Ibn Ghaylân al-Balkhî was first brought to attention recently when a work of his was presented as evidence of the spread of Avicennan philosophy, ‘the triumph of Avicennism’, during the sixth/twelfth century. More recently, this figure has been further contextualized and shown to be of intrinsic interest as evidence and a main representative of a previously-unknown post-Ghazâlian current that, despite the later obscurity of its exponents, played an immensely vital role in the development of the philosophical and theological traditions by paving the way for the definitive transformation initiated by Fâkhr al-Dîn al-Râzî later in the century. Further light is shed on this current and its wider milieu in Ibn Ghaylân’s critical gloss on the Book of Simple Drugs in Avicenna’s Canon of Medicine, published and examined for the first time in the present article. This gloss, as will become clear below, must be one of the most unusual texts in the history of Islamic thought: it shows a philosophically and scientifically learned theologian, inspired by al-Ghazâli’s criticism of philosophy, veering away from the usual problems of metaphysics and natural philosophy and instead attacking Avicenna in the field of medicine, his ultimate goals being to demonstrate that Avicenna’s works are unreliable and should not be treated as though

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they were infallible, and to expose the prevalence, in the philosophical tradition, of uncritical imitation (taqlid), as opposed to dispassionate intellectual enquiry. In what follows, I begin by offering a revised reading of the author’s context, career and wider project, before examining the text at hand and its overall argument. An edition of the Arabic text with facing translation are provided at the end of the article.

I. THE POST-GHAZÂLIAN CONTEXT

The mainstream of early sixth/twelfth-century Ash’arism in the east of the Muslim world continued largely unaffected by the major developments initiated by al-Ghazâlî (d. 505/1111) at the turn of the century. This mainstream current, the continuation of the classical tradition, is represented by al-Juwayni’s student Abû l-Qâsim al-Ansârî (d. 512/1118), who following the death of his teacher became the most important Ash’ârî in Iran, his student Diyâ’ al-Dîn al-Makkî (d. ca. 559/1163–64), and the latter’s son and student Fâkhr al-Dîn al-Râzî (d. 606/1210) in the earliest phase of his career. In contrast to al-Ghazâlî, these theologians made relatively little effort to engage with the philosophical tradition, but continued to operate within the classical kalâm theological tradition, arguing primarily with, and against, the Basran Mu’tazila.5

The early-to-mid sixth/twelfth century, as I argue in a previous study, also witnessed the emergence of a significant and distinct current, which can best be described as Ghazâlian.6 The two main representatives of this


5 In the case of al-Râzî, again, this is true only of the earliest phase of his career. See my forthcoming ‘Al-Râzî’s Earliest Kalâm Work’.

previously-unknown current, whom I have so far identified, are Sharaf al-Din al-Mas’udi and Ibn Ghaylân al-Balkhi, the subject of the present article. The Ghazalian current emerged as both a product of, and a reaction to, the great spread and appeal that Avicennan philosophy had achieved by the beginning of the sixth/twelfth century, even within non-philosophical orthodox circles. It was instigated chiefly by the manner in which al-Ghazali approached philosophy in some of his works, but secondarily by the philosophy of Abû l-Barakât al-Baghdâdi (d. 560/1165), which presented an alternative to Avicennan philosophy, more harmonious in some respects with Sunni orthodoxy.7

Taking their cue mainly from al-Ghazali, members of this movement engaged seriously, yet critically, in the study of philosophy and the sciences, especially through the works of Avicenna. Their outlook was shaped, first and foremost, not by his al-Iqtisâd fi l-i’tiqâd, a summa of usûl al-dîn, but by the pointedly combative Tahâfu’t al-falâsifa, which he himself considers to represent the epitome of his kalâm output.8 In contrast to their mainstream classical Ash’ari predecessors and contemporaries, their staple genre was, hence, not the general, traditionally-structured theological summa, but the critical commentary, or in other words the ‘doubts’ (shukûk) and the ‘refutation’ (radd) genres. Ibn Ghaylân and al-Mas’udi go even further than al-Ghazali in that their known philosophico-theological writings exhibit no interest in either the positive exposition of theological doctrines or debate with the Mu’tazila, but are dedicated decidedly to the criticism of Avicenna’s works and doctrines. They were effectively career critics of Avicenna.

That the writings of Ibn Ghaylân and al-Mas’udi are not independent of each other, but attest to the presence of a distinct current, or movement, in which they were the two central figures, is confirmed not only by the various similarities between their output, but furthermore by a variety of circumstantial evidence, not least the fact that they appear to have been colleagues and in direct contact with each other. Ibn Ghaylân, in one place, refers to al-Mas’udi as a major authority and cites a critical


commentary he wrote on Avicenna’s *al-Ishārāt wa-l-tanbihāt*. Both figures, furthermore, were unfortunate enough to feature as the prime targets for the scathing criticism that Fakhr al-Dīn al-Rāzī, their junior by three or four decades, directed at some hapless contemporaries whom he met, and with whom he debated, during his travels in Transoxania.

Though representing a current, these two figures nonetheless differed in their approaches to Avicennan philosophy. While Ibn Ghaylān was motivated, as he himself indicates, primarily by a desire to defend orthodoxy against the false doctrines advocated by Avicenna, al-Masʿūdī combines that motive with a more philosophical and scientific outlook, which leads him often to criticize certain Avicennan doctrines and arguments on purely philosophical, rather than apologetic, grounds and to offer philosophical alternatives to them. It would not be uncharitable to describe both stances as immature, each in its own peculiar way: that of Ibn Ghaylān in its fixation on refutation, and that of al-Masʿūdī in the relative ambiguity and incoherence of its objectives. While this interpretation might make these figures philosophically problematic, it nevertheless greatly heightens their historical consequence. For it highlights that they represent an intermediate transitional phase that is novel and innovative, but at the same time inchoate, unsettled and ultimately unsustainable. Ibn Ghaylān and al-Masʿūdī do not quite mark the beginning of full-fledged neo-Ashʿarism; they are not the first of the ‘later’ Ashʿaris, the *mutaʿakhkhirīn*, of Ibn Khaldūn. Credit for the definition and initiation of this new, post-classical phase of Ashʿarism, which supersedes the earlier classical phase, must be given to al-Rāzī in the last quarter of the sixth/twelfth century. Yet, as missing links, they certainly bear the hallmarks of being proto-neo-Ashʿarīs, and as such they fill a serious gap in our understanding of the history of the school.


and of the interaction between the philosophical and theological traditions in the first three quarters of this century, and they contextualize other major developments that were taking place in the period.

II. IBN GHAYLĀN AL-BALKHĪ, GHAZĀLIAN CRITIC OF AVICENNA

Afḍal al-Dīn ʿUmar ibn ʿAlī ibn Ghaylān al-Balkhī, also known as al-Fard al-Ghaylānī or occasionally al-Imām al-Fard (the unique imām),12 originates from Balkh in the north-east of Khurāsān. His birth and death dates are unknown. He tells us that he began his studies, including the study of mathematics, in his native Balkh before joining the Nizāmiyya school in Marw to study fiqh in Shawwāl 523 (September–October 1129).13 Having become interested in the study of logic at the Nizāmiyya, he then moved in Shawwāl 524 (September–October 1130) to Nishapur where he completed his studies in the subject. At some point, he appears to have studied with Muḥammad ibn Yūsuf al-Īlāqi (d. 536/1141), an Avicennan philosopher, logician and medical scholar.14 These dates suggest that he was born ca. 505/1111–12.

The next dateable point in Ibn Ghaylān’s life can be gleaned from a manuscript copy of a short and untitled gloss on a text by Muḥammad ibn ʿAbd al-Bāqī, more on which below. Dated, in the copyist’s colophon, Saturday 18 Jumādā II 576 (9 November 1180),15 and transcribed from the author’s original copy, this manuscript copy is introduced as follows: ‘Our venerated master Afḍal al-Dawla wa-l-Dīn, may God preserve his high status in honour and rank, says…’.16 The copy, thus, was made in


13 MS Tehran, Kitābkhāna-yi Majlis-i Shāfī-yi Islām, 599 (6), fol. 174a. See n. 26 below.


15 Ibid, fol. 171b.
Ibn Ghaylān’s lifetime. This is despite the fact that the text continues as follows: ‘Umar ibn ‘Ali ibn Ghaylān, may God encompass him in His forgiveness (taghhammada-hu Allāhu bi-l-ghufrān), says...’. Rather than being a requiescat, this supplication, which rhymes with the author’s name, appears to have been included by the author himself.

Shortly after 582/1186, Ibn Ghaylān’s younger contemporary Fakhr al-Dīn al-Rāzī met him as soon as the latter entered Samarqand in the course of his travels in Transoxania. Al-Rāzī writes that Ibn Ghaylān enjoyed a ‘great reputation’; so he wasted no time and hurried to visit him at his home. It is unclear when al-Rāzī wrote his collection of controversies; this may have been many years after the event. By that time, Ibn Ghaylān had died, as al-Rāzī appends his name with the requiescat ‘may God have mercy on him’. A very rough estimate of his date of death would be ca. 590/1194.

As mentioned already, Ibn Ghaylān’s intellectual career concentrated largely on the criticism of Avicennan philosophy, the theme that underlies most of his known writings. He appears to have written at least two or three substantial works. In his only major work known to be

17 In the Munāzārat (32), al-Rāzī writes that while he was staying in Bukhārā, he met Sharaf al-Dīn al-Mas‘ūdī and his colleague al-Raḍī al-Naysābūrī in 582/1186. Later in the text (Munāzārat, 54), he writes that he travelled from Bukhara to Samarqand, where he stayed for ‘several years’ (sinīn, though I wonder whether it might be ‘two years’, sanatayn) before returning to Bukhara and meeting with al-Naysābūrī again.

18 al-Rāzī, Munāzārat, 59. Al-Rāzī’s goodwill, however, gave way to indignation as he was offended when the host kept his guests waiting before he came and greeted them. It is, of course, impossible to tell whether Ibn Ghaylān’s perceived discourtesy was unintentional or meant to assert his senior scholarly status.

19 See also: Shihadeh, ‘From al-Ghazālī to al-Rāzī’, 151 n. 35; 162 n. 83.

extant, *Hudūth al-ʿālam* (*The Generation of the World in Time*, published 1998), he responds to a text titled *al-Ḥukūma fi ḥujaj al-muthābitin li-l-māḍi mabdaʾan zamāniyyan*, in which Avicenna refutes the arguments put forth by those who maintain that the world is created in time and that the past, thus, has a temporal beginning. Ibn Ghaylān also informs us that he wrote a book titled *al-Taʿwīṭa li-l-takhtīʿa* (*Prolegomenon to the Refutation*), which concentrates on exposing the errors that Avicenna committed in the exposition of mixed syllogisms. On this he writes, ‘I exposed the errors of Avicenna in a field where no one would imagine he might err, namely logic, in numerous places therein’. There appears to be an extant copy of this text. In *Hudūth al-ʿālam*, he also announces his intention to write a refutation of Avicenna’s *al-Iṣḥārāt wa-l-tanbīḥat*, the Pointers and Reminders, to be entitled *al-Tanbīḥ ʿalā tamwiḥāt kitāb al-Tanbīḥat* (*Drawing Attention to the Casuistry of the Pointers and Reminders*), though it is unclear whether or not he did write it.

In addition to these two or three longer works, he is known to have written three shorter epistles, each surviving in one or two manuscript copies. One is the text discussed, edited and translated below, in which he concentrates his criticism on certain aspects of the materia medica of Avicenna’s *Canon of Medicine* and of a work of Ibn Ghaylān’s senior contemporary Ismāʿīl al-Jurjānī, more on whom below. Though the extant copy of this text is untitled, I will henceforth refer to it with the following title, which I have lifted out of the author’s introduction: *Drawing Attention to the Inconsistency, Discrepancy and Contradiction in the Book of Simple Drugs in Avicenna’s Canon of Medicine (al-Tanbīḥ ʿalā l-iḥtiyāf wa-l-taʿfūrūr wa-l-tanāṣquʿ fi kitāb al-ʿadwīya al-mufrada min kitāb al-Qānūn fi ʿl-ṭīb li-Ibn Sīnā)*. The two other texts are not directed at Avicenna, but nonetheless share the same critical stance seen in all of Ibn Ghaylān’s other known works. They both deal with subjects closely associated with philosophy, and target senior contemporaries.

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21 An edition of Avicenna’s short text is published as an appendix to Ibn Ghaylān’s *Hudūth al-ʿālam*, 131–52. See n. 9 above.
22 Ibn Ghaylān refers to the *Taʿwīṭa* in both the *Tanbīḥ ʿalā l-iḥtiyāf* (p. 160 below) and *Hudūth al-ʿālam*, 11.
24 The first text in MS Tehran, Kitābkhāna-yi Majlis-i Shūrā-yi Islāmī, 599, according to the Library’s catalogue, is an untitled and anonymous text on logic (Yūsuf Iṭiṣāmī, *Fihrist-i Kitābkhāna-yi Majlis-i Shūrā-yi Millī*, Vol. 2 [Tehran: Majlis-i Shūrā-yi Millī, 1933], ii. 356). However, Dānishpazhūh identifies it as a copy of the *Taʿwīṭa* (*ʿGūshāʾi az tārīkh-i manṭiq*, 291–2). I have not yet had access to this copy.
The first is the aforementioned gloss on a commentary written by Abū Bakr Muhammad ibn ‘Abd al-Baqī (d. Baghdad, 535/1141), known as Qādī Märīstān Baghdād or more commonly Qādī al-Märīstān, on Book 10 of Euclid’s Elements.26 This text remains unpublished. The second is a response to a short tract written by Rashīd al-Dīn Waṭwāt (b. Balkh, ca. 480/1087, d. Khwārazm, 578/1182) on a logical problem raised by al-Īlāqī, and it provides further evidence of Ibn Ghaylān’s interest in logic.27 The two appear to have associated, and Ibn Ghaylān refers to a discussion in which he and Waṭwāt engaged in ‘the presence of some common people (‘awāmm)’, and in which the latter challenged him on the logical points in question.28

Ibn Ghaylān amply and enthusiastically explains how and why he came to write all these works in criticism of Avicenna and representatives of the Avicennan tradition. He tells us that his early study of mathematical subjects and logic (subjects that, following al-Ghazālī, he continued to view favourably) led him gradually to the study of the closely-related subjects of philosophical physics and metaphysics, during which his ‘heart would feel perturbed’ because of ‘the conflict with the theological foundations of religion’, which he encountered in these subjects.29 He thus turned to the study of kalām with a view to gaining the ability to refute the philosophers’ heterodox doctrines. This refutation he later prosecutes in his writings. Such a task was all the more urgent considering, as Ibn Ghaylān informs us in Ḥudūth al-ālam, the great spread of Avicennism among his contemporaries, including mainstream religious scholars—something at which he expresses...


27 MS Tehran, Kitābkhāna-yi Majlis-i Shūrā-yi Islāmī, 599 (8); ʾIʿtīṣāmī, Fībrīst-i Kitābkhāna-yi Majlis, 357. An edition has been published by Dānishpazhūh (‘Gūshāʾi az tārikh-i mañṭiq’, 294–310). The text is the first part of a collection of epistles entitled ʿUyūn al-rasāʾil min funūn al-masaʾil, the rest of which has not survived. On Waṭwāt, better known for his literary and philological work in Persian and Arabic, see ‘Rashīd al-Dīn Muḥammad b. Muhammad b. ʿAbd Djalīl al-ʿUmarī, known as Waṭwāt’, EIr2; ‘Waṭwāt, Raṣīd-al-Dīn’, EIr.

28 Cited in Dānishpazhūh, ‘Gūshāʾi az tārikh-i mañṭiq’, 293.

29 Ibn Ghaylān, Ḥudūth al-ālam, 10.
alarm. It has become rooted in the hearts of some’, he writes, ‘that truth is what [Avicenna] says, whatever that may be, that it is inconceivable for him to err, and that one who contradicts him in anything he says must be irrational’. The same point is reiterated in his gloss on the materia medica of the Canon, where he refers to ‘those who believe that he is immune from error and cannot conceivably go wrong’. 

In one place in Hudūth al-ʿālam, Ibn Ghaylān confirms his motive for writing purely refutative works to the exclusion of general and comprehensive theological summae, as other defenders of Sunni theology were in the habit of doing, and by this underscores his break with the objectives and modus operandi of classical kalām. He writes that earlier kalām theologians premised the doctrine that the world is created ex nihilo, which is the subject of his own book and one of the most fundamental doctrines in Islamic theology, on four principles: first, that accidents exist; second, that accidents are generated in time; third, that there must be at least some accidents inhering in each body (so bodies cannot pre-exist accidents); and, fourth, that what cannot pre-exist that which is generated in time must itself be generated (so both bodies and accidents, which make up the entirety of the world, are generated in time). Ibn Ghaylān goes on to argue that none of these principles (formulated in such broad terms, rather than in the terms of kalām atomism) are contested by the philosophers: They too affirm that the world consists of bodies, that no body is devoid of accidents, that accidents are generated in time, and that what pre-exists what is generated in time must itself be generated. Notwithstanding their acceptance of these principles, they maintain that the world is pre-eternal and that these principles do not prove it to be generated.

33 By ‘bodies’, kalām theologians here refer to atoms. Ibn Ghaylān, however, does not mention atoms in his account of the argument.
For although a particular accident inhering in a given body is generated, the body could have had a beginningless series of the same type of accident, in which case it could conceivably be pre-eternal.\(^{35}\) To this, Ibn Ghaylân points out, the \textit{kalâm} theologians respond by advancing various arguments to demonstrate that a chain of generated events that has no beginning (\textit{hawâdith lâ auwala la-bâ}) is inconceivable.\(^{36}\)

This last response, according to Ibn Ghaylân, is pertinent since it defends the orthodox doctrine of creation \textit{ex nihilo}, not against some hypothetical or obsolete objections thought up by the theologians (as is often the case in \textit{kalâm}), but against a real and contemporary challenge: that presented by the philosophers, who were gaining widespread popularity. By contrast, the long proofs traditionally put forth in support of the four principles themselves are much less pertinent and worthwhile:

The scholars had sought to prove the generation of the world in time against everyone, not only the philosophers. So they needed to prove the four principles against those who denied any of them. \textit{Nowadays}, however, there is no need to prove these principles, since nowadays we have no opponents other than the philosophers, and since they have been a source of corruption in the world, and since they deny none [of the foregoing four principles]. I have, therefore, directed my attention, in this topic, to arguing with them using what they cannot deny and have no means to evade and to reject.\(^{37}\)

He does not, however, consider it necessary to refute all the philosophers. For Avicenna, he writes, had refuted (\textit{abṭala}) Aristotle and become the supremely authoritative and influential philosopher among those Muslims interested in philosophy. This makes it pointless and superfluous—a pedantic waste of time—to discuss the doctrines of any philosophers other than Avicenna, and imperative to focus all one’s efforts on refuting his philosophy, which is spreading corruption (\textit{fasâd}) among Ibn Ghaylân’s contemporaries.\(^{38}\) In this view, Ibn Ghaylân accentuates, and puts a new spin on, a point made previously by Al-Ghazâlî to introduce his criticism of the philosophical tradition.\(^{39}\)


\(^{38}\) Ibid, 15.

Al-Ghazālī distinguishes three ‘types’ of philosophers: the Physicalists (*dabriyya*), ancients who denied the existence of the Creator and maintained that the world is pre-eternal and self-sustaining; the Naturalists (*ṭabi‘iyyūn*), who affirmed the existence of the Creator, but advocated a physicalist account of human nature; and the Metaphysicians (*ilāhiyyūn*), a ‘later’ group of philosophers, including Socrates, Plato and most importantly Aristotle, who, we are told, refuted the views of the previous two groups and developed a comparatively mature and refined set of teachings. Aristotle’s philosophy was then adopted and transmitted by al-Fārābī and Avicenna. Though al-Ghazālī considers all three groups to be unbelievers, the last clearly deserve this verdict on fewer counts. They are also the only group of philosophers whose views deserve and need to be addressed, as the first two, according to him, are extinct and had already been dealt with by the third. However, by presenting Aristotelianism as the least-bad school of philosophy and effectively redirecting much of the earlier sweeping anti-philosophical sentiment towards the two extinct groups, al-Ghazālī actually paves the way for his view that Aristotelianism has much good to offer theology. Ibn Ghaylān’s sketch of the history of philosophy contrasts with al-Ghazālī’s in two key respects: It unambiguously identifies Avicenna and his followers (*shī‘atu-hu*), only as opponents (*khasm*), whose views pose an imminent threat to Islam and who need to be refuted with the utmost urgency; and it argues, more explicitly than al-Ghazālī does, that Avicennan philosophy is the only school of thought that ought to be engaged and refuted.

Having read *Hzudh al-ʿālam*, al-Rāzī chooses to attack Ibn Ghaylān on this very point when he meets him in Samarqand and engages him in a debate around the dialectical tactics and line of argument implemented in this book. Ibn Ghaylān defiantly reiterates his position, declaring that his sole objective is to argue against Avicenna, and hence to assert the generation of the world in time by rebutting the latter’s notion of a chain of generated events that has no beginning. ‘I dispute this problem with none other than Abū ʿAlī [Avicenna]’, he reportedly tells al-Rāzī,

40 The names of the last two groups correspond to the components of philosophy that al-Ghazālī discusses immediately afterwards, namely natural philosophy (*ṭabi‘iyyāt*) and metaphysics (*ilāhiyyāt*) (*Munqidh*, 23). I suspect, however, that al-Ghazālī uses the latter group name with the secondary sense of ‘Theists’, not to suggest their being the only ones to recognize the existence of God, but to emphasize that they afford God a greater role and advocate certain views that are more harmonious with the teachings of theistic religions.
‘So since I have refuted his doctrine of a beginningless chain of motion-events [hence, a beginningless series of accidents], this has sufficed to prove the temporal generation of bodies.’ And, a little later, ‘I have not undertaken to prove the temporal generation of bodies [e.g. by establishing the aforementioned four principles]; rather, I have only undertaken to refute the opinion of Abū ‘Ali.’\footnote{41} For this, Ibn Ghaylân was taken to task, quite robustly, by al-Râzî, who accused him of engaging, not in proper scholarly enquiry (baqth), but in mere disputation (mujâdala) with a particular person on a particular opinion.\footnote{42} Following this encounter, al-Râzî appears to go on to write some sort of response to Ibn Ghaylân, to which two early biographers, al-Qifî (d. 646/1248) and Ibn al-Shâr al-Mawṣîli (d. 654/1256), refer with the title \textit{Response to [al-Farîd] al-Ghaylânî (Jawâb al-Ghaylânî)}.\footnote{43} No copies of this text are known to be extant.

By taking such a tactical, refutative stance, Ibn Ghaylân has embodied the Ghazâlian \textit{kalâm} ethos, as opposed to the style of theology practised by classical Ash’arîs. Yet in this respect, he is arguably more Ghazâli than al-Ghazâlî himself. Like al-Ghazâlî, he views the central function of \textit{kalâm}, epitomized in both \textit{Tahâfut al-falâsifa} and \textit{Huduth al-‘âlam}, as essentially defensive, refutative and therapeutic. The \textit{mutakallim} should respond to heresies that form an immediate threat to the beliefs of the Muslim community and give rise to doubts in the hearts of the believers. The practice of \textit{kalâm}, hence, is a collective obligation (farḍ kifâya), rather than an individual obligation (farḍ ‘ayn).\footnote{44} Following al-Ghazâlî, Ibn Ghaylân also considers the uncritical imitation (taqlîd) of the chief philosophers to be the greatest danger that threatens the orthodoxy of Islam, and hence deserving of the utmost attention of the \textit{mutakallim}.\footnote{45}

\footnote{41} al-Râzî, \textit{Munâzara}, 60. 
\footnote{42} Ibid., 61; Shihadeh, ‘From al-Ghazâlî to al-Râzî’, 160–1. 
Al-Ghazâlî too writes of those who treat the main authorities of the philosophical tradition as being effectively immune from error. Yet Ibn Ghaylân takes a more strident stance towards the philosophers than that of al-Ghazâlî, who, we are told, should not have conceded the philosophers’ belief in God and the hereafter.

The text published in the present article, the second anti-Avicennan text by Ibn Ghaylân to be unearthed, sheds new light both on his intellectual activity and on the post-Avicennan and post-Ghazâlîan milieu. It confirms the Ghazâlîan undercurrent, but furthermore shows that it was taken to an unprecedented extreme. For though the subject matter of this curious text is pharmacological, a most peculiar choice for a theologian, the author’s ultimate objective, as he tells us in the preface and the concluding remarks, is not pharmacological at all, but rather theological.

### III. IBN GHAYLÂN ON THE MATERIA MEDICA OF THE CANON

Ibn Ghaylân informs us, in the preface to the Tanbîh, of the immediate objectives of this short text. He writes:

I have gone through the Book of Simple Drugs in the Canon of Medicine by Abû ‘Alî ibn Snâ, and have found enough inconsistency (ikhtilâf), discrepancy (tafâwut) and contradiction (tanâqud) therein to indicate that the bulk of its contents are compiled from different earlier books with neither deliberation in the compilation process nor careful investigation. So it is my desire here to bring this to the attention of my fellow scholars, thus saving them the effort of research and the trouble of enquiry. Of the totality of [the errors that I identified,] it will suffice here to record those that pertain to the natures of drugs. For, except in a minority of cases, whenever a drug has two names starting with two different letters, and is thus listed under two alphabetical headings, he will give its nature in one place differently from what he gives in the other place. Similarly, the natures he assigns to many of the drugs he lists in his book titled Heart Remedies (al-Adwiya al-qalbiyya) are different from those found in the Canon.

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47 Ibn Ghaylân, Hudûth al-‘âlam, 9.
48 Ibn Ghaylân, Tanbîh ‘alâ l-ikhtilâf, p. 160 below.
A little further on Ibn Ghaylān informs us that he cites Avicenna’s statements verbatim (though in fact some are paraphrased), his sole intention being to highlight the discrepancies and contradictions among the drug natures (ṭabā‘ī, sing. ṭab‘) he provides. By showing that it contains much inconsistency, and is thus an uncritical compilation from multiple earlier sources, Ibn Ghaylān seeks, in the first instance, to undermine the integrity of all that Avicenna had written on simple drugs. Though he hopes that it would be possible for him in the future to distinguish between the true and the false among these drug natures, he displays hardly any genuine interest in serving such a positive objective in this text. Here again, al-Rāzī’s aforementioned accusation that Ibn Ghaylān was engaged in mere disputation, rather than proper scholarly enquiry, comes to mind.

In the preface, Ibn Ghaylān also expresses his astonishment at the way in which his senior contemporary al-Sayyid Ismā‘īl al-Jurjānī (b. 434/1042, d. Marw, 531/1136) incorporated much material from the Book of Simple Drugs in the Canon into his own work titled Dhakhīra-yi Khwārazmshāhī (The Khwārazmshāhī Treasure), the most important medical encyclopaedia in Persian.49 Ibn Ghaylān cites the Arabic translation, Tarjamat al-Dhakhīra al-Khwārazmshāhiyya, which al-Jurjānī himself prepared. He writes that despite the fact that al-Jurjānī spent his ‘long life’ studying, writing and compiling medical books (he lived for approximately 100 years and began writing his Dhakhīra around the age of 70), he omits to identify and to correct Avicenna’s errors, but simply reproduces the same discrepancies and contradictions found in the Canon. Ibn Ghaylān observes that although it is highly unlikely that al-Jurjānī failed to notice and identify these errors in Avicenna’s works, he nevertheless chooses to follow him uncritically, even when doing so leads him in some cases to committing additional errors.50 With the reverential awe that he displays towards his eminent predecessor, al-Jurjānī thus represents those scholars who follow Avicenna blindly as though he were infallible: a trend to which Ibn


Ghaylân refers in his concluding remarks and which, as mentioned, he subjects to severe criticism in his *Hudûth al-‘âlam*, exhibiting a markedly Ghazâlîan influence. From Ibn Ghaylân’s citations, however, one gets the impression that, to him, al-Jurjânî was one of ‘us’, the orthodox, who were led astray by Avicennan philosophy, rather than an Avicennan philosopher straight and simple. Indeed, we know that in Nishapur he studied with the physician ‘Abd al-Rahmân ibn Abî Şâdiq (d. shortly after 460/1068), but also associated with the leading Ash’âri and Sufi Abû l-Qâsim al-Qushayrî (d. 465/1072). The significance of al-Jurjânî here, moreover, does not stem purely from both his great eminence as a physician and his alleged uncritical imitation of Avicenna, but also, it seems, from his possible association with the Ghazâlîan current. The evidence suggestive of this is that Zahîr al-Dîn al-Bayhaqî attributes to him ‘a book in response to the philosophers’ (*kitâb fi l-radd ‘alâ l-falâsîfa*), which resonates with the type of activity with which Ibn Ghaylân was engaged. If al-Jurjânî was indeed an earlier Ghazâlîan critic of Avicennan philosophy, this would be all the more reason for Ibn Ghaylân to point out his blind imitation of Avicenna so reprovingly.

Ibn Ghaylân’s dialectical terms of reference in the *Tanbîh* are mostly Ghazâlîan: first and foremost, the criticism of Avicenna to show that he is not infallible and therefore should not be imitated uncritically. Even the focus on the contradictions (*tanâqûd*) committed by Avicenna betrays a direct Ghazâlîan influence. Ibn Ghaylân’s non-Ghazâlîan (and arguably un-Ghazâlîan) innovation here is that he chooses a new, non-philosophical battlefield in order to undermine, indirectly, the integrity of Avicenna’s philosophical thought. He considers this a legitimate line of criticism, as it serves the goal of underscoring the philosopher’s contradictions and blind plagiarism and imitation of his predecessors.

Ibn Ghaylân concentrates his criticism on one aspect of Avicenna’s pharmacology, that is, the natures that he attributes to the different

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51 Though Ibn Abî Şâdiq was influenced by Avicenna’s medical works, it is unlikely that he studied with him, as reported in later biographical sources. On him, see ‘Ebn Abî Şâdeq’, *Elr*; Ullmann, *Medizin*, 160.


54 Al-Ghazâlî, for instance, refers to the philosophers’ contradiction (*tanâqûd*) in no less than five places in the introduction of *Tahâfut al-falâsîfa* (6, 8, 13, 18, 20). One place is cited explicitly in Ibn Ghaylân’s *Hudûth al-‘âlam* (8).
simple drugs listed in the *Canon*. Following the preceding medical tradition, ultimately drawing on Galen’s theory of the medicinal properties of drugs in his treatise *On Simple Drugs*, Avicenna itemizes simple substances, approximately 800 in total, alphabetically and gives each a pair of primary qualities (dry or moist, and warm or cool), and a degree of strength, increasing on a scale of one to four, for each quality. The qualities assigned to each drug are not intrinsic to the drug itself, but delineate only the drug’s actions, i.e. the effects that these remedies are said to have on the temperament of human bodies. A drug can thus have either a drying or a moistening effect, and either a warming or a cooling effect. Inventories of simple drugs, therefore, are vital for determining which remedies to prescribe in order to restore the natural balance of the temperament of a particular human body, or of some organs thereof. A moistening drug, for instance, can be indicated to treat an ailment that involves excessive unnatural dryness in the body. Knowing the qualities of simple drugs is also vital for preparing more complex compound drugs, something to which we shall return further below.

To show that the natures that Avicenna attributes to the simple drugs he lists contain much inconsistency, Ibn Ghaylân simply enumerates various cases of discrepancy and contradiction between the natures assigned to those drugs that happen to be known by two names and that consequently came to be catalogued in two places in the Book of Simple Drugs in the *Canon*. Some substances come to be catalogued in multiple entries if they are known by different names in different regions, languages or earlier pharmacological sources, or if a substance has a dedicated entry but is also mentioned elsewhere as a product of another substance (e.g. the fruit or resin of a certain tree). A discrepancy

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57 For a sense of the diverse array of textual and cultural sources—Greek, Arabic, Persian, Syriac, Akkadian and Sumerian—that contributed to the
(tafāwut) is when the same drug is given, in two places, two different degrees of the same quality, while a case of contradiction (tanāqud) is when the same drug is given, in two places, two opposite qualities, i.e. either warming and cooling, or drying and moistening. In some cases, Ibn Ghaylān points out inconsistencies between the natures given in the Canon and those given in another, much shorter Avicennan work, al-Adwiya al-qalbiyya (Heart Remedies). Such errors, according to the author, have resulted from the manner in which Avicenna compiles multiple earlier inventories of simple drugs into his own pharmacopeia, a manner, we are told, so careless and undiscerning that he failed either to notice that different earlier sources referred to the same drugs by different names or assigned different qualities to the same drug, or to attempt resolving these inconsistencies.  

Take, for instance, sea onion, which appears in the Canon by two names. In one entry, under the letter alif, it is called ‘isqil’ and characterized by Avicenna as being warming in the third degree. In another entry, under the letter ‘ayn, it is referred to as “uṃṣul” and characterized as being warming in the second degree. Avicenna, as Ibn Ghaylān points out, identifies both as the rat onion (bāṣal al-fa’r), thus named because of its poisonous effect on rats. Yet he neither attempts to resolve the inconsistency nor even displays awareness of it.

Another example of discrepancy is the orach which, again, appears in the Canon by two names. As ‘sarmaq’, it is said to be cooling in the evolution of the Arabic pharmacological nomenclature, see Peter E. Pormann, ‘The Formation of the Arabic Pharmacology between Tradition and Innovation’, Annals of Science, 68/4 (2011): 493–515, at 495 ff.  


59 Ibn Ghaylān, Tanbīh ‘alā l-ikhtilāf, no. 1; cf. Avicenna, Canon, i. 246, 396. For the purposes of the present article, it has not been necessary to verify whether or not any of the pairs of drug names mentioned do in fact refer to the same substance, or to determine Avicenna’s sources for the names and natures of these drugs.

60 Ibn Ghaylān, Tanbīh ‘alā l-ikhtilāf, no. 8; cf. Avicenna, Canon, i. 389, 424.
first degree and moistening in the first degree. As ‘qataf’, however, the same substance is said to be cooling in the second degree and moistening in the second degree.

Avicenna also writes that pistachio is warming in the upper second degree, and is more warming than walnut.61 In another place, however, he writes that walnut is warming in the third degree. ‘So how’, Ibn Ghaylân exclaims, ‘could something that is warming in the upper second degree be more warming than what is warming in the third degree!’62

A case of contradiction can be found in the primary qualities given for alkanet (or bugloss), which under the heading ‘îbûnâ’sâ’ is said to be warming, though the degree is not stated, and under the heading ‘shînjâr’ is said to be cooling in the first degree.63 Similarly, biranjâsîf (wormwood) is said to be moistening in the first degree, while qaysûm (southernwood), which Ibn Ghaylân says is undoubtedly the same plant, is said to be drying in the third degree.64

One case results ultimately from an error of transcription. Black poplar is given two separate entries in the Canon, and is referred to in one entry as ġawar rûmî, which is its correct name, and in the other as jawz rûmî, clearly a corruption of the former name (with a dot added under the ġâ’ and another above the râ’).65 In both cases, the tree is said to exude a gum known as kahrubā, which is discussed elsewhere in a devoted entry.66 Whether the corruption of ġawar into jawz was the result of Avicenna misreading one of his sources or occurred at an earlier stage in the transmission of pharmacological sources requires further investigation and goes beyond our current scope. Either way, it explains the inconsistency among the natures given in the three entries in question, which Ibn Ghaylân highlights.

Having listed fifteen such cases that he uncovered in the Book of Simple Drugs in the Canon, Ibn Ghaylân mentions one possible defence of Avicenna, namely that responsibility for these errors lies, not with the

61 Although each drug quality is given a degree of strength on a scale of one to four, there are further gradations within the degrees themselves. These are referred to using the adjectives ‘upper’ (âkhir) and ‘lower’ (awwal); hence, ‘lower second degree’, and ‘upper second degree’.
62 Ibn Ghaylân, Tanbîh ‘alâ l-ikhtilâf, no. 5; cf. Avicenna, Canon, i. 280, 412.
63 Ibn Ghaylân, Tanbîh ‘alâ l-ikhtilâf, no. 4; cf. Avicenna, Canon, i. 260, 435.
64 Ibn Ghaylân, Tanbîh ‘alâ l-ikhtilâf, no. 15; cf. Avicenna, Canon, i. 267, 424.
65 Ibn Ghaylân, Tanbîh ‘alâ l-ikhtilâf, no. 9; cf. Avicenna, Canon, i. 284, 323.
66 Ibid, i. 338.
author, but with careless copyists of the *Canon*. This, in all likelihood, reflects an actual line of defence taken by contemporary Avicennists, and is in fact a tactic that has been reproduced numerous times to exonerate various respected predecessors (most famously, al-Ghazālī and Ibn al-ʿArabī) of heterodox views found in their writings. Ibn Ghaylān, however, quickly dismisses this defence: even if some of these cases could be explained thus, it will be implausible to explain them all as due to mere scribal errors.

The author then provides a complete list of the cases—twelve altogether—of discrepancy and contradiction found between the drug natures given in the *Canon* and the natures attributed to drugs with the same names in Avicenna’s *al-Adwiya al-qalbiyya*, which includes a much shorter inventory of simple drugs. Chicory, for instance, is said to be moistening in the former book, and drying in the latter. Zedoary (wild ginger) is said to be warming and drying in the third degree in the *Canon*, but warming and drying in the second degree in the *Adwiya*. Similar errors are reproduced by Ismāʿīl al-Jurjānī. For instance, sea onion appears in the *Dhakhira* by two names, ‘isqīl’ and ‘unṣul’. The former is said to be warming in the third degree, and the latter warming in the second degree. Yet while Avicenna lists these two drugs under different alphabetical headings, al-Jurjānī categorizes one under medicinal foods (*agbdhiya dawāʾiyya*), sometimes defined as substances that resemble the human body in their constitution and hence provide nourishment, and the other under pure drugs (*adwiya muṭlaqa*), that is, substances that do not resemble the human body in their constitution, and hence do not provide nourishment. Given that these two categories are distinct in essence, it is a contradiction to categorize the same substance under both. Yet, as Ibn Ghaylān puts it, this is an additional, ‘scandalous error’ that al-Jurjānī commits ‘out of the imperative to follow [Avicenna] in another error’.

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71 On these drug categories see, for instance, Avicenna, *Canon*, i. 96.
Having cited a total of twenty-seven cases of inconsistency among the natures that Avicenna assigns to simple drugs, ten cases of which are reproduced in Ismā‘īl al-Jurjānī’s book, Ibn Ghaylān concludes by informing his readers of his broader aims:

They are an insignificant trifle in comparison to Avicenna’s nonsensicalities in the philosophical sciences, by which he has gone against the truth and contradicted the religion of Islam. I have exposed some of his errors in these sciences in an epistle I titled Prolegomenon to the Refutation (al-Tawṣī’al-ī-takhlīṣā’), which is devoted to revealing the mixed syllogistic forms that he omitted to consider in logic, and in a book I wrote to prove that the world was generated in time.72

Then follows a partly-legible sentence, the gist of which appears to be that since Ibn Ghaylān has already refuted Avicenna’s philosophy more directly in these other, dedicated books, it will be inapt either to cite the type (namat) of evidence listed in this short epistle with a view to undermining the integrity of his philosophical doctrines (hence, an yusta’mala bi-hī), or to use it as a model of refutative argumentation to be applied to Avicenna’s other, philosophical works, as it is unlikely that comparable inconsistencies be found therein (hence, an yu‘ūd bi-hī mithlu-hu). He goes on to conclude the text as follows:

However, given the total unambiguity of [the evidence set out above], it lends itself well to silencing those who believe that [Avicenna] is immune from error and cannot conceivably go wrong.73

In this conclusion, Ibn Ghaylān lays bare his true objective. He is not the least concerned here with the medicinal properties of the drugs mentioned in the text, nor does he exhibit much genuine interest or expertise in medicine, beyond what is expected of a man of learning with access to medical and lexical sources. Nowhere in this text does he attempt to engage in a positive pharmacological investigation to determine which of the conflicting drug natures given by Avicenna are correct, or indeed whether completely different sets of primary qualities and degrees should be affirmed. He effectively admits that his choice of subject-matter and tactic is opportunistic and stems purely from its

73 Ibid.
instrumentality in undermining Avicenna’s scholarly integrity and thereby defending orthodox theology. One can hardly think of a more expedient way to find faults in Avicenna’s writings than to identify black-and-white contradictions and discrepancies in an inventory of drugs that classifies drugs simply and systematically using a pair of contrary primary qualities, with four degrees of potency for each primary quality. There will be no need to construct elaborate arguments, only to be rejected by the supporters of Avicenna, nor to respond to any counter-arguments. This way, Ibn Ghaylân seeks to illustrate, once and for all, Avicenna’s fallibility and uncritical following of earlier sources, ultimately casting doubt on the integrity of his other writings, especially philosophical ones, and supporting his denunciation of the uncritical imitation (taqlîd) of Avicenna prevalent among his susceptible contemporaries.

A defender of Avicenna might refer Ibn Ghaylân to the introduction of the Book of Simple Drugs in the Canon, where it is explained that the properties of many remedies are only known through experience (bi-l-tajriba).74 This makes the advancement of pharmacology an empirical and cumulative process that draws on the experimentation and observations of predecessors, as it would be impossible for a physician to experiment for himself with the hundreds of drugs he lists in an extensive pharmacopoeia to ascertain their medicinal properties and indications. Add to this the fact that pharmacology is far from being an exact science, a point suggested, for instance, in the conditions of experimentation that Avicenna details in order for drug properties to be ascertained ‘reliably’ (bi-l-thiqa)—he does not say, ‘with certainty’.75 If Ibn Ghaylân’s central criticism of Avicenna in the Tanbih can be analysed into two accusations—that he compiles his Book of Simple Drugs mostly by plagiarizing earlier pharmacological sources, and that he displays a lack of deliberation and careful investigation in the process of compilation—only the latter accusation appears to be of any weight.

Yet even this latter accusation seems to stem from an arguably minor trend in Arabic pharmacology, associated in particular with the earlier philosopher al-Kindî (d. after 256/870), to which Avicenna does not subscribe. Al-Kindî attached much importance to the primary qualities of

74 Avicenna, Canon, i. 224.
75 Ibid, 224–6.
simple drugs in determining their actions, and used them to calculate the final natures of compound drugs in a formulaic fashion. The presence of inconsistencies of the sort that Ibn Ghaylān chooses to concentrate on—a choice that probably has this trend in the background—might indeed cause serious difficulties in such a system. Yet though Avicenna consistently provides the natures of the simple substances he lists, he often reports the divergences of opinion among earlier sources. As one recent study notes:

The fact that Avicenna systematically mentions this kind of divergence, most of the time without indicating his own preference, strongly suggests a reluctance to take seriously the theory of medicinal degrees, and this reluctance is borne out in other parts of the Canon. [...] This reluctance is confirmed by the content of Book V, devoted to compounds. The introductory chapter, which expounds the reasons for using compounds, does not mention medicinal degrees at all.

Avicenna’s apathy towards this theory concurs with his view that the actions of simple drugs can be determined by either deduction or experiment, and that drug actions that can only be known through experiment and observation will not be deducible from the drug’s primary qualities.

Furthermore, the actions of compound drugs frequently do not follow uniformly and predictably from the primary qualities and actions of their simple ingredients, but must be ascertained by means of experience and observation. It is no wonder, therefore, that Avicenna displays a lack of rigour (for some of his readers, to an unacceptable extent) in the manner he compiles the natures of simple drugs from his sources.

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Ibn Ghaylân’s text fares better in its criticism of his contemporaries. Al-Jurjânî, by contrast to Avicenna, was a physician by profession and wrote his main medical work at an advanced stage in a long career of medical scholarship and practical experience. He is likely, as Ibn Ghaylân notes, to have detected the inconsistencies among the natures that Avicenna assigns to some drugs. So his failure to mention or to correct any such cases of inconsistency is indeed noteworthy and betrays a disinclination to deviate from Avicenna’s teachings. It is perhaps at this point that Ibn Ghaylân’s short text appears most compelling: It shows quite convincingly how one highly respected scholar followed Avicenna uncritically in the discipline (‘ilm) in which he specialized, to illustrate the broader point that this practice was prevalent in other philosophical and scientific disciplines, most importantly metaphysics and natural philosophy.

Finally, besides the *prima facie* scholarly objective of Ibn Ghaylân’s text, one wonders, if we factor in the possibility that the intended readership may have included patrons of scholarship as well as scholars, whether his choice of a pharmacological theme for his attack on Avicenna may also stem from undeclared political considerations. Patrons supported scholarship for an array of socio-cultural motives, some expecting to enjoy lively philosophical and theological debates in return. Yet casting doubt on some of the most authoritative and respected cornerstones of the medical profession—the *Canon* and the *Dhakhîra*—not least when that undermined something as tangible and vital as the basic remedies necessary for the preservation and restoration of human health and for survival, goes beyond the purely academic and is more a cause for anxiety. What Ibn Ghaylân is trying to drive home is, effectively, that neither Avicenna’s unorthodox metaphysics nor his unreliable medicine can be good for you, neither for your wellbeing in the hereafter, nor even for your health in this world. The *Tanbih* may, as such, be an attempt to exclude the followers of Avicenna from the favour and predilection of wealthy and powerful patrons, thereby undermining the income and privilege of his opponents.

Despite the opportunism and, in some respects, frivolity of Ibn Ghaylân’s pharmacological fault-finding exercise, the interest of his text does not lie merely in its curiosity and eccentricity. As a historical document, it reveals not only the lengths to which a key representative of the sixth/twelfth-century Ghazâlîan current went in his criticism of Avicenna, but equally the degree of authoritativeness that his contemporaries bestowed upon Avicenna’s works. For historians of medicine, it might evidence a wider, and more positive, interest among post-Avicennan physicians to scrutinize, refine and consolidate the diverse received pharmacological lore.
IV. THE MANUSCRIPT COPY, EDITION AND TRANSLATION

Two manuscript copies of this text appear to be extant. One copy, mentioned in an article published in Iran in 1961, belonged to the Parvantā collection in Kabul, and is currently inaccessible.\(^79\) So I have based my edition on the other copy, which appears in MS Tehran, Kitābkhāna-yi Majlis-i Shūrā-yi Islāmī, 1538. According to the Library’s catalogue, this large codex consists of 521 folios (17×23 cm, 28 ll.) and contains 32 short Arabic medical and pharmacological treatises by various authors.\(^80\) The texts were copied in an elegant scholar’s naskh during the ninth/fifteenth century by a physician called Muḥammad ibn Qutb al-Tabīb, who was based in Iran.\(^81\)

Ibn Ghaylān’s text, according to the Library’s catalogue, is the 25th item in the codex,\(^82\) and appears on three and a half pages, pp. 399–402.\(^83\) The text appears somewhat out of place in the manuscript, given that, despite its pharmacological content, it has, as explained in the previous section, ulterior objectives and is of little practical value to the professional physician.

The text bears no evidence of collation. In some places, the copyist puts in the margin three triangularly-arranged dots (.) to indicate words that he finds illegible in the exemplar, but nonetheless tries to transcribe. A small number of these and some other problematic places in the text have remained unresolved in my edition.

In the edition below, I have modified the text in accordance with modern spelling conventions, and have added nunation and diacritical marks where needed. As mentioned, the manuscript copy is untitled; but I have added a title which I have extracted from the preface. All additions to the manuscript text are inserted in square brackets. The manuscript copy is referred to as MS; and the text, where relevant, has been collated.


\(^81\) Ḥā’irī, Fīhrīst, 241.

\(^82\) A brief description of the text is provided in Ḥā’irī, Fīhrīst, 267–8.

\(^83\) As the manuscript has been paginated, rather than foliated, and as I do not have access to a copy of the whole codex, I am unable to provide folio numbers, and have no choice but to refer to the page numbers that appear in my copy of Ibn Ghaylān’s text.
with published editions of the Canon and al-Adwiya al-qalbiyya. References to page numbers in the Canon, vol. i, and the Adwiya, are shown in square brackets, like this: [C. 246] and [H. 264] respectively.

In the translation, I have dealt with the drug names flexibly in the interest of clarity and accuracy. As a general rule, I use the Arabic drug names and give their English equivalents in brackets when the discussion is concerned with the names themselves. When the drug names are not at issue, I simply render them into English.
فقال الشيخ الإمام الفاضل أفيض الدين عمر بن علي بن غيلان البلخي:
إني تصفحت كتاب الأدوية المفردة من كتاب القانون في الطب لأبي علي بن سينا، ووجدت من الاختلاف والتفاوت والتناقض ما يبدو على أن جلٌّ ما فيه منقول من كتب متقدمة مختلفة من غير رؤية في نقله واعتناء بالتحقق فيه. فأحببت أن أزدهره في العلم على ذلك وأكتب مؤونة البحث ونعب الطلب واقتصرت من حمل ذلك على إثاث ما يختص بطبائع الأدوية، فإن كل دواء كان له أسان، وأولما حرف أن تنبت ذلك يدخلان في ردود من أبوب الحروف المعجمة - قد ذكر طبعه في أحدما مخالفاً لما ذكره في الباب الآخر، إلا في قليل من ذلك، وأيضاً ما أورده من الأدوية في كتابه الموسوم بالأدوية القلبية جعل طبع كثير منها هناك مخالفاً لما في كتاب القانون.

والعجب أن السيد الإمام إسحاق الجرجاني رحمه الله نقل في أكثر المواضع ما في القانون إلى كتابه المسمى ترجمة الدنيا الخوارزم مشاهية من غير تفاوت والاختلاف في كلام أبي علي، مع إكباره مدة عمره الطويل على تصنيف الكتب الطبية ودرسها ونقل الكلام من كتاب منها إلى آخر والبسط مرة والتلخيص أخرى، ولم ينته على مواضع الغلط، أو لم ينتبه، وهو أبعد.

فنقلت الآقليات المختلفة بأعيانها إلى أن ي�سر 4 عون الله تعالى تميز الحق عن الباطل، وهو الموقف لذلك والعتوم من الزلل.

1 MS
2 MS
3 MS (Marked with a three-dotted sign [•••] in the margin. See above, p. 158.)
4 MS
VI. TRANSLATION
[DRAWING ATTENTION TO THE INCONSISTENCY, DISCREPANCY AND CONTRADICTION IN THE BOOK OF SIMPLE DRUGS IN AVICENNA’S CANON OF MEDICINE]

The eminent shaykh and imām Afdal al-Dīn ‘Umar ibn ‘Alī ibn Ghaylān al-Balkhi wrote:

I have gone through the Book of Simple Drugs in the Canon of Medicine by Abū ‘Alī ibn Sīnā, and have found enough inconsistency, discrepancy and contradiction therein to indicate that the bulk of its contents are compiled from different earlier books with neither deliberation in the compilation process nor careful investigation. So it is my desire here to bring this to the attention of my fellow scholars, thus saving them the effort of research and the trouble of enquiry. Of the totality of [the errors that I identified,] it will suffice here to record those that pertain to the natures of drugs. For, except in a minority of cases, whenever a drug has two names starting with two different letters, and is thus listed under two alphabetical headings, he will give its nature in one place differently from what he gives in the other place. Similarly, the natures he assigns to many of the drugs he lists in his book entitled Heart Remedies are different from those found in the Canon.

What is astonishing is that in most cases al-Sayyid al-Imām Ismā‘īl al-Jurjānī (may God have mercy on his soul) reproduced the contents of the Canon in his own book titled Translation of the Khwārazmshāhī Treasure, without modifying or changing what Abū ‘Alī had written.5 This is despite him having devoted his long lifetime to the writing and study of medical books, copying things from one book to another, expanding some texts and abridging others. Yet he fails to recognize these errors. Or, he might not have even noticed them, which is more unlikely.

I have, hence, excerpted here the inconsistent statements verbatim, [thereby making them available] until it become possible, with the assistance of God exalted, to distinguish what is true from what is false. Verily, it is He who guides to [truth] and grants immunity from error.

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5 Henceforth, Avicenna and al-Jurjānī are referred to as Abū ‘Alī and al-Sayyid, respectively.
7 In other sources, this also appears as *ibūhalsā* and *ibūkhalsā*.
8 Page 400.
[1] One such case is *isqīl* (sea onion) and *‘unṣul* (sea onion). He includes these under the letters *alif* and *‘ayn*, and writes that the essence of each is rat onion, [thus named] because it kills rats. On the nature of *isqīl*, he writes that it is warming in the third degree and drying in approximately the second degree, whereas on the nature of *‘unṣul*, he states that it is warming and drying in the second degree [C. 246, 396].

Al-Sayyid al-Imām divides simple drugs into three divisions: first, medicinal foods; second, animal drugs; and third, pure drugs. So he considers one and the same thing, namely *isqīl*, as both a medicinal food and a pure drug, although the two are different in their definition and essence. He refers to it in these two places by two synonymous names, and for each name assigns what Abū `Alī had specified. He has thus committed a scandalous error out of the imperative to follow Abū `Alī in another error.

[2] Another case is *abhal* (juniper), on which he states that it is the fruit of *‘ar’ar* (juniper) and that, according to some, it is warming and drying in the third degree [C. 248–9]. He then lists *‘ar’ar* under the letter *‘ayn* and writes that its berry is warming in the first degree and drying in the second [C. 395].

[3] Another case is that in the entry on *iṣṭurak* (storax) he states that it is a type of *may’a* (storax), that it is sometimes identified with olive gum, and that it is warming in the third degree and drying in the first [C. 251]. But in the entry on *lubnā* (storax), he states that it is *may’a*, that its sap is called *‘asal al-lubnā* (storax honey) and *iṣṭurak*, and that it is warming in the first degree and drying in the second [C. 350].

Al-Sayyid discusses *abhal*, *‘ar’ar*, *iṣṭurak* and *lubnā* in the *Translation of the Treasure* with the same aforementioned discrepancies and other problems.

[4] Another case is that he writes that *ibūjalsā* (alkanet) is identical to *khass al-ḥimār* (alkanet), *shinqār* (alkanet) and *shinjār* (alkanet). In the entry on *ibūjalsā* he states that it is warming and drying [C. 260]. Then, under the letter *shin*, he includes *shinjār* and states that it is *khass al-ḥimār* and is cooling in the first degree and drying in the second [C. 435]. Al-Sayyid writes on *ibūjalsā* and *shinjār* the same as what is in the *Canon*, and refers to *shinjār* in his entry on *khass al-ḥimār*, thereby falling into the same contradiction.

[5] Another case is that he writes that pistachio is more warming than walnut, and that it is warming in the upper second degree [C. 412]. In the entry on walnut, he states that it is warming in the third degree [C. 280]. But how could something that is warming in the upper second degree be more warming than what is warming in the third degree! He also indicates that walnut is drying in the lower second degree, and that its drying power is weaker than its warming power. He has thus committed a grave error. Al-Sayyid reproduces the same statements in both places.

9 Avicenna here cites Galen.
ومن ذلك جوز الطرفة، فقد ذكر أنه كرمزال، وحكم أن حرارة كالمعتدل أو في أول الأول، وجضيفه في آخر الأول أو فوقه. ثم قال وهو عند قوم بارود في الأول، يابس في الثانية. ولا شك أن المفهوم من النص الأول أنه عليه حر، ومن النص الثاني إذ ينسب القول المذكور إلى أحد أن بارود. وهو يتناقض يجب التنبيه عليه.

ومن ذلك أنه ذكر في تعريف اللاذن أنه رطوبة تتعلق بشعر الشعر الراعية وحلاها إذا رعت نباتا يعرف بقيسوس، إلى تمام بيان كيفية تولّى تلك الرطوبة وتعلقتها. ثم قال هو حار في آخر الأول، يابس في الثانية. ثم ذكر قيسوس في باب القاف، وقال: أصنافه ثلاثة، أسود وأبيض وأحمر، وجميع حريف قابض. وأحد أصنافه يكون منه شيء يستند للاذن. والقيسوس في الأصل هو اللاذن أو غيره، وإنما متناقابل الأحوال. وطبعته إلى الحرارة، وربما كان في بعض أجناسه باردًا. واللاذن نفسه حار في آخر الثانية. وقال بعد ذلك في خواص القيسوس، وأما المعروف من جملته بالاذن فهو كما وجدنا. فجعل حارة اللاذن مرة في الأولى وأخرى في آخر الثانية. وتشوه كامه في ماهية اللاذن عند ذكر القيسوس، فأظهر أنه من أصناف القيسوس وأجزاءه بعد أن جعله رطوبة تركب القيسوس.

ومن ذلك ما ذكر في السرمق أنه القطيف، وهو بارد رطب في الأول. وفي القطيف أنه السرمق، وهو بارد إلى الثانية، رطب فيها.

ومن ذلك أنه ذكر جوز رومي في ثلاثة مواضع. فذكره مرة في باب الجم أنه يسمى أكروسو، يستن شديدًا في الثالثة، وجضيفه في الأولى، صمغه بالرغ في النسخين، وزهره أشد تسخينًا. وذكره في باب الحاء بهذا اللفظ من غير تقاطع، ثم قال إن الرومي من هذه الشجرة صمغها الكهربيا، ونحن نفرد له بابًا، وهو معتدل البس. وقال في الكهربا عند
Another case is *jawz al-ṭarfā‘* (tamarisk). He writes that it is the same as *kazmāzak* (tamarisk), and he avers that its warming nature is almost neutral or in the lower first degree, and that its drying nature is in the upper first degree or higher. He then states that, according to some people, it is cooling in the first degree and drying in the second [C. 284]. Undoubtedly, what is implied in the former point is that in his view it is warming; and [what is implied] in the latter point, where he attributes the foregoing view to someone else, is that it is cooling. This is a contradiction, which ought to be brought to attention.

Another case is that he defines ladanum as a viscous substance that adheres to the hair and beards of grazing goats when they browse on a plant known as cistus, and he goes on to explain the manner in which that viscous substance is produced and adheres [to the goat’s hair]. He then states that it is warming in the upper first degree and drying in the second degree [C. 350]. In the entry on cistus (*qisīs*) under the letter *qāf* [C. 422–3], he writes:

> It is of three types, black, white and red, all of which are acrid and astringent. Out of one of these types, something known as ladanum is produced. Cistus originally is ladanum or other than that; both are closely comparable in their characteristics. It tends to be warming in nature, though some of its types can be cooling. Ladanum itself is warming in the upper second degree.

On the properties of cistus, he then writes: ‘As to the type known as ladanum, it is such and such’. So, in one place he considers ladanum warming in the first degree, and elsewhere warming in the upper second degree. Furthermore, his explanation of what ladanum is became confused when he discussed cistus, suggesting that it is a type or part of cistus having already considered it a viscous constituent of cistus.

Another case is that he writes in the entry on *sarmaq* (orach) that it is the same as *qaṣaf* (orach), and is cooling and moistening in the first degree [C. 389]. However, in the entry on *qaṣaf*, he states that it is the same as *sarmaq*, and is cooling up to the second degree, and moistening in the same degree [C. 424].

Another case is that he discusses *jawz rūmī* in three places. He first includes it under the letter *jīm*, and states that it is also called *akūrūs* (black poplar), and is extremely warming in the third degree and drying in the first, and that its gum is extremely warming and its flowers even more warming [C. 284]. He then includes it under the letter *ḥā‘*, referring to it with exactly the same expression [C. 323]. There he states that the gum of the *rūmī* type (black poplar24) of this tree is known as *kahrubā‘*, which he will discuss in a

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21 See p. 152 above.
22 Here the substance is named ‘*al-jawz al-rūmī*’.
23 Here the substance is named ‘*hawar*’. Clearly, the expression is not ‘exactly’ the same. However, without diacritics, *hawar* and *jawz* have the same orthography. The alternative rendering, ‘describing both in exactly the same way’, does not work, since the descriptions of the two drugs are in fact dissimilar.
24 Literally, Roman or Byzantine poplar.
ذكره إنه صمغ شجرة يقال لها الحوز الرومي، وهو حار في الأولى، يابس في الثانية، وقوته شبيهة بقوة زهر شجرته. لا عمل بذع الشجرة في موضع حارا في الثالثة، وفي موضع حارا في الأولى. وقال أيضاً قوته شبيهة بقوة زهرة هذه الشجرة، لكنه أورد منها. ولا شك أنه أراد به التسخين. وقد جعل زهرها أشد تسخينًا، على أن الشجرة إذا كانت شديدة التسخين.

وفي الثالثة يبدع أن يكون صمغها قليل التسخين.

[10] ومن ذلك أنه قال في المصطفي إنه حار يابس في الثانية، وهو أقل تسخينًا وتجفيفًا من الكحول. وجعل الكحول حارا في الثانية، مجففا في الأول، لجعل المجفف في الثانية أقل تجفيفاً من المجفف في الأول، والسيد وافقه في ذلك.


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26 MS
27 Canon أثري
28 Page 401.
29 Canon الثالثة
30 MS (Marked with a three-dotted sign [. . .] in the margin. See above, p. 158.)
dedicated entry and is neutrally drying. In the entry on kahrubā, he mentions that this is the gum of a tree known as jawz rūmi, and then states that it is warming in the first degree and drying in the second, and that its power is similar to that of the flower of its tree [C. 338]. So in two places he states that the nature of the tree is warming in the third degree, whereas in another place he says that it is warming in the first. He also writes that its power is similar to that of the flower of this tree, but is less warming than [the flower] [C. 338]. By this [i.e. ‘its power is similar…’], he was undoubtedly referring to the power of warming. So he has made the flower more warming, despite the fact that when a tree is extremely warming in the third degree its gum is unlikely to be moderately warming.

[10] Another case is that in the entry on mastic, he asserts that it is warming and drying in the second degree, and is less warming and drying than frankincense [C. 360]. But he then states that frankincense is warming in the second degree and drying in the first [C. 337]. He thus made what is drying in the second degree less drying than what is drying in the first degree. Al-Sayyid follows him in this.

[11] Another case is that he states in the entry on dahmast (laurel) that it is ghār (laurel) tree, that its berry is the most efficacious part in it, and that it is warming in the third degree and drying in the second [C. 293]. In the entry on ghār he writes that its berry is more warming and its bark less warming, and that overall it is warming and drying in the second degree [C. 468]. The [sentence] structure in both places suggests that he is referring to the nature of the whole tree, including all its parts; and it follows that in one case it is warming in the third degree, and in the other case warming in the second. So if what is referred to in both places is taken to be the nature of the berry – since he asserts that the berry is more warming than the bark, and the most powerful part of the tree – then what is more powerful will be warming in the second degree, and what is weaker will be warming in the third. 32

[12] Another case is that in the entry on hil bauwā, or hāl bauwā (cardamom) he states that it is the same as kbīr bauwā (cardamom), and is warming in the first degree and drying in the second [C. 298]. But in the entry on kbīr bauwā he writes that it is warming and drying in the third degree [C. 464]. Al-Sayyid does the same.

[13] Another case is that in the entry on the fruit of khaḍrā (terebinth) he writes that its gum is warming and slightly drying [C. 323]. He then mentions it under the letter dād as darw (terebinth), and there states that rubb al-darw (terebinth extract), which is its gum, is brought to Makka, and is named thus, and that it is warming in the third degree and moistening in the first [C. 466]. In the [Arabic] lexicon, darw is the gum of this tree […]

31 Literally, more cooling.
32 The referent of ‘what is weaker’ here is not obvious.
In *Canon*, vol. i. 267, this substance is said to be ‘cooling and moistening in the first degree’, rather than ‘warming and moistening in the first degree’, as in Ibn Ghalyān’s text. A marginal note in a later hand highlights the discrepancy committed by Avicenna:

"...معلوم أن الهر يؤثر على النباتات..."

And if this is the case, then the text in the Adwiya also mentions the Ninth Year in the third volume, as follows:

"...الخضرة حار يجب على النباتات..."

33 In *Canon*, vol. i. 267, this substance is said to be ‘cooling and moistening in the first degree’, rather than ‘warming and moistening in the first degree’, as in Ibn Ghalyān’s text. A marginal note in a later hand highlights the discrepancy committed by Avicenna:

"...معلوم أن الهر يؤثر على النباتات..."

34 MS وهو
35 MS هذه
36 MS ورد
37 *Canon* الثالثة
38 *Adwiya* الثالثة
39 *Adwiya* الثالثة
[14] Another case is that in the entry on euphorbias he writes that sun spurge latex is a euphorbia, and that it is warming and drying in the fourth degree, whereas other [euphorbias] are [warming and drying] in the second or third degrees [C. 334, 336]. However, at the same [fourth degree in both respects] we also find [two other euphorbias, namely] mezereon and euphorbia pithyusa [C. 438, 361].

[15] Another case is that he states that biranjāsif (wormwood) is warming and moistening in the first degree, and qayṣum (southernwood) warming in the first degree and drying in the third [C. 267, 424]. However, qayṣum is undoubtedly the same as biranjāsif, as indeed is stated in some copies of the Canon.40

These are the cases of discrepancy and contradiction pertaining to the natures of drugs that I found in the [Book of Simple] Drugs in the Canon. Even though some might try to explain some of these inconsistencies in terms of scribal errors in different copies, not all can be explained thus. This being the case, had the compiler been scrupulous enough to fix up what he was compiling, he would have refrained from detailing all the characteristics of a drug that is known by two names in one place, and then referring to [the former place] when he discusses [the drug] under its other name.41

As to the inconsistency between [the natures of drugs] given in the Canon and those given in Heart Remedies:

[16] One such case is what he says concerning the peel and seed of citron. In the Canon, he states that its peel is warming in the first degree and drying in the upper second, and its seed warming in the first degree and drying in the second [C. 257]. However, in Heart Remedies, he states that its peel is warming and drying in the third degree, and its seed cooling and drying in the second, and he indicates that the cause of its efficacy in strengthening the heart is that it fortifies the pneuma by virtue of being cooling and drying in the second degree [H. 264–5].

Al-Sayyid treats citron in exactly the same way he treats sea onion. He considers it a medicinal food and hence includes it in the first part [of the Book of Simple Drugs in the Treasure] devoted to [medicinal foods], and then considers it a pure drug and hence includes it in the part devoted to [pure drugs]. In the former part he writes on its peel and seed the same as what is in the Canon, while in the latter part he writes the same as what is in Heart Remedies.

40 This is not stated in the published editions of the Canon.

41 I take ‘nāqīl’ (compiler) to be a reference to Avicenna, rather than the aforementioned copyists. This point echoes the opening sentence of the epistle.
[17] ومنه جعله البصين في القانون حاراً يابساً في [الثانية، وفي الأدبية القلبية حاراً في
الثانية يابساً في] الأولى.
[18] ومنه جعله البارصيني في القانون حاراً يابساً في الثانية، وفي الأدبية القلبية حاراً
في آخر الثانية، يابساً في الثالثة. والتفاوت بين أجزاء الثانية وبين الثالثة، وإن كان سهلاً،
فلا حاجة يكون تفاوتاً، وحسن التنبية عليه، ولذلك حكم بالتفاوت فيه.
[19] يشبه [43] هذا ومتقلة أنه جعل البذور حاراً في الأولى إلى الثانية، يابساً في أول
الأول في القانون، وحاراً يابساً في الأولى مطالتا في الأدبية القلبية. فلم يخل
عن تفاوت ما.
[20] وكذلك جعل في القانون الزرباد حاراً يابساً في الثالثة، وفي الأدبية القلبية حاراً
يابساً في الثانية.
[21] وأيضاً جعل النعنع [حاراً] في آخر الأول، وبسسه في أول الثانية في الأدبية
القلبية، وجعلها في الثانية في القانون.
[22] و مثل ذلك ما جعل في الأدبية القلبية بالاقالة [46] وقرفة الطيب وقرفة البارصيني
فيسها في آخر الثانية، وجعل القالة في القانون حارة يابسة في الثالثة، وجعل قرة القطن
حارة يابسة إليها أيضاً.
[23] ومن التفاوت الذي يؤدي إلى التناقص أنه جعل الطرشوثق [47] في القانون رطباً،
وفي القلبية يابساً.
[24] ومن الذي ليس يسهل أنه جعل المسكن في القانون حاراً يابساً في الثانية، وفي
الأدبية القلبية في الثالثة.
الثانية.
[26] ومنه أنه جعل يس الصدلين (؟) في القانون في الثالثة، وفي القلبية جعله في
الثانية.

42 MS
43 MS
44 MS
45 MS
46 MS
47 In other sources, this also appears as ṭarḥashqūn, ṭalḥashqūq or ṭarshaqūq.
48 Page 402.
[17] Another case is that in the Canon he considers behen warming and drying in the second degree, while in Heart Remedies it is said to be warming in the second degree and drying in the first [C. 266–7; H. 268].

[18] Another case is cassia, which in the Canon he considers warming and drying in the third degree, and in Heart Remedies warming in the upper second degree and drying in the third [C. 289; H. 269]. Although the discrepancy between the [upper] divisions within the second degree and the third degree is only slight, it is still a discrepancy and deserves to be pointed out. For this reason, I count this as a discrepancy.

[19] Similarly, in the Canon he considers basil warming in the first to second degrees and drying in the lower first, whereas in Heart Remedies it is said to be warming and drying in the first degree without qualification [C. 274; H. 267]. There is some discrepancy here.

[20] Likewise, he considers zedoary warming and drying in the third degree in the Canon, and warming and drying in the second degree in Heart Remedies [C. 303; H. 271].

[21] Also, he considers mint warming in the upper first degree and drying in the lower second degree in Heart Remedies, and considers it [warming and drying] in the second degree in the Canon [C. 375; H. 277].

[22] A similar case is that in Heart Remedies he considers cardamom (qāqulla), cinnamon (qirfat al-ṭib) and Malabar bark drying in the upper second degree. However, in the Canon he considers cardamom warming and drying in the third degree, and cinnamon (qirfat al-qaranful) warming and drying in the same degree [C. 417; H. 279].

[23] One case of discrepancy that results in contradiction is that he states that chicory is moistening in the Canon, but drying in Heart Remedies [C. 326; H. 272].

[24] A further, not insignificant case is that in the Canon he considers musk warming and drying in the second degree, but [warming and drying] in the third degree in Heart Remedies [C. 360; H. 276].

[25] Another case is that in the Canon he considers ambergris drying in the first degree, but [drying] in the second degree in Heart Remedies [C. 398; H. 278].

[26] Another case is that in the Canon he considers [... drying] in the third degree, but [drying] in the second degree in Heart Remedies.

49 Avicenna here identifies qirfat al-qaranful with qirfat al-ṭib.

50 This rather seems to be a case of simple contradiction.

51 The text here reads ‘sandalin’. No substance by this name is listed in either the Canon or the Adwiya, or indeed in other pharmacological sources. It cannot be sandalwood (ṣandal), as in both works it is said to be drying in the second degree (C. 414; H. 279). Only zedoary (zarunbād) is said to be drying in the third degree in the Canon (303) and in the second degree in the Adwiya (271); but it has already been mentioned (no. 20).
[27] ويُعلِّم أنه جعل السوسن الآراد في القانون حار يابساً في الثانية، وفي الأدوية القلبية قال السوسن الآراد قريب الطبع من الزعفران، ولكنك أنت الصواب يابساً ويبساً منه. وذكر في كلا الكتابين أن الزعفران حار في الثانية، يابس في الأولى. جعل الحار البابس في الثانية، أنت الصواب يابساً ويبساً من الحار في الثانية البابس في الأولى. هل يجيبِ جداً؟

هذا ما اتفق العثور عليه من هذا النطق. وهو نزير يسير بالقياس إلى مخترفات ابن سينا في العلوم الحقيقية التي ناقض فيها الحق وخالف بها دين الإسلام. وقد بينت بعض خطته في تلك العلوم في رسالة سيني بها التوضغة، وهي مقصورة على بيان ما ينال فيه من أشكال الأفقيسة في مختاراتها من علم المطلق، وفي كتاب صفيه في إثبات حدوث العلم. فلذلك كان هذا النطق من الكلام يذعن. إن يستعمل به ويثبت أن يوجد به مثله. لكن لكيال ظهوره صلح لتسكيت من يعتقد أنه معصوم عن الزلزال وأن الخطأ عليه محل. ثم يعون الله.

52 MS
53 MS
54 MS
55 MS
56 Dánishpazhūh ‘Gūsha‘i az tārikh-i mantiq’, 291) provides a transcription of this concluding paragraph from the manuscript copy of the Parvantu collection. However, it does not assist in improving this sentence.
57 MS
Another example is that in the Canon he considers iris warming and drying in the second degree, and states in Heart Remedies that iris is close in its nature to saffron, but is less warming and drying [C. 383; H. 277]. In both books, he writes that saffron is warming in the second degree and drying in the first [C. 306; H. 270]. He has thus made what is warming and drying in the second degree less warming and drying than what is warming in the second degree and drying in the first, which is most baffling!

These are the cases of [inconsistency, discrepancy and contradiction among the natures assigned by Avicenna to simple drugs] that I found. They are an insignificant trifle in comparison to Avicenna’s nonsensicalities in the philosophical sciences, by which he has gone against the truth and contradicted the religion of Islam. I have exposed some of his errors in these sciences in an epistle I titled Prolegomenon to the Refutation, which is devoted to revealing the mixed syllogistic forms that he omitted to consider in logic, and in a book I wrote to prove that the world was generated in time. [...]58 However, given the total unambiguity of [the evidence set out above], it lends itself well to silencing those who believe that he is immune from error and cannot conceivably go wrong.

58 A largely indecipherable sentence here. See p. 154 above.
Index of Drug Names

INDEX OF DRUG NAMES

2
أبلي

13
ضرؤ

4
بروفا

23
مارحشوق

16
أرتج

2
عر

16.1
إسيبل

25
عبر

3
إسترك

1
وصل

9
أغريوس

11
نار

19
أياروج

5
فستق

15
برجامس

22
قائمة

1
بصل النثر

22
فترة النصي

17
بهن

22
فترة الطب

5
جوز

22
فترة الفن

9
جوز روبي

(sic)
8
قطف

6
جوز الطفاء

7
قياسس

13
حبة الخضراء

15
قياسوم

9
حوري روبي

6
كمارك

4
خص الحز

10
كر

12
خير با

9
كوبا

18
دارسيني

7
لدمن

11
دهمست

14
لعبة

20
زيناد

3
لين

27
زغنام

14
مازون

3
زكون

24
مسك

8
سرق

10
مصاصي

27
سوس آزاد

3
ميغة

14
شيم

21
مع

4
شجار

12
هبل با (هال با)

4
شتقر

14
 النوع