The “Kitab al-Shukuk’ ala Jalinus” of Muhammad ibn Zachariyä al-Razi

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Abu Bakr Muhammad ibn Zachariyä al-Razi, known as the “Galen of the Arabs,”1 “the Physician par excellence of the Muslims,”2 and “Learned Master (Allamah)” of the Sciences of the Ancients,3 was one of the most widely-recognized and encyclopaedic philosophers ever to appear in the Islamic world. He read with a number of teachers from Khuräsan, al-Nishaburi,4 Abu Zayd al-Balkhi,5 and Ali ibn Rabban al-Tabari.6 He made a thorough study of medical practice in the hospitals of Rayy and Baghdad, finally achieving the rank of “resident surgeon” (“al-tabib al-maristani”).

Al-Razi debated with many outstanding personalities of his time. He discussed metaphysics and the problem of time with Abu al-Qasim al-Ka’bi al-Balkhi;8 the question of the pre-existence of matter with Ahmad ibn al-Hasan al-Masma’i;9 the validity of medicine with Abu al-Abbas al-Nashi al-Akbar;10 the problem of pleasure with Abu al-Abbas Shahid ibn al-Husayn al-Balkhi;11 bitter taste with Ahmad ibn Muhammad Abu Tayyib al-Sarakhsi;12 and the immate with Ahmad ibn Kayyal.13

The esteem in which al-Razi was held is indicated by the Fihrist (bibliography) of his writings compiled by Abu Rayhan al-Biruni, another great learned man of the 5th/11th century.14 Al-Biruni undertook the work despite his strong disagreement with al-Razi on a number of philosophical and religious issues. The Fihrist is divided by subject; some of the various headings include medicine, the natural sciences, logic, mathematics, astronomy, commentaries and summaries by al-Razi of predecessors, works, metaphysics, alchemy, and heresiography.

Among al-Razi’s works on the natural sciences al-Biruni mentions the al-Shukuk ala Jalinus (Doubts concerning Galen).15 Unfortunately only three manuscripts of this valuable work have survived; all three, moreover, seem to be descended from one copy. Nor has the al-Shukuk, despite its importance for the history of medicine, ever been published. It is my aim in this modest essay to bring al-Razi’s critique of Galen to the attention of scholars of the history of medicine.

It is first necessary to point out that the Arabic term “shakk” (Lit: “doubt”) contained in the title is equivalent to the Greek term “aporia” which gives the sense of “difficulty, hardship, confusion.” In philosophical dialectics it indicates a difficulty, problem, or enigma. The addition of the Arabic preposition “alā” (here parallel to the Greek “pros”) further indicates objection and critique.16 Thus al-Razi, brings up certain “doubts” or “objections” to problematic points in which Galen has apparently entangled himself in his writings.

Galen himself was born several centuries before al-Razi, in the year 130 C.E. in the town of Pergamon (known to the Arabs as “Farghamus” or “Farghamun”) in Asia Minor. He died in Sicily in 200 C.E., leaving behind numerous treatises not only on medicine and philosophy, but on many other subjects as well. He also compiled an autobiography, called in Arabic “Finaks”17 or “Binaks”,18 from the Greek “pinax” meaning “catalogue”, along with another treatise laying down the proper order in which his books were to be studied.19 After his death his fame only increased. His students had a great following; they travelled to many lands and taught in various schools and centres of religious learning. As time passed the Greek originals of Galen’s works became hidden away in the corners of the academies, where they lay for centuries nearly forgotten. By this time, however, most had been rendered by Muslim translators either into Syriac or Arabic. In the Middle Ages they were subsequently translated from Arabic into Latin,20 and finally in the Renaissance with the renewed influence of Greek thought further into Latin and then into other European languages.

Many translators shared in the Arabization of Galen’s works. Chief among these was Hunayn ibn Ishaq al-‘Abädi, known as “Hunayn the Translator”
Kitab al Shukuk

(d. 260/856-57). Hunayn's translations of Galen are listed in one of his own treatises, and it was through these that Galen became known in the Islamic world. His name finally became synonymous in the Islamic literatures with perfection in the art of medicine. The well-known Arabic poet al-Mutanabbi says:

When I found the cure for my illness with my beloved;
Even Galen seemed to me little in comparison.

Although many Islamic scholars studied Galen and used his writings, al-Razi was probably the most learned among them. He even makes mention of several of Galen's works listed neither in Hunayn ibn Ishāq's bibliography nor that of Galen himself. His admiration for Galen is obvious: he followed the Greek physician not only in his medicine, but also in his philosophy and ethics. It is no wonder then that he begins the Kitāb al Shukuk with the following declaration:

[In writing this book] I am faced with opposing one who is in my eyes the greatest of men, and who has benefitted me more than any person. It was through him that I was guided; I trod in his footsteps, and drank of his knowledge as if from an ocean! I am faced with this knowing that the slave must not oppose his master, nor the student his teacher, nor he who receives grace the one who granted it.

We also see that the titles of several of al-Razi's works coincide with those of Galen's, for example "al-Burhān" (The Demonstration); "Fi-mā ya taqidu-hu ra' y(an)" (On the Beliefs Held [by Galen]); and "Fi manāfi-a'da" (On the Usefulness of the Parts of the Body). Al-Razi also summarizes a number of Galen's important works: thus his "Summary of the Greater Book of the Pulse" (Ikhtisār kitāb al-nabd al-kabir) and "Précis of the Stratagem for Recovery" (Talkhis li-hilat al-bur), the "Précis of Causes and Accidents" (Talkhis al-ilal wa-al-a'rād) and the "Précis of Painful Members" Talkhis al-a'dā' al-ālimah. Al-Razi states in the al-Shukūk that Galen is, in his opinion, even greater than Aristotle:

There was in the City of Peace [that is Baghdad] a certain man who used to read the works of Galen with me. He himself favoured Aristotle. Whenever he came across passages [in which doubts could be applied against Galen] he would vigorously censure me for setting him above Aristotle. God knows that I was many times quite put to shame by the elegance of his arguments on such occasions.

It is worth mentioning here that al-Razi sided with Plato rather than Aristotle concerning many of the questions on which Galen himself agreed with Plato. Examples of these are the problem of pain and pleasure, and the three souls. Thus al-Sādī al-Andalūsī (d. 462/1069-1070) says concerning al-Razi: He strongly disagreed with Aristotle, censuring him for splitting from his teacher Plato and others of the ancient philosophers in the matter of many of their beliefs.

Thus having read all of Galen's important works and finding a number of inconsistencies and dubious points, al-Razi set about composing his Kitāb al Shukuk. Al-Biruni calls the book al-Shukuk alā Jālinus while Ibn Abi Usaybi’ah gives it a longer title: al-Shukuk wa-al-munāqadāt allāti fi kutub Jālinus (Doubts and inconsistencies in the Books of Galen). The manuscript which I have used (described below) bears a longer title still: Kitāb al shukuk il-Rāzi alā kitāb fādil al-attībā Jālinus fi al-kutub allāhi nusība ilay(hi) (AL-Razi's Book of Doubts Concerning the Treatise of the Most Eminent of Physicians, Galen, on the Works Attributed to Him).

It should be recalled here that Alexander of Aphrodisias (fl.c.early 3rd C.A.D.) also opposed certain of Galen’s beliefs,22 before al-Razi; thus Yahyā al-Nahawī al-Iskandarānī (John Philoponus, fl.c.A.D. 490-c.570) also wrote a work which he called “Doubts”, in which he clarified what he believed to be Galen's errors.33

The Ismā‘ili philosopher Muhammad ibn Surkh al-Nishābūri (fl. A.H. 4th or 5th C./A.D. 10th or 11th C.) also mentions al-Razi’s Shukūk in a book which he wrote as a commentary on the qasidah of his contemporary Abu al-Haytham al-Jurjānī—going on to note that another man living at the time wrote a book which he called “Doubts Concerning Muhammad ibn Zakariya.” It is reported that when al-Razi saw the latter book he said, “It seems that he holds me in the same high regard as I do Galen himself” then proceeded to confess his own errors.34 The story may be apocryphal. It is certain, however, that Ibn Abi Sādiq,25 Ibn Riwān al-Misrī,26 and Abu al-Alā ibn Zuhr each wrote a book called “Solution to al-Razi’s Doubts Concerning the Works of Galen” (Hall shukuk al-Rāzi alā kutub Jālinus). Ibn Maymūn al-Qurtubī ("Maimonides", d. 601/1204-1205) also mentions Ibn Riwān’s and Ibn Zuhr’s refutations of al-Razi’s Book of Aphorisms Kitāb al-fusūs).38 Ibn Abi Usaybi’ah actually had Ibn Riwān’s treatise in his possession, but it is unfortunately lost to us. Ibn Zuhr’s work, however, is existant, in the form of a manuscript in the library of the Madrasat Nawwāb in Mashhad. The title reads al-Bayān wa-al-tadyīn fi al-ītīsār li-Jālinus (Explanation and Elucidation in support of Galen). Ibn Zuhr thinks that either one of the Islamic “sceptics” (al-Sufastā‘iyah) contrived the work and then fathered it.
on al-Rāzi, or that al-Rāzi wrote it either when he was still young and had not yet properly understood Galen, or at the end of his life when he was preoccupied with alchemy and had been overcome by the fumes of arsenic and sulfur.  

Al-Rāzi himself begins the al-Shukuk with the following comment "I know that many people will think me ignorant for writing this book..." He then goes on to defend himself: "The practice of science and medicine does not allow that one surrender, as it were, such an attitude on the part of his students". He then replies to those who reproach him as follows:

As for those who censure me and call me ignorant for having produced this Book of Doubts - I do not consider them philosophers. They have turned their backs on the way of the philosophers. They have taken up the ways of ignorant upstarts, blindly imitating (q-l-d) authority and reframing from raising any objection against it. Aristotle says: Plato and the Truth are at odds, and both are friend to me - but the Truth is a friend dearer still than Plato.  

Al-Rāzi continues:  

As for those who believe that the sciences continually grow and are refined as time passes... If it then be said that this is tantamount to claiming that modern scholars are better than the ancients, I reply: that I do not see that this statement is valid except on condition that the moderns improve on that which has been laid down by the ancients.  

Maimonides's observation, however, must be rejected, for Galen himself also enquired in his medical works into questions of philosophy such as createdness and pre-existence, generation and corruption, time and place, matter, and plenum and void. The ancients believed that medicine and philosophy complemented each other. Some even said that medicine was "the philosophy of the body" and philosophy "the medicine of the soul."  

The Islamic physicians took the same view: they discussed philosophical questions in their medical works on the principle that they affected the medicine of the body and the soul. We see this approach in the Firdaws al-hikmah ("Paradise of Wisdom") of Ali ibn Rabban al-Tabari (d. after 895/1489-1490), and also in the Kitab al-mu'aliyat al-Bugratiyah ("Book of Hippocratic Treatments") of Abu al-Hasan al-Tabari.  

It is interesting that on one occasion in the Shukuk al-Rāzi makes an objection to a doctrine of Galen concerning language, thus stepping outside the realm of both medicine and philosophy. He reports Galen's statement that, "The language of the Greeks is the sweetest, while those of some other peoples resemble the squealing of pigs and the croaking of frogs." Al-Rāzi replies: This is a statement such as a common person would make! For the pronunciation of words of any language become light and sweet through habituation. The Arabic language seems to the Arabs as does Greek to the Greeks; and the language of the Byzantines seems gross to the Arabs just as that of the Arabs seems gross to the Byzantines. Ibn Hazm has this to say in reply to Galen: "This is extreme ignorance; anyone who becomes aware of a language not his own which he does not understand will see it in the way Galen describes, and no differently."  

The works of Galen to which al-Rāzi applies his doubts are some of his most important, among them the "Opinions of Hippocrates and Plato"; the "Ethics"; the "Simple Drugs", the "Elements (ustuqssat) according to Hippocrates"; the "Types of Fever"; "Painful Members"; "Foods"; "Critical Illnesses"; "The Crisis"; "The Demonstration"; "Medical Experience"; "The Treatment of Healthy Persons"; "Anatomy of Animals"; "Commentary on Hippocrates"; "Book on the Nature of Man"; "Commentary on the Book of Aphorisms"; "Preface to knowledge"; "The Movement of Muscles"; "Stratagem for Recovery"; "Atrophy"; "Tremors and Shivers"; "The Lesser Practicum"; "Causes and Symptoms"; "Qatājānus"; the "Natural Faculties"; "That the Faculty of the Soul follows on the Temperament of the Body"; "On the Opinions [of Galen]"; "The Temperament"; "The Usefulness of the Members"; "the Semen"; "al-Mayāmir"; and The Greater Book of the Pulse.
Al-Razi mentions the views on nature and philosophy of Greek thinkers such as Plato, Aristotle, Hippocrates, Theophrastus, Chrysippus, Empedocles, Diocles, Thales, Asclepiades, Dioscorides, and Erasistratos. Among Islamic scholars he names Hunayn ibn Ishaq and Muhammad ibn Musa, he also mentions, without giving his name, a prominent man and noble friend who used to read the works of Galen with him. In the course of his discussion of Galen, al-Razi also records the names of a number of his own works no longer existant. These names allow us to at least determine the subject-matter of the lost treatises. In one passage, for instance, he mentions the Sam al-Kayyan, evidently from its title an essay on the oral teaching of the natural sciences: “I have devoted a chapter of the Sam al-Kayyan to the opinion of those who assert that changes are either hidden or apparent. Whoever reads it will become convinced that this doctrine has shortcomings”. Other titles of lost works of al-Razi are:

“Refutation of al-Sarakhsi on the Matter of Bitter Taste” (Fi al-rudd ala al-Sarakhsi fi amr al-tam al-murr). In the course of a discussion of proof that the efficacy of a medicine may be determined through its taste al-Razi writes: “I have discussed these matters in a treatise which I have devoted to refutation of Ali Ahmad ibn-al-Tayyib al-Sarakhsi (d.286-899) concerning bitter taste”. All-Razi’s Kitab al-Shukuk allows us to gain knowledge of the contents of some of his works which are no longer existent - even if, in many cases, he does not specifically mention the titles of such works.

Thus al-Razi’s Kitab al-Shukuk lets us enquire exhaustively into this doctrine of Galen and his book on climates, God willing.

On the Climate of Underground Passages (Fi jaww al-asrāb). Al-Razi writes: I have explained in a separate treatise that the warmth which we feel in the winter in the water which comes from springs and from the air in deep places does not result because it is of itself warmer at that time than in summer. Rather we feel it so because of the cold of our bodies - just as well feel tepid water to be cold after being in the bath because of the heat of our bodies. If you should wish to inform yourself of all I have stated concerning this matter, then read [the appropriate] treatise.

Greater Book of the Soul (al-Nafs al-Kabir). Al-Razi writes: Many doubts may be raised against Galen’s refutation of Chrysippus concerning the accidents of the soul. It is not necessary to prolong discussion of them here, since I intend to write a book which will treat the subject thoroughly, God willing, and in which I will also discuss the objections which may be made to Galen’s Ethics.

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I have only been able here to give a glimpse of this important treatise of Muhammad ibn Zakariyya al-Razi, The Physician of the Arabs. I would recommend to those interested in the works of Galen and al-Razi and their medical and philosophical thought to pay particular attention to this work. For my part, I hope to eventually edit and publish the Kitab al-Shukuk; it should be of great use for the history of Islamic science.
15- al-Biruni, al-Risálah, no. 88 (in both editions).
19- This was known in Arabic as Famarâtíb girá at kutub (ìhi), and in Latin as De Ordine Librorum.
25- Ibn Abü Usaybiáh, Uyun al-anbá, nos. 2, 190 & 191 of the works cited of al-Ra¿i. See also Hunayn ibn Ishaq, al-Risálah, nos. 49, 113 & 115 of the works cited of Galen.
26- al-Biruni, al-Risálah, nos. 108, 109, 110 & 111 of the works cited of al-Ra¿i. See also Hunayn ibn Ishaq, al-Risálah, nos. 14, 15, 20 & 26 of the works cited of Galen.
27- al-Ra¿i, Kitâb al-shukúk, p. 16.
29- al-Biruni, al-Risálah, no. 88.
30- Ibn Abü Usaybiáh, Uyun al-anbá, p. 422.
31- MS. in the Malik Library in Tehran, referred to above, p. l.
33- Ali ibn Ridwán al-Misiri writes in a letter to Ibn Butlân al-Baghdádí: I am much astonished to see that Yahyá al-Nawahí has written a book which he calls al-Shukuk in which he clarifies what he asserts to be the errors (ughlûtÁt) of Galen (KhamÁ rasáÁl Ibn ButlÁn wa-Ibn RidwÁn, ed. J. Schacht & M. Meyerhof [Cairo: 1937], p. 75).

35- Abu al-Qásim Abú al-RahmÁn ibn Abá Sádáp lived in the fifth century of the Hijrah. Ibn Abú Usaybiáh says in his biographical notice that he wrote a Solution to Ra¿i’s Doubts concerning the Works of Galen in his own hand (Uyun al-anbá, p. 461).
36- Ibn Abú Usaybiáh attributes to Abu al-Há­san Áli Ibn RidwÁn al-Misiri (d. 453) a work called On the Solution of al-Ra¿i’s doubts concerning the Works of Galen (ibid., p. 567).
37- Abu al-ÁlÁ Zahár ibn MarwÁn (d. 1259/1131) was known in Latin as Avenzoar. Ibn Abú Usaybiáh also attributes to him a Solution of al-Ra¿i’s Doubts Concerning the Works of Galen (ibid., p. 519).
40- See the notice in the Majallat Al-asÁtÁn-i Ouds-i Radawi (Mashhad), 7, p. 116.
41- Ibn Zahár in his al-BayÁn wa-al-tabyÁn has the sceptics say, instead of al-Ra¿i says (Mashhad ms., p. 1).
42- P. 1. Al-Ra¿i here in fact imitates Jabir ibn HayyÁn, who begins his al-Tajmi and also his al-SirÁl al-maknun: There will be people who will think me ignorant... See Paul Kraus, Jabir ibn HayyÁn (Cairo: 1942-43), vol. 2, p. 252.
43- Ali ibn RidwÁn al-Misiri relates the same statements in his Epistle to Ibn ButlÁn, but also adds the words of prophesy: It would be easier for us to killour fathers than to accept false beliefs (KhamÁ rasáÁl, p. 76).
44- al-Shukuk, pp. 12.
45- Radd Musá ibn Maymun al-Qurtubí, p. 77.
47- See Hunayn ibn Ishaq, al-Risálah, no. 103. The book was published in Goettingen in 1966, along with a German translation.
48- Kitáb al-shukuk, p. 29.
49- Ibn Hazm al-Andalusi, al-Akhám fi-usul al-ahkám (Cairo: Mattá’at al-ImÁm), vol. 1, p. 32.
51- Ibid., pp. 8, 16 & 28.
52- Ibid., p. 10.
53- Ibid., p. 17.
54- Ibid., p. 10.
55- Ibid., p. 5.
56- Ibid., p. 25.
57- Ibid., p. 23.