	B 76a	46	P 51b	B 85b
14	P 46a-46b	B 76a-77a	47	P 51b-52a	B 85b-86a
15	P 46b	B 77a-77b	48	P 52a	B 86a-86b
16	P 46b	B 77b	49	P 52a-52b	B 86b
17	P 46b-47a	B 77b	50	P 52b	B 86b-87a
18	P 47a	B 77b-78a	51	P 52b	B 87a
19	P 47a	B 78a	52	P 52b	B 87a-87b
20	P 47a	B 78a	53	P 52b-53a	B 87b
21	P 47a	B 78a-78b	54	P 53a	B 87b
22	P 47a-47b	B 78b	55	P 53a	B 87b-88a
23	P 47b	B 78b	56	P 53a	B 88a
24	P 47b	B 78b-79a	57	P 53a	B 88a
25	P 47b	B 79a	58	P 53a	B 88a-88b
26	P 47b	B 79a	59	P 53a-53b	B 88b
27	P 47b-48a	B 79a-79b	60	P 53b	B 88b
28	P 48a	B 79b	61	P 53b	B 88b
29	P 48a	B 79b-80a	62	P 53b	B 88b-89a
30	P 48b-49a	B 80a-81a	63	P 53b	B 89a
31	P 49a-49b	B 81a	64	P 53b-54a	B 89a
32	P 49b	B 81b-82b	65	P 54a	B 89a
33	P 49b-50a	B 82b-83a	66	P 54a	B 89a-89b

67	P 54a	B 89b	124	P 62b	B 102b
68	P 54a	B 89b	125	P 62b	B 102b
69	P 54a	B 89b-90a	126	P 62b	B 102b-103a
70	P 54a-54b	B 90a	127	P 62b	B 103a
71	P 54b	B 90a-90b	128	P 62b	B 103a
72	P 54b	B 90b	129	P 62b	B 103a
73	P 54b	B 90b	130	P 62b-63a	B 103a-103b
74	P 54b-55a	B 90b-91a	131	P 63a-63b	B 103b-104b
75	P 55a	B 91a	132	P 63b	B 104b
76	P 55a	B 91a-91b	133	P 63b-64a	B 104b
77	P 55a	B 91b	134	P 64a	B 104b-105a
78	P 55b	B 91b	135	P 64a	B 105a-105b
79	P 55b	B 91b	136	P 64a	B 105b
80	P 55b	B 91b-92a	137	P 64a-64b	B 105b-106a
81	P 55b	B 92a	138	P 64b	B 106a
82	P 55b-56a	B 92a-93a	139	P 64b-65b	B 106b-107a
83	P 56a	B 93a	140	P 65b	B 107a
84	P 56a-56b	B 93a	141	P 65b	B 107a-107b
85	P 56b	B 93a	142	P 65b-66a	B 107b-108a
86	P 56b	B 93a-93b	143	P 66a	B 108a
87	P 56b	B 93b	144	P 66a	B 108a
88	P 56b	B 93b	145	P 66a	B 108a
89	P 56b-57a	B 93b-94a	146	P 66a	B 108a
90	P 57a	B 94a	147	P 66a	B 108a
91	P 57a	B 94a-94b	148	P 66a	B 108b
92	P 57a-57b	B 94b	149	P 66a	B 108b
93	P 57b	B 94b-95a	150	P 66a-66b	B 108b
94	P 57b	B 95a	151	P 66b	B 108b-109a
95	P 57b-58a	B 95a-95b	152	P 66b	B 109a
96	P 58a-58b	B 95b-96a	153	P 66b	B 109a
97	P 58b	B 96a	154	P 66b	B 109a
98	P 58b	B 96a	155	P 66b-67a	B 109a-109b
99	P 58b	B 96a-96b	156	P 67a	B 109b
100	P 58b	B 96b	157	P 67a-67b	B 109b-111a
101	P 58b-59a	B 96b	158	P 67b-68a	B 111a-111b
102	P 59a	B 97a-97b	159	P 68a	B 111b
103	P 59a	B 97b	160	P 68a	B 111b
104	P 59a-59b	B 97b-98a	161	P 68a-69b	B 111b-113b
105	P 59b	B 98a	162	P 69b	B 113b
106	P 59b	B 98a	163	P 69b-70a	B 114a-114b
107	P 59b-60a	B 98b-99a	164	P 70a	B 114b
108	P 60a	B 99a-99b	165	P 70a	B 114b
109	P 60b	B 99b-100a	166	P 70a	B 114b-115a
110	P 60b	B 100a	167	P 70a-70b	B 115a
111	P 60b-61a	B 100a	168	P 70b	B 115a
112	P 61a	B 100a-100b	169	P 70b	B 115a-115b
113	P 61a	B 100b	170	P 70b	B 115b
114	P 61a	B 100b	171	P 70b-71a	B 115b-116a
115	P 61a	B 100b	172	P 71a	B 116a
116	P 61a-61b	B 100b-101a	173	P 71a	B 116a
117	P 61b	B 101a-101b	174	P 71a	B 116a
118	P 61b	B 101b	175	P 71a	B 116-116b
119	P 61b-62a	B 101b	176	P 71a	B 116b
120	P 62a	B 101b-102a	177	P 71a	B 116b
121	P 62a	B 102a	178	P 71a-71b	B 116b
122	P 62a	B 102a-b	179	P 71b	B 116b
123	P 62a-62b	B 102b	180	P 71b	B 116b

181	P 71b	B 117a
182	P 71b	B 117a
183	P 71b	B 117a
184	P 71b	B 117a
185	P 71b-72a	B 117b-118a
186	P 72a	B 118a
187	P 72a-72b	B 118a
188	P 72b	B 118b-119a
189	P 72b-73a	B 119a
190	P 73a	B 119a-119b
191	P 73a	B 119b
192	P 73a	B 119b
193	P 73a	B 119b
194	P 73a	B 119b-120a
195	P 73a	B 120a
196	P 73a	B 120a
197	P 73a	B 120a
198	P 73a-73b	B 120a
199	P 73b	B 120a-120b

200	P 73b	B 120b
201	P 73b	B 120b
202	P 73b	B 120b
203	P 73b-74a	B 120b-121a
204	P 74a	B 121a
205	P 74a	B 121a-121b
206	P 74a	B 121b
207	P 74a	B 121b
208	P 74a	B 121b
209	P 74a-74b	B 121b
210	P 74b	B 121b-122a
211	P 74b	B 122a
212	P 74b	B 122a-122b
213	P 74b-75a	B 122b
214	P 75a	B 122b
215	P 75a	B 122b-123a
216	P 75a	B 123a
217	P 75a	B 123a

CC III (Comments on the Third Book of the *Canon*)

1	P 75a	B 123a
2	P 75a-75b	B 123a-123b
3	P 75b	B 123b
4	P 75b	B 123b-124a
5	P 75b	B 124a
6	P 75b	B 124a
7	P 75b-76a	B 124a
8	P 76a	B 124a
9	P 76a	B 124a-124b
10	P 76a-76b	B 124b-125a
11	P 76b	B 125a
12	P 76b	B 125a
13	P 76b	B 125a
14	P 76b	B 125a
15	P 76b	B 125a-125b
16	P 76b-77a	B 125b
17	P 77a	B 125b
18	P 77a	B 125b-126a
19	P 77a	B 126a-126b
20	P 77a-77b	B 126b
21	P 77b	B 126b
22	P 77b	B 126b
23	P 77b	B 126b-127a
24	P 77b	B 127a
25	P 77b	B 127a
26	P 77b	B 127a
27	P 77b	B 127a
28	P 77b-78a	B 127a-127b
29	P 78a	B 127b
30	P 78a	B 127b

31	P 78a	B 127b-128a
32	P 78a-78b	B 128a
33	P 78b	B 128a
34	P 78b	B 128a
35	P 78b	B 128a-128b
36	P 78b	B 128b
37	P 78b	B 128b
38	P 78b	B 128b
39	P 78b	B 128b
40	P 79a	B 128b-129a
41	P 79a	B 129a
42	P 79a	B 129a
43	P 79a	B 129a-129b
44	P 79a	B 129b
45	P 79a	B 129b
46	P 79a-79b	B 129b
47	P 79b	B 129b-130a
48	P 79b	B 130a
49	P 79b	B 130a
50	P 79b	B 130a
51	P 79b	B 130a-130b
52	P 80a	B 130b
53	P 80a	B 130b
54	P 80a	B 130b
55	P 80a	B 130b-131a
56	P 80a	B 131a
57	P 80a	B 131a
58	P 80a	B 131a
59	P 80a-80b	B 131a
60	P 80b	B 131a-131b

61	P 80b	B 131b	118	P 85b	B 140a
62	P 80b	- omitted -	119	P 85b-86a	B 140a
63	P 80b	B 131b	120	P 86a	B 140a
64	P 80b-81a	B 131b	121	P 86a	B 140a
65	P 81a	B 132a	122	P 86a	B 140a
66	P 81a	B 132a	123	P 86a	B 140a-140b
67	P 81a	B 132a	124	P 86a	B 140b-141a
68	P 81a-81b	B 132b-133a	125	P 86a	B 141a
69	P 81b	B 133a-133b	126	P 86a-86b	B 141a
70	P 81b-82a	B 133b	127	P 86b	B 141a-141b
71	P 82a	B 133b	128	P 86b	B 141b
72	P 82a	B 133b	129	P 86b	B 141b
73	P 82a	B 133b-134a	130	P 86b	B 141b
74	P 82a	B 134a	131	P 86b	B 141b-142a
75	P 82a	B 134a	132	P 86b-87a	B 142a
76	P 82a	B 134a	133	P 87a	B 142a-142b
77	P 82a	B 134a	134	P 87a	B 142b
78	P 82a-82b	B 134a	135	P 87a	B 142b
79	P 82b	B 134a-134b	136	P 87a-87b	B 142b-143a
80	P 82b	B 134b	137	P 87b	B 143a
81	P 82b	B 134b	138	P 87b	B 143a
82	P 82b	B 134b	139	P 87b	B 143b
83	P 82b	B 134b-135a	140	P 87b	B 143b
84	P 82b	B 135a	141	P 87b-88a	B 143b
85	P 82b-83a	B 135a	142	P 88a	B 143b
86	P 83a	B 135a-135b	143	P 88a	B 143b-144a
87	P 83a	B 135b	144	P 88a	B 144a
88	P 83a-83b	B 135b-136a	145	P 88a	B 144a
89	P 83b	B 136b (different order)	146	P 88a-88b	B 144a-144b
90	P 83b	B 136b (different order)	147	P 88b	B 144b
91	P 83b	B 136b (different order)	148	P 88b	B 144b
92	P 83b	B 136a	149	P 88b	B 144b
93	P 83b	B 136a	150	P 88b	B 144b-145a
94	P 83b	B 136a	151	P 88b	B 145a
95	P 83b	B 136a	152	P 88b-89a	B 145a
96	P 83b-84a	B 136a-136b	153	P 89a	B 145a-145b
97	P 84a	B 137a	154	P 89a	B 145b
98	P 84a	B 137a	155	P 89a	B 145b
99	P 84a-84b	B 137b	156	P 89a	B 145b
100	P 84b	B 137b	157	P 89a	B 145b
101	P 84b	B 137b	158	P 89a-89b	B 145b-146a
102	P 84b	B 137b	159	P 89b	B 146a
103	P 84b	B 137b	160	P 89b	B 146a
104	P 84b	B 138a	161	P 89b	B 146a-146b
105	P 84b-85a	B 138a-138b	162	P 89b-90a	B 146b-147a
106	P 85a	B 138b	163	P 90a	B 147a
107	P 85a	B 139a	164	P 90a	B 147a
108	P 85a	B 139a	165	P 90a	B 147a-147a
109	P 85a	B 139a	166	P 90a	B 147b
110	P 85a	B 139a	167	P 90a	B 147b
111	P 85a-85b	B 139a	168	P 90a	B 147b
112	P 85b	B 139a-139b	169	P 90a	B 147b
113	P 85b	B 139b	170	P 90a-90b	B 147b-148a
114	P 85b	B 139b	171	P 90b	B 148a
115	P 85b	B 139b	172	P 90b-91a	B 148a-148b
116	P 85b	B 139b-140a	173	P 91a	B 148b
117	P 85b	B 140a	174	P 91a	B 148b-149a

175	P 91a	B 149a	232	P 96b	B 158b
176	P 91a	B 149a	233	P 96b	B 158b-159a
177	P 91a-91b	B 149a-149b	234	P 96b-97a	B 159a
178	P 91b	B 149b	235	P 97a	B 159a
179	P 91b	B 149b	236	P 97a	B 159a
180	P 91b	B 149b	237	P 97a	B 159a
181	P 91b	B 149b-150a	238	P 97a	B 159a
182	P 91b-92a	B 150a	239	P 97a	B 159a
183	P 92a	B 150a-150b	240	P 97a	B 159a-159b
184	P 92a	B 150b	241	P 97a	B 159b
185	P 92a	B 150b	242	P 97a	B 159b
186	P 92a	B 150b	243	P 97a-97b	B 159b
187	P 92a	B 150b-151a	244	P 97b	B 159b-160a
188	P 92a-92b	B 151a	245	P 97b	B 160a
189	P 92b	B 151a	246	P 97b	B 160a
190	P 92b	B 151a-151b	247	P 97b	B 160a
191	P 92b	B 151b-152a	248	P 97b	B 160a
192	P 92b	B 152a	249	P 97b	B 160a-160b
193	P 92b-93a	B 152a	250	P 97b-98a	B 160b-161a
194	P 93a	B 152a-152b	251	P 98a	B 161a
195	P 93a	B 152b	252	P 98a	B 161a
196	P 93a	B 152b	253	P 98a-98b	B 161a-161b
197	P 93a-93b	B 152b-153a	254	P 98b	B 161b
198	P 93b	B 153a	255	P 98b	B 161b
199	P 93b	B 153a-153b	256	P 98b	B 161b-162a
200	P 93b	B 153b	257	P 98b	B 162a
201	P 93b-94a	B 153b-154a	258	P 98b-99a	B 162a
202	P 94a	B 154a	259	P 99a	B 162a
203	P 94a	B 154a	260	P 99a	B 162a
204	P 94a	B 154a-154b	261	P 99a	B 162a-162b
205	P 94a	B 154b	262	P 99a	B 162b
206	P 94a-94b	B 154b-155a	263	P 99a	B 162b
207	P 94b	B 155a	264	P 99a	B 162b-163a
208	P 94b	B 155a	265	P 99a-99b	B 163a
209	P 94b	B 155a-155b	266	P 99b	B 163a
210	P 94b	B 155b	267	P 99b	B 163a
211	P 94b	B 155b	268	P 99b	B 163a-163b
212	P 95a	B 155b	269	P 99b-100a	B 163b
213	P 95a	B 155b-156a	270	P 100a	B 163b
214	P 95a	B 156a	271	P 100a	B 163b-164a
215	P 95a	B 156a	272	P 100a	B 164a
216	P 95a	B 156a-156b	273	P 100a	B 164a
217	P 95b	B 156b	274	P 100a	B 164a
218	P 95b	B 156b	275	P 100a	B 164a
219	P 95b	B 156b	276	P 100a	B 164a
220	P 95b	B 156b	277	P 100a	B 164a
221	P 95b	B 157a	278	P 100a	B 164a-164b
222	P 95b	B 157a	279	P 100a-100b	B 164b-165a
223	P 96a	B 157a-157b	280	P 100b	B 165a
224	P 96a	B 157b	281	P 100b	B 165a
225	P 96a	B 157b	282	P 100b	B 165a
226	P 96a	B 157b	283	P 100b-101a	B 165a-165b
227	P 96a	B 157b-158a	284	P 101a	B 165b
228	P 96a	B 158a	285	P 101a	B 165b
229	P 96a	B 158a	286	P 101a	B 165b
230	P 96a-96b	B 158a	287	P 101a	B 165b
231	P 96b	B 158a-158b	288	P 101a	B 165b

289	P 101a	B 165b-166a
290	P 101a	B 166a
291	P 101a	B 166a
292	P 101a-101b	B 166a-166b
293	P 101b	B 166b
294	P 101b	B 166b
295	P 101b	B 166b
296	P 101b	B 166b
297	P 101b	B 166b-167a
298	P 101b-102a	B 167a
299	P 102a	B 167a
300	P 102a	B 167a-167b
301	P 102a	B 167b
302	P 102a	B 167b
303	P 102a	B 167b
304	P 102a	B 167b
305	P 102a	B 167b-168a
306	P 102a-102b	B 168a
307	P 102b	B 168a
308	P 102b	B 168a
309	P 102b	B 168a-168b
310	P 102b-103a	B 168b
311	P 103a	B 168b
312	P 103a	B 168b
313	P 103a-103b	B 168b-170a
314	P 103b	B 170a
315	P 103b	B 170a
316	P 103b	B 170a
317	P 103b	B 170a
318	P 103b-104a	B 170a
319	P 104a	B 170a-170b
320	P 104a	B 170b
321	P 104a	B 170b
322	P 104a	B 170b
323	P 104a	B 170b
324	P 104a	B 170b
325	P 104a	B 170b-171a
326	P 104a-104b	B 171a
327	P 104b	B 171a
328	P 104b	B 171a
329	P 104b	B 171a
330	P 104b	B 171a
331	P 104b	B 171a
332	P 104b	B 171a
333	P 104b	B 171b
334	P 104b	B 171b
335	P 104b-105a	B 171b-172a
336	P 105a	B 172a

337	P 105a	B 172a
338	P 105a	B 172a
339	P 105a	B 172a
340	P 105a	B 172a-172b
341	P 105a	B 172b
342	P 105a-105b	B 172b
343	P 105b	B 172b
344	P 105b	B 172b
345	P 105b	B 172b
346	P 105b	B 172b
347	P 105b	B 172b
348	P 105b	B 172b-173a
349	P 105b	B 173a
350	P 105b	B 173a
351	P 105b	B 173a
352	P 105b	B 173a
353	P 105b	B 173a
354	P 105b-106a	B 173a-173b
355	P 106a	B 173b
356	P 106a	B 173b
357	P 106a	B 173b
358	P 106a	B 173b
359	P 106a	B 173b
360	P 106a	B 173b
361	P 106a	B 173b-174a
362	P 106a	B 174a
363	P 106a	B 174a
364	P 106a	B 174a
365	P 106-106b	B 174a
366	P 106b	B 174a
367	P 106b	B 174a-174b
368	P 106b	B 174b
369	P 106b	B 174b
370	P 106b	B 174b
371	P 106b	B 174b
372	P 106b	B 174b-175a
373	P 106b-107a	B 175a
374	P 107a	B 175a
375	P 107a	B 175a
376	P 107a	B 175a
377	P 107a	B 175a
378	P 107a	B 175a-175b
379	P 107a	B 175b
380	P 107a-107b	B 175b
381	P 107b	B 175b
382	P 107b	B 176b-176a

CC IV (Comments on the Fourth Book of the Canon)

1	P 107b	B 176a	53	P 111b	B 183a
2	P 107b	B 176a	54	P 111b	B 183a
3	P 107b	B 176a	55	P 111b-112a	B 183a
4	P 107b	B 176a	56	P 112a-112b	B 183b-184b
5	P 107b	B 176a-176b	57	P 112b	B 184b
6	P 107b-108a	B 176b	58	P 112b	B 184b
7	P 108a	B 176b	59	P 112b	B 185a
8	P 108a	B 176b-177a	60	P 112b	B 185a
9	P 108a	B 177a	61	P 112b	B 185a
10	P 108a	B 177a	62	P 112b	B 185a
11	P 108a-108b	B 177a-177b	63	P 112b	B 185a
12	P 108b	B 177b	64	P 113a	B 185a-185b
13	P 108b	B 177b-178a	65	P 113a	B 185b
14	P 108b	B 178a	66	P 113a	B 186a
15	P 108b-109a	B 178a-178b	67	P 113a-113b	B 186a
16	P 109a	B 178b	68	P 113b	B 186b
17	P 109a	B 178b	69	P 113b	B 186b
18	P 109a	B 178b	70	P 113b	B 186b
19	P 109a	B 178b	71	P 113b	B 186b-187a
20	P 109a	B 178b	72	P 113b	B 187a
21	P 109a	B 179a	73	P 113b	B 187a
22	P 109a-109b	B 179a-179b	74	P 113b	B 187a
23	P 109b	B 179b	75	P 113b	B 187a
24	P 109b	B 179b-180a	76	P 113b	B 187a
25	P 109b	B 180a	77	P 113b	B 187a
26	P 109b-110a	B 180a	78	P 113b-114a	B 187a
27	P 110a	B 180a	79	P 114a	B 187a
28	P 110a	B 180a-180b	80	P 114a	B 187a
29	P 110a	B 180b	81	P 114a	B 187b
30	P 110a	B 180b	82	P 114a	B 187b
31	P 110a	B 180b	83	P 114a	B 187b
32	P 110a	B 180b	84	P 114a	B 187b
33	P 110a	B 180b	85	P 114a	B 187b
34	P 110a	B 180b	86	P 114a	B 187b
35	P 110a	B 180b	87	P 114a	B 188a
36	P 110a	B 180b-181a	88	P 114a-114b	B 188a
37	P 110a-110b	B 181a	89	P 114b	B 188b
38	P 110b	B 181a	90	P 114b	B 188b
39	P 110b	B 181a	91	P 114b	B 188b
40	P 110b	B 181a	92	P 114b-115a	B 189b-189a
41	P 110b	B 181a-181b	93	P 115a	B 189a
42	P 110b	B 181b	94	P 115a	B 189a
43	P 110b	B 181b	95	P 115a	B 189a
44	P 110b-111a	B 181b	96	P 115a	B 189a
45	P 111a	B 182a	97	P 115a	B 189a
46	P 111a	B 182a	98	P 115a	B 189a
47	P 111a	B 182a	99	P 115a	B 189a
48	P 111a-111b	B 182b	100	P 115a	B 189a
49	P 111b	B 182b	101	P 115a	B 189b
50	P 111b	B 182b	102	P 115a	B 189b
51	P 111b	B 183a	103	P 115a	B 189b
52	P 111b	B 183a	104	P 115a	B 189b

105	P 115b	B 190a	116	P 116a	B 190b
106	P 115b	B 190a	117	P 116a	B 190b
107	P 115b	B 190a	118	P 116a	B 190b
108	P 115b	B 190a	119	P 116a	B 190b
109	P 115b	B 190a	120	P 116a	- omitted -
110	P 115b	B 190a	121	P 116a	- omitted -
111	P 115b	B 190a	122	P 116a	- omitted -
112	P 115b	B 190a-190b	123	P 116a	- omitted -
113	P 115b-116a	B 190b	124	P 116a	- omitted -
114	P 116a	B 190b	125	P 116a	- omitted -
115	P 116a	B 190b			

CC V (Comments on the Fifth Book of the *Canon*)

1	P 116b	- omitted -	20	P 118b	- omitted -
2	P 116b	- omitted -	21	P 118b	- omitted -
3	P 116b-117a	- omitted -	22	P 118b	- omitted -
4	P 117a	- omitted -	23	P 118b-119a	- omitted -
5	P 117a	- omitted -	24	P 119a	B 191a
6	P 117a	- omitted -	25	P 119a	B 191a-191b
7	P 117a	- omitted -	26	P 119a	B 191b
8	P 117a	- omitted -	27	P 119a	B 191b
9	P 117a	- omitted -	28	P 119b	B 191b
10	P 117a-117b	- omitted -	29	P 119b	B 191b-192a
11	P 117b	- omitted -	30	P 119b	B 192a
12	P 117b	- omitted -	31	P 119b	B 192a
13	P 117b	- omitted -	32	P 119b	B 192a
14	P 117b	- omitted -	33	P 119b	B 192a
15	P 117b	- omitted -	34	P 119b	B 192a
16	P 117b-118a	- omitted -	35	P 119b-120a	B 192b
17	P 118a	- omitted -	36	P 120a	B 192b
18	P 118a-118b	- omitted -	37	P 120a	B 192b
19	P 118b	- omitted -			

2. Edition of Arabic texts

While the following editions of Arabic texts aim to stay close to the original manuscripts, *shadda*, *tā' marbūṭa*, and *hamza* will always be given (e.g. ان, الادويه, الرئيس will be presented as اُنْ، الأُدوية، الرئيس). Moreover, the texts are occasionally voweled, but vocalisation found in manuscripts will be explicitly indicated. Divisions into sentences and paragraphs are a matter of interpretation but will usually follow the divisions of a text as suggested by copyists of the manuscripts consulted. For instance, the copyist of manuscript P indicated the beginning of new units of meaning by red overlinings placed above the unit's first word. This will be represented by a new paragraph. If more than one manuscript was available, variants will be given if two radically different readings are found.⁸⁹⁵

CCP, 1

كنت يا سيدي أطال الله بقاءك حين فاوضتني في أمر كتاب الرئيس أبي علي بن عبد الله بن سينا الملقب بالقانون، ذكرت ما بلغك عن الحكيم الفاضل المتطبب الاندلسي وهو أن رجلاً من التجار جلب من العراق نسخة من هذا الكتاب قد بولغ في تحسينها. فأتحفه بها، تقرّباً إليه. ولم يكن هذا الكتاب وقع إليه قبل ذلك. فلما تأمله ذمّه وأطرحه ولم يُدخله خزانة كتبه. وجعل يقطع من طوره ما يكتب فيه نسخ الأدوية لمن يستشفيه من المرضى.

CCP, 2

وذكرت ما قيل من أنه لا يُصلح للمبتدي في تعلّم الطبّ لما تضمّنه من الألفاظ الحوشية والمعاني الفلسفية، ولتحرّري مؤلفه الإختصار الشديد⁸⁹⁶ العبارة وتوجّه الدلالة على كثير من المعاني بالإيماء والإشارة، ثمّ لما فيه من المنقودات عليه التي، إن تُركت، تتقرّر في ذهن المبتدي على ما فيها. كان ذلك غروراً له⁸⁹⁷ ومضرباً به.

895. For the possible dependence of manuscript B on manuscript P, see above p. 47ff.

896. P has السديد (i.e. 'appropriate expressions' instead of 'strongly worded expression') with a *haček* over the *sin* but which then seems to have been corrected to الشديد by the same hand.

897. B بها.

CCP, 3

وذكرت توهمك أن مصنفه لم يبيضه ولا حرره وأن الذي اوهمك ما فيه من الإيهام في مواضع والتصحييف والتشويش والتحريف في مواضع

CCP, 4

وذكرت ما بلغك من عبارتي وإجتهادي في إصلاح نسختي منه وإنني علقت عليه حواشي كثيرة وسألتني أن أؤلف لك كتاباً وأقيد فيه ما علقت عليه من الحواشي ...

CCP, 5

فقطعتني عن إجابتك ما كنت عليه من نبو الدار وعدم الإستقرار وعلمي بأن مثل هذا الكتاب لا بد أن يقع لمن ليس هو بمثابتك في قصد الإنتفاع وتحري الإنصاف وبالجملة في الفضائل الخلقية بل لا بد أن يقع لبعض الذين قد غلبت عليهم الرذائل وتمكنت منهم عادات السوء وكثير ما هم ولا سيما في هذا الوقت فيحمله حسده لمصنّفه على كفران فضيلته والآزاء عليه. وظنّ العوامّ والجّهال أنّه لم يقصد به إلا التعاطى والتشفّع ونحوهما وبالجملة على قلب حسناته سيئات وفي ذلك من الغبن⁸⁹⁸ ما هو ظاهر.

CCP, 6

ثمّ كثير من تلك الحواشي إنّما الموعول فيها على الظنون والبيّنات⁸⁹⁹ والتأويلات البعيدة التي يقتضيها ويُلبّأ إليها حُسنُ الظنّ بالرئيس مؤلّف الكتاب والمحاماة عن فضيلته وتتبع المخارج له، ولو كانت في أبعد الطرق الوجوه وأمثال هذه الأفاويل.

وإن كان أرباب الفضائل وذوي الإنصاف وعدالة لطبع وكرم السجية يعرفون بقدر التعب فيها والعناء في استخراجها ومبلغ الإجتهد في التسبّب والتوصّل إليها، فإنّ الاشرار والحسّاد وأهل اللوم والتشغيب والعناد مع ذلك لا يعدمون مواضع الإيهام والتّمويه على ذوي الغباوة والعوامّ وفي ذلك من الإستهداف لسهام أهل هذه الطبقة.

898. B. الغيره.

899. B. والتمكنيات (i.e. 'possibilities'). In P, this variant is crossed out and we find the correction in the margin.

CCP, 7

وبالجملة لذوي المراء والخلاف ما هو ظاهر. فلهذه الأسباب كان من رأي قبض العنان عن هذا الميدان حتى وصل كتابك مضمناً تردّد سؤالك في ذلك. وخشيت أن تظنّ بي ظناً عليك بمعلومه فألفت هذا الكتاب وقسمته على جملتين.

CCP, 8

الجملة الثانية أودعتها المهمّ من جميع ما علّفته عليه من الحواشي وما يليق أن يودع في التأليفات دون ما سواها ممّا لا يليق إلا بالطرر لأنّ ذلك هو الأليق بغرضك والأحقّ بملمتسك.

وبسطت القول في مواضع منها فضل بسطٍ لإتساع المجال في التأليف لذلك وضيق الطرر عنه وحاذيت بترتيبها ترتيب فصوله وأقاويله في فصلٍ فصلٍ منها ليُسهل بذلك على الناظر فيه كشف ما تُريد كشفه منها. وعنوانته بالتصريح بالممكنون في تنقيح القانون لمطابقه هذا العنوان لغرضه. وأنا مبتدي بما التمسته وباللّه أعتضد.

CCJ, 1

⁹⁰⁰ فأقول أمّا ما اعتمده بن زهر من أطراح كتاب الرئيس وتهجينه ⁹⁰¹ تحييفٌ ظاهرٌ، لأنّ ⁹⁰² هذا الكتاب - وإن كان مُصنّفه قد اعتمد فيه من الكلام المتكلّف والإستعارات ⁹⁰³ البعيدة ما لا يليق بالعلوم وكان فيه ما ذكرناه من الإبهام ⁹⁰⁴ والنقص والتصحيف والاختلاف والتشويش والتحريف، بالجملة مواضع كثيرة منقودة ⁹⁰⁵ - فإنّه كتاب قد اشتمل من أصول الطبّ وقوانينه على ما لم يشتمل غيره عليه من الكنايش الكبار.

ثمّ فيه من الإيجاز والإختصار وحسن التأليف والترتيب وسهولة الكشف لما يراد كشفه منه ما ليس في غيره منها بل ما يُغتفر له معه عظيم الزلل ويسمح به احتمال الخطاء والخلل. وبالجملة فليس في

900. P فُأقول.

901. The following words are different in B. See below.

902. B وتهجينه فهو تجيدٍ مستقيمٍ إن.

903. B والأشياء.

904. Amended by the present author. P and B both have الإيهام (deception).

905. B omits.

جميع ما لدينا من الكنائيش الكبار ما يقوم مقامه ولا يسدّ مسدّه.⁹⁰⁶

CCJ, 2

مما ذكرتَ فامّا قول من قال أنّه لا يصلح للمتعلّم المبتدى ولا يحتاج إليه العالم المنتهى فليس بصادق على العموم لأنّه لا يصدق باعتباره مبتدئاً أسعده الجدّ بموقف فاضل حسن التأتى للتعليم فأنّ فضيلته وجوده تأتية للعلم تأسو سقم الكتاب ويسدد ذهن المبتدى نحو الصواب سيّما أن أعين من المتعلّم بالمعيّة وفطرة رايقه ذكيه. ولا يصدق باعتبار عالم تدعوه الحاجة إلى كتاب جامع مختصر تردد مطالبته للتذكار ويخف جملة عليه في الأسفار.

CCJ, 3

وامّا توهّمك أنّ مصنّفه سوّده ولم يُحرّره، فقد قال بذلك كثير ممّن يتعصّب له ويحسن الظنّ به، والذي دعاهم الى ذلك أنّ الذي وُجد فيه من المنقودات، وإن كان كثير منها قد يقع في الكتب العلميّة من قبل تخلّف نسّاخها لا من مصنّفها ولا سيّما في الكتب الكبار، لما ينضاف الى جهل نسّاخها بها من التكاثر عن تصحيحها بالمعارضة لطولها⁹⁰⁷ فإنّ منها ما⁹⁰⁸ يُسرّع إلى غلط النسّاخ. ويبعد ان يصدّر مثله عن مصنّف يعقّب ما صنّفه ونقّحه.

ولاسيما في الكتاب الثاني منه الذي ألفه في الأدوية المفردة فإنّ فيه من التشويش والتغيير والنقص والتحريف والقطع ببادي الرأي وتهافت الأقاويل والإختصار المُجحف بالمعنى والإحالة على ما لم يذكره والحشو بما لم يتحقّقه كما سننّب عليه، اذا صرنا اليه، ما لا يجد أهل التعصّب له فيه عُذراً أجود له ولا أجمل به من أنّه سوّده ولم يحرّره.

CCJ, 4

[1] ومن الناس من نسب مؤلّفه الى أنّه لم يكن من المشتغلين بصناعة الطبّ، ولا ممّن تقدّمت⁹⁰⁹ له قبل تأليفه عنايةً بالنظر فيها، وأنّه اقتضب ما فيه من كتب أربابها حين أراد⁹¹⁰ تأليفه إقتضاباً. فكانت

906. B adds ذكرت.

907. Last two words omitted in B.

908. B adds لا.

909. B has بتأليفه.

910. B امثلاً.

حالته فيها حال الغريب الدخيل الصَّحْفِي⁹¹¹، فعرض⁹¹² له ما لا بدّ أن يُعرض لمن كان بهذه المثابة.

[2] وهذا القول يعارض ما تضمّنته سيرته التي اثبتها أبو عبيد الله الجوزجاني صاحبه من أنّه اشتغل بقرأة الطبّ وله من العمر ستّة عشر سنّة وتميّز في علمه على المشاركين من أهل بلده في ذلك الوقت وخدم به بعض ملوك عمره.

CCJ, 5

وقد ظنّ قوم من أهل بلادنا أنّ الذي في هذا الكتاب من السقم ونحوه ممّا تقدّم ذكره، أمرٌ يخصُّ⁹¹³ ما عنده من نسخةٍ فقط ونسبوا ذلك الى قصّة اتّفقت في اول نسخةٍ حصلت في هذه البلاد منه.

وهي أنّ رجلاً من التجّار العراقيّين وصل الى مصر في أوائل الأيّام الأميركيّة⁹¹⁴ وصحبته نسخةٌ منه واتّفق أنّ مرض بها وعالجه أحد مشاهير أطبائنا، فلمّا أبلّ من مرضه، أطرف الطبيب يوماً بالكتاب، فأعجب به وسأله ابتياعه او نقله - فأبى ذلك. ثمّ سافر⁹¹⁵ التاجر الى مدينة تيّس⁹¹⁶ والكتاب صحبته فكاتب الطبيب قاضيه يومئذٍ في ذلك الوقت والتمسه القاضي من التاجر، فامتنع عليه. وجرت بينهما مفاوضة وأمور أفضت إلى أنّ سمح له بعاريته أيّاماً قلائل. لم يقدر التاجر أن يقل له فيها شيئاً، وأخذه القاضي. وفكّه أجزاً وفرق على النسخ، فنقلوه في ذلك الأجل على عجل، وأعاد الأصل الى ربّه، وسيّر الفرع الى الطبيب ولم يقابل به، قالوا فتفرّعت منه النسخ التي عندنا على ما فيها من سقم ونحوه، إلا أنّ ما ظنّوه من ذلك ليس بحقّ، لأنّه وصل بعد ذلك الينا نسخ كثيرة من ذلك الكتاب من الشام والعراق فوجدنا حالها حال النسخ التي عندنا منه.

CCJ, 6

وقد كنتُ سألتُ جماعةً من أعيان⁹¹⁷ الواردين إلينا من العراق: هل وقعت لأهل تلك البلاد نسخةٌ منه بخطّ مصنّفه وإن كانت وقعت لهم، فهل هي مُسوّدة لم يُحرّرها، كما قيل، أم قد حرّرها؟

911. P vowels as الصَّحْفِيّ or الصُّحْفِيّ.

912. B فعرضت له.

913. B امراً يخصُّ ما.

914. P and B both have الأميركيّة i.e. Amiriyyah instead of Āmiriyyah.

915. B سار.

916. Vowels and shadda added by the present author.

917. B adds الفضلاء.

فأخبرني بعضهم أنّ بعض المدارس التي هناك نسخة منه بخطّ المصنّف، إلاّ أنّه لم يتحقّق حالها. وذكر بعضهم أنّه كان لأبي الحسن هبة الله بن صاعد البغداديّ الطيب المعروف بابن التلميذ نسخة يذكر أنّه صحّحها على دستور المصنّف وعنى بها وعلّق عليها حواشي له، وأنّ تلك النسخة اشتهرت صحّتها وبيعت بعد وفاته ببغداد وانتقلت إلى الشام...

CCJ, 7

ثمّ ورد إلى بلادنا في أيام الناصريّة رجلٌ من مشاهيرهم وصحبته نسخة من هذا الكتاب يذكر أنّه قرأها على هبة الله بن صاعد المقدّم ذكره وصحّحها على دستور المصنّف ونقل إليها حواشيتها التي وجدها على الكتاب الأوّل من نسخة وبخطّه، بعد تأملها.

فسررتُ بذلك جدّاً ورجوتُ أن أظفر منها بشفاء عليل واشتدّ تشوّقي إلى رؤيتها لحرصى على تصحيح الكتاب ورغبتى في أن أقف لأبي الحسن هبة الله بن صاعد على كلامه في فنّ من فنون العلم الذي يعزّ الكمال فيها، لأنني لم أكن وفتت له قط على شيء سوى مقطّعاتٍ من أشعار منسوبة إليه، أنشدها قومٌ من أهل المشرق وهى من أحسن الشعر.

فلما وفتت على النسخة من الكتاب المقدّم ذكره وتاملتها، والحواشي التي عليها، وجدتها كما قيل لأن تسمع بالمعيدي خيراً من أن ترأه. فأمّا النسخة فلم أجد بينها وبين النسخة التي عندنا كثير تفاوت يعتدّ به.

CCJ, 8

[1] وأمّا الحواشي فإنّي وجدتُ المواضع المستغلقة المعتاصة من كلام صاحب الكتاب التي يليق بها الحواشي خاليةً منها⁹¹⁸ غفلاً عطلاً مهملةً لم ينبّه على أشكالها واعتياصها فضلاً عن أن يوضع ويبيّن مثل قوله في حدّ الطبّ أنّه علم...

[2] ثمّ فيها أقاويل تُوقع الشكّ في صحّة ما يدعى من يُصحّ تلك النسخة على دستور المصنّف.

918. B omits last two words.

CCJ, 9

ثمّ ورد الينا رجل من مشاهير أطباء الشام وصحبته نسخة أخرى من هذا الكتاب الأوّل فيه الحواشي المقدم ذكرها بعينها، وزيادات قليلة لم تكن في تلك النسخة مجانسة لها، وحواشي أخرى كثيرة على الكتب الأربعة الباقية منه منسوبة إلى ابن التلميذ حالها حال الأوّل.

CCJ, 10

وأتفق أن فاضلته في أمرها فاعترف بكثير ممّا ذكرته من حالها واعتذر لصاحبها بأنّ قوم من طلبته كانوا يستفهمونه عن أمور بيّنة لا يحتاج إلى استفهامها فيفهمهم إيّاها بما يليق بإفهامهم فيكتبوه وينسبوه إليه.

CCJ, 11

ولمّا انتهى في البحث عن هذا الكتاب إلى هذا الحدّ وكدت أن أياس من إصلاحه من أصلٍ صحيحٍ، جمعتُ منه عدّة نسخٍ، منها النسخة التي ذكر صاحبها أنّه قرأها على بن التلميذ وصحّحها على دستور المصنّف.

وعارضتُ نسختي بجميعها فما وجدتُ بتلك⁹¹⁹ النسخة مُتَّفَقَةً عليه من الأقاويل التي تضمّنها الكتاب وليس هو بكلام مستقيم، فطلبتُ أصله الذي أخذه منه مصنّف الكتاب في أقاويل المتقدمين وأئمة المؤلّفين. فأنّي وجدته بعينه، ألا أنّه⁹²⁰ قد عرض فيه سهوٌ وتصحيفٌ أو تحريفٌ في نقله، أصلحتُ ذلك القول عليه.

وإنّ لم أفع على القول بعينه، اجتهدتُ في إصلاحه بمقتضى أصول الصناعة المُجمَع عليها وقوانينها الماثورة عن أئمتها، إمّا قطعًا وإمّا ظنًّا أن تهتأ لي ذلك، وقدرتُ عليه. وما وجدتُ تلك النسخ مختلفة تخيرتُ الصحيح منها إن وجدته أو الأقرب إلى الصّحة والأشبه والأولى بمقتضى تلك الأصول والقوانين.

919. P and B both have تلك. In the margin of P, however, this is corrected to بتلك by the scribe who collated P with the autograph.

920. P and B have إلا أنّه.

هذا وأما ما وجدته فيه من الألفاظ الحوشية والإستعارات البعيدة والعبارات المستغربة عند الأطباء، وبالجملة غير المتداولة بينهم، والمواضع العويصة المشكلة والتي فيها تناقض، إما في الحقيقة وإما فيما يظهر في بادي الرأي، فإنني اجتهدت في تفسير كثير منها وإيضاح مستغلة وكل عويصة وإبانة ما بيدوا من تناقضه، وتهافته.

[1] الفصل الأول من التعليم الأول من الفن الأول في حدّ الطبّ. قال الرئيس "الطبّ علم يتعرّف منه أحوال بدن الإنسان من جهة ما يصحّ ويحول عنه ليحفظ الصّحة حاصله ويستردّ زائلة"⁹²¹

قوله "الطبّ علم" يظهر عنه أنّه يريد أنّه صناعة نظريّة. وليس الأمر كذلك لأنّ الصناعة النظرية هي إلى غايتها القصى حصول العلم فقط. اعني أن تجعل معوضاتها وأنواعها والأعراض الذاتية لها معقولات للنفس حتى تصير تلك المعقولات كماً للنفس وجمالاً وصناعة الطبّ. فليست كذلك لأنّ غايتها القصى تحصيل الصّحة في بدن الإنسان وفي كل واحد من أعضائه بأفعالها التي تفعلها فيها، كالتغذية، وإعطاء الأدوية، والفصد، والبطّ، والكّي، والشرط. وهذه حال الصنائع الفاعلة كما لخصه أبو نصر الفارابي.

ولذلك ما اعترض الرئيس نفسه فقال: "ولقائل أن يقول إنّ الطبّ ينقسم إلى نظريّ وعملٍ فأنتم قد جعلتموه كلّ نظرياً إذ قلتم أنّه علمٌ..."⁹²² واجاب بأنّ الطبّ إذا قيل أنّه ينقسم إلى نظريّ وعملٍ كان المراد بالنظر منه علم الأصول، وبالعمل علم كيفية المباشرة وكلاهما علمٌ.

[2] فقد يقول قائل ليت شعري هل يعني بالطبّ هاهنا الصناعة نفسها، أعني القوّة أو الملكة الموجودة في النفس التي شأنها أن تحفظ الصّحة على ما هو من الأبدان والأعضاء صحيح، وتستردّها إلى ما هو منها عليل بأفعالها التي تفعل عنها تلك القوّة أو الملكة، فإنّه إن كان قصد القوّة أو الملكة⁹²³ المذكورة فليس القول الذي أتى به مطابقاً لها لأنّ القوّة المذكورة إنّما يتم⁹²⁴ حصولها لإنسانٍ ما بشئيين.

921. D I, 13, l. 7f.

922. D I, 13, l. 8f.

923. The rest of the sentence is missing in B.

924. يتم corrected to يلعلم.

أحدهما أن يكون جميع المعارف التي تشتمل عليها صناعة الطب أعني المعارف التي شأنها أن يتوصل بها بالذات إلى الصحة وهي التي تنقسم إلى علم الأصول، وعلم كيفية المباشرة الذين ذكرهما معلومة عنده إما بالإستنباط وإما بالتعليم.

والآخر أن يكون له قدرة على أن يفعل عن تلك المعلومات في واحدٍ واحدٍ من الجزئات وهذه القدرة إنما تحصل بطول المزاولة لأعمال الطب والإعتياد والتدرب في شيءٍ شيءٍ من الأمور الجزئية بعد حصول تلك المعارف.

وكذلك ما قال أبو نصر الفارابي أن "الصناعة الفاعلة قوة على فعل ما كائن عن معرفة". وقال أن الطب صناعة فاعلة عن مبادئ صادقة تلتبس بأفعالها أن تحصل الصحة في بدن الإنسان وفي واحدٍ واحدٍ من أعضائه وإن كان قصد المعارف التي تشتمل على الطب فمن الظاهر أن تلك المعارف مجردة ليست هي صناعة الطب لأنها إذا كانت حاصلة عند إنسان ما ولم تنصف إليها القدرة على الفعل المذكورة لم يكتف بها وحدهما⁹²⁵ في أن تحفظ الصحة على ما هو من الأبدان والأعضاء صحيح ويستردّها إلى ما هو منها مريض كما تلخص في موضعه.

[3] ونحن نجيب عن هذا القائل فنقول أن الرئيس هاهنا ليس يعتبر الطب من جهة ما غايته تحصيل الصحة في بدن الإنسان وكل واحدٍ من أعضاء بأفعاله التي يفعلها فيها كما فعل أبو نصر حيث قال أن "الطب صناعة فاعلة عن مبادئ صادقة يلتبس بأفعالها أن يحصل الصحة في بدن الإنسان وفي واحدٍ واحدٍ من أعضائه." لكن من جهة ما غايته علم ما شأنه أن يتوصل به بالذات إلى تحصيل الصحة في بدن الإنسان وفي كل واحدٍ من أعضائه. وانت يتبين ذلك وتحققه من قوله "وإذا علمت هذين [القسمين] فقد حصل لك علمًا علمي وعلم عملي وإن لم تعمل قط".⁹²⁶

فإن قوله "وإن لم تعمل قط" دليل واضح على صحة ما قلناه له. وكأنه ينحوا في هذا القول نحو فاضل الأطباء جالينوس في قوله أن "الطب معرفة الأشياء المنسوبة المتصلة بالصحة والمرض وبالحوال التي لم تحصل للإنسان فيها صحة ولا مرض. فإن فاضل الأطباء في هذه القول إنما اعتبر الطب من تلك الجهة وتأمل هذا التأويل فظن به.

925. P وحدها.

926. D I, 13, last line.

الفصل الخامس⁹²⁷ في مائة العضو وأقتسامه. قال المؤلف الذي ذكره الرئيس في هذا الفصل وما بعده من اقاويله في التشريح ليس بمقصود على ذكر أمور التشريح فقط بل مخلوط بذكر المنافع ولذلك ينبغي أن يُزاد في ترجمة كل فصل منها ذكر المنافع فيقال الفصل الكذا⁹²⁸ في تشريح كذا ومنافعه فإن في ذلك فائدة ظاهرة وهي تنبيه الطالب لمنافع عضو عضو من الأعضاء البسيطة من هذا الكتاب على الموضوع الذي يطلبها⁹²⁹ منه.

قال الرئيس “وكذلك في النساء عروق يندفع فيها المنى إلى المَهْبِلِ”⁹³⁰.

في كتاب خلق الإنسان لأبي حاتم سهل بن محمد المعروف بالسجستاني “وللرحم حَلَقَتَانِ أحدهما التي على فم الرحم عند طرف الفرج والحلقة الأخرى⁹³¹ التي تضم على الماء وتنفخ للحيض وما بينهما المَهْبِلِ”. وفي الصحاح: “المَهْبِلُ أقصى الرحم. ويُقال: طريق الولد. وهو ما بين الفرج والرحم.”⁹³² قال ثابت بن عمر في كتاب خلق الإنسان “وقال أبو زيد المَهْبِلُ مستقر الرحم وهو باطل إنما المَهْبِلُ ما بين الحلقتين.”

قال المؤلف وهذا هو الذي أراده الرئيس، أعنى ما بين الحلقتين لأن المنى إلى هنالك يندفق ثم يتبلعه الرحم وينضم عليه فمه. ووجدت في بعض النسخ “المحبل” وليس يليق بهذا الموضوع لأن المحبل وقت حبل الأم. قال الجوهري: “ويقال كان في محبل فلان أي وقت حبل أمه به.”

927. Should be first section (of the fifth chapter). D I, 36. Ibn Jumay' had clearly confused the section with the chapter.

928. الفلاني is added in the margin of P in a different hand.

929. يطلبها P.

930. D has المحبل. D I, 39, l. 9. The Bulaq edition also has المحبل (Ibn Sīnā, *Canon (Būlāq)*, vol. I, 22, l. 5).

931. P للاخرى?

932. Jawharī, *Ṣiḥāḥ*, vol. V, 1846: “والمَهْبِلُ: أقصى الرّحم ويقال: طريق الولد، وهو ما بين الطّبيّة والرّحم.”

[1] قال المؤلف إمّا أنّ العلم بأمور التشريح إنّما يحصل من جهة المباشرة بالحسّ والمشاهدة فذلك ظاهر وقد لخصّ فاضل الأطباء أنّ مُشاهدة ما⁹³³ يظهر بالتشريح في الأبدان البشريّة لا يكون بحيث ينتفع به المتعلّمون ما لم يقترن اليه شريطتان.

إحدهما أن يكون⁹³⁴ بحضرة الأستاذين الحذاق فإنّ من يتولّى ذلك بنفسه من المتعلّمين إنّما قصاره أن يصير قَصَابًا⁹³⁵ حاذقًا.

والأخرى أن يكون بعد تقدّم رياضة كثيرة في تشريح حيوانات أُخرى من الحيوانات الشبيهة في بعض أعضائها أو جُلّها بأبدان الناس، فإنّ مشاهدة المتعلّم كلّ ما⁹³⁶ يحتاج اليه من أمور التشريح في الأبدان البشريّة يعسر جدًّا والذي يتفق أن يُشاهده⁹³⁷ فيها مرّة أو مرّتين ولو كان بين يدي أستاذٍ حاذق قد لا يثبت له ولا يستقرّ في تخيلّه ما لم يتقدّم له الرياضة المذكورة.

[2] فأما الأقاويل المكتوبة فيها فإنّما فائدتها كما علّمنا فاضل الأطباء أن يستعين بها⁹³⁸ من تهيات له مباشرة التشريح من غير أن يجد معلّمًا فيكون كما قيل:

ومن لم يجد كلّ المنى طلب البعض

وظاهر أن هذا القدر من الإستعانة بالأقاويل >المكتوبة فيها إنّما يرجى من الأقاويل<⁹³⁹ التي أثبتّها أهل الحذق فيه والمباشرة له والخبرة⁹⁴⁰ التامة به. فإنّ أولئك هم الذين يتهيّأ أن تكون أقاويلهم فيها مطابقة للأمر الموجودة لأنهم أثبتوا في كتبهم ما شاهدوه بالحسّ وتحققوا معرفته.

933. B. مشا.

934. B om.

935. B قصامًا

936. B has instead of لما كل .

937. B. يتشاهده.

938. B. به.

939. B om.

940. B. الخيرة.

[3] وأما غيرهم الذين إنَّما تخيَّلوا تلك الأمور⁹⁴¹ من الأقاويل المكتوبة تخيُّلاً ضعيفاً، كما تنخيل خَطَطَ بغداد من لم يشاهدها ولا عرفها إلا من كتابٍ، وكتبوا أمَّا كتبوا فيها على جهة الفضل والتشبع، فلا ينبغي أن يتوقَّع ذلك القدر من أقاويلهم. فإنَّ فاضل الأطباء يقول أنَّ الطمع⁹⁴² في تعلُّم التشريح من الكتاب كالطمع⁹⁴³ في تعلُّم⁹⁴⁴ الملاحاة ونحوها من الكتاب. وإذا كانوا هم أنفسهم لم يتخيَّلوا أمور التشريح التي أثبتوها في كتبهم إلا تخيُّلاً ضعيفاً فكيف ليت شعري يكون حال مَنْ يتعلَّمها من أقاويلهم.

[4] فلذلك لا أرى لأحدٍ من المتعلِّمين أن يروم تعلُّم أمور⁹⁴⁵ التشريح من شيء من أقاويلهم ولا يعدل في ذلك عن أقاويل فاضل الأطباء فيها. وإذا كانت في هذا الحدِّ من قلة الإنتفاع بها فلا فائدة في الإشتغال بتحريرها وتنقيحها.

[5] فلهذه الأسباب رأيتُ أن أضرب صفحاً عن مقايضة أقاويل الرئيس في أمور التشريح بأقاويل فاضل الأطباء والتنبيه⁹⁴⁶ على ما فيها مما شأنه أن يعرض لمن هو بمثابته⁹⁴⁷ ممَّن رام القول فيها من غير مشاهدة لها، من التقصير في الشرح أو الخروج عن الترتيب⁹⁴⁸ الصحيح في الوضع أو التحريف اليسير في النقل وما أشبه ذلك.

[6] وأقتصر على ما جاء فيها ممَّا هو ظاهر الخلاف لما هو مشهور عند الأطباء، ممَّا تضمَّنته أقاويل فاضل الأطباء في كتبه المشهورة وما يبدو فيه من كلامه نفسه نقص أو تناقض أو إختلاف بالجملة

941. B omitted.

942. B omitted.

943. B كالطمع .

944. B omitted. B has a slightly different sense: "Tasting of anatomy through books is like tasting salt through books."

945. B omitted.

946. B التبينه ?

947. B بثأبته ?

948. B التدبير .

وما قد يحتاج إليه من تفسير لفظ او إيضاح قول مشكل وما أشبه ذلك فقط.

CCI, 69

[1] قال الرئيس "ولكن العظم الذي يفرزه الأول أعظم من الذي يفرزه الثاني"⁹⁴⁹.
قد ظنّ قوم أنّ هذا الموضوع من كلام الرئيس ناقص ما قاله⁹⁵⁰ "ثمّ الذي يفرزه الثالث وعظما الوجه
وعظما ثقبى الحنك"⁹⁵¹ وليس الأمر كما ظنّوه لأنّ الرئيس⁹⁵² قال في أوّل هذا الفصل "أمّا عظام
الفكّ الأعلى فيتبيّن عددها مع تبيّننا لدروزه". وهو حقّ لأنّه إنّما تتحدد عظامه بالدروز التي فيه ثمّ أتى
على بيانها كلّها. ولذلك يكون قد استونا⁹⁵³ عدد عظامه كلّها وإن لم يُصرّح بذكرها أو يذكر بعضها.

[2] ونفصل هذه الجملة فنقول أنّه لمّا بيّن أمر الدروز الخمسة وهي القاطع لأعلا الحنك والثلاثة
المبتدئية من ما بين الحاجبين إلى ينتهى الأوسط منها إلى ما بين الثنيتين، وكلّ واحدٍ من الذين عن
جنبتيه إلى ما بين الناب والرابعة اللتين من جهّته، فالمعترض لهذه الثلاثة قبل إنتهائها إلى منابت
الأسنان المذكورة.

[3] تحدّدت بذلك في الفكّ ستة قطع. قطعان أوليتان ثانيتان فيما بين الدروز الثلاثة المبتدئية من ما
بين الحاجبين وبين الدرر المعترض لها. وهما العظام اللذان فيهما ثقبى الحنك. وقطعتان ثانيتان
متحددتان فيما بين المعترض وبين ما تحته من أطراف تلك الثلاثة ومنابت الأسنان، وهما العظامان
المركز فيهما الثنيتان والرابعيتان.

وهذه العظام الأربعة صرّح الرئيس بذكرها وقطعتان ثالثتان عن جنبتي هذه الأربعة ثمّ لمّا بيّن
الدرزين النازلين من الدرر المشترك الأعلى الأخذين إلى ناحيتى العينين وتشعب كلّ واحد منهما إلى
شعبة الثلث انقسمت فيهما كلّ واحد من تلك⁹⁵⁴ القطعتين الثالثتين إلى أربع قطع. ثلث منهم عند

949. D ولكن العظم الذي يفرزه الدرر الأول من الثلاثة اعظم ثم الذي يفرزه الثاني D.

950. P has either مسال or مسال instead of قاله.

951. This is missing in the printed editions of the *Canon*. De Koning seems to have had this passage in the manuscript he was translating (Koning, *Trois Traités*, 464, lines 18ff.).

952. B omitted the entire beginning of this passage.

953. B استو في

954. P تنيك ?

العين وواحدة تحتها. وهي عظم الوجنة المركز فيه باقى الأسنان العليا.

[4] فصارت جملة عظام الفكّ الأعلى المتعدّدة بهذه الدروز اثني عشر عظمًا. وذلك هو عدد عظامه الخاصّة به. وإنّما قلت الخاصّة به لأنّ بعض المشرحين يعدّ من جملة عظامه عظمي الأنف والعظم المعروف بالوتدي كما أخبرنا الفاضل جالينوس.

وهما العظمان اللذان فيهما ثقب الحنك وهما المثلاثان والعظمان اللذان تحتهما المذكور فيهما الشيتان والرباعيتان وهما المتحرّكان وعظما الوجنتين المركز فيهما باقى الأسنان العليا. والعظام الستة التي عند العينين. فقد الصحّ أنّ كلام الرئيس في هذا لا ينقصه شيء بل تامّ كامل.

CCI, 92

قال الرئيس "ثمّ يلتقيان على تقاطع صليبيّ" قوله تقاطع صليبيّ قد يغلط بعض الناظرين في هذا الموضوع فيوهمه أنّه يريد إنهما يتقاطعان في الحقيقة. وليس الأمر كذلك وإنّما هما كما علمنا فاضل الأطباء كخطّين منحنيين موضوعين في سطح واحد تلتقي. حدبتهما دون تقاطع. فيصير شكلهما بعد الإلتقاء المذكور وانقطاع كلّ واحد منهما إلى العين المحاذية لمنشأه هذا الشكل وظاهر أنّ هذا الشكل يشبه التقاطع الصليبي وليس هو تقاطع صليبي بل لا⁹⁵⁵ تقاطع أصلاً. ومما يحقّق أنّه أراد ما ذكرناه قوله بعد: "وقد ذكر غير جالينوس إنهما يلتقيان على التقاطع الصليبي من غير انعطاف"

CCI, 202

قال الرئيس "وبالجملة فإنّ البول الزيتيّ ثلاثة أصناف فإنّه إمّا أن يكون كلّه دسماً أو يكون أسفله فقط أو يكون أعلاه دسماً."

قال المؤلف قال فاضل الأطباء في الثالثة من تفسير الثالثة من إبيديميا الدسومة التي تطفو فوق البول قد رأيناها مراراً كثيرةً وأمّا بول كلّه عن آخره دسماً أو في وسطه شيء دسم فما رأينا قط وأحرى أن لا يكون بول في أسفله شيء دسم لأنّ من شأن كلّ شيء دسم أن يطفو فوق سائر⁹⁵⁶ الرطوباب.

قال ولم يذكر ايضاً بقراط هذا البول في كتاب تقدمة المعرفة على أنّه قد وصف هناك جميع ما

955. P ولا ؟

956. B كلّ.

يعرض في الأمراض الحادة باستقصاء وشرح بين.

CC I, 207

ولذلك يكون ما ذكره الرئيس من الفرق بين هذين البوليين غير كافٍ وتحريف في النقل، إلا أن يكون له تأويلاً بعيداً. كما من عادتنا أن نفعل في حقّه دائماً فنقول أنه إنّما يعنى "بسهولة الخروج" خفة البدن عليه وسهولة الإحتمال له. فأنه بهذا النحو من التأويل يصير مُطابِقاً للأصول.

CC I, 211

قال الرئيس "والعُـبُّبُ⁹⁵⁷ الباقية في علل الكلى تدلّ على طول⁹⁵⁸ لدالاتها على الرياح والزوجة.⁹⁵⁹" وفي بعض النسخ والقُبب بالقاف. الصحيح الذي في النسخة الأولى أعني العُـبُّبُ بالعين غير مُعْجَمة. وهي النفاخات التي تكون على وجه البول وقد ذكرها بقراط في السابعة من الفصول فقال: "من كان فوق بوله عُبُّبٌ دلّ على أنّ علته في كلاه وانذر منها بطول."⁹⁵⁹

CC I, 286

قال الرئيس: "الشبيهة الألوان بالمتقلّبون"

هذا الإسم يعني به الطائر المعروف في بلادنا بابي⁹⁶⁰ قلمون وهو طائر مآتى يكون كثيراً في أسافل أرض مصر في الموضع المعروف منها باليشمور وما يليه وأهل تلك البلاد يسمونه ديك الماء وله ألوان مختلفة أغلبها الزرقة اللازوردية والخضرة وألوانه تتطوس وتنغير بحسب أوضاع البصر وعلى رأسه لطعة حمراء ناصعة وهو ممّا يحتبس في المنازل لحسنه ولأكله الحشرات.

CC II, 30

أنوخلسا

957. P vowels as العُـبُّبُ. This is also the reading Lane seems to have preferred (Lane, *Lexicon*, 1931). Ullmann reads 'ubub (Ullmann, *Wörterbuch*, 548).

958. D طول المرض.

959. D I, 192.

960. P بالبو.

قال الرئيس فيه في لوح الماهية هو خس الحمير ويسمى شنجار وشنكار.

وجدت في النسخ المصححة من كتاب دسقوريدس اسم هذا الدواء أنخسا بالتون ساكنه والخاء معجمة مضمومة والسين غير معجمة. ووجدته في موضع آخر من ذلك الكتاب أنخوسا ولا فرق بينهما لأن الضمة إذا شددت صارت واوا. وكذلك وجدت في الحاوي اعني أنخوسا بالواو.

وجدت في نسخة أخرى من كتاب الرئيس أنوخسا وبهذا الحكم يكون أنوخلسا وأنوخسا تحريف أوقع في اسم هذا الدواء وقوله يسمى شنجار وشنكار أي إذا عرّب لأنه إذا عرّب نطق به تارة بالميم وتارة بالكاف لأنه فارسي وهو في الفارسية بالكاف المعدولة ولا نظير لها في العربية. وقد كتبه قوم شنقار بالقاف وقوم شنكال باللام.

قال فيه ومنه صنف أصفر الورق أحمر اللون. هذا القول أيضا فيه تصحيف وتحريف. وصوابه: أصغر ورق أحمر الثمر شاهدة. قول دسقوريدس في الصنف الثالث منه وقد يكون من أنخسا صنف آخر إلا أنه أصفر من الصنفين إلا ولين وهو شبيه بالصنف الثاني غير أنه أصفر منه وله ثمر أحمر قان. قول الرازي في الحاوي الصنف الآخر منه الذي ورقه أصفر وثمره أحمر قان. وكذلك الذي ذكر من أسماء أصنافه.

وقال فيه في لوح الطبع قال الجالينوس أنوخلسا حار يابس. جالينوس لم يقل ذلك بل⁹⁶¹ قال أن فيه قوئى مختلفة وإنه مع ذلك مبرّد وبين ذلك وأوضحه في السادسة من كتابه. وقد قال الرئيس أن هذا الدواء هو خس الحمار والشنجار. وذكر الشنجار في حرف الشين والحلق التول فيه بأن طبعه بارد في الأولى يابس في الثانية. وذكر خس الحمار في حرف الخاء وقال فيه أن طبعه حار يابس في أول الثانية. وذكر هو فيلوس في حرف الهاء. وقال فيه أنه خس الحمار وأن طبعه بارد رطب وفيه تجفيف وتسخين قليل وبالجملة فأقاوله في طبع هذا الدواء متهافتة جدا.

CC II, 66

جوز جندم. هو كوز كندم بالكاف المعدولة وهو اسم فارسي مركب من كوز وهو الجوز وكندم وهو الحنطة وفي حال التعريب يكتب بالميم تارة وبالكام أخرى.

إنما B. 961.

دار فلفل. قال الرئيس فيه في لوح الماهية: "هو أول ثمر الفلفل."⁹⁶² قال المؤلف: أخبرني غير واحدٍ من الثقات المحصلين من تجار الهند والصين أن الدار فلفل ليس من ثمر شجر الفلفل ولا الفلفل الأبيض من ثمر شجر الأسود ولا ينبت واحدٌ منهما في البلاد التي يخرج منها الفلفل الأسود وأن الدار فلفل إنما يخرج من فوفل وهي من بلاد اللاز من أعمال القص وبهرورا⁹⁶³ وليس بها فلفل.

والفلفل أسود من المنبيادات وليس بها دار فلفل ولا فلفل أبيض. والأبيض من نواحي الصين وبها فلفل أسود خفيف مقاربت لا تحمله التجار لدنائه وهذا الحكم لا يكون ما قاله الرئيس حقاً بل وهماً إلا أن هذا الوهم ليس ممّا يختصّ به الرئيس بل قد سبقه إليه ديسقوريدس وتبعه فيه فاضل الأطباء جالينوس وسائر من أتوا⁹⁶⁴ بعدهما.

وسبب ذلك بعد مساكن القدماء عن منابت هذه الأدوية وضعف الأخبار الواصلة إليهم عنها وإختلالهم بسبب البعد مع تخلف أكثر المخبرين من التجار وقلة تحصيلهم واشتغالهم عن البحث عن أمثال هذه الأشياء وطلب الأرباح.

والرئيس فالظاهر من أمره أنه في غالب الأمر يحسن الظنّ بالرازي ويقلّده فيما يحكيه عن جالينوس وغيره وينقله منسوباً إلى من ينسبه الرازي إليه من غير أن يكشفه من الأصل ولذلك تجده يغلط فيما يغلط فيه الرازي كثيراً وتصحّف ما تصحّف عليه ولهذا ينبغي أن يكتب ...

بيروح ... قال الرئيس "سواء كان معنى هذا الإسم موجوداً أو غير موجود وكثير من الأسماء يدلّ على معانٍ غير موجودة وصورة البيروح الموجود خشبٌ أغبراء في التفتت كبار كالقسط⁹⁶⁵.⁹⁶⁶ قال المؤلف البيروح ينبت في بلادنا كثيراً وقد اقتلعت من أصول ما ينبت منه بمصر وبالإسكندرية عدّة فوجدت صورتها طريةً على ما ذكره ديسقوريدس وجففتها فكاف الجاف منها على ما ذكره الرئيس

962. D I, 438, l. 16.

963. Yaqut does not list a *Nahrūrā*, *Yahrūrā*, *Bahrūrā*, *Tahrūrā* or *Thahrūrā* (cf. Abū 'Abd Allāh Ya'qūb ibn 'Abd Allāh, *Mu'jam*).

964. B اتى.

965. *Qunnabīt* (Lev, and Amar, *Materia Medica*, 367). D كالقنبيط .

966. D I, 509, l. 17.

خلا قوله إلى التفتت فإنها ليست كذلك وعسى الذي اتفقت مشاهدة الرئيس له منها كان عتيقاً
نخرًا.

وأخبرني قوم من أهل الإسكندرية ممن يشتغل بالفلاحة أنه يندر منها ما يكون على صورة الإنسان
فتطلبته منهم قد ذكروا أنهم لا يجدونه إلا إتفاقاً لأنه ليس لهم فيما يظهر من نباته على وجه الأرض
علامة يستدلون بها على ما هو من أصوله كذلك فيقتلعونه. وأخبرني شيخنا أبو نصر عدنان بن العين
زربي أنه شاهد منه أصلاً ببيمارستان بغداد شبيهاً جداً بصورة الإنسان لا يغادرُ منها شيئاً وقدره
كقدر الطفل الصغير وأن الذي جلبه رجل من أهل البادية وذكر أنه وجده في بريّة⁹⁶⁷ سنجان وأخبرني
بذلك أيضاً غيره ممن شاهدته.

CC II, 147

نوشادر. قال الرئيس في لوح الإختيار أجوده الفيكاني الصافي البلوري.

هو الفيكاني بالفاء مخففة وهو ضربٌ من النوشادر معدني ومعدنه بين الصين وكاشغر في موضع
يُعرف بكون⁹⁶⁸ ويتكون في باطن شقيف جبل تحته مستنقع ماء. وأخبرني بذلك رجل من أهل
المشرق له اشتغال بشيء من أحوال الأجسام المعدنية والمصبوغة وذكر أنه وصل إلى معدينه
المذكور وشاهره.

CC II, 177

فاوينا. قال المؤلف: أخبرني رجل من صيادلة اليونانيين المستعربين أن اسم هذا الدواء الصحيح
عندهم فاونيا يتقدم النون على الياء.

CC II, 181

صفصاف. قال الرئيس فيه في لوح الماهية وهو الخلاف. قال المؤلف⁹⁶⁹ الصفصاف أنواعٌ
والخلاف واحدٌ منها وقد ذكره الأطباء في كتبهم والمشهور بهذا الاسم في وقتنا هذا شجرٌ شبه
الصفصاف في إستقامة أغصانه وسرعة يسوه إلا أن ورقه أطول وأعرض وورق الصفصاف يخرج في

967. P بريه.

968. P and B: بكو. The following word has a very similar ending (ون) so that the تن was probably dropped by the copyist who may not have been familiar with the name.

969. B omitted.

طول أغصانه زَهْرٌ مستطيل الشكل لونه أبيض إلى الصفرة يميل إلى رائحة السوس الأبيض وذلك قبل خروج ورقه وليس له ثمر.

وأهل الشام يسمونه الخَلاَف بتشديد اللام وربما سموه البان ويستقطنون من زهره ماء يتطيّبون به كما يتطيّب بماء الورد ويتخذون منه دهنًا يسمونه أيضًا دهن البان وقد نُقِل في هذا الوقت إلى بلادنا وغُرِس في بعض بساتينها.

CC II, 188

رعى الحمام والإبل. قال الرئيس فيه في لوح الماهية: "حشيش له حبّ كحبّ الآس أو قريباً منه لكنه أشدّ منه غيرة وتشبه لبّه في اللون والطعم العدس المقشر وفيه أدنى حلاوة."⁹⁷⁰

قال المؤلف: ذكر ديسقوريدس رعى الإبل في الثالثة من كتابه فقال أنّه نباتٌ له شاقٌ مروى ينشعبُ منه شعبٌ كثيرةٌ وورقه في عرض الأصبع طوال حدًّا كورق الحبة الخضراء منحينةً إلى خارج فيها خشونة يسيرة وعلى شعبه أكاليل كأكاليل السبت وزهرٌ لونه أصفرٌ وبزر كبزر السبت وطول أصله نحوًا من ثلث أصابع في غلظ اصبع لونه أبيض وطعمه حلوٌ يوكل هو والساق إذا كان رخصًا.

وذكر رعى الحمام في الرابع منه فقال أنّه ينبت في أماكن فيها ماء وإنّه من المستأنف كونه في كلّ سنةً طوله نحو من شبر أو أكبر قليلًا. وله ورقٌ مشرف لونه إلى البياض ما هو نباتٌ من الساق والكثير ما يوجد له أصل واحد وساق واحد.

وظاهرٌ من هذين القولين انهما نوعان متباينان لا نوعًا واحدًا كما وصفهما الرئيس وكذلك بين ويظهر من كلام فاضل الأطباء ثمّ الذي ذكره الرئيس لا يطابق ما وصف به ديسقوريدس واحدًا منهما لأنّ الرئيس يقول أنّ لهذا النبات حبّ كحبّ الآس ولم يذكر ذلك ديسقوريدس ولا جالينوس ولا غيرهما فيما علمتُ وكذلك ما ذكره من طبعهما وخواصهما فإنّه يقول أنّه حار في الأوّل رطب في الثانية وجالينوس يقول أنّ رعى الإبل حار لطيف ورعى الحمام يابس. يقول أنّ الإبل الذي نزعاها لا يضرّها سمُّ الهوام والقدمات إنّما وصفوا بهذه الخاصية رعى الإبل خاصّةً والرئيس يقول أنّه يسود الشعر ولم يذكر واحدًا منهما بهذه الخاصية القدمات ولا غيرهم من المؤلفين في الأدوية فيما علمت.

970. D I, 662.

وبالجملة فإنّ كلامه فيهما غير سديد.

CC II, 202

ترمس. قال الرئيس فيه في لوح الماهيّة هو الباقي المصريّ.

قال المؤلف: هذا وهمٌ قد سبقه إليه أكثر المؤلفين في الأدوية المفردة لأنهم لم يعرفوا الباقي المصريّ. ولم يقع عليه فيمن عرفته من المحدثين غير أبي الحسن على بن رضوان فإنه قد ذكره في مواضع من كتبه وهو ثمر نباتٍ يقوم في المياه القائمة في أسافل أرض مصر يعرفه أهل تلك البلاد بالجبور والجامسة.

CC III, 14

قال الرئيس فيه “والنرجسُ والسوسنُ والأقحوان”⁹⁷¹. وفي نسخة أخرى “والزعفران”. وفي نسخة أخرى “والأرغوان”⁹⁷².

الأقحوان والزعفران كل واحدٍ منهما دواء منضجٌ مُحلّلٌ مقوٌّ وهما دواء إن متمكّنان في هذا المحلّ.

فأمّا الأرغوان فالظاهر أنّه تصحيف الزعفران وفي الحواشي العراقية: “الأرغوان هو زهر شجرة معروفةٍ بإصفهان وغيرها. لونها إلى حمرة خفيفة تمتلى بتلك الزهرة جميع الشجرة في الربيع.”

CC III, 15

قال الرئيس “وأمّا المُسهلات الرقيقة لتنقية الرأس فهي الشبيارات.”⁹⁷³ شبيار بالشين المة والياء بعد الباء اسم فارسيّ، مركّب من شب ومعناه الليل وباره ومعناه في اللغة الفهلويّة القديمة الدواء. وقد أسقطوا الهاء تخفيفاً فقالوا شبيار الدواء الذي يوافق أخذه ليلاً والشبيارات جمعه وأصله صبر ومصطكى.

971. D II, 31, l. 8.

972. P and B both have الارغوان.

973. D II, 33 l. 8.

قال الرئيس فيه "ويقع فيها الهليلج ليمنع البجار الحاد الذي يتولّد في المعدة"

الهليلج إذا وقع في تركيب الحبوب المراد منها تنقية الرأس خاصة قلل تبخيرها إليه بتقويته لقمّ المعدة بقوة قبضه وعفوصته فقال بذلك تنقيتها له وهذا ضرب من فساد التركيب لا يقع فيه حذاق الأطباء في تركيبهم المسهلات بل الذي ينبغي ضده.

فهو أن يُخلط بمنقيات الدماغ ما فيه إرخاء لقمّ المعدة وإعانة على التبخير واتصال⁹⁷⁴ تقويتها بسرعة إلى الرأس مثل الزعفران لأن ذلك ممّا يجعل تنقيتها له أبلغ وأكثر حتى أن ابن زهر الاندلسي كان يُلقى فيها الشيء اليسير من الثوم وربما سقاها بالخمير أو بماء قد نفع⁹⁷⁵ فيه وبنثب⁹⁷⁶ إلى أن ينشئ ويأخذ في العليان لما في ذلك من الأسراع بابخرتها إلى الدماغ.

وكان فعله ذلك قياسًا على خلط أئمة القدماء من الأطباء الشيء اليسير من الرازيانج في أدوية المثانة ليسرع إيصالها وليس لمعترض أن يعترض هذا القول بخلط السنبل بالمصطكي وبالصبر لأنه إذا فكر مع نفسه لم يجد الهليلج لطافتها ولا لهما شدة قبضه وشدة لقمّ المعدة والأولي بالهليلج ونحوه ممّا يمنع البخار الحاد من الترقّي إلى الدماغ أن يستعمل بعد التنقية بتلك الحبوب وهذا أمر ظاهر والصواب فيه واضح يّين.

كلام كلي في الصداع. قال الرئيس "العضو يصل بينه وبين الدماغ واشجة العصب ... الواشجة هي المشتبكة. قال الجوهرى "الواشجة: الرّحم المُشْتَبِكَة".⁹⁷⁷ ووشجت العروق والأعصاب أي اشتبكت.

قال الرئيس فيه "ومنه ما سببه سابق قد وصل" اي صار سببًا واصلا. قد وصل معناه اي صار سببًا

974. P. ايصال

975. P. نفع؟

976. B. يبيت

977. Jawharī, Ṣihāḥ, vol. I, 347.

CC III, 26

في أصناف الصداع الكائن من سوء المزاج. قال الرئيس: "والمزاج الرطب بما هو رطب فليس مؤلماً إلا أن تكون هناك مادة رطبة⁹⁷⁸ من جهة تبخير أو أحداث ريح يفعل تفرق الإتصال"

المادة الرطبة قد تكون كثيرة المقدار فتولم بالتمديد. ولم ذكر ذلك, وصوابه هذا القول أن يقول "إلا أن يكون هناك مادة رطبة مولمه من تمديدها وإثقالها أو أحداث ريحاً تفعل تفرق الاتصال"

CC III, 27

قال الرئيس "أو مجمدات طبيعياً"⁹⁷⁹ الحواشي العراقية لا أرى هذه الزيادة جيدة. فإن كان لها معنى فعساه مزاج الشيخوخة البارد.

CC III, 28

تفصيل أصناف الصداع الكائن بالمشاركة

قال الرئيس فيه "ورياح الأفرسة"⁹⁸⁰

الألف في هذه اللفظة زيادة وقد جات كذلك في جميع كتب الطبّ التي عرفناها وهو غلط وقع لهم. وقد ذكر ذلك ونبه عليه بن جناح في كتاب التلخيص. وصوابها الفرسة بالسين, والفرصة بالصاد.

قال الجوهرى: "الفرسة ريح تأخذ في العنق فتفرسها" أي تدقّها. وقال أيضاً: "والفرصة ريح [يكون منها]⁹⁸¹ الحذب".

وليس الافرسة إسم جمع لأنّ ما جاء على فعله لا يحوز جمعه على أفعله. وإنّما يجمع على فعلات مثل قصعة وقصعات وجفنه وجفنات. وأمّا على فعالٍ مثل قصعة وقصاع وصحفة وصحاف أو على

978. D adds مؤلمة Cf. correction IJ makes.

979. Apparently not in D.

980. D II, 49, l. 4 from below.

981. Not in the manuscripts but in Jawharī, *Ṣiḥāh*, vol. III, 1048.

CC III, 29

قال الرئيس "والخمار يصدع بلا تبخير⁹⁸² ويسرع إليه البرد لتخلخل أطرافه."⁹⁸³

كذا وجدتُ في النسخ التي وقفتُ عليها وهو كلام فاسد بعيد من الصواب ويشبه أن يكون سهو
ناسخ وصوابه "والخمار يصدع بالتبخير ويسرع إلى صاحبه البرد لتخلخل أطرافه."

CC III, 30

قال الرئيس "والتدبير اللطيف ضار بمن⁹⁸⁴ صداعه بسبب العلاج الغليظ للمرار"⁹⁸⁵. كذا وجدتُ هذا
الموضع أيضًا في تلك النسخ ووجدته قد أسقط من بعضها.

قوله "العلاج الغليظ" على جهة الأصلاح وبقى هكذا: "والتدبير اللطيف ضار بمن صداعه بسبب
المرار".

وهذا ليس بأصلاح والأشبه والأقرب أن يكون قد عرض في هذا الموضع سهو أيضًا في قوله
"الغليظ" وأن صوابه "المغلظ" ويكون قوله "سبب" بمعنى يوجد حتى يكون القول هكذا:

"والتدبير اللطيف ضار بمن صداعه بسبب التدبير المغلظ للمراري", أي التدبير اللطيف يضر بمن
كان صداعه يقتضى تغليظ مرارة, وهو الذي يكون سبب صداعه هيجان المرار فيه لرقته وجدته
وذلك حقّ فإنه إذا أصلح على هذا النحو استقام الكلام وصح معناه.

CC III, 31

982. Note that D simply drops the problematic *bi-lā tabkhīr*. Ibn Jumay' seems not to have been the only one who was aware of this problem even though he solved it in a more satisfying way.

983. D II, 50, l. 23. It is unclear why Ibn Jumay' put this under the *faṣl* "general discourse on symptoms of different types of headaches and its subdivisions" whereas in D we find it under the previous *faṣl* ("on types of headaches which are caused by movements"). Perhaps D is later and Ibn Jumay' refers to an earlier division of the Canon not preserved in D.

984. D لمن.

985. D والتدبير اللطيف ضار لمن صداعه يوجب العلاج بالتدبير الغليظ بسبب المرار.

علاج الصداع الحار

ينبغي ان يترجم هذا الفصل, اعنى التاسع من المقالة الثانية من الفن الاول, بهذه الترجمة: في معالجات اصناف الصداع حتى يكون "علاج الصداع الحار بمادة او بغير مادة وسائر ما ذكره بعد من معالجات اصناف الصداع" الى قوله "في الصداع تاليه والجودة داخله فيه".

CC III, 32

قال الرئيس وقيل "المرفقة النيشويية" "وفي نسخة أخرى" النيشوقية⁹⁸⁶<⁹⁸⁷

النيشو اسم فارسيّ. يسمّى به على ما سمعته من جماعة من العجم ضرب من الإجاج والقراصيا صغير المقدار شديد الحُموضة يؤكل طرياً ومُقَدَّرًا ويُطبخ كما يطبخ بالأجاج والقراصيا. وأما اختلاف النسختين الفارسيّة ليس فيها قاف وإنما هي للتعريب وكلاهما جازين.

CC III, 33

قال الرئيس في علاج الصداع البارد بغير مادة أو بمادة "ومما ينفع فيه حبّ القرنفل" حبّ القرنفل هو حبّ الطيب كالمذكور في اقرباذين سابور بن سهل.

CC III, 34

قال الرئيس فيه ومن الأطلية الجيدة لكلّ مزمن من الخوذة والشقيقة الباردتين أن تُطليا بالحجر المصري هذا الحجر هو الذي ذكره جالينوس في التاسعة من كتابه في قوى الأدوية المفردة وقال أنه في بلاد مصر ويستعمله الناس في قصارة الكتان وغسله.

CC III, 35

قال الرئيس فيه ايضاً صبر ومرّ وفرييون وجنديدستر وايشمون وقسط وعافر قرحا وفلفل يطلى بشراب عتيق.

وفي نسخة أخرى في موضع أيشمون أفيون. وجدتُ نسخة هذا الطلاء في الحاوى. كما هو هاهنا,

986. D II, 56, l. 7 reads النيشوقية.

987. B omitted.

اعنى في متن الكتاب, أفثيمون وفي الحاشيه أفيون والأفيون أليق.

وقد تقدّم خلطه في طلاء أخر لهذا المرض ذكره قبل هذا الطلي. والأفيثمون غير منكر في هذا الموضوع لأنّ الرئيس نفسه قد قال في قوانين علاج الصداع: وربما ضمنا الرأس بعد الحلق بادوية مُسهلةً لجنس الخلط الذي فيه.

CC III, 36

وقال الرئيس في علاج الصداع اليابس "أما الصُداع اليابس الذي يكون من مادة صَفْرَاوِيَّة او دَمُويَّة"⁹⁸⁸ وفي بعض النسخ "او دَمُويَّة" "او سوداوية" وهو الجيد لان الصداع اليابس عن مادة دمويه لا يكون.

CC III, 38

وقال الرئيس في علاج الصُداع الكاين عرضًا للحميات والامراض: "وأما ربط الأطراف وذلكها وإستعمال الحمور". الحمور بحاء غير مُعجمة مفتوحة ... وهو يعنى به الأدوية المعروفة عند الأطباء بالحمرة.

CC III, 39

في الشقيقة. قال الرئيس فيه "ويَحُدُّها جالينوس بأنّها الساترة المتوسّطة"⁹⁸⁹

كذا وجدنا هذا الموضوع في جميع النسخ التي وقفنا عليها وهو كلام لا معنى له. والظاهر أنّه قد اتّفق فيه تصحيف ونقص وصوابه: "ويحدّها جالينوس بالانتهاء إلى الشان المتوسّطة"

شاهده قول جالينوس في الثانية من كتاب الميامر: "قد يعرض في نصف الرأس علّة مُوجِعة مرّة تكون في الجانب الأيمن ومرّة تكون في الجانب الأيسر وحَدُّها الذي ينتهى إليه هو الشان المُمتدّ في الطول الرأس.

988. Cf. D II, 61.

989. D II, 74, l. 10f.

قال الرئيس: "وربما احتيج إلى أن يخرج الدم بالفصد إلى الغشى من القيفال أو من العرق الكتفي الذي من خلف فإنه أبلغ لأنه يمنع الدم أن يرتفع إلى الرأس."⁹⁹⁰ هذا القول فيه تحريف في النقل في قوله "أو من العرق الكتفي الذي من خلف" أنه مأخوذ من قول الرازي في الحاوي الذي هذه حكايته:

قال الرازي: لي فصد العرق الكتفي من خلف انفع من فصده في المرفق لأنه حينئذٍ يقطع جرية الدم إلى الرأس وبهذا انحسب الرعاف إلا الذي يكون من العروق الضواري.

ومن قوله أيضا الذي هذه حكايته سماع لي للرعاف الشديد الذي لا تنجب فيه الأدوية يطلب القيفال من الكتف ويفصد هناك فيحبس الدم مكانه.

والمفهوم من هذين القولين أن فصد القيفال ممّا يلي الكتف من خلف يقطع الرعاف. وليس هذا هو المفهوم من قول الرئيس لأنّ قوله "أو من العرق الكتفي الذي من خلف" يفهم منه أنه عرق آخر غير القيقال. وليس الأمر كذلك. وبهذا الحكم ينبغي أن يفهم هذا، ويكون القول هكذا ويطابق هذين القولين: "وربما احتيج أن يخرج الدم بالفصد إلى الغشى من القيفال وهو العرق الكتفي من خلف."

في تشريح القلب. قال الرئيس: "فلا يوجد غشاء يدانيه في الشخونة."⁹⁹¹ اظنه الشخانة أي الغلظ والصلابة. قال الجوهري "تخن الشيء أي صلب غلظ فهو تخين".

Colophon of the Princeton copy

وقد تمّ الكلام على جميع الكتاب على ما شرطه المؤلف وبتمامه تمّ التكاثر ولله المجد والمنّة سرمدًا وكُتِبَ بالقاهرة العباسيّة في الدولة العادلّية في مدّة يسيرة انتهأؤها سلخ شعبان سنة ستمائة للهجرة.

ونقلته من خطّ مصنّفه ولم أقابله للعجلة والسفر.

990. Cf. D II, 239, l. 17.

991. D II, 370, l. 15. French trans. Koning, *Trois Traités*, 686.

T = *Maqālah fī munāfi' al-līmū*, Turkey, Topkapı Palace, Aḥmad III 2136, fols. 113aff

A = *Fī khawāṣ al-līmū*, Damascus, al-Assad Library, 661 m/f., pp. 114ff.

[1] قال هبة الله ذكرت، أيها الأخ الكريم والصديق الحميم ... [تعجبك]⁹⁹² من إزراء قومٍ على المصريين في تصريفهم الليموا في كثيرٍ من أغراضهم [واعتمادهم عليه في علاج كثيرٍ من أمراضهم]⁹⁹³ مع ظهور جليل منافعها إذا وُضع في مواضعه، وتمويههم في الاحتجاج عليهم بأنه لو كان ما يذكرونه من كثرة منفعه على ما يظنون له لكان الأقدمون من الأطباء قد ذكروه في ما دونوه ولم يُهملوا أمره ويطرحوه. وسألتني بيانَ تزييف هذا التمويه برسالة أصنّفها فيه وقد كتبتُ هذه الرسالة إليك لئلا يُظنَّ بي ظناً عليك وباللّهِ أستعين وأعتصم ممّا يشين ويضمّ.⁹⁹⁴

[2] فأقول إن القدماء وإن كانوا قد أفادونا الأصول التي تستنبط بها معرفة جميع ما يُحتاج إلى استنباط معرفته⁹⁹⁵ من قوى الأدوية ومنافعها ويمتحن صحته⁹⁹⁶ ما استنبطه غيرنا منها فإنهم لم يذكروا جميع أنواع الأدوية التي يكثر أطباء جل الأقطار الآن استعمالها ويعتمدون⁹⁹⁷ في أكثر أعمالهم عليها بل ولا استوعبوا جميع منافع ما ذكروه منها لكن أخلّوا ببعضها فلم يذكروه وبعض منافع ما ذكروه [منها]⁹⁹⁸ فلم يعرفوه.

[3] وبيان ذلك أن⁹⁹⁹ الفاضل جالينوس لم يذكر في شيءٍ من كتبه التي تأدّت إلينا شيئاً¹⁰⁰⁰ من [أصناف]¹⁰⁰¹ الهليلجات ولا التربد ولا الشنا ولا البلاذر ولا القرنفل ولا السورنجان ولا التمر الهندي

992. Added in the margin of T.

993. Added in the margin of T.

994. The paragraph is not preserved in A.

995. A omitted.

996. صحته.

997. يعتمدون.

998. Added in the margin of T.

999. بأن.

1000. A omitted.

1001. Added in the margin of T.

ولا الترنجيين ولا الشيرخشت ولا الكشوث ولا الطباشير ولا البوزيدان ولا الصندل ولا الدرورنج¹⁰⁰²
ولا البهمن ولا الكافور ولا الجوزا ولا الخولنجان إلى غير ذلك من أدوية كثيرة يطول ذكرها.

[4] وإذا كان هذا حال جالينوس مع وقوع الإجماع¹⁰⁰³ على علمه وفضله وحصول الإقرار بتقدمه
ونبله وأنه المبرز¹⁰⁰⁴ في هذه الصناعة والباذل في استكمالها كل الوسع والاستطاعة فكيف ليت
شعري [يكون]¹⁰⁰⁵ غيره ممن ينحطّ عن طبقته.

[5] بل لولا أن المتقدم من الأذكىاء الفائقي الفطر أدرك اليسير وقّيده ثم تناوله¹⁰⁰⁶ من أتى بعده من
الصحيحى النظر فهذبه وزيّده وبالجملة، لولا تعاون القرائح الجيّدة على الاستنباط والاستخراج
وتعاقد الفكر الرائقة على الاستثمار والاستنتاج لما تمّت الصنائع وكملت بل لبادت وبطلت.
ولذلك، فلا يكون عجباً أن يستتمّ الآخر ما لم يستكمله الأول ولا غريباً¹⁰⁰⁷ أن يستدرك المتأخّر ما
أغفله¹⁰⁰⁸ المتقدم.

[6] بل يجب على [كل]¹⁰⁰⁹ من تحلّى بهذه الصناعة الاجتهاد في تهذيب ما لم يهذّبه من تقدّمه
بزيادة البحث والتنقيير وطلب الزيادة ولو بالأمر اليسير الحقيق. وكيف يبخر حظّ المحدثين أو ينكر
فضل المتأخّرين وقد استخرجوا من الغرائب ما أينعت به عروش المتقدمين وأثمرت واستنبطوا من
العجائب ما حسنت به حدائقهم وتجمّلت.

[7] ولو ذهبُ أعدّد ما لهم من المآثر وما ظفروا به من المحاسن والمفاخر لصرتُ إلى إكثار¹⁰¹⁰ ربّما
أخرج إلى إضجار.¹⁰¹¹ وإنمّا غلط كثير من الناس في أمرهم أن الحاضر أبداً محسود مذموم والغابر
مغبوط مرّحوم. ولله درّ القائل:

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1002. A. الدرورنج T.
1003. A. الاجماع.
1004. T. المبرز.
1005. Added in the margin of T.
1006. A. بناء؟
1007. T. معنياً.
1008. A. علقه.
1009. Added in the margin of T.
1010. A. اكثارهما.
1011. A. اصحار.

ولع الناس بامتداح القديم وبذمّ الجديد غير الذميم

ليس إلا لأنهم حسدوا الحيّ وحنّوا على العظام الرميم

[8] فالذي ينبغي للطبيب إذا مرّ بسمعه ذكر منفعة أو منافع منسوبة إلى دواء لم يعرفه أو لدواء قد عرفه أن لا يبادر إلى إنكارها فإنّ ذلك من فعل القلق العجول بل الضعيف الفكر الجهول بل ينبغي أن يُروى في ذلك ويتأمله تأملاً شافياً ويبحث عن صدقه أو كذبه بحثاً كافياً ويمتحنه بالأصول القياسية والطرق التجريبية التي كفاه جالينوس كلفة استخراجها وهداه إلى طريق الانتفاع بها واستنتاجها فإنّ ثبت له صحته قبله وإن ثبت له استحالته بطله¹⁰¹² وإن احتمل الأمران كرّر النظر فيه وبالغ في تقصّيه فإنّه كثيراً ما يتفق أن يُنسب إلى شيء منفعة ما فتستبعدها ببادئ الرأي والفهم وينبو عن قبولها الفهم/الوهم فإذا أُجيدَ التقصّي عن سببها والبحث عن مُقتضاها وموجبها ثبتت صحتها وتبيّنت حقيقتها.

مثال ذلك ما ذكره بُقراط من نفع صبّ الماء البارد على صاحب الكُزاز فإنّه يكاد لغرابته أن يقطع ببادئ الرأي بخروجه عن حكم الإمكان والجواز فإذا وُقف على سرّه وتبيّن باطن أمره وهو أنّ الماء البارد يحقن ببرده الحار الغريزي ويعكس حركة الروح الحيواني فيجتمع في الباطن ويقوى ويستحمّ ويكترّ بحميّة وقوّة ناكصاً على أعقابه فيعمل عملاً قوياً في الكُزاز وأسبابه فعند ذلك يسهل أمره عليه و يصدّق بما نُسب من منفعة إليه .

1012. أ.بطله A.

[1] الأول: أن كثيراً من المباحث تلخصت بمجاورته ومحاورته وتهذبت بمنافسته ومنافشته. الثاني: ليكون قضا لبعض حقوقه. الثالث: لتوقفي بقوته في هذا العلم وتحقيقه.

[2] فإني وجدته واقفاً على فروع هذا العلم وأصوله لا سيما على أبواب هذا الكتاب وفصوله فعرفت أنه هو الذي يعرف قدر ما استخرجته من الكتب العلمية والغرائب الحكمية التي توجد في شيء من المصنّفات التي للقدماء والمتأخرين ولم يشتمل عليها كتاب أحد من السابقين.

[3] الطب علم يتعرف منه أحوال بدن الإنسان من جهة ما يصح ويحول عن الصح ليحفظ الصحة حاصلة وتسترد زائلة، التفسير: في هذا الموضوع مباحث، البحث الأول. لماذا قال الطب علم يتعرف منه أحوال بدن الإنسان، ولم يقل الطب علم تلخيص أحوال بدن الإنسان. جوابه أنه اصطلاح على تخصيص اسم العلم بإدراك الكليات والمعرفة بإدراك الجزئيات في الفصل الثاني من كتاب البرهان من الشفاء.

وإذا ثبت ذلك فنقول المذكور في الكتب الطبية أبداً يكون أموراً كليّةً فإني تعليم أصناف الحميات مثلاً ومقدماتها وأسبابها وعلاماتها وعلاجاتها على ما يذكر في الكتب الطبية تكون كليّة، ثم أن أحوال الأشخاص مختلفة فإن لكل مزاج علاجاً خاصاً لا يليق إلا به والمقصود من علم الطب إنما هو التمكّن من المعالجات الحريية للأشخاص الحريية إلا أن العلم بالقوانين الكليّة الموردة في الكتب تكون سبباً لأن يحصل للطبيب معرفة خاصة بأحوال بدن شخص خاص فالطب هو العلم الكلي بالأمر المشتركة فيها بين الأشخاص الإنسانية والغرض من ذلك العلم الكلي حصول المعرفة بأحوال شخصٍ وشخصٍ ومرضٍ ومرضٍ بعينه. فإدراك الأحوال الجزئية غير داخله في علم الطب ولكنها هي المقصورة منه فلماذا قال الطب علم يتعرف منه أحوال بدن الإنسان أي الطب هو العلم الكلي الذي يكتسب منه إدراك الأحوال الجزئية لأبدان الجزئية.

[4] حاشية ذكر في النسخة الأولى في كيفية تركيب هذا الحدّ قوله الطبّ هو علم إنّما قدم العلم لأنّه جنس.

[5] البحث السادس فيما حدّ به جالينوس الطبّ. قال الطبّ معرفة الأشياء المنسوبة إلى الصّحة والمرض والحالة¹⁰¹³ التي ليست بصّحة والأمراض ولا شكّ أنّ معرفة الأغذية والأدوية والأسباب والعلامات مندرجة في ذلك وله دلالة عليها بالتضمن ويدخل فيه ايضاً طبّ سائر الحيوانات.

فإن قيل هذا الحدّ باطل طرداً وعكساً. أمّا الطرد فلان كلّ ما ينسب إلى الأحوال الثلاثة لو كان طبّاً لكان العلم الطبيعيّ طبّاً لأنّ الجسم والحركة والزمان والمكان منتسبة بوجه ما إلى هذه الأمور بل العلم الألهيّ ايضاً فإنّ الله سبحانه وتعالى له نسبة إلى هذه الأمور بالفاعليّة بوسط أو بغير وسط. وأمّا العكس فلان هذه الأحوال الثلاثة غير منتسبة إلى أنفسها لإستحالة إنتساب الشيء إلى نفسه فوجب أنّ لا يكون العلم بالصّحة والمرض والحالة المتوسّطة من الطبّ.

وجواب الأوّل أنّ تلك الأمور منتسبة إلى الصّحة والمرض لا من حيث أنّها صّحة أو مرض لكن من حيث أنّها حادثة أو ممكنة ونحن إنّما اعتبرنا الأمور المنتسبة إليها من حيث هي هي.

وجواب الثاني أنّ المطلوب من الصّحة والمرض تصوّر حدودهما وأحكامها وكلّ ذلك مغاير لما هياتها وحدّه محمد بن ذكرى الرازي في شكوكه بأنّه علم الأشياء التي يحتاج إليها في حفظ الصّحة والزينة ونفى الأمراض بمقدار ما في وسع البشر وبحسب ما يمكن من ذلك.

[6] ويمكن أن يقال في حدّ الطبّ أنّه جملة العلوم بالأمور التي معها يمكن حفظ الصّحة أن كانت حاصله واستردادها أن كانت زائلة بقدر الأمكان وعلى هذه العبارة لا يتوجه شيء من الشكوك المذكورة.

1013. حال Manuscript has

3. Illustrations

The illustrations on the next two pages reproduce D II, 44-75. Passages commented on by Ibn Jumay' are highlighted in gray and references to his comments are given in the margins.

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