ARTICLE No. 8.

The Science of Medicine under the Abbasids.

By M. Z. SIDDIQI.

THE CAUSES OF THE SPEEDY DEVELOPMENT OF ARABIAN MEDICINE IN THE ABBASID PERIOD.

The advent of the Abbasids marked a new era in the history of the development of Arabian medicine. They came to power and there arose the magnificent building of Arabian medicine with all its parts well developed. The rapid rise of this science, in the short space of less than two hundred years, can be comprehended only in the light of the collective circumstances that led to it, namely, the previous development of Medical science by the Greeks and the Indians, the work done in connection with Arabian medicine and the development of Arabic grammar and scientific prose literature under the Umayyads, the keen interest of the Abbasid Caliphs and their courtiers in literary activities, and the ample means and appliances which they had at their disposal for the promotion of Arabian medicine.

THE INTEREST OF THE CALIPHS.

All the early Abbasid Caliphs from al-Manṣúr to al-Mutawakkil were great patrons of learning and of the learned. Al-Manṣúr was himself a scholar,[1] and being fond of the company of scholars he urged his son, Mahdí, to frequent their society.[2] He took a keen interest in Astronomy and other sciences, and also in literature.[3] Mahdí had less taste for scientific studies and was not so broad-minded as his predecessor or successors, still he was himself a literary man[4] and his generosity towards literary men was unprecedented.[5] Al-Hárún's literary and scientific interest is too well known to need emphasis. His love of literature and science was further excited by his acquisition of a large number of books in his campaign in Asia Minor (at the conquest of Angora). In order to preserve the previously-collected and the newly-acquired books and to make the best use of them, he founded the Baytu'l-Ḥikmat, organised the library and the translation department, appointed Faḍl b.

1 al-Mas'udí, Murúju'l-Dhahab, vol. 8, p. 292.
2 Annals of al-Ṭabari, series 3, p. 404.
3 Murúju'l-Dhahab, vol. 8, pp. 290–292.
4 al-Suyúṭí, Táríkhu'l-Khulafá, 1857, p. 275.
5 Ibn Khallikán, ed. Wüstenfeld, No. 252; Kitábu'l-Aghání, Vol. IX, p. 40.

Núbakht to supervise the translation of Persian books into Arabic. He entrusted the task of supervising the translation of Greek medical works[1] to Yúḥanná b. Másawayh, who had many assistants under him. Al-Mámún organised and sent a commission to Byzantium in order to acquire Greek scientific books.[2] Al-Mu'taṣim approved the strict measures taken by Afshín in regard to the apothecaries[3] and supplied Yúḥanná b. Másawayh with big monkeys for dissection.[4] Al-Wáthiq's long and interesting discussion with the learned medical men of his time concerning the fundamental principles of the science of medicine, their basis, and the method followed in establishing them, shows his keen interest in medical science and its history.[5] Al-Mutawakkil, in spite of his orthodox views, knew the worth of real scholars and did not hesitate to promote the learned Christian physicians to the position which they deserved. He had promoted Ḥunayn b. Isḥáq from the position of an ordinary translator to that of superintendent of the translation department,[6] and made him the head of the physicians in Baghdád[7] and he appointed Rabban al-Ṭabarí, who worked as foreign secretary of al-Mu'taṣim, as his own courtier.[8]

According to the Arabic proverb النّاسُ على دين ملوكهم, people follow their Kings, the interest of the Caliphs in the science created an interest for it in their courtiers and subjects also. Isḥáq b. Sulaymán b. 'Alí al-Háshimí,[9] Muḥammad b. 'Abdi'l-Malik al-Zayyát,[10] Ibnu'l-Mudabbir,[11] 'Abdul-Láh b. Isḥáq[12], the family of the Barmacides[13] and of the Banú Músá[14]

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[1] Táríkhu'l-Ḥukamá, pp. 255, 380. Cf. Ṭabaqátu'l-Aṭibbá, vol. 1, p. 175.

[2] al-Fihrist, p. 243.

[3] Táríkhu'l-Ḥukamá, p. 189.

[4] Ṭabaqátu'l-Aṭibbá, vol. 1, p. 87.

[5] Murúju'l-Dhahab, vol. 7, pp. 173–180. A description of the principles of the empirics and of the methodists is given in this discussion.

[6] Ṭabaqátu'l-Aṭibbá, vol. 1, p. 189.

[7] *Ibid.*, p. 198.

[8] al-Fihrist, German Edition, p. 296.

[9] He got a Sanskrit book on drugs translated into Arabic by Manka (al-Fihrist, p. 303). He was interested in Indian medicine, probably because he had lived in India as a governor of Sindh (al-Ṭabarí, vol. 3, p. 609).

[10] He used to spend about two thousand dinars a month on translators and copyists (Ṭab., vol. 1, p. 206). For his interest in literature see Kitābu'l-Aghání, vol. 20, pp. 46-47.

[11] *Ibid.*

[12] *Ibid.*

[13] Yaḥya b. Khálid got the compendium of Susruta translated into Arabic (al-Fihrist, p. 303).

[14] The Banú Músá, who are also known as Banú Munajjim, were the greatest patrons of Arabic scientific literature after the Caliphs. They sent a commission to Byzantium to acquire Greek works (al-Fihrist,

are some of those courtiers and private persons who showed great zeal in attracting students of medicine to Baghdád and in encouraging them to enrich Arabic medical literature with translations and independent contribution.[1]

Baghdád as a great literary centre.

Baghdád, the Metropolis of Islam, thus assumed the fallen mantle of Rome and Alexandria. Hither came the most able men of the time from all quarters of the globe, attracted by the patronage of princes and private individuals, to employ their medical talents in well-stored libraries and well-equipped hospitals, and by their collective effort they produced the vast and varied literature of Arabian medicine. Here, too, trade brought a large variety of new medicaments like سناء, Senna, فلنجه, Falanja, (probably Per. Pálanga), سلاجيت, Salájít, and اكتمكت. As regards the international aspect of its medical school, at any rate, Baghdád excelled the previous seats of learning. Neither at Rome nor at Alexandria were Indian Medical men working side by side with those of other nations, nor were so many important Indian and Greek medical works translated into any other language as into Arabic.

The different groups of medical men.

The different groups of these men of many-sided learning helped the progress of Arabian medicine in different ways. Some translated the Greek or the Indian medical works into Arabic. Some tested and verified the medical principles established by the ancient physicians. Some tried to systematise the diverse branches of medical science into one harmonious whole. Here we will deal only with the translation of medical works into Arabic and with the verification of medical principles by the Arabic medical writers.

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p. 243), brought Thábit b. Qurra to Baghdád, and introduced him and many other scholars to the court of the Caliphs (Ṭab., vol. 1, p. 215; Mu'jamu'l-Udabá, vol. 5, p. 460). They paid Ḥunayn and others 500 dinars a month for translating medical works into Arabic (Tab., vol. 1, p. 187). They had a big library which was a great attraction for people in different towns (Mu'jam, vol. 6, p. 467).

[1] Táhir, the governor of Khurásán, after making his son a *Wáli* of Diyári Rabi'a, wrote to him a long letter (Annals of al-Ṭabarí, series 3, vol. 2, pp. 1046–1061), instructing him in the art of governing people. In this letter, which was much admired by Mámún and a copy of which was sent by him to all the officials, he says 'You should establish hospitals for the sick and appoint physicians and attendants to treat and attend them'. (Ṭabarí, series 3, vol. 2, p. 1059.)

The early translators.

Though the translation of medical works into Arabic was resumed in the Abbaside period in the reign of al-Manṣúr, and received an organised form in the reign of al-Hárún, yet it was not carried out on the basis of any sound principle until the appearance of Ḥunayn b. Isḥáq in this field, about the end of the reign of al-Mámún. Almost all the early translators, like Batríq, his son Yaḥyá, and Stephen b. Basil, were non-Arabs, lacking regular and well-grounded education in the Arabic language, the mastery of which was as essential for the purpose of translating Greek medical works into Arabic as that of the Greek language and of medical science. This deficiency in the early translators must have gravely hampered their work and rendered their translation useless for the Arabic-reading public.

Remarks of Bahauddin.

This conjecture is corroborated by a passage in the Kashkul of Bahá'uddín-al-'Amilí. He says that Yuḥanná, the son of Batriq and Ibn Ná'ima of Emessa, while translating, considered every single word of the Greek text and replaced it by its Arabic equivalent. 'This,' he continues, 'was not a sound method of translation, firstly, because Arabic equivalents could not be found for every Greek word, on account of which a large number of Greek words were used by them in their translations and, secondly, because the syntax of the two languages very often differs. Again metaphorical expressions, the use of which is quite common in every language, cannot be well translated by this method.'[1]

Ḥunayn as a translator.

About the end of the reign of al-Mámún there appeared in the Graeco-Arabic translation department of the Baytu'l-Ḥikmat the great personality of Abu Zayd Ḥunayn b. Isḥáq al-'Ibádí who was fully qualified for translating Greek medical works into Arabic.[2] He knew Arabic as his native tongue and further studied it with the great grammarian Khalíl; he had learnt Greek at Alexandria, and he had received his education in medical science from Yúḥanná b. Másawayh. Being thus well-equipped, he revolutionised the old system of rigid literal translation and based it on the better principle of freely expressing the sense of the Greek texts in Arabic language without caring

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1 Kashkúl, Buláq, 1288 A.H., p. 191.

2 Ḥunayn could not have been appointed as a translator in the Baytu'l-Ḥikmat before 830 because he was born in 809 and it is extremely improbable that he had finished his student life before he was 21 years of age.

to render in it exactly every single word of the original Greek text. But he was not too free in his translation and he always tried to be as literal as possible, provided the sense was clearly expressed. In order to achieve this end, he did not hesitate to add certain explanatory phrases where he thought it necessary to do so.[1]

His students.

Some time after he had entered the translation department, Ḥunayn engaged other competent translators to assist him in his work. His son, Isḥáq, his nephew Ḥubaysh, 'Isá b. Yaḥyá, and al-Raháwi are some of his assistants who are mentioned by the Arab bibliographers. All of them being students and assistants of Ḥunayn they must have followed his method and principle in their translation. This is evident at least in the case of Hubaysh, whose translation of the 9th–15th books of Galen's Anatomy has come down to us, and has been published together with a German translation, by Dr. Max Simon. In his introduction to the Arabic text, describing the character of the Arabic text, Dr. Simon says: 'He (the Arabic translator) has endeavoured to translate all that is essential in the content, though he has dealt with the conjunctions (Bindemittel) more freely, at times very freely indeed. At any rate he has taken the trouble to render into Arabic all the component parts of a sentence, including the Grammatical ones, in some form or other, i.e. (he has followed) a principle and (taken) a liberty which even a modern translator may follow (and may take), within certain limits, if his aim is a translation faithful to the sense which is always more than a purely literal one, and which presupposes familiarity with the nature of the subject. On the whole the Arab has thoroughly succeeded in achieving his purpose'.[2]

Their care in translation.

The translator of these books of Galen's Anatomy used, besides a Syriac translation, three copies of the Greek text,[3] no doubt, for the purpose of collation. If we may assume that it was the rule with the school of Ḥunayn to use as many copies of the Greek texts as might be available, this would indicate that they took care to make their translation as

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[1] Our opinion is based on the comparison of the quotations of Dioscorides in the Mufradat of Ibnu'l-Baytár with the German translation of Dioscorides' book by Berendes. The additional explanatory phrases which are found in the quotations at many places are not found in the German translation.

[2] *Anatomie des Galen*, vol. 1, Int. p. XLV. He also says that many explanatory phrases are added in the Arabic text which could not have occurred in the original Greek text, vol. 1, Int. p. XIV.

[3] *Ibid.*, p. XIII.

correct as possible. This is further indicated by the fact that the mastery of the subject by the translator was considered essential, as is shown by the revision of the translation of Mathematical works rendered by Ḥunayn and others, by Thábit b. Qurra.[1]

Arabic medical technical terms.

The great difficulty which the translators of the medical works in general had to face was in connexion with the technical terms, almost all of which they must have coined. With so little of the early Arabic medical literature available, it is difficult to trace their development, still a glance at the list of the terms given below will show what system the translators followed in coining the pathological and other medical terms. Sometimes they used only phrases descriptive of the disease of the organs affected, such as وجع الرية , وجع الجنب , وجع الركبة وجع الكلية , ورم الطحال , ورم الكبد, etc., or they tried to express the peculiarity of the disease by means of a metaphor like داء الفيل , داء الاسد و داء الثعلب, داء الحية etc. Sometimes they tried to explain the peculiar character of the disease without employing any metaphor as we find in such cases as المرض المزمن , تقطير البول عسر البول , حمّى اليوم , حمّى الغب , الدوار , الحمّى الدائمة, etc. Sometimes they used such words as were in common use, or their derivatives in a particular technical sense, like الرجاء , hope, in the sense of Hydrometra الآكلة , the eater, in the sense of Gangrene, النملة , the ant, in the sense of Herpes, الظفرة , the nail, in the sense of Pterygium, الصداع from صدع , to split, in the sense of Headache, الشقيقة from شق to tear, in the sense of Hemicrania, etc. But were the Arabs original in coining these and other technical terms ? We are inclined to answer this question in the negative and say that the Arabs in most cases, if not as a rule, translated the Greek technical terms, literally, into their own language whether in Anatomy, Pathology, or Physiology. The following table of Arabic and Greek nomenclature will illustrate our remark.

Anatomical terms.

اذن القلب	*καρδίας οὖς.*
اصل الجفن	*ῥίζα τοῦ βλεφάρου.*
بطون الدماغ	*κοιλίαι τοῦ ἐγκεφάλου.*
وعاء الرحم , تجويف الرحم	*κόλπος τῆς ὑστέρας.*

[1] al-Fihrist, pp. 265, 267.

تجويف القلب ,	*κολίαι τῆς καρδίας.*
الرطوبة الجلدية	*κρυσταλλοειδὲς ὑγρόν.*
الطبقة الشبكية	*ἀμφιβληστροειδὲς χιτών.*
الطبقة العنبية	*ῥαγοειδὲς χιτών.*
الطبقة القرنية	*κερατοειδὲς χιτών.*

A large number of other Anatomical terms like عنق الرحم ، فم الرحم المعاء الصائم؛ المعاء الاعور , قعر المعدة , فم المعدة and others are nothing but literal translation of Greek terms, as may be seen by referring to the Glossary of the *Anatomie des Galen* of Dr. Simon.

Pathological terms.

The four stages of fever :—

الابتداء	*ἀρχή.*
التزيد or الصعود	*ἀνάβασις.*
الانتهاء	*ἀκμή.*
الانحطاط or الهبوط	*κατάβασις.*
الاستسقاء	*ὕδρωψ.*
الاستسقاء الزقي	*ἀσκίτης ὕδρωψ.*
الاستسقاء الطبلي	*τυμπανίτης ὕδρωψ.*
الاستسقاء اللحمي	*ὑποσαρκίδιος ὕδρωψ.*
استطلاق البطن	*κοιλίας ῥύσις.*
الآكلة	*γάγγραινα.*
البلغم الحامض	*φλέγμα ὀξύ.*
البلغم الحلو	*φλέγμα γλυκύ.*
البلغم الزجاجي	*φλεγμα ὑαλώδες.*
شطر الغب	*ἡμιτριταῖος.*
الحمّى المثلثة (حمّى الغب)	*πυρετὸς τριταῖος.*
حمّى الربع	*πυρετὸς τεταρταῖος.*
المحرقة (الحمّى)	*καῦσος.*
داء الأسد	*λεοντίασις.*
داء الثعلب	*ἀλωπεκία.*
داء الحيّة	*ὀφίασις.*
ذات الجنب	*πλευρῖτις.*
ذات الرية	*πνευμονία.*
الزرقة	*γλαύκωσις.*
الشهوة الكلبية	*κυνοειδεῖς ὀρέξεις.*

A comparison of the Greek and Arabic nomenclature will show that many other Arabic terms under this heading, e.g., the terms denoting the different kinds of urine and the different types of pulse are translated literally from the Greek.

PHYSIOLOGICAL TERMS.

القوة الجاذبة	*δύναμις ἑλκτική.*
,, الماسكة	,, *καθεκτική.*
,, الدافعة	,, *προωστική.*
,, النفسانية	,, *ψυχική.*
,, الحيوانية	,, *ζωτική.*
,, الطبيعية	,, *φυσική.*

This method of translating literally Greek technical terms has been employed even in pharmacology. We find that the Arabic names of many plants are literal translations of their Greek names. Here we give only a few instances.

اذن الفار	*μυὸς ὦτα*
بست پائه - بسفائج P. كثير الارجل	*πολυπόδιον*
(الزعرور) ذو ثلاث حبّات	*τρίκοκκος*
لسان الثور	*βούγλωσσον*
گاو زبان P. لسان الحمل	*ἀρνόγλωσσον.*
لحية التيس	*τραγοπώγων.*[1]

DEVELOPMENT OF MEDICAL ARABIC NOMENCLATURE.

Though the Arabs translated the Greek technical terms, in most cases, yet we should not be justified in concluding from

[1] The same system, it seems, was followed in some other sciences also which the Arabs borrowed from other nations. In Logic the Arabic terms given below with their Greek equivalents appear to be translations of the corresponding Greek terms.

المقدمة	Premiss	*πρότασις.*
حد اوسط	Middle term	*ὅρος τὸ μέσον.*
حد اكبر	Major term	*τὸ μεῖζον ἄκρον.*
شكل	Figure	*σχῆμα*
الدور	Vicious circle	*κυκλός.*
المقولة	Category.	*κατηγορία.*

In Alchemy ذهب فرفير and برّاق القمر are probably translations of *χρῦσοκοράλλιον* and *ἀφροσέληνον* respectively (Ar. Alchemisten, Heidelberg 1924, Part 1, pp. 21, 23, ft. note). But in alchemy the Arabs could not have followed this system too frequently except in regard to the names of substances, because this science was not developed by their predecessors.

this that they did not develop the medical nomenclature any further than the Greeks. Dr. Simon says that the Arabs, in a later period, advanced the formal side of the medical science by developing the Anatomical nomenclature further than what they received from the Greeks. In this they must have been helped by the scientific development of Arabic Grammar. Thus in case of single-worded Pathological terms they mostly used the form فُعال , like خناق , Angina, بخار , Fever, كزاز , Tetanus صداع, Headache, دوار , Vertigo, زكام , Catarrh, etc. In pharmacology they mostly used the form فعول , such as سعوط , snuff, سفوف, powder, حمول , suppository, قيوء, emetic, لعوق, linctus, لطوخ, plaster, etc.

It is difficult, however, to determine whether this system of translating technical terms was adopted by the early translators and maintained by Ḥunayn and his students, when they entered the translation department, on the ground that these Arabic terms had already gained currency or whether they themselves liked this system and improved it because they were unable to substitute a better system in its place.

The share of Ḥunayn in Graeco-Arabic medical translation.

Be it as it may, Ḥunayn and his school applied themselves heart and soul to translating Greek medical works, and almost entirely by their own exertions[1] they reproduced in Arabic, in less than fifty years well-nigh, all the important medical works of the Greeks. To what extent this part of Arabic medical literature was indebted to the school of Ḥunayn will be made clear by the following table.[2]

Greek authors.	*The number of works translated.*	*Number of works translated by Ḥunayn's school.*
Galen	91	85
Oreibasios ..	5	3
Paulos	2	1
Dioscorides ..	1	1

[1] We have said this because the physicians of Jundisháp̄úr are not mentioned as translators of any medical work into Arabic. Yuḥanná b. Másawayh himself is not mentioned as a translator. The name of George, who is mentioned by Ibn Abí Uṣaybi'a as a translator (vol. 1, p. 203), does not occur in the list of the translators given by Ibnu'l Nadím (al-Fihrist, p. 244). Even Ibn Abi Uṣaybi'a does not say which medical works he had translated. Only one Kunnásh of George is mentioned by the Arabic bibliographers; and this book which he had written in Syriac was translated into Arabic by Ḥunayn. (Ṭabaqát, vol. I, p. 125.)

[2] In this table I have left out those Greek authors the translators of whose works are not mentioned by Ibnu'l-Nadím. The table is based on the statement of Ibnu'l-Nadím (pp. 288–293).

The character of the translations executed by Ḥunayn's school has already been discussed. Even these translations, in spite of the great care with which they were made, were not always free from faults. Ibnu'l-Bayṭár says in connection with the word سطرونيون that 'Ḥunayn has translated it as كندش, which is far from being correct'.[1] He also says in connection with the word شقراص, that Ḥunayn has translated the Greek word قسوس (probably κισσός) as شقراص. It is strange, he says, that Ḥunayn has done so, because these two plants do not even resemble each other.[2] Dr. Simon has also referred to some mistakes in the Arabic translation of Galen's Anatomy. But, as Dr. Simon says,[3] such mistakes are not many.

Ḥunayn and his students, apart from translating the Greek medical works, made also some independent contributions to Arabic medical literature. Long lists of their independent medical works are found in the Fihrist, and other Arabic bibliographies.

The Indian physicians in Baghdád.

Side by side with the physicians well-versed in the Greek system of Medicine, there were living at Baghdád many Indian medical men, having a thorough knowledge of their own system, who sometimes vied with their rivals and showed the efficacy of their art where the devotees of the Greek systems had failed.[4] The names of three of them :—Manka, Ibn Dhan (?) and Ṣáliḥ Ibn Bhalla (?) have been mentioned by Ibnu'l-Nadím,[5] Ibn Abí 'Uṣaybi'a[6], and Ibnu'l-Qifṭí.[7] It was the Barmakites, a family in touch with and revered by the Indians before Persia was conquered by the Arabs,[8] that drew these physicians to Baghdád and established their reputation. Ja'far b. Yaḥyá suggested the name of Ṣáliḥ to al-Hárún for the treatment of his cousin, Ibráhím.[9] Ibn Dahan (?) was in charge of the hospital of the Barmakites[10]; Manka, who was probably in the same Hospital, was asked by Yaḥyá b. Khálid to translate the Compendium of Susruta.[11]

The presence of these physicians in Baghdád, and perhaps the success with which they practised their art attracted the

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1 Vol. 3, p. 13. Ibnu'l-Bayṭár has also referred to other mistakes of the translators in general (though he has not mentioned the name of Ḥunayn), vol. 2, p. 46.

2 Vol. 3, p. 66.

3 *Anatomie des Galen*, vol. 1, Int. p. XLV.

4 For such cases see Ṭabaqátu'l-Aṭibbá, vol. 2, pp. 33–35.

5 al-Fihrist, p. 245.

6 Ṭabaqátu'l-Aṭibbá, vol. 2, pp. 33-34.

7 Táríkhu'l-Ḥukamá, p. 215.

8 Prof. Browne's Lit. Hist. of Persia, 1919, vol. 1, p. 258.

9 Ṭabaqátu'l-Aṭibbá, vol. 2, p. 34.

10 al-Fihrist, p. 245.

11 *Ibid.*, p. 303.

notice of al-Mámún, Isḥáq b. Sulaymán, and others. Thus numerous important Indian medical works, the names of a dozen of which are reported by Ibnu'l-Nadím,[1] were translated into Arabic. Ibn Abí Uṣaybi'a has added some more names to this list. Some of these works were translated directly from Sanskrit and others through Persian.

Another group of physicians.

Simultaneously with great Ḥunayn and others who were busily engaged in translating Greek and Indian medical works into Arabic there was another equally or more important group of physicians at Baghdád, which thinking the translation work beneath their scholarship and dignity, or feeling themselves unqualified for this work, helped in the quick development of Arabian medicine by producing independent works in Arabic. To this group belonged almost all the physicians who came from the school of Jundisháپúr and wrote any book on medicine in Arabic, and also other medical men of this period like Sábúr b. Sahl, 'Ísá b. Mása and others.

Their works.

The works of the members of this group, so far as it appears from their titles and descriptions given in the Arabic bibliographies, may be divided into two classes.

(1) Those works which dealt with the same subjects with which the ancient physicians had dealt in such of their works as were translated into Arabic, like Kitábu'l-Ḥummiyát[2] of Ibn Másawayh, the 'Kitábu man la yaḥduruhu Ṭabíbun'[3] of 'Ísá b. Mása, etc. In these works they tried to treat the old subjects on new lines and to add the results of their own experience to what they had received from the ancients. Thus in the Kitábu'l-Ḥummiyát, Ibn Másawayh treated the subject in a tabular form (مشجّر), a form that, so far as we know, had never before been applied to such subjects.[4]

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1 al-Fihrist, p. 303.

2 Ṭabaqátu'l-Aṭibbá, vol. 1, p. 183. The same work of Galen also was translated into Arabic (al-Fihrist, pp. 289-290).

3 *Ibid.*, p. 184. A book of the same title by Rhuphos was translated into Arabic (al-Fihrist, p. 291).

4 In another book, Kitábu'l-Tashríḥ (Táríkhu'l-Ḥukamá, p. 38). Yúḥanná b. Másawayh attempted to test and verify the Anatomical system of Galen. According to Ibn Abí Uṣaybi'a, he had the ambition to write a book on Anatomy, had kept monkeys to dissect when they were grown up, had received particular species of them from Mu'taṣim and wrote a book on Anatomy which was admired by friends and foes alike (Ṭab., vol. 1, p. 178). According to a story reported by Ibnu'l-Qifṭi, he wanted to dissect his own son in order to establish human anatomy but the Caliph stood in the way (pp. 390-391). But Ibnu'l-

(2) To the second class belong such works of these physicians as dealt with subjects which had not been treated by the ancient writers. The pharmacopœia of Sábúr b. Sahl, the book on piles by Abú Músá 'Ísá, the book on the causes of sudden death by Qusṭá Ibn Lúqá, etc. may be included in this class.

Though a very large number of very able medical men were busy in serving the cause of Arabian medicine in different ways, yet there was an important work in connection with it—the systematisation of the different branches of this science—which did not receive any serious attention from these physicians. An able and energetic young man of Ṭabaristán, well-qualified in the healing art, and well-equipped for this work, felt its necessity and took it up. This was Abu Sahl 'Alí b. Rabban al-Ṭabarí, the author of the Firdausu'l-Ḥikmat, which has been edited by me and published by the Aftab Press of Berlin.

Nadím has not mentioned the Kitábu'l-Tashríḥ in the list of Ibn Másawayh's works, nor could we find any reference to this book in any extant medical work that we have read. The stories related by Ibn Abí Uṣaybi'a and Ibnu'l-Qifṭí are not found in any of the Arabic histories.