

# ABŪ AL-RAYḤĀN AL-BAYRŪNĪ\*

362/973 — ca. 443/1051

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For over half a century Al-Bayrūnī<sup>1</sup> strove to impart knowledge to his contemporaries and to leave for his posterity as good an account of the sciences as was possible 1000 years ago. But the man who has shed so much of light on so many obscure matters has had all sorts of half-truths and untruths told about his life and deeds. Thus, he has been made to get born in all places right from al-Jurjāniyah in the north-west to the (non-existent) city of Bayrūn<sup>2</sup> (supposedly) in Sind in the south-east; he was born both Sunnite and Shī'ite, and, evinced Shī'ite as well as Ismā'īlite leanings;<sup>3</sup> he was at once almost a bosom friend of Maḥmūd the Ghaznawid ruler and not on amicable terms with him, and was even thrown into the prison by Maḥmūd;<sup>4</sup> was saved by Aḥmad ibn al-Ḥasan al-Maymandī the Vizier who sought for six long months to find Maḥmūd in the right mood for it, and yet is thought to have received Mas'ūd's favour only after his antagonist, Al-Maymandī, had died;<sup>5</sup> he returned from

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<sup>1</sup> In the autograph MS. of *Kitāb fī Tahdīd Nihāyah al-Amākin li-Taṣḥīḥ Masāfāt al-Masākin*, Al-Bayrūnī has given his name as "Abū al-Rayḥān Muḥammad ibn Aḥmad al-Bayrūnī". (See, photocopy of the title-page in *Islamic Culture*, VI (1932), facing p. 534) It is therefore not right to call him "Al-Bīrūnī". In any case, the combination of "Abū Rayḥān" with "Al-Bayrūnī/Al-Bīrūnī" is anomalous: it should either be "Abū al-Rayḥān al-Bayrūnī" (as in Arabic) or "Abū Rayḥān Bīrūnī/Bērūnī" (the Persian way).

<sup>2</sup> I shall write "Bayrūn" for بایرون disregarding the variant readings of "Bīrūn" and "Bērūn". However, if any author has given the harakah of "Bā" (or if it can be inferred) then transliteration would be made accordingly. (In Arabic expressions, please read ē for è).

<sup>3</sup> See, e.g., G. Sarton, *Introduction to the History of Science*, vol. I, (reprint) Washington, 1950, p. 707; L. Massignon, "Al-Beruni et la valeur internationale de la science arabe", *Comm. Vol. (=Al-Bīrūnī Commemoration Volume, Calcutta, 1951)*, p. 217; and, Abd al-Salām Nadwī, "Al-Bērūnī", *Comm. Vol.*, p. 254.

<sup>4</sup> See, e.g., Al-Nizāmī al-ʿArūdī, *Chahār Maqāleh*, ed. Mirzā Muḥammad al-Qazwīnī, Netherlands, 1909, p. 57; Muḥammad b. Mahmūd al-Naysābūri apud Yāqūt al-Hamawī, *Muʿjam al-Udabāʾ*, (vol. XVII. ed. Sabāʾi Bayūmi, Egypt, 1397,) p. 183; and, E.C. Sachau, *Alberuni's India*, (reprint) London, 1914, pp. ix-xvi.

<sup>5</sup> See, e.g., Al-Nizāmī al-ʿArūdī, *op. cit.*, pp. 57-58, and, E.C. Sachau, *Alberuni's India*, p. xiv.

Jurjān on the invitation of ‘Alī ibn al-Ma’mūn the Khwārizm-Shāh and also on the invitation of his successor, Abū al-‘Abbās al-Ma’mūn;<sup>6</sup> he lived in India for 40 years as well as for only 13 or 10 years, and yet he went a number of times to India without staying there for long;<sup>7</sup> he began to learn Sanskrit in India and also at Kābul and possibly right in Khwārizm itself;<sup>8</sup> is called Al-Bayrūnī because he was born in a place called “Bayrūn”, because he did not belong to Khwārizm or its capital, because he had lived in Khwārizm for a very short period;<sup>9</sup> and so on. We have as good authority for the one as for any other of these views: the authority being that of Al-‘Utbi (died 427 or 431 A.H.), Abū al-Faḍl al-Bayhaqī (ca. 385-470 A.H.), Al-Sam‘ānī (506-562 A.H.), Abū al-Ḥasan al-Bayhaqī (490-565 A.H.), Al-Nizāmī al-‘Arūdī (wrote between 547 and 552 A.H.), Yāqūt al-Ḥamawī (ca. 575-626 A.H.), Ibn al-Athīr (ca. 555-630 A.H.), ‘Uthmān al-Jūzjānī (wrote ca. 664 A.H.), Ibn abi Uṣaybi‘ah (591-668 A.H.), Ibn Sa‘īd (610-685 A.H.), Al-Shahrazūrī (died ca. 687 A.H.), Al-Ghaḍānfar (630-692 A.H.), and Al-Qalqashandī (756-821 A.H.), not to mention such recent “authorities” as H.M. Elliot, E.C. Sachau, Muḥammad ibn ‘Abd al-Wahhāb al-Qazwīnī, and, S.H. Barani.

The earliest biographical notice of Al-Bayrūnī in an extant work, so far as we know, is found in *Kitāb Titimmah Ṣiwān al-Ḥikmah* of Abū al-Ḥasan ‘Alī al-Bayhaqī,<sup>10</sup> but he did not have any first-hand knowledge nor has he mentioned the writer on whose authority he had based his narration. Moreover, his account is vitiated by a number of impossible

<sup>6</sup> See, e.g., S.H. Barani, “Al-Birūnī and his Magnum Opus Al-Qānūn u’l-Mas‘ūdī” (in *Al-Qānūn al-Mas‘ūdī*, Hyderabad, Deccan, 1956) p. vi; Ḥamid ‘Askari, *Nāmwar Muslim Sā’insdān*, Lahore, 1962, p. 460; and Muḥammad al-Qazwīnī, (Notes to al-Nizāmī’s) *Chahār Maqāleh*, Netherlands, 1909, p. 194.

<sup>7</sup> See, e.g., A.H. al-Bayhaqī, *Kitāb Titimmah Ṣiwān al-Ḥikmah*, Lahore, 1351 A.H., p. 62; Al-Shahrazūrī (Extract in E.C. Sachau’s introduction to *Al-Āthār*, p. LIII); Muḥammad al-Qazwīnī, *op. cit.*, p. 195; S.H. Barani (in *Al-Qānūn*, p. viii); Ḥamid ‘Askari, *op. cit.*, p. 466, and, *Fikr-o-Nazar*, October, 1973, p. 191.

<sup>8</sup> See, e.g., A. Learned Man apud Yāqūt, *op. cit.*, p. 186, and S.H. Barani (in *Al-Qānūn*, p. viii).

<sup>9</sup> See, *infra*.

<sup>10</sup> Sir H. M. Elliot (*The History of India as Told by Its Own Historians*, Vol. II, London, 1896, p. 1, note 2) is mistaken in crediting Al-Shahrazūrī with being the first biographer: not only does he come after Abū al-Ḥasan al-Bayhaqī but also after Yāqūt al-Ḥamawī and Ibn abi Uṣaybi‘ah. See, Ismā‘il Pāshā, *Hadiyah al-‘Arīfin*, Vol. II, Istanbul, 1955, p. 136, and Al-Ziraklī, *Al-‘Ālām*, 2nd. ed., Vol. V., p. 101, Vol. IX, p. 157, and Vol. I., p. 188. Sir Henry is also incorrect in believing that Al-Shahrazūrī wrote “shortly after Biruni’s death”.

statements such as that Al-Bayrūnī had lived in India for 40 years and that he was born in a place called Bayrūn which was an excellent and marvellous town (offering an explanation why such a place should be so wonderful by saying that after all the pearl is found in the sea-shell). Al-Nizāmī al-ʿArūḍī's account, though not a biographical notice, contains many "facts" about Al-Bayrūnī which are not to be met elsewhere. However, this man, who was a fable-monger pure and simple, has made so many patent mis-statements that no credence at all can be given to any of his statements. Yāqūt al-Ḥamawī's is the only reliable early account that we have, for, whatever he has recorded is either a statement of a contemporary scholar or what he himself had happened to find in a book. However, some of the statements recorded by him cannot possibly be true.<sup>11</sup> Ibn abī Uṣaybīʿah, Ibn Saʿīd and Al-Shahrazūri, who were contemporaries, appear to be the ultimate source for placing Bayrūn in Sind but not for the creation of Bayrūn itself which, as we have already seen, is found in the *Titimmah* of Al-Bayhaqī. (Abū al-Fidā' has mentioned "Al-Bīrūn" on the authority of Ibn Ḥawqal. This, of course, appears to be a case of misreading. Abū al-Fidā',<sup>12</sup> however, has also reported from Al-Muhallabī<sup>13</sup> and Ibn Saʿīd. But I cannot say if it is a case of reading "Bīrūn" for "Nayrūn". He has quoted Al-Bayrūnī's *Al-Qānūn* also, which must be a case of misreading.) Shams al-Dīn Muḥammad ibn Maḥmūd al-Shahrazūri, an extract from whose *Kitāb Nuzḥah al-Arwāḥ wa Rawḍah al-Afrāḥ fī Tawārīkh al-Ḥukamā' al-Mutaqaddimīn wa al-Muta'akkkhirīn* has been reproduced by Sachau in his edition of *Al-Āthār al-Bāqiyah*, has obviously copied from the *Titimmah* and Yāqūt's *Muʿjam al-Udabā'*, adding only the location of Bayrūn (in Sind) and "al-Shahīd" to "al-Sulṭān", making a verbal alteration in one or two places. Al-Ghaḍanfar had undoubtedly read some of Al-Bayrūnī's works, and generally, his account is reliable. Al-Qalqashandī is a very late writer and most of his statements relevant to our present purposes have been given on Ibn Saʿīd's authority.

<sup>11</sup> For example, that Al-Bayrūnī belonged to the countryside (*Muʿjam al-Udabā'*, p. 180), that Maḥmūd died in 422 A.H. (p. 180), or that Maḥmūd used to discuss with Al-Bayrūnī whatever came to his mind regarding the heavens and the stars (p. 183). That one ʿAbd al-Samad was his teacher and was executed on Maḥmūd's orders (p. 186), appears to me to be quite improbable.

<sup>12</sup> Abū al-Fidā' (672-732 A.H.), *Kitāb Taqwīm al-Buldān*, ed. Reinaud and De Slane, Paris, 1840, pp. 348-349.

<sup>13</sup> See, *infra*, note 152.

We have seen that some of the accounts are altogether unacceptable while little reliance can be placed in the other accounts. Fortunately however a number of personal anecdotes can be culled out from some of Al-Bayrūnī's books available to us from which (as supplemented by the accounts of reliable historians of contemporary events) a reasonably good account can be given of Al-Bayrūnī's life and works.

That Al-Bayrūnī was born in 362 A. H. appears to have been obtained from Al-Bayrūnī's *Risālah al-Fihrist*, for, no conflicting report has come to our knowledge. The authority for the specific date of Thursday the 3rd *Dhū' al-Hijjah*, however, appears to be Al-Ghāḍanfar, and later writers have apparently taken it from him. We now know that the ultimate authority for this date is that of Al-Bayrūnī himself.\* There is, however, no such consensus regarding Al-Bayrūnī's birth-place. In fact, no less than thirteen different views can be distinguished, which we set out below together with the names of those who have upheld them:

- i. That he was born at al-Jurjāniyah — J.H. Kramers;<sup>14</sup>
- ii. That he was born in the outskirts of al-Jurjāniyah — F. Krenkow;<sup>15</sup>
- iii. That he was born in the outskirts of Kāth — S.H. Barani;<sup>16</sup>
- iv. That he was born in the outskirts of Khiva — E.G. Browne;<sup>17</sup>
- v. That he was born at *Madinah Khwārizm* (i.e., in the City, or the Capital City, of Khwārizm) — Al-Ghāḍanfar,<sup>18</sup> and Sir H.M. Elliot;<sup>19</sup>
- vi. That he was born in the outskirts of *Madinah Khwārizm* — Ḥamīd 'Askarī<sup>20</sup> and Idārah Taṣnīf-o-Tālif;<sup>21</sup>

\* See, *infra*.

<sup>14</sup> J.H. Kramers, "Al-Biruni's Determination of Geographical Longitude by measuring the Distances", *Comm. Vol.*, p. 189.

<sup>15</sup> F. Krenkow, "Bīrūnī and the MS. Sultan Fātih No. 3386", *Comm. Vol.*, p. 196.

<sup>16</sup> S.H. Barani in *Al-Qānūn al-Mas'ūdī*, p.v.

<sup>17</sup> In the Notes to his English translation of *Chahār Maqalah*, London, 1921, p. 127.

<sup>18</sup> Al-Ghāḍanfar, *Risālah al-Mushhāṭah li-Risālah al-Fihrist*. (E.C. Sachau in his introduction to Al-Bayrūnī's *Al-Āthār*, reprint, Leipzig, 1923, has reproduced al-Ghāḍanfar's statement on page xvi).

<sup>19</sup> H.M. Elliot, *The History of India as Told by Its Own Historians*, Vol. II, London, 1869, p. 1, note 2.

<sup>20</sup> Ḥamīd 'Askarī, *op. cit.*, p. 457. (He however appears to think that there is a historical city with the name of "Khwārizm" outside of which there is or used to be a village called "Bayrūn/Bīrūn" where Al-Bayrūnī was born).

<sup>21</sup> *Al-Berūnī*, second edition, Idārah Taṣnīf-o-Tālif, Lahore, 1971, pp. 9-10.

- vii. That he was born at Bērūn/Bīrūn/Bayrūn, a village in the vicinity of *Madīnah Khwārizm* — S.H. Barani;<sup>22</sup>
- viii. That he was born outside *Madīnah Khwārizm*—Al-Sam‘ānī,<sup>23</sup> Yāqūt al-Ḥamawī,<sup>24</sup> and, E.C.Sachau;<sup>25</sup>
- ix. That he was born in some village in the province of Khwārizm — ‘Abd al-Salām Nadwī;<sup>26</sup>
- x. That he was born at Bayrūn/Bīrūn/Bērūn, a town in Sind — Al-Shahrazūrī;<sup>27</sup>
- xi. That he is related (*mansūb*) to Bīrūn/Bayrūn/Bērūn, a town in Sind — Ibn abī Uṣaybi‘ah,<sup>28</sup> and Ibn Sa‘īd;<sup>29</sup>
- xii. That he was born at Bayrūn/Bīrūn/Bērūn (a town somewhere in the world) — Abū al-Ḥasan al-Bayhaqī;<sup>30</sup> and,
- xiii. That he is related (*mansūb*) to the Bērūn quarter of al-Manṣūrah in Sind—*Fikr-o-Nazar*.<sup>31</sup>

(To this list a fourteenth item can also be added, namely that he was born outside the province of Khwārizm, if we take Al-Sam‘ānī to have meant “the province (of Khwārizm)” by the word “*balad*”.)

It is a matter for no small wonder or regret, that none of these views is quite correct, some being altogether figments of bio-bibliographers’ imaginations. Muḥammad b. Tāwīt al-Ṭanjah, in the course of his research on Al-Bayrūnī has found a statement of Al-Bayrūnī himself regarding the place and date of his birth. Al-Ṭanjah found this statement in Al-Bayrūnī’s *Maqālah fī Ḥikāyah Ahl al-Hind fī Istikhrāj al-‘Umr* and this he has

<sup>22</sup> S.H. Barani, *Al-Bērūnī*, Ist. ed., Lucknow, 1915, p. 34.

<sup>23</sup> ‘Abd al-Karīm al-Sam‘ānī, *Kitāb al-Ansāb*, Leyden, 1912, folio 98 b.

<sup>24</sup> Yāqūt al-Ḥamawī, *Mu‘jam al-Udabā’*, p. 180.

<sup>25</sup> (In his introduction to) *Al-Āthār al-Bāqiyah*, pp. XVI-XX.

<sup>26</sup> A.S. Nadwī, “Al-Bērūnī”, *Comm. Vol.*, p. 255.

<sup>27</sup> See, *Al-Āthār al-Bāqiyah*, p. LIII (Sachau has given an extract from Al-Shahrazūrī’s *Kitāb Nuzḥah al-Arwāḥ*).

<sup>28</sup> Ibn abī Uṣaybi‘ah, *Uyūn al-Anbā fī Tabaqāt al-A‘labbā*, Vol. III, Beirut, 1957, pp. 29-30.

<sup>29</sup> Al-Qalqashandī, *Subḥ al-A‘shā*, Vol. V, pp. 64-65, and Abū al-Fidā’, *Taqwīm al-Bulḍān*, p. 348, report from Ibn Sa‘īd to this effect (I have not been able to verify their statement).

<sup>30</sup> A.H. al-Bayhaqī, *Tūtimmah*, p. 62.

<sup>31</sup> October, 1973, pp. 191-192. It is not explicitly stated that Al-Bayrūnī was born at Al-Manṣūrah in Sind. It has however been suggested that Al-Manṣūrah might have spread over to the other bank of the river which might have been called “Bīrūn” and to which Al-Bayrūnī’s family might have belonged.

quoted in his edition of Al-Bayrūnī's *Tahdīd Nihāyah al-Amākin li-Taṣhīḥ Masāfāt al-Masākin*. We reproduce the statement below.

”وقت مولدى قد اتفق بمدينة خوارزم التى عرضها فى ناحية الشمال ٤١ ٢٠' و بعد ها عن مدينة السلام نحو المشرق ساعة مسنوية تامة ؛ و كانت الولادة يوم الخميس ثالث ذى الحجة سنة ٣٦٢ هـ.“<sup>32</sup>

“My birth took place in *Madīnah Khwārizm* (the city, or the capital city, of Khwārizm) whose latitude in the northern hemisphere is 41° 20' and whose distance from *Madīnah al-Salām* (Baghdād) is one complete level hour to the east; and this happened on Thursday the 3rd *Dhū' al-Hijjah* 362. A.H.”

(It would appear that Al-Ghaḍanfar was right in identifying Al-Bayrūnī's birth-place as “*Madīnah Khwārizm*”. But, see infra.) Al-Bayrūnī, as Al-Ghaḍanfar had reported, was born in the Capital of Khwārizm, and no question of his having been born at any Bayrūn in Sind or Khwārizm, or any village in the vicinity of any city arises. The question however is as to which city did Al-Bayrūnī refer when he said that he was born at *Madīnah Khwārizm* (the City, or the Capital City, of Khwārizm). That this “*Madīnah Khwārizm*” was Khiva, in spite of its advocacy by Browne, is out of the question (at the relevant epoch Khīwah was certainly not the capital of Khwārizm<sup>33</sup> and hence could not have been referred to as “*Madīnah Khwārizm*”), and one wonders how was Browne led into identifying Al-Bayrūnī's birth-place as Khiva.

<sup>32</sup> See, *Tahdīd*, Ankara, 1962, p.v.

<sup>33</sup> Khīwah was at that time a Khurasanian town (i.e., a town on the west bank of the Oxus) and is mentioned as such by all the geographers of the period. According to Al-Is-takhrī, *Kitāb Masālik al-Mamālik*, ed. M.J. De Goeje, Leyden, 1927, p. 302, Khīwah was situated at a distance of one marhalah from *Madīnah Khwārizm*. Ibn Hawqal (commenced travels in 331 A.H.) states that there is a marhalah between *Madīnah Khwārizm* (which he specifies as *Kāth*) and Khīwah; see, *Kitāb Surah al-Ard*, ed. J.H. Kramers, 2nd. ed., 1938, p. 519. The anonymous Persian work. *Hudūd al-Ālam* (written in 372 A.H.), ed. Manooc-hehr Sotoodeh, Teheran, 1340/1962, mentions “*Khīw*” and states it to have been a small borough belonging to (the principality of) Gurgānj (Kurkānj); see, p. 123. Al-Maqdisī, *Aḥsan al-Taqāsīm fi Ma'rifah al-Aqālīm*, ed. De Goeje, 2nd. ed., Leyden, 1906, lists “*Khīwah*” as one of the Khurasanian cities of Khwārizm; see, page 287.

The earliest Arabo-Muslim<sup>34</sup> authority on the geography of the area concerned, Ibn Khurdādhbih, the author of *Kitāb al-Masālik wa al-Mamālik* (written in 232 and revised in 272 A.H.) says that "the name of Khwārizm is Fīl, and it is on both the banks of River Balkh,"<sup>35</sup> which has been interpreted by De Goeje as stating that "the name of the capital of Khwārizm is Fīl, a city which is formed of two parts on either side of River Balkh."<sup>36</sup> Abū Ishāq Ibrāhīm al-Iṣṭakhri in his *Masālik al-Mamālik* (written in 318-321 A.H.), says that the capital of Khwārizm is the biggest city of the province and is situated on the northern bank of the Oxus, and that in the Khwarizmian language it is called "Kāth"; he further says that the province has another big city called Al-Jurjāniyah which is situated on the southern bank of the Oxus.<sup>37</sup> Ibn Ḥawqal—who, in his *Kitāb Ṣūrah al-Ard* (written sometime after 331 A.H.) has copied almost verbatim from Al-Iṣṭakhri on Khwārizm — calls the capital (which he calls *qaṣbah* instead of *madinah*) "Kāth Darkhāsh", and while he does not refer to Al-Jurjāniyah as another *qaṣbah* he refers to Kāth as "Madinatuhā al-Kubrā".<sup>38</sup> Abū 'Abd Allāh Muḥammad al-Maqdisī, who has drawn heavily upon his predecessors in his *Aḥsan al-Taqāsīm fi Ma'rifah al-Aqālīm* (written in 375-387 A.H.), repeats Ibn Ḥawqal, adding only that Kāth is called "Shahras-tān".<sup>39</sup> Now, if we look at the map of Khwārizm the first thing we notice is that the course of the Oxus (*Nahr Jayhūn* = *Āmū Daryā* = *Nahr Balkh*) upstream is first in the south-easterly direction then somewhere past the city of Āmul it changes to almost west-east direction. Thus it would appear that the capital of Khwārizm, which has been variously named as Fīl, Kāth, Kāth Darkhāsh and Shahras-tān, must have been to the north of Al-Jurjāniyah. Now, Yāqūt al-Ḥamawī, who visited the province in 616 A.H., says in his *Kitāb Mu'jam al-Buldān* that the capital of Khwārizm is called

<sup>34</sup> Some writers call everyone an "Arab" if he wrote in the Arabic language; others call everyone "Muslim" if he belonged to lands (actually in theory) governed by the Caliph or a Muslim Amir—even though the person concerned may neither be of Arab stock nor profess the religion of Islam. It is suggested that "Arabo-Muslim" would be a more appropriate epithet as it would also cover those who were one but not the other in addition to those who were both. As for those who were neither, since they did belong to the Arabo-Muslim civilization, the epithet may be said to apply to them in a broader sense.

<sup>35</sup> *Kitāb al-Masālik wa al-Mamālik*, ed. M.J. De Goeje, Leyden, 1889, p. 33.

<sup>36</sup> "Le nom propre de la capitale de Khwarizm est Fyl, ville qui est formée de deux quartiers, sur les deux rives du fleuve de Balkh" (p. 24 of the translation).

<sup>37</sup> *Masālik al-Mamālik*, ed. De Goeje, Leyden, 1927, pp. 299-300.

<sup>38</sup> *Ṣūrah al-Ard*, ed. J.H. Kramers, 2nd. ed., 1938, pp. 477-478.

<sup>39</sup> *Aḥsan al-Taqāsīm*, ed. De Goeje, 2nd. ed., Leyden, 1906, p. 287.

by its inhabitants "Kurkânj" of which "Al-Jurjānīyah" is the arabicised form; that this city was called "Fil" in olden times, getting named "Al-Manşūrah" afterwards; that that city, which was situated on the eastern bank of the Oxus, was inundated; and that there was a small-town on the western bank of the Oxus "facing" Al-Manşūrah called "Kurkânj" to which the inhabitants of Al-Manşūrah shifted.<sup>40</sup> Yāqūt further says that Al-Manşūrah was completely destroyed.<sup>41</sup> Combining Yāqūt's account with the earlier statements, especially that of Ibn Khurdādhbih, it would begin to emerge that the capital of Khwārizm was once situated on both the banks of the Oxus, the whole city being first given the name of Fil and then Al-Manşūrah, the south-western quarter being known as "Kurkânj" and the north-eastern quarter as "Shahrastān"; that the Shahrastān quarter was inundated and submerged under the waters of the Oxus, whereupon only the Kurkânj part of the city remained, and that in course of time the name "Al-Manşūrah" also went out of use. This account would appear to be substantiated by a number of other considerations. Firstly, we know that when Ibn Sīnā, a younger contemporary of Al-Bayrūnī, left Bukhārā he came to Kurkânj where he met the minister, Al-Suhaylī, who presented Ibn Sīnā to his Amir, 'Alī b. al-Ma'mūn.<sup>42</sup> Secondly, Al-Bayrūnī at one place in his *Tahdīd*<sup>43</sup> reports an observation that he made in a village called "Būshakānaz" (بوشکانز) situated on the west bank of the Oxus between Al-Jurjānīyah and *Madīnah Khwārizm*, and at another place<sup>44</sup> refers to the same observation which, he says, was made in a village on the west bank of the Oxus to the south of *Madīnah Khwārizm* (from which it would appear that *Madīnah Khwārizm* must have been to the north of Al-Jurjānīyah). Thirdly, in the anonymous Persian book written in 372 A.H. (*Hudūd al-Ālam*), we have the same account of Al-Jurjānīyah consisting of two parts, but here the two parts are named as "*Shahr Andarūnī*" (Inner City) and "*Shahr Bērūnī*" (Outer City),<sup>45</sup> which would appear to both explain the *nisbah* of Al-Bayrūnī and to be compatible with his statement about the place of his birth. (That is, we would say that he

<sup>40</sup> *Muġjam al-Buldān* (Vol. II, Teheran, 1965), pp. 480-483 (Also Abū al-Fidā'; see, *Taqwīm*, p. 347).

<sup>41</sup> *Muġjam al-Buldān*, p. 483.

<sup>42</sup> Ibn Sīnā apud Abū 'Ubayd al-Jūzjānī. (See, Al-Qiftī, *Ta'rikh al-Hukamā'*, ed. J. Lippert, Leipzig, 1903, p. 417).

<sup>43</sup> *Tahdīd*, ed. Al-Tanjah, Ankara, 1962, pp. 52-53.

<sup>44</sup> *Tahdīd*, pp. 80-81.

<sup>45</sup> *Hudūd al-Ālam*, ed. Manoochehr Sotoodeh, Teheran, 1340, 1962, p. 123.

was born in the quarter called "*Shahr Bērūnī*", whence his *nisbah* of "Al-Bayrūnī"; but, as this quarter was part of the city proper, Al-Bayrūnī has correctly referred to the place of his birth as "Madīnah Khwārizm"). Finally, wherever the capital of Khwārizm might have been before or after the time in question, it must have been the city of Al-Jurjānīyah which was the capital of Khwārizm at the time when Al-Bayrūnī wrote his *Maqālah fī Hikāyah Ahl al-Hind fī Tariq Istikhrāj al-ʿUmr*.<sup>46</sup> Even so, the problem posed by the itineraries mentioned by the geographers remains unsolved. (Each of the geographers mentioned above has given a list of the principal habitations of the province and the distances between them. It appears from these itineraries that the capital of Khwārizm was to the south of Al-Jurjānīyah at a distance of 3 *marḥalah* or days journey.<sup>47</sup>) To this we may add the account of Aḥmad ibn Faḍlān who visited the province 309 A.H. on his way to Ṣaḡālibah. He says that he reached Khwārizm (i.e., a city called "Khwārizm"; possibly, however, the capital of the province) from Bukhārā, called on the Amir of Khwārizm (i.e., the province), Muḥammad ibn ʿIraq, from where he went to Al-Jurjānīyah.<sup>48</sup> He gives the distance between the two cities as 50 *farsakh* by boat.<sup>49</sup> Ibn Faḍlān could not possibly have been mistaken, and we can therefore take it as established that Al-Jurjānīyah was certainly not the provincial capital in

<sup>46</sup> Al-Ma'mūn b. Muḥammad, Amir of Kurkāj, evidently continued to rule from Kurkāj. Abū ʿAbd Allāh, we know from Al-ʿUtbi (*op. cit.*, pp. 95-96) was taken to Kurkāj where he was beheaded in the presence of Al-Ma'mūn; Ibn Sīnā was presented to the then Khwārizm-Shāh at Kurkāj; on his return from Jurjān, Al-Bayrūnī appears to have come to Kurkāj (whereas previously he used to reside in Kāth), where he made a series of observations in 406-407 A.H. including one in the Dār al-Imārah; it was at Kurkāj that a tower was built in 401 A.H. on Abū al-Abbās al-Ma'mūn's orders, who is stated in the inscription recovered from its ruins to have personally visited the site; and, finally, all later writers mention this city as the capital of Khwārizm, and, it appears to have continued to be so till 618 A.H. when the Tartars destroyed it. (Abū al-Faḍl al-Bayhaqī, in his *Tārikh*, however, appears to regard Kāth as the capital, for he states that Abū al-Abbās agreed to have khuṭbah delivered in Maḥmūd's name in all the cities of his realm except "Khwārizm and Gurgānj". This, however, appears to me to indicate only that Al-Bayhaqī continued to refer to Kāth as "Khwārizm" without realizing that "Khwārizm" then applied to another city.)

<sup>47</sup> See, e.g., Al-Iṣṭakhri, *op. cit.*, pp. 341-342, and Ibn Ḥawqal, *op. cit.*, pp. 519-520.

<sup>48</sup> *Risālah ibn Faḍlān*, ed. Sāmī al-Dahān (Tr. into Persian, A.F. Ṭabāṭabā'i, 1345, pp. 62-63.)

<sup>49</sup> *Ibid.* (The distance given by Ibn Faḍlān, however, appears to be too large. In *Tahdīd*, Al-Bayrūnī has taken the distance between Madīnah Khwārizm and Al-Jurjānīyah—Kurkāj in *farsakhs* as 19 and in miles 57; see, p. 232. Even the fact Al-Bayrūnī's must have been the air distance, and Ibn Faḍlān's was, as he himself states, the distance

309 A.H. and that there used to be a considerable distance between the city which was then the capital of Khwārizm and the city then known as "Al-Jurjāniyah". We further draw the conclusion that just as the capital of province-X is referred to in Arabic as "Madīnah-X", in Persian it is simply referred to as "X", dispensing with "madīnah". Both the conclusions gain weight from the fact that Abū al-Faḍl al-Bayhaqī reports Al-Ma'mūn agreeing that *khuṭbah* will thenceforth be read in Maḥmūd's name in all the cities of the province "except Khwārizm and Gurgānj"<sup>50</sup> (Persianised form of Kurkānj). As to which city "Khwārizm" and "Madīnah Khwārizm" refer, we have Al-Bayrūnī's own testimony! In the chart in which he has set out longitudes and latitudes of some cities in his *Al-Qānūn*, there are two relevant entries: (i) "Al-Jurjāniyah, one of the cities of Khwārizm", and (ii) "Kāth, another city (*balad*) of Khwārizm which was formerly its capital (*madīnah*)."<sup>51</sup> Now, the most conclusive piece of evidence for the view that Al-Bayrūnī had referred to "Kāth" as "Madīnah Khwārizm" in connection with his birth-place comes from the geographical data given by Al-Bayrūnī in the *Maqālah* for his birth-place, and in his *Al-Qānūn* for Kāth. The figures for Kāth are: longitude  $85^{\circ} 0'$ , latitude  $41^{\circ} 36'$ . The figures for his place of birth are; longitude  $85^{\circ} 0'$ , latitude  $41^{\circ} 20'$ . (There is however a slight discrepancy, viz... the latitude of one is  $41^{\circ} 36'$  and of the other it is  $41^{\circ} 20'$ . The difference of  $16'$  can be explained in many ways. For example that  $41^{\circ} 20' = \text{ك} \text{ا}$  was really  $41^{\circ} 35' = \text{ا} \text{ا}$  or, that these were the figures accepted by Al-Bayrūnī as correct at different times,<sup>52</sup> etc.).

This however leaves, some problems unsolved, to which we must now attend. Now, "Fil" was said by Ibn Khurdāhbih to be the name of Khwārizm, but not necessarily that of the capital of Khwārizm. Thus, in the middle of the third century the province might have been known as

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by boat, does not seem sufficient to account for the difference — the difference of 31 farsaks or 93 arabian miles being too great for that. It is however possible that Ibn Faḍlān may actually have stated the distance to be 50 miles, which would be short by only 7 arabian miles.)

<sup>50</sup> *Tārīkh Bayhaqī*, ed. Ghānī and Fayyāḍ, Teheran, 1324 A.H., pp. 674-675.

<sup>51</sup> *Al-Qānūn al-Mas'ūdi*, Hyderabad, Deccan, 1954-1956, p. 575.

<sup>52</sup> In his *Tahdīd*, Al-Bayrūnī obtains by mathematical operation  $41^{\circ} 35' 40''$  as the latitude of Madīnah Khwārizm, which he states to be in agreement with the values earlier obtained by observation: see, p. 234. For Al-Jurjāniyah's latitude he gives different figures:  $42^{\circ} 0' 35''$  (page 49) and  $42^{\circ} 30' 13''$  (page 51) obtained on the same day by different methods;  $42^{\circ} 10' 3''$  (pages 51-52) by yet another method; and  $42^{\circ} 17'$  (page 54) which he states to be the "actual" value.

“Fīl”, possibly by the Iranians, while the name of its capital could be “Kāth”. (It could also be that Al-Jurjānīyah was then the capital and was known as Fīl.) Faḍlān came to Kāth, which was the capital of Khwārizm in 309 A.H. and which he has called, as is done in Persian, just by the name the province itself was called.<sup>53</sup> Al-Iṣṭakhṛī, it seems, has placed Kāth on the northern (and Al-Jurjānīyah on the southern) bank because the course of the Oxus being generally in the north-westerly direction in the Khwārizmian region, the Transoxanian side of the province would appear to be north (and the Khurasanian side to be south) of the river. (Al-Iṣṭakhṛī has clearly mentioned that the name of the capital was “Kāth” and that Al-Jurjānīyah was a big city and the next largest to Kāth.) Ibn Ḥawqal’s statement that the capital of Khwārizm is beyond the Oxus, and is nearer to the cities of *Māwarā’ al-Nahr* than the cities of Khurāsān, becomes self-evident. By the time of *Hudūd al-‘Ālam* the political situation appears to have changed. Whereas of old there used to be one province of Khwārizm under the Khwārizm-Shāhs, with Kurkānj as a borough (including probably the whole Khurasanian area of Khwārizm) under a ruler subordinate to the Khwārizm Shāhs, by 372 A.H. the Amir of Kurkānj had made himself independent of the Khwārizm-Shāhs. Thus the one province of Khwārizm with its capital at Kāth had virtually become two provinces with Kāth and Kurkānj as the two capitals. This, however, does not appear to have received the formal sanction of the Caliph as al-Maḳdisī is not clear in recognizing this division. But, of course, he refers to Kāth as *Qaṣbatuhā al-Kubrā*, and states that the name of its (i.e., Khwārizm’s) Khurasanian capital (*qaṣbah*) is al-Jurjānīyah (i.e., Kurkānj). We cannot, however say whether he is right in stating that Kāth is called “Shahraṣtān. (There is nothing improbable about it as it may only be that Kāth was so called by the Iranians because it was a walled city.) In A.H. 385 the then Khwārizm-Shāh was killed and the whole territory was reunited under the Amir of Kurkānj who henceforth assumed the title of Khwārizm-Shāh, but evidently, he continued to rule from Kurkānj. Hence it is that when Ibn Sīnā migrated from Bukhārā he was presented to the then Khwārizm-Shāh at Kurkānj, and hence it is that the Dār al-Imārah at Al-Jurjānīyah referred to by Al-Bayrūnī was in Kurkānj.<sup>54</sup> As for what

<sup>53</sup> I have not been able to compare the Arabic original of the *Risālah*. However, “Khwārizm” has been used in the Persian translation for a city, the city where Ibn Faḍlān called on the then Khwārizm-Shāh.

<sup>54</sup> A.F. al-Bayhaqī (*Tārīkh Bayhaqī*, pp. 675-676) narrates how the rebellion broke out and what happened thereafter. In this connection he states that the rebels, after killing the

Yāqūt has said, it is obvious that it is simply a case of erroneous conjecture. The data he had received was not enough to satisfy him and so he tried to bring about a compromise between the (apparently) conflicting statements. As for Al-Bayrūnī's statement in *Tahdīd*, placing Kāth to the north of Kurkānj, either it is a slip of the pen or just another example of the writers of that period to look at the map sometimes upside down! (We have an example in Yāqūt in the biographical sketch of Al-Bayrūnī himself, where the North-Pole has been referred to as the South-Pole.<sup>55</sup>)

A problem however remains unsolved—the problem which has been at the base of many erroneous conjectures. Why was he called *Al-Bayrūnī* or *Bērūnī*? The fact is, we do not know. We do now know that he was not called so because he was born at any place called *Bayrūn* or because he was born outside Kāth proper. We have also reason to believe that Khwārizm was his native-land.<sup>56</sup> Then why was he nevertheless called Al-Bayrūnī? I think the answer lies in two directions. If it can be established that he was so called before he migrated from Khwārizm in the wake of Amir of Kurkānj's annexation of the whole of Khwārizm, it would appear that his family must have been from outside of Khwārizm (certainly the city, and possibly the province). If however, it is found to be a later accretion to his name then the simplest explanation would be that people outside Khwārizm also had the practice of calling "Bērūnī" those persons who happened to be strangers or immigrants and that as he did not desire to be referred to as "Al-Khwārizmī" he adopted for himself the *nisbah* of "Al-Bayrūnī".

Al-Bayrūnī, therefore was born at Kāth then capital of Khwārizm,<sup>57</sup> on Thursday the 3rd of *Dhū' al-Hijjah* 362 A.H. But who were his parents and to which country or region did his family belong? To answer this question satisfactorily, it is required to determine what probative we-

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Vizier and other Elders, reached the *Dār al-Imārah* where they killed the Khwārizm-Shāh. This lends further support to the view expressed in the text.

<sup>55</sup> See, *Mū'jam al-Udabā'*, p. 183.

<sup>56</sup> Al-Bayrūnī has described his emigration from Khwārizm as "estrangement from homeland" (*al-ightirāb 'an al-waṭan*) and his return thereto as "reunion" (*al-ijtimā' al-shamī*); see, *Tahdīd*, p. 81.

<sup>57</sup> It should be clear by now, why Al-Ghadanfar was not right in stating Al-Bayrūnī to have been born at Madīnah Khwārizm. Al-Ghadanfar (born 630 A.H.) wrote at a time when Kāth was no longer the capital. (In fact, by the time he came to write his *Risālah*, even Kurkānj, the later capital, had been almost completely destroyed by the Tartars.)

ight is to be accorded to the two poems\* reproduced by Yāqūt from *Kitāb Sirr al-Sūrūr* which contain biographical references.<sup>58</sup> Even though in none of his works known to us has Al-Bayrūnī quoted any verses written by himself —and he has profusely quoted verses written by others — it cannot at all be regarded as unlikely that the man who translated into Arabic *Qisṣah Wāmiq 'Adhrā*, wrote or translated a number of other stories, and among whose works is *Qāfiyah al-Alif fī Itmām Shī'r abi Tammām*, contributed a few verses also. The *qaṣidah* (said to be) in honour of Abū al-Faṭḥ al-Bustiy, it would at first glance appear, could have been written by none else than Al-Bayrūnī. On closer inspection, however, it seems more plausible that it was written by Abū al-Faṭḥ al-Bustiy or some other poet of the same *kunyah* in praise of Al-Bayrūnī. For, in the first instance, it appears odd that the writer of an encomium should for the greater part of his poem boast of his own connections with princely courts and of his popularity with the scholars of the east and the west, then lament the sad plight into which he had fallen, and finally state that praise was due to so-and-so who was then his only support. On the contrary, if the *qaṣidah* is for Al-Bayrūnī this aesthetic infelicity is removed. For now the poet speaks of the *mamdūh* throughout, at first associating himself vicariously with the *mamdūh* and submerging his own personality into that of his patron, then remembering himself and reminding himself that it was only meet that he should sing of the greatness of his master and pray for his betterment in this world and salvation in the hereafter. Secondly, it appears more likely that after Maḥmūd's death Al-Bustiy was in need of a patron than that Al-Bayrūnī needed his support. Finally, some of the statements are not accurate, which in the case of Al-Bustiy can be regarded as poetic licence but cannot be so condoned in the case of Al-Bayrūnī. We do not know if Al-Bayrūnī was ever associated with Abū al-Ḥasan 'Alī b. al-Ma'mūn, nor as to what actual relationship subsisted between Maḥmūd and Al-Bayrūnī. But we know from Al-Bayrūnī himself that the-

\* See, Appendix.

<sup>58</sup> See, *Mu'jam al-Udabā'*, pp. 186-188, and p. 189. (Muḥammad b. Maḥmūd al-Naysābūrī, from whose *Kitāb Sirr al-Sūrūr* Yāqūt has reproduced one *qaṣidah*, two short poems and three quatrains said to have been written by Al-Bayrūnī, is the only person to have mentioned Al-Bayrūnī as a poet. No other early writer, not even Abū Al-Mansūr al-Tha'ālibī or Abū al-Ḥasan al-Bākhari, who have quoted verses from all Ghaznawid poets known to them of the period in question, be they major or minor, has quoted any verses from Al-Bayrūnī or has stated him to have been a poet. If Al-Bayrūnī did write any verses then this omission, to say the least, is very strange.)

ir relations became strained right in the year 408 A.H. and that Maḥmūd was never reconciled towards him and ever thereafter treated him harshly.<sup>59</sup> As for the other poem, it could very well be from Al-Bayrūnī's pen, but it could equally well be altogether unrelated to him. In conclusion, we would say that while little reliance could be placed in them nor could any views be based solely on their testimony, we might use them with caution to tentatively fill a lacuna in the biographical continuity.

Reverting to the question of his parentage and mother-land, Al-Bayrūnī has himself stated that Arabic and Persian were for him foreign languages in which he did not feel quite at ease.<sup>60</sup> The difficulties he encountered in learning Sanskrit and Indian sciences he has graphically depicted in his *Kitāb al-Hind*.<sup>61</sup> He does not appear to have known, beyond a few words of astronomical vocabulary, any other language except the Khwarizmian (and, possibly, the Syriac). In the *Tahdīd*, he has described his being obliged to leave Khwārizm as "estrangement from his homeland" (*al-ightirāb an al-waṭan*) and to his return as "reunion" (*al-ijtimā' al-shaml*).<sup>62</sup> He was born, we have concluded, right in the capital of Khwārizm. The obvious inference is that he was of Khwarizmian stock. As to who exactly were his parents we have no direct testimony beyond the fact that his father's name was Aḥmad. But we have considerable circumstantial evidence for the identification of this Aḥmad. We know that Abū Naṣr al-Manṣūr, a grandson of 'Irāq b. al-Manṣūr the Khwārizm-Shāh,<sup>63</sup> was a noted mathematician and astronomer of his time, and in the *qaṣidah* appears in the role of Al-Bayrūnī's guardian and benefactor. We also learn from *Al-Āthār al-Bāqiyah* that Abū Naṣr was his teacher,<sup>64</sup> and

<sup>59</sup> *Kitāb al-Jamāhir fi Ma'rifah al-Jawāhir*, ed. F. Krenkow Hyderabad, Deccan, 1355 A.H., 26-27.

<sup>60</sup> F. Krenkow "Abu'r-Raihan al-Beruni", *Islamic Culture*, Vol. VI (1932), pp. 530-531, has reproduced a passage to this effect from Al-Bayrūnī's *Kitāb al-Ṣaydanah*. See also, L. Massignon, *op. cit.*, p. 218, who in his translation is still more explicit: "ma langue natale, Kharazmienne..."

<sup>61</sup> *Kitāb al-Hind*, ed E.C. Sachau, Hyderabad, Deccan, 1958, p. 12.

<sup>62</sup> p. 81.

<sup>63</sup> This connection has been challenged by Muḥammad al-Qazwīnī, *op. cit.*, p. 249. Here it is he who has gone wrong and, surprisingly, it is Al-Nizāmī who is right. Al-Qazwīnī has simply mistaken the identity of the Khwārizm-Shāh. However, it is obvious that "Mawlā Amir al-Mu'minin" could not be an ordinary Khwarizmian, and, hence that as his genealogy suggests, he was the grandson of 'Irāq the Khwārizm-Shāh. I do not know what led E.G. Browne to go one step better than his original (Al-Qazwīnī) and to spell the name of Abū Naṣr's grandfather as 'Arrāq.

<sup>64</sup> *Al-Āthār al-Bāqiyah*, ed. E.C. Sachau, (reprint) Leipzig, 1923, p. 184.

from *Tahdīd* that Al-Bayrūnī had made astronomical observations in circa 380 A.H.,<sup>65</sup> i.e., when he must have been only about 18 years of age. Now, we have reason to suppose that he must have lost one of his parents, probably both, in his infancy or early childhood,<sup>66</sup> and, in the *qaṣidah* we have a statement to the effect that he was nursed with *Āl 'I-rāq's* milk. This could of course be an instance of poetic licence, but it could embody historical truth as well. If true, it would imply that Al-Bayrūnī must have belonged to that or some equally aristocratic family, for, surely, no lady of that House could otherwise have deigned to let any child feed on her. I rather fancy that this Aḥmad was no less a personage than Aḥmad b. Muḥammad b. 'Irāq, the penultimate Khwārizm-Shāh of that dynasty, and that Abū 'Abd Allāh, the last Khwārizm — Shāh of the House of 'Irāq must have been his step-brother. This hypothesis gains further credence from the facts that (i) Al-Bayrūnī had to go into hiding and eventually to migrate from Khwārizm *as a result of* the struggle between Abū 'Abd Allāh and Al-Ma'mūn, the Amir of Kurkanj,<sup>67</sup> for, I fail to see why a 23-year old youngman given to reading books, solving mathematical problems and making astronomical observations, even if he had been a well-wisher or supporter of the Khwārizm-Shāh and his uncle, should have to migrate from his mother-land; (ii) Al-Bayrūnī never called himself "Al-Khwārizmī" — the reason for which would appear to be that Al-Bayrūnī was afraid of being chased by the Ma'mūnids even in his exile, and that by the time of the "reunion" with his own people he had acquired fame as "Al-Bayrūnī"; and (iii) that Al-Bayrūnī could dare to incur Maḥmūd's displeasure in the year in which the latter had made himself master of Khwārizm and that too right in the lion's den—at Ghaznah of all places!<sup>68</sup> As for the verse in which his mother is stated to have been the carrier of woods, the expression has certainly been used for poetical effect; there, Abū Lahab is not his father but Al-Bayrūnī himself, whereas his mother's having been a wood-carrier (*ḥammālah al-ḥaṭab*) could have been established only if he himself would not have been Abū Lahab. It is obvious that both the expressions, "Abū Lahab" and *Ḥammālah al-Ḥatab*, have been used metaphorically for "an impudent old-man" (*Shaykh bi-lā adab*) and "a despicable woman".

<sup>65</sup> *Tahdīd*, p. 234.

<sup>66</sup> I am happy to note that S.H. Barani had reached the same conclusion. See, *Al-Qānūn*, p. v.

<sup>67</sup> *Tahdīd*, p. 81.

<sup>68</sup> *Kitāb al-Jamāhir*, pp. 26-27.

Al-Bayrūnī must have commenced his studies very early and in all likelihood under the supervision of Abū Naṣr al-Manṣūr. (So far as we know, Abū Naṣr is the one person who has been called by Al-Bayrūnī his teacher. S.H. Barani, has certainly committed a slip here.)<sup>69</sup> It was probably as a result of this pupilship that he became so keenly interested in astronomy and the mathematical sciences so early in his life. In his *Tahdīd* he has mentioned an astronomical observation that he made in ca. 380 A.H.,<sup>70</sup> which means that his age was then something like 18 years and could possibly be even less. By the time he had attained the age of 23 years in 385 A.H., he had already conducted geodetical observations on quite a large scale and determined the latitudes of various places in Khwārizm with remarkable accuracy.<sup>71</sup> What he did between 385 A.H. and 387 A.H. we cannot say. But, it is reasonable to conjecture that he continued to live at Kāth or some nearby place, devoting himself mainly to reading books and trying to solve the then unsolved problems in mathematics and mathematical astronomy, possibly in the solution of the problems ever since known as "Al-Bayrūnī's Problems". In the year 387 A.H. he made a lunar observation at Kāth in cooperation with Abū al-Wafā' al-Būzjānī, who conducted his observation at Baghdād for the determination of the longitudinal difference between the two cities<sup>72</sup> (Result: 15° exactly). Sometime after this observation Al-Bayrūnī left Khwārizm. When exactly did he reach Jurjān we cannot say, nor as to when did he receive the patronage of Qābūs b. Washmgīr. In *Al-Āthār*, al-Bayrūnī has mentioned that he had been to Rayy before he had received Qābūs's fa-

<sup>69</sup> S.H. Barani states that one Bandād al-Sarakhsī (in the text actually al-Sarhasnī) was also his teacher, and quotes *Al-Āthār*, p. 184, line 20, in support of his claim (See his *Al-Bayrūnī*, Lucknow, 1915, p. 41). Barani has obviously made a slip here as it is Abū Naṣr who has been mentioned as "ustādhi" in the text quoted. 'Abd al-Salām Nadwī has made the same claim and cited p. 25 of *Al-Āthār* in its support. The text quoted does not support the claim as only the name of one Muḥammad b. Ishāq b. Ustādhi Bandād al-Sarakhsī has been mentioned by way of example (See line 15).

<sup>70</sup> p. 234.

<sup>71</sup> See, e.g., *Tahdīd*, pp. 52-53, 81, 232 and 236; and *Al-Qānūn*, p. 365.

<sup>72</sup> *Tahdīd*, p. 236. (I do not know from where did Barani (in *Al-Qānūn*, p.v.), get the idea that it was Abū Naṣr who put Al-Bayrūnī in touch with Abu al-Wafā' al-Būzjānī, whom he further states to have been Abū Naṣr's teacher — possibly on the authority of Z.A. al-Mūsawī, who, in the introduction to his edition of *Rasa'il abī Naṣr Manṣūr ibn 'I-rāq ilā al-Bayrūnī*, Hyderabad, Deccan, 1948, states Abū Naṣr to have been a pupil of Abū al-Wafā'. In any case Barani has made a slip in stating that the two great astronomers had observed a solar eclipse; it was actually a lunar eclipse which they jointly observed.)

voir,<sup>73</sup> and, therefore, if it was not the case that he had been to Jurjān earlier also, it would appear that he had not taken the direct route to Jurjān via Dihistān but had crossed over to Khurāsān. Since he appears to have been in an impoverished condition while in Rayy, it may be inferred that some time must have elapsed between his leaving Khwārizm and reaching Rayy. Late in 390 A.H. he started writing *Al-Āthār*,<sup>74</sup> but he had already written *Kitāb Tajrīd al-Shu'ā'āt wa al-Anwār* and dedicated it to Qābūs.<sup>75</sup> It was in 388 A.H. that Qābūs had himself returned to his rule in Jurjān, and therefore, it would appear that Al-Bayrūnī was received by him in circa 389 A.H. It is possible that before this he had come under the patronage of the Ispahbad of Jilān,<sup>76</sup> Marzbān b. Rustam<sup>77</sup>

<sup>73</sup> p. 338.

<sup>74</sup> In *Al-Āthār* Al-Bayrūnī takes 1.12.1311 Alexandrine for conversion; see, p. 194. By calculation the day is found to fall in the month of *Shawwāl* 390 A.H.

<sup>75</sup> *Al-Āthār*, p. 10.

<sup>76</sup> The title (Ispahbad Jil/Jilān) seems to have led Jalāl Humā'i (*Tafhim*, p. v.) and Z.A. Azhar ("Al-Berūnī kā Waṭan awr Uskī Shā'iri", *Al-Mā'arif*, November, 1973, pp. 5-22) to erroneous conjectures. Azhar has gone to the extent of stating that "... Al-Bayrūnī remained associated with a number of royal courts: upto 385/995 with the court of the *Āl 'Irāq* section of the Kings of Khwārizm; upto 387/997 with the court of the Ispahbad of Māzandarān, Marzbān b. Rustam; upto 388 with the court of Tabaristān's Qābūs b. Washmgir. ..." Apart from the erroneous dating, it is clear that Azhar did not realize that even though the words "Māzandarān" and "Tabaristān" may not always signify identically the same geo-political entity, the two mainly signify the same geographical area. He also did not realize that Marzbān was a subordinate of Qābūs, nor that Qābūs was the ruler of all the three districts of Jurjān, Tabaristān and Jilān. Humā'i gives the name and title of the person for whom Al-Bayrūnī wrote the *Maqālid* as "Ispahbud Tabaristān Jil Jilān Marzbān b. Rustam b. Sharwīn", from which it appears that Humā'i regarded Marzbān either as the ruler of Tabaristān and Jilān or as the ruler of Tabaristān, a district (assuming "Jil" to mean a "section" or "district") of Jilān.

Actually, there was a district by the name of Jilān which was also called Jil. Tabaristān and Jurjān were then two other districts lying along the Caspian Sea. (For the application of the terms in question, see, G. Le Strange, *The Lands of the Eastern Caliphate*, reprint, London, 1966, pp. 172-174 and 368-381, and H.L. Rabino, *Māzandarān and Astrābād*, London, 1928, Chapters I and X).

"Ispahbad" was the title of the rulers of Tabaristān, Māzandarān. (See, M.P. Shād, *Farhang Ānand Rāj*, Vol. I, Teheran, 1335 Khurshīdī, p. 256) According to Ibn Isfandiyyār, *Tārīkh Tabaristān*, this title was properly applicable to two different dynasties of Tabaristān. "the House of Bāwand... and the Qārinwands, or House of Washmgir..." (see, E.G. Browne's translation, *History of Tabaristān*, Leyden and London, 1905, pp. 91-92). It would therefore appear that either Marzbān was the ruler (Ispahbad) of Tabaristān, as Humā'i states, or, as I believe the case to be, Marzbān (who was Qābūs's cousin and the father-in-law of the latter's son) had had the title of "Jil-Jilān" bestowed on him. That it could be so is evidenced by the fact that, according to Ibn Isfandiyyār, the last Sasanian ruler, Yazdgird

(who is probably the gentleman whose daughter had been married to Iskandar, son of Qābūs<sup>78</sup>), for, he had written for this notable his *Kitāb Maqāhid 'Ilm al-Hayah Mā Yaḥdath fi Basit al-Kurah*.<sup>79</sup> But he could just as well have written this book while he was with Qābūs.<sup>80</sup> In any case, by

had awarded the title of "Jil-Jilān Farshwādgār-Shāh" to Jil, the then ruler of Jilān, and appointed him governor of Tabaristān. (See, *op. cit.*, p. 97) (In any case, the matter needs further investigation.)

<sup>77</sup> Z.A. Azhar, *op. cit.*, p. 6, states that Al-Bayrūnī remained associated with the court of Marzbān b. Rustam upto 387 A.H., but it is not clear on whose authority he has so stated. In any case, this goes against the fact that Al-Bayrūnī made an observation at Kāth in 387 A.H. (unless he had been to Jurjān earlier).

<sup>78</sup> Unṣur al-Ma'ālī Kaykā'ūs b. Iskandar b. Qābūs b. Washmgir, in his *Kitāb Naṣihat Nāmeḥ* better known as *Qābūs Nāmeḥ*, states that his mother was the daughter of Prince (Malikzādeh) Marzbān b. Rustam b. Sharwīn (Bombay, 1325/1907 edition, p. 4; in Levy's edition, London, 1951, his name has however been given on p. 6 as Marzbān b. Rustam Sharwīn). In the *Risālah al-Fihrist* of Al-Bayrūnī (as given in Sachau's edition of *Al-Āthār*), Al-Bayrūnī mentions having written a book for the Isfahbud Jil-jilān, Marzbān b. Rustam. According to Kaykā'ūs, his grandfather was the author of Marzbān Nāmeḥ (Levy's ed., p. 6), from which that worthy's interest in learning is evident. Ibn Isfandiyyār, who mentions him as one of the two sages and philosophers of Tabaristān, credits him also with a *Diwān* of poetry in the Tabari dialect known as *Niki-Nāmeḥ*. (See E.G. Browne's abridged translation of his *Tāriḫ Tabaristān*, Leyden and London, 1905. p. 86) Jalāl Humā'ī (in his introduction to Al-Bayrūnī's *Kitāb al-Taḥḥim*) states that Al-Bayrūnī wrote his *Maqāhid 'Ilm al-Hayah* at Jurjān and dedicated it to Marzbān b. Rustam b. Sharwīn, "the Isfahbud of Tabaristān Jil Jilān" (p. V, note 2). If Humā'īs additions are not merely guess-work, the view that the person to whom Al-Bayrūnī dedicated his *Maqāhid* and Kaykā'ūs's maternal grandfather were the same would appear to have been almost conclusively established. The fact that according to Ibn Isfandiyyār (*op. cit.*, p. 225) Isfahbud Rustam b. Sharwīn b. Shahriyyār Bāwand was the maternal uncle of Qābūs (and hence that Marzbān b. Rustam was Qābūs's cousin) lends further credibility to this view.

Jilān, Tabaristān, and Jurjān, were under the rule of Qābūs. (See M.B. Badakhshāni, *Tāriḫ Irān*, Vol. II, Lahore, 1971, p. 146) Jilān (also called Jil), of course, was the ancestral home of the Ziyārids, and according to Kaykā'ūs, *loc. cit.*, his ancestor Arghash Farhādān was the ruler of Jilān in the time of Kaykhusraw. The Ziyārid rule over Tabaristān and Jurjān, it has been reported, began with Mardāwij b. Ziyār in 319/931. See H.L. Rabbino, *Māzandarān and Astrābād*, London, 1928. p. 141. According to Badakhshāni, *op. cit.*, p. 143, by 316/928. Mardāwij had conquered Tabaristān as well as Hamadān. I have however my reservations. See, Ibn Isfandiyyār, *op. cit.*, pp. 204-217). On his return to Jurjān in 388/998, Qābūs was able to extend his rule again to Tabaristān and Jilān too. (Badakhshāni, *op. cit.*, p. 146).

<sup>79</sup> Al-Bayrūnī, *Risāleh Fihrist Kutub Muḥammad ibn Zakariyah al-Rāzi* (in Sachau's ed. of *Al-Āthār*, Leipzig, 1923, p. XXXX).

<sup>80</sup> Jalāl Humā'ī, in his introduction to Al-Bayrūnī's *Kitāb al-Taḥḥim*, states that Al-Bayrūnī had written *Maqālid 'Ilm al-Hayah* at Jurjān. (See, p. V, Note 2). I do not know of Humā'ī's authority, but if his statement is correct then the chances of Al-Bayrūnī's association with the "Court" of Marzbān become still less.

390 A.H. he had written at least 10 books, including *Kitāb fī Isti'āb al-Wujūh al-Mumkinah fī Ṣan'at al-Uṣṭurlāb* (which is extant in manuscript form and which may throw some light on some of these questions), and an account of the exchange of views he had with the 'young scholar' (*fatā al-fādil*), Ibn Sinā, on some scientific problems.<sup>81</sup> During his stay in Jurjān, he made at least two astronomical observations, one in *Rabi' al-Thānī* 393 A.H. and the other in *Shawwāl* 393 A.H.,<sup>82</sup> and a number of attempts to measure a degree of the circumference of the earth, for which latter he used to select localities situated between Dihistān and the land of the Ghuzz Turks.<sup>83</sup> We cannot say if he returned to Khwārizm at the invitation of Abū al-Ḥasan 'Alī b. al-Ma'mūn in 394 A.H.<sup>84</sup> and, if so, whether he continued to reside in Khwārizm thereafter; but, he did make an astronomical observation at Al-Jurjāniyah in Khwārizm (then probably the capital) on the 14th of *Ramaḍān* 394 A.H.<sup>85</sup> It is not impossible that he may have come to observe lunar eclipse there, returning to wheresoever he had come from; but, it appears more likely to me that, as the *qaṣidah* suggests, Al-Bayrūnī had become dissatisfied with Qābūs<sup>86</sup> and some influential friends back home had made it possible for him to return and be received by 'Alī, the then Khwārizm-Shāh, and to be appointed to a post of some eminence. (Soon after his return to Khwārizm, whenever

<sup>81</sup> Al-Bayrūnī, *Al-Āthār*, pp. 10, 25, 79, 138, 185, 211, 213, 230, 257, 295, 297 and 357 (See also p. XX).

<sup>82</sup> *Al-Qānūn*, pp. 740-741.

<sup>83</sup> See, *Tahdīd*, p. 204.

<sup>84</sup> Barani categorically states that it was at 'Alī's invitation that Al-Bayrūnī returned home some time in 394 A.H.; see, *Al-Qānūn*, p. vi. So far as I know, Barani is the only writer who has fixed the date of his return to Khwārizm in 394 A.H., all others (including Barani in *Al-Bērūnī*) have placed it much later, in the period between 400-403 A.H. However the evidence for this view (apart from the observation mentioned in the text) there being none, it would appear to be a guess by Barani. ('Alī was probably the ruler in 394 A.H.; Al-Bayrūnī made an observation in Al-Jurjāniyah in 394 A.H.; in all likelihood Al-Jurjāniyah was then the capital of Khwārizm; Al-Bayrūnī is not known to have been abroad any time between 394 A.H. and Abū al-'Abbās's accession; whenever Al-Bayrūnī may have returned to Khwārizm, soon after his return he was appointed to a high office; the *qaṣidah* includes 'Alī's name in the list of patrons; therefore, Al-Bayrūnī returned home in 394 A.H. at 'Alī's invitation. It is, however, ignored that he may have returned at the invitation of someone else, who may have made it possible for him to be received by 'Alī and in due course to be drafted in government service.)

<sup>85</sup> *Al-Qānūn*, p. 74.

<sup>86</sup> Al-Bayrūnī's dissatisfaction with Qābūs is evidenced also by the fact that Al-Bayrūnī did not publish his *Al-Āthār* upto 428 A.H., and that in his later writings shows no warmth of feelings towards him.

did that happen, he was appointed to a post which the envious grudged him and in which capacity the wise and magnanimous were happy to see him.<sup>87</sup>) ‘Alī died in 399 A.H.<sup>88</sup> and he began serving the last of the Ma’mūnid Khwārizm-Shāhs — participating in literary sittings, tendering advice on internal and external matters, going on at least one secret mission (to receive from the Caliph’s emissary the honorific robe and Certificate of Titles on behalf of Al-Ma’mūn), pacifying rebellious leaders, and keeping company at the drinking table,<sup>89</sup> but evidently not reading any books to, or writing for, this young prince<sup>90</sup> — whom he continued to serve until late in the year 406 A.H. when he probably resigned his post and once again returned to his scientific pursuits. (From *Shawwāl* 406 to *Rajab* 407 A.H. we find him making several astronomical observations at Al-Jurjāniyah.<sup>91</sup> It is, however, possible that he had continued to be in government service, and that the observations were made with Abū al-‘Abbās’s blessings. But it is altogether unfounded that he was the Vizier during Al-Ma’mūn’s last days.<sup>92</sup>)

<sup>87</sup> *Tahdīd*, p. 81.

<sup>88</sup> Ḥamid ‘Askarī, *op. cit.*, p. 461, says that ‘Alī died circa 1009, but no authority is cited. I do not remember from where have I got this date. However, Al-Bayrūnī apud A.F. al-Bayhaqī, p. 667, states that he served Al-Ma’mūn for seven years. Assuming that he served upto the third quarter of the year 406 A.H. he should have started serving him in 399 A.H.

<sup>89</sup> A.F. al-Bayhaqī, *op. cit.*, pp. 667-675.

<sup>90</sup> We do not know of any written by Al-Bayrūnī for him. In A.F. al-Bayhaqī there is no mention of his reading any book to him or discussing any scientific questions with him. Nor is there any direct evidence for his participation in the construction of the tower built at Al-Jurjāniyah in 401 A.H. The fact, however, that Al-Bayrūnī was then in the service of Abū al-‘Abbās who personally visited the site of construction, and that Al-Bayrūnī had the requisite ability to be associated with the project in some capacity lends itself easily to the view that he must have played a part into it. (This view would have been considerably strengthened if Al-Bayrūnī would have been in Qābūs’s service at the time of the construction of *Gunbad Qābūs* in the year 397 A.H., but we know that Al-Bayrūnī was at Al-Jurjāniyah in 394 A.H., and we have no evidence for the view that he returned to Jurjān any time after this sojourn to Khwārizm).

<sup>91</sup> *Tahdīd*, pp. 49, 53, 89, 101 and 118; and, *Al-Qānūn*, pp. 618, 619, 620, 622 and 661.

<sup>92</sup> “Ma’mūn appears to have appointed Al-Bayrūnī his Minister” — Barani (in *Al-Qānūn*, p. vi).

However, A.F. al-Bayhaqī categorically states that the rebels killed the Vizier (of Abū al-‘Abbās); *Tārīkh Bayhaqī*, p. 675. Therefore, Al-Bayrūnī could not have been that Vizier. We have seen that Al-Bayrūnī conducted a number of astronomical observations between *Shawwāl* 406 and *Rajab* 407 A.H. It would therefore appear to be quite unlikely that he would be the Vizier during that period. Moreover, in A.F. al-Bayhaqī’s report of the inci-

In *Shawwāl* 407 A.H., Abū al-<sup>ḥ</sup>Abbās al-Ma'mūn was killed by the mutineers whereupon Maḥmūd marched on to Khwārizm, crushed the rebels and if Abū al-Faḍl al-Bayhaqī is to be believed, carried away practically every member of the Khwārizmian aristocracy to Ghaznah<sup>93</sup> in early 408 A.H.<sup>94</sup> We do not know what transpired at Ghaznah, except that sometime that year Al-Bayrūnī's daring retort so annoyed Maḥmūd that he never forgave the audacious scholar. Whether he was imprisoned or not<sup>95</sup> I cannot say, but soon we find him at Ḥayfūr near Kābul ma-

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dents leading to the killing of Abū al-<sup>ḥ</sup>Abbās, the last time Al-Bayrūnī appears in the role of an adviser is when he suggests to Abū al-<sup>ḥ</sup>Abbās to bring about reconciliation between the Khān and Ilak who were then reportedly fighting in the area of Uzgand which would appear to have taken place at least one year before the death of Abū al-<sup>ḥ</sup>Abbās so that the incidents occurring between the tendering of that advice and the killing of Abū al-<sup>ḥ</sup>Abbās may get time to take place. In any case, A.F. al-Bayhaqī's account only shows him in the role of a confidant and adviser (of sufficient importance to be able to pacify the rebellious leaders), and not that of a Vizier (with administrative powers).

<sup>93</sup> *Tārikh Bayhaqī*, p. 676 ff.

This need not surprise us. Maḥmūd did not come to Khwārizm to teach a lesson to the rebels or to avenge the murder of his sister's husband, Abū al-<sup>ḥ</sup>Abbās, but to annex the province to his expanding realm. In any case, it is apparent that a great majority of the nobles of the province were opposed to the idea of making Maḥmūd their over-lord, and that after Abū al-<sup>ḥ</sup>Abbās's death, a Ma'mūnid prince (son of <sup>ḥ</sup>Alī) was proclaimed Khwārizm-Shāh; therefore, whether a given noble had sided with or opposed Abū al-<sup>ḥ</sup>Abbās, Maḥmūd could not rely upon his loyalty to him. (It may also be mentioned that Maḥmūd did not wholly rely even upon Abū al-<sup>ḥ</sup>Abbās; in fact, when peace was made between Khān and Ilak through the good-offices of Abū al-<sup>ḥ</sup>Abbās's ambassadors, Maḥmūd became suspicious of his motive for that enterprise.)

<sup>94</sup> The air had become warm (according to A.F. al-Bayhaqī) when Maḥmūd marched towards Khwārizm; see, *Tārikh*, pp. 677-678. According to <sup>ḥ</sup>Abd al-Wahhāb al-Qazwīnī; (*Ḥawāshī Chāhār Maqāleh*, p. 195, it was springtime when Maḥmūd left Khwārizm for Ghaznah. The year mentioned in both the reports is 408 A.H. It would therefore appear that it must have been in early 408 A.H. that Maḥmūd returned to Ghaznah.

<sup>95</sup> S.H. Barani (e.g., *Comm. Vol.*, p. 34) thinks that Al-Bayrūnī was probably a political detenu when he applied the "Dip-method" for the determination of Earth's circumference at Nandana, believing this to have occurred in 408-409 A.H. As I believe him to have been to India not earlier than 411 A.H. the question of his having been a detenu in the fort of Nandana would not seem to arise. However, Al-Nizāmī may not be wrong reporting Al-Bayrūnī's imprisonment, though he is certainly wrong, in giving the reason therefor and the gap that we have in our narration (=408-409 A.H.) might very well prove to have been occasioned by his detention. If the time and place of writing *Al-Kūtib fī al-Uṣṭurlāb* (an extract from which has been reproduced by Barani, *Comm. Vol.*, p. 34, via Nallino's *Ilm al-Aflāk*) could be established, this question could receive a definitive answer. (This book, it appears from the extract, Al-Bayrūnī wrote before he had been able to put into actual practice the "Dip-method" which he had by then worked out following the sug-

king astronomical observations (*Jumādī al-Ukhrā* 409 A.H.).<sup>96</sup> It was in this year (i.e. 409 A.H.) that, on his way back from the expedition to Mathura in India, Maḥmūd must have showed the jewel to Al-Bayrūnī which he had seized from the temple at Mathura.<sup>97</sup> From *Rajab* 410 to *Shabān* 411 A.H. we find him at Ghaznah, once again making a series of astronomical observations.<sup>98</sup> In *circa* 413 A.H. we find him in such hardships and difficulties that he even consulted astrologers!<sup>99</sup> (Barani says that he wrote his *Maqālah Ifrād al-Maqāl* in 413 A.H.,<sup>100</sup> but in the published text of this *maqālah*<sup>101</sup> there is no mention as to when was it written.) In 415 A.H., however, he appears to have been called upon by Maḥmūd in connection with the statement of the ambassadors "from the farthest limits of the Turks" that there was a place where the sun rotated above the earth, and to have satisfied Maḥmūd on this issue.<sup>102</sup> It appears that he took advantage of this opportunity to add to his knowledge of places and distances.<sup>103</sup> In *Rajab* 416 A.H., he finished his *Tahdīd* at Ghaznah.<sup>104</sup> At about that time, probably earlier, he translated the Sanskrit work *Karana Tilak* into Arabic.<sup>105</sup> From these two works we learn that he had already been to India, where he had put into actual practice the "Dip-method" for the determination of the length of the earth's circumference, and where he had come across the book *Karana Tilak*. In 418 A.H., ambassadors

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gestion of an earlier writer, Al-Nayrīzī.) Incidentally, the title of this book has not been listed in *Risālah al-Fihrist* (unless this book is identical with *Kitāb fi Istī'māl al-Uṣṭurlāb al-Kurrij*).

<sup>96</sup> *Tahdīd*, p. 88. (Barani, says that we find him in the vicinities of Kābul and Qandhār; see *Al-Qānūn*, p. vii, I do not know from where has he got the reference to Qandhār. Taking Ghaznah as the point of reference, we have Kābul and Qandhār in almost opposite directions, and, as such, it cannot be Ḥayfūr—which, I am advised, is to be read as "Jayfūr"—to which Barani referred).

<sup>97</sup> *Kitāb al-Jamāhir*, p. 78.

<sup>98</sup> *Tahdīd*, pp. 248 and 281; and, *Al-Qānūn*, pp. 365, 408 and 647.

<sup>99</sup> Al-Bayrūnī, *Risālah al-Fihrist*. (See, *Al-Athār*, ed., Sachau, p. XXXVI)

<sup>100</sup> *Al-Qānūn*, p. vii.

<sup>101</sup> *Maqālah Ifrād al-Maqāl fi Amr al-Zalāl*, Hyderabad, Deccan, 1948.

<sup>102</sup> Yāqūt, *Mu'jam al-Udabā'*, p. 183; A.F. al-Bayhaqī, *op. cit.*, p. 63; and V. Minorsky, "On Some of Biruni's Informants", *Comm. Vol.*, p. 235.

<sup>103</sup> Minorsky (*Comm. Vol.*, pp. 235-236).

<sup>104</sup> *Tahdīd*, p. 281.

<sup>105</sup> The Arabic translation by Al-Bayrūnī, *Ghurrah al-Zijāt*, has fortunately been traced. The Arabic text has been edited by S.S.H. Rizvi, who has also translated it into English. The text and the English translation were serialized in *Islamic Culture* beginning with Volume XXXVII (1963).

came from Qitā'i Khān<sup>106</sup> whom Al-Bayrūnī had the occasion to interrogate and from whom he is thought to have acquired knowledge about cities in the far east.<sup>107</sup> In *Rajab* that year (418 A.H.) he wrote his *Risālah fī Istikhrāj al-Awtār fī al-Dā'irah*, but, at which place we do not know.<sup>108</sup> He wrote *Kitāb al-Tafhīm* for a Khwarizmian lady in 420 A.H., probably at Ghaznah.<sup>109</sup> In *Rabi' al Thānī* 421 A.H., Maḥmūd died, the struggle between his two sons culminated in Mas'ūd's victory who arrived in Ghaznah as ruler probably in *Jumādī al-Ukhrā* 422 A.H.<sup>110</sup> This year he finished at Ghaznah his *Kitāb fī Ikhtilāf al-Waqi' fī Taqāsīm al-Aqālīm*.<sup>111</sup> There is reason to believe that *Kitāb al-Hind* was also being written at about that time, and was finished at Ghaznah in 422-423 A.H.<sup>112</sup> Exhausted by constant work and, I suppose, lack of due appreciation, he fell seriously ill in 423 A.H., and it was only by sheer determination and willpower that he overcame his illness towards the end of 423 A.H. or some time in 424 A.H.<sup>113</sup>

Before we continue with our narration, we shall endeavour to determine what relationship actually subsisted between Al-Bayrūnī and

<sup>106</sup> V. Minorsky (*Comm. Vol.*, p. 234) identifies the king on whose behalf this embassy came as Emperor Sheng Tsung (983-1031 A.D.) of the Liao dynasty.

<sup>107</sup> *Kitāb al-Jamāhir*, p. 208, and, Minorsky (in *Comm. Vol.*, pp. 233-234).

<sup>108</sup> *Risālah fī Istikhrāj al-Awtār fī al-Dā'irah*, Hyderabad, Deccan, 1948, p. 226.

<sup>109</sup> *Kitāb al-Tafhīm fī Šinā'ah al-Tanjīm*, ed. Jalāl Humā'i, 1939. The learned editor points out that the statements made on pp. 135-138, 280-281, and 427 are found by calculation to imply that the book was written at Ghaznah in 420 A.H., the year which Al-Bayrūnī has himself mentioned in the book.

<sup>110</sup> Ibn al-Athīr, *Ta'riḫ al-Kāmil*, Vol. IX, pp. 149 and 150 (See, however, *Kitāb al-Hind*, p. 203, and *Al-Qānūn*, pp. 688-689, which appears to be irreconcilable with the dates given by Ibn al-Athīr).

<sup>111</sup> Yāqūt states that Maḥmūd died in 422 A.H. whereas Al-Bayrūnī was alive and was then living at Ghaznah, for, he further states, he had himself seen in Al-Bayrūnī's own hand his *Kitāb Taqāsīm al-Aqālīm* written at Ghaznah that year (*Mu'jam al-Udabā'*, p. 180). Thus, the book in question was written at Ghaznah in 422 A.H. In the text, the title quoted is from *Risālah al-Fihrist*, which appears to have been the full title of the book mentioned by Yāqūt.

<sup>112</sup> On p. 203, it is stated that Maḥmūd died full ten Persian months before the Nawroz of 400 Yazdijard; on p. 252, it is said that the image (at Somnath) was destroyed in A.H. 416, and on p. 206 that he found the Indians computing the year of the destruction of Somnath as 947 Sakakāla.

<sup>113</sup> *Risālah al-Fihrist* in *Al-Āthār*, p. XXXXVI. (He fell ill, as he says, after the age of 60 years, i.e., after 3.12.422 A.H. The illness was very serious and must have kept him in bed for quite a while. He dreamt about sighting the moon at about the age of 61 years, i.e., circa 3.12. 423 A.H. If he finished *Kitāb al-Hind* in 423, A.H. he must have fallen ill soon thereafter.)

Maḥmūd, and for how long and during which period did Al-Bayrūnī reside in India. As stated earlier, we do not know how did he occupy his time after his arrival in Ghaznah and before he is found making astronomical observations near Kābul. Al-Bayrūnī could have been in India during this period, but there is no evidence for that. Again, between 411 and 415 A.H. we do not know where was he or what was he doing, except that in circa 413 A.H. he was in so unfortunate a circumstance that he was reduced to consulting astrologers. I think that this is the period during which he must have stayed in India. The astrologers whom he consulted, we know, mistook his age greatly;<sup>114</sup> I wonder if that was because the Indian astrologers could not guess his age correctly, his having come from a different clime and race. The period is long enough for a man of genius like Al-Bayrūnī to improve upon his knowledge of Sanskrit to such an extent that he could not only translate books from Sanskrit into Arabic but also from Arabic into Sanskrit. Finally, in *Ghurrah al-Ẓiyāt*, his translation of *Karana Tilak*, he states that he had found that Sanskrit work of Vijaya Nanda while he was in India, and in this translation Al-Bayrūnī takes 25 *Ṣafar* 416 A.H. for conversion into other eras because, as he states, it was a famous day, the day on which Maḥmūd met Khān Yūsuf.<sup>115</sup> It is clear that the book must have been written shortly after that event, and that Al-Bayrūnī must have acquired that book sometime earlier in India. From 416 A.H. upto the time of his serious illness we find him at Ghaznah feverishly engaged in writing books and *maqālahs*, and we have no evidence for his having gone to India at any time during this period. After his recovery from the illness which almost killed him, he must have been too weak at the advanced age of 62 years to undertake journey to India. Moreover, in none of his extant works written after *Kitāb al-Hind* does he improve upon that justly celebrated work; rather, as Edward Sachau has pointed out, he becomes capable of confounding two Indian eras in his *Al-Qānūn* which he had so clearly distinguished in his *Kitāb al-Hind*.<sup>116</sup>

As for his beginning to learn Sanskrit, if he did not go to India right in 408 A.H. he may have started taking lessons in that language at Ghaz-

<sup>114</sup> *Risālah al-Fihrist* (See, *Al-Āthār*, p. XXXXVI).

<sup>115</sup> See, *Islamic Culture*, Vol. XXXVII (1963), p. 185. (Incidentally, Al-Bayrūnī states Jayananda to have been an exegetist from Benaras—which may possibly be the source for the erroneous belief that Al-Bayrūnī had “penetrated” into India as far deep as Benaras).

<sup>116</sup> *Alberuni's India*, pp. xvi-xvii.

nah.<sup>117</sup> Maḥmūd had in his employ Indian soldiers who constituted a whole contingent and were officered by their own compatriots.<sup>118</sup> In fact it would appear that there used to be a large Indian colony of settlers (not to mention the traders and casual visitors) in the metropolitan city of Ghaznah.<sup>119</sup> As a boy, Al-Bayrūnī used to go to a Roman (a Greek?), a visitor to Khwarizm, to learn the names of fruits and plants;<sup>120</sup> is it likely that he would not take advantage of learned Indians who could teach him their language and their sciences? Moreover, four years or so which we get between 411 and 415 A.H. does not appear sufficient to enable him to do whatever his official assignment might have been and yet to start learning the A.B.C. of the language at the beginning of this period and at the end of this period to have translated a number of books from that language and some into it! As Al-Bayrūnī has given the names of the planets and the signs of the zodiac in Sanskrit (along with six other languages) as early as his *Al-Āthār*,<sup>121</sup> it is not impossible that he might have learned Sanskrit alphabets right in his hometown of Kāth.

Regarding his relations with Maḥmūd, I think Sachau has reached the right conclusion, though on insufficient evidence, in his introduction to *Indica*. Al-Bayrūnī's attitude towards Maḥmūd is a mixture of the sentiments of daring, fear, resentment and remorse. Sometimes he is more daring than afraid, more resentful than remorseful, and at other times he is almost the reverse. We know that his sharp retort in 408 A.H. won him Maḥmūd's life-long displeasure, and yet we find Maḥmūd showing him the Mathura jewel in 409 A.H. and consulting him on an astronomical question in 415 A.H. Their attitudes towards each other are ambivalent.

<sup>117</sup> S.K. Chatterji too is of the opinion that Al-Bayrūnī started taking lessons in Sanskrit at Ghaznah, while, he thinks, he was under detention. See, "Al-Biruni and Sanskrit", *Comm. Vol.*, p. 86.

<sup>118</sup> See, C.E. Bosworth, *The Ghaznavids* 994: 1040, Edinburgh, 1963, p. 110. (Bosworth quotes as his authority Gardīzī, *Ẓayn al-Akhbār*, p. 96, *Tārīkh Bayhaqī*, pp. 237, 251-252 and 497, and Nāzīm, *Sultān Maḥmūd*, p. 140, note 7.)

<sup>119</sup> That the Indian soldiers had their own quarter in Ghaznah is obvious; it is also clear that they must have been destined to remain away from their Indian homes because of their brethren's superstitious belief that they had become *malīcha* or impure. We know from *Kitāb al-Hind* itself about the Hindu rulers of Kābul; therefore, there must have been quite a large number of Afghān Hindus, some of whom must naturally have been settled in the then capital, Ghaznah (See also S.K. Chatterji, *op. cit.*, p. 86).

<sup>120</sup> Krenkow (*Islamic Culture*, p. 531) quotes a passage from *Kitāb al-Ṣaydanah* to this effect.

<sup>121</sup> *Al-Āthār*, pp. 192-193.

Al-Bayrūnī was certainly no confidant or court astrologer of the Amir, but he could have been in his employment, i.e., in the service of the state. If so, this position must have been such that he could pay for books procured from remote places in India (and possibly elsewhere) and for the services of Indian pundits (brought to Ghaznah?) who could teach him those books, and yet which neither allowed him complete freedom to devote himself to engagements of his own choosing, nor eminent enough to be commensurate with his great abilities or to be such as to make him feel happy. (S.K. Chatterji thinks that the Sanskrit legend on some coins of Maḥmūd issued after the annexation of the Punjab must have been translated from Arabic by Al-Bayrūnī. He would, moreover, like to think that the decision to issue the bilingual coins had been taken on Al-Bayrūnī's suggestion.<sup>122</sup> Barani has gone one better by asserting that it was on Al-Bayrūnī's suggestion that the decision was taken.<sup>123</sup> Now it is possible that Maḥmūd, or whoever happened to be the official concerned, selected Al-Bayrūnī for the translation, but it is equally possible that an Indian scholar was chosen for the purpose. As for his having influenced the decision, this not only goes against what we know of the relationship between Al-Bayrūnī and the Amir, but also ignores the fact that Maḥmūd had decided to employ a whole contingent of Indian soldiers long before he took the decision to have bilingual coins issued for circulation in his Indian province, unless, of course, one were willing to assert that that decision had also been influenced by Al-Bayrūnī.)

Picking up the thread of our narration, we find Al-Bayrūnī badly shaken and weakened by his serious illness but as determined as ever to solve outstanding problems and to present the results obtained by him and his great predecessors in a systematic and coherent form, making things thereby much easier for future students. At about this time (circa *Shawwāl* 423 A.H.) he had the dream he has reported in *Risālah al-Fihrist*, from which he had concluded that he yet had some 16 years to devote to his studies and writings, and from which I conclude that his instinct of self-preservation, which had remained under subjection for so long, had reasserted itself to such an extent that the uppermost thought in his sub-conscious mind was then that of the future—a future that appeared uncertain to him at that date—and, further that, this episode must have preceded

<sup>122</sup> "Al-Biruni and Sanskrit", *Comm. Vol.*, p. 98.

<sup>123</sup> See, *Al-Qānūn*, p. ix.

his receiving Mas'ūd's favour and financial support. Aḥmad b. al-Ḥasan al-Maymandī died in 424 A.H. It would therefore appear that Sachau was right in believing that Al-Bayrūnī's relations with the Ghaznawid court were established only after that Vizier's death,<sup>124</sup> but there is just no evidence for the view that Al-Maymandī was inimical to Al-Bayrūnī. Thus, in circa 425 A.H. Al-Bayrūnī became associated with Mas'ūd's court, and, there is reason to believe that he started writing *Al-Qānūn*, which he dedicated to this prince, in the year 426 A.H. (Jalāl Humā'ī, in his introduction to *Kitāb al-Taḥḥīm* asserts that Al-Bayrūnī started writing it in 421 A.H. in the last year of Maḥmūd's rule, whose courtier Humā'ī believes Al-Bayrūnī to have been in 420 A.H.<sup>125</sup> The name of the book is certainly no evidence against Humā'ī's view; but there is conclusive internal evidence to show that the book could not have been begun any earlier than 423 A.H.,<sup>126</sup> and that by middle of 426 A.H. only about a sixth of the book had been written.<sup>127</sup> J.H. Kramers goes even earlier and states that "... the oldest extant copy of the *Qānūn* was finished... in the year 416... ." <sup>128</sup> Either he has referred to some other book as *Qānūn*, a slip of the pen, or someone has wrongly written "416" for, say, "516". It is known from Al-Bayrūnī himself that the book had not been finished upto 427 A.H.<sup>129</sup> In early 428 A.H. he wrote *Risālah Fihrist Kutūb abū Zakariyā al-Rāzī* (better known as *Risālah al-Fihrist*) which, in addition to the report of some anecdotes from his life, he has given a list of his own works also. We know very little about his later life, except that he finished *Al-Qānūn* sometime between 428 and 432 A.H.; started writing, finished and dedicated his *Kitāb al-Jamāhir fī Ma'rifah al-Jawāhir* to Mawdūd b. Mas'ūd<sup>130</sup>

<sup>124</sup> *Alberuni's India*, p. ix.

<sup>125</sup> *Kitāb al-Taḥḥīm*, p. v (See, Note 3).

<sup>126</sup> Al-Bayrūnī was on page 175 in the year 426 A.H. (see below, note 127). On page 168 he has given the name of Caliph al-Qā'im bi-Amr Allāh as then on the caliphal throne. Al-Qā'im came on the throne on the 11 th of Dhū'al-Hijjah 422 A.H. Unless therefore Al-Bayrūnī wrote all those 168 pages in Dhū' al-Hijjah's remaining days, or inserted the reference to Al-Qā'im at a later date he could not have begun writing the book 422 A.H. The subject matter dealt with therein, however, is not new—some of it may be found in as early a work as *Al-Āthār* itself.

<sup>127</sup> On p. 175, the day is stated to be the 5th day of the 6th month of the 9th year of the then running century of the Indians, which is found by calculation as falling in the year 426 A.H.

<sup>128</sup> J.H. Kramers, *op. cit.*, p. 190.

<sup>129</sup> In *R. al-Fihrist* it is shown as unfinished (428 A.H.); Mas'ūd died in 432 A.H., during whose lifetime it appears to have been finished.

<sup>130</sup> *Kitāb al-Jamāhir*, p. 31.

(ruled 432-441 A.H.), who appears to have continued Al-Bayrûnî's grant from the treasury; to have attracted a number of devoted scholars to him who took dictation from him and thus facilitated writing of books;<sup>131</sup> and, that he finished his *Kitâb al-Şaydanah* at the great age of about 80 years in 442/443 A.H.<sup>132</sup> As to when did he die we cannot really say, except that he certainly did not die on the 2nd of *Rajab* 430 A.H., the date mentioned by Al-Ghaḍanfar which, he says, he had found written in the handwriting of one of Al-Bayrûnî's closest assistants, Abû al-Faḍl al-Sarakhsî, and which he found to confirm another person's report to the effect that Al-Bayrûnî died at the age of 77 years 7 months.<sup>133</sup> However, while copying from Abû al-Muḥâmid Muḥammad b. Mas'ûd b. Muḥammad b. al-Zakî al-Ghaznawî's copy of *Kitâb al-Şaydanah* in which, according to Al-Ghaḍanfar himself,<sup>134</sup> Al-Ghaznawî had stated that all the (then) existing copies (of *Kitâb al-Şaydanah*) had been derived from the rough draft the main portion of which (according to Abû al-Muḥâmid) had been in the handwriting of Aḥmad al-Nahsha'î with marginal notes scribbled by Al-Bayrûnî himself in a not very legible hand, Al-Ghaḍanfar did not notice that according to *Kitâb al-Şaydanah* Al-Bayrûnî could not have died at the age of 77 years 7 months. I have taken 443 A.H. as the most likely year because *Kitâb al-Şaydanah* must have been finished late in 442 or early in 443 A.H., and because Yâqût also appears to me to have mentioned this year. (In the text we have,<sup>135</sup> it is actually 403 A.H., but Yâqût could not have given that date, as he himself reports seeing a book in Al-Bayrûnî's own hand finished at Ghaznah in 422 A.H.<sup>136</sup> Ibn al-Athir has given 430 as the year of Al-Bayrûnî's death,<sup>137</sup> which, I believe, was his conclusion from Yâqût's text —just as 'Abd al-Salâm Nadwi has done.<sup>138</sup> These two,

<sup>131</sup> We have report of at least one case in which the main text of the book (*Kitâb al-Şaydanah*) was in the hand of a pupil (Aḥmad al-Nahsha'î) with marginal notes scribbled by Al-Bayrûnî himself. (Krenkow reports from Al-Ghaḍanfar, who reports from Abû al-Muḥâmid al-Ghaznawî; see, *Islamic Culture*, Vol. VI., 1932, p. 532.

<sup>132</sup> I believe Al-Bayrûnî has himself stated in the introduction to his *Kitâb al-Şaydanah* that he was then 80 years of age.

<sup>133</sup> Quoted in Sachau's introduction to *Al-Āthār*, p. XXXVI.

<sup>134</sup> Krenkow (*Islamic Culture*, p. 532) has reproduced the statement from *Kitâb al-Şaydanah*.

<sup>135</sup> *Muġam al-Uḍabâ'*, p. 186.

<sup>136</sup> *Ibid.*, p. 180.

<sup>137</sup> *Al-Lubâb fi Tahdhîb al-Ansâb*, ed. Mustafâ 'Abd al-Wahid, Egypt, 1971, p. 224.

<sup>138</sup> 'Abd al-Salâm Nadwî, "Al-Berûnî", *Comm. Vol.*, p. 256.

it appears, think that “*thalāthīn*” (ثلاث) is a corruption of “*thalāthīn*” (ثلاثين). I, however, think it more likely that “*arbaʿīn*” (اربعين) was inadvertently left out by some copyist, as a result of which “443” became “403”.

Speaking about Firdawsī and Maḥmūd, Edward Sachau maintains that “In the case of the king *versus* the poet the king has lost. As long as Firdawsī retains the place of honour accorded to him in the history of the world’s mental achievements, the stigma will cling to the name of Maḥmūd, that he who hoarded up perhaps more worldly treasures than were ever hoarded up, did not know how to honour a poet destined for immortality.”<sup>139</sup> I have no desire to challenge this dictum, and only wish to add that Maḥmūd certainly does not appear to have known how to honour any man destined for immortality. But in the case of the King *versus* the Scientist, the scientist has lost miserably, and it is only after some nine centuries that the case is beginning to come up for revision. How great has been his failure may be judged from the fact that sometime ago there was an article in one of our newspapers having a large circulation, whose title was something like “Alberuni: One of the greatest scientists of all time” and whose text consisted only of a report of the astrological feat of prognosticating that Maḥmūd would go out by a door specially made in the wall for the purpose and that he himself would be thrown down that day from an elevated place but would escape unhurt. Even Sachau has suggested that Al-Bayrūnī could have maintained himself at Ghaznah by practicing as an astrologer!<sup>140</sup>

The earliest “authority” for this (now) well known astrological performance, so far as I know, is Al-Niẓāmī al-ʿArūḍī al-Samarqandī’s *Chahār Maqāleh*<sup>141</sup> (written between 547 and 552 A.H.), a prose work highly rated by E.G. Browne, which is also the earliest “authority” for the report that Maḥmūd had called for Abū Naṣr al-Manṣūr, Abū al-Khayr al-Khammār, Al-Bayrūnī, Abū Sahl al-Masiḥī and Ibn Sinā, the first three agreeing to go and the last two going away to Jurjān instead.<sup>142</sup> In addition to the above noted astrological feat, Al-Bayrūnī has been credited with anot-

<sup>139</sup> *Alberuni’s India*, p. viii.

<sup>140</sup> *Ibid.*, pp. ix-x.

<sup>141</sup> See, p. 57. Al-Niẓāmī however says that the report has reached him (آوردہ آندکے). He, of course, mentions no book or writer as his source.

<sup>142</sup> See, pp. 76-80.

her correct forecast: Mas'ūd Sa'ad Salmān (died 515 A.H.). in his *qaṣidah* for Sayf al-Dawlah abū al-Qāsim Maḥmūd, son of Sultān Raḍī al-Dīn Ib-rāhīm b. Mas'ūd (ruled 450-492 A.H.), on the occasion of his being appointed governor of India, *inter alia*, states:

بدان کتاب که کرده است نام او تفهیم      بسال پنجه ازین گفت بو ریحان  
چوسال هجرت بگشت تی وسین وسه جیم      که پادشاهی صاحبقران شود بجهان

(50 years ago, in his book called *Tafhīm*, Abū Rayḥān had foretold that the just King—Sayf al-Dawlah—would come to rule the world in 469 A.H.) Now, Jalāl Humā'ī states that while editing the Persian text of *Kitāb al-Tafhīm*, he looked for this prophecy in all the six old manuscripts (two of which were of the Arabic text) from cover to cover not once or twice but several times, all in vain.<sup>143</sup> Jalāl Humā'ī need not have done that: Al-Bayrūnī was no astrologer. In fact, in *Kitāb al-Tafhīm* itself, not to mention other works, Al-Bayrūnī has denounced astrology and astrologers at a number of places, as Humā'ī himself has noted.<sup>144</sup>

Reverting to *Chahār Maqāleh*, it is obvious that Al-Nizāmī was just the reverse of Al-Bayrūnī: his vocation was to deceive the credulous, superstitious and vainglorious Amirs. The incident of 403 A.H. he has reported is altogether impossible, as even Muḥammad b. 'Abd al-Wahhāb has pointed out. (Among other things, Al-Nizāmī makes Ibn Sīnā meet Qābūs, whereas Ibn Sīnā himself apud Ibn 'Ubayd has stated that he reached Jurjān only after Qābūs had been incarcerated.<sup>145</sup>) As for the astrological

<sup>143</sup> *Kitāb al-Tafhīm*, p. XIV.

<sup>144</sup> *Ibid.*, p. XIV. Jalāl Humā'ī refers to *Kitāb al-Tafhīm*'s pages 316, 400 and 538. Humā'ī also mentions in this connection Al-Bayrūnī's *Kitāb al-Tanbih 'alā Ṣinā'ah al-Tamawiyah* and *Al-Āthār*.

<sup>145</sup> See, Al-Qifṭī, *op. cit.*, p. 417.

S.H. Barani, however, has challenged this view: "I do not believe in the view held by some scholars that Ibn Sīnā never met Qabus. On the other hand we have the positive testimony of Ibn Sīnā's disciple Jauzjani that he met the former in Jurjan in about A.H. 402 (i.e. before Qabus' death) and found him in that King's service." (Barani, "Ibn Sina and Alberuni", included in *Avicenna Commemoration Volume*, Calcutta, 1956, p. 4.) Barani has referred to Al-Jūzjānī's statement in the latter's preface to Ibn Sīnā's *Kitāb al-Shifā'*. Now, the relevant statement occurs on pp. 1-2 of the published text of the book quoted (Vol. I—*Isagogee*, Cairo, 1952). But in his statement Al-Jūzjānī has not mentioned the name of Qābūs. He however states that Ibn Sīnā was about 32 years of age when he met him (Ibn Sīnā) at

feat, I believe, nothing needs to be done beyond saying that over 2000 years ago Aristotle offered an argument against astrology which has not yet been refuted: Aristotle<sup>146</sup> pointed out that on astrological principles identical twins ought to lead identical lives, but that was impossible!

In the end, I would like to discuss how the erroneous views regarding Al-Bayrūnī's place of birth have arisen — in particular, how did the excellent and marvellous city of Bayrūn come into existence, how was it taken to Sind, and how was Al-Bayrūnī obliged to get born there.

We have seen that Al-Bayrūnī's statement about the date and place of his birth is found in one of his minor and little-known works, and, it so happens that in none of his well-known or important works is he known to have repeated that statement. Nor do we find any such statement in any of the known works of his contemporaries. Now, it is obvious that no such place as Bayrūn/Birūn/Bērūn was known to have existed in Khwārizm, Jurjān or Khurāsān of those days. Al-Bayrūnī's *nisbah* must therefore have been problematic for anyone who had either to write his biography or to write on *ansāb*. Thus, the two earliest writers known to us, Abū al-Ḥasan al-Bayhaqī and al-Samʿānī had just that to do. The first steps in the wrong direction, therefore, would appear to have been taken by these two, who happened to be contemporaries of each other. If one had nothing to go upon save the *nisbah* itself, one could come to either of these two conclusions with regard to its *raison d'être*: (i) that it was derived from the proper noun "Bayrūn" (and hence that there is a place called Bayrūn where Al-Bayrūnī was born or to which his family belonged), or (ii) that it was derived from the attributive noun "Bayrūnī", meaning "outsider" or "foreign" (and hence that Al-Bayrūnī was so called because he was a foreigner to the people among whom he lived). A.H. al-Bayhaqī and al-Samʿānī did just that; the former (who had to give a biographical

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Jurjān, and that Ibn Sinā was then in the service of "Al-Sultān". From this Barani is not unjustified in reaching his conclusion; for, the year in question would appear to be 402 A.H. (Ibn Sinā is stated to have been born in 370 A.H.). However, as only "Al-Sultān" has been mentioned, it is quite possible that here Al-Jūzjānī is referring to Qābūs's son who had succeeded him, if the year in question was 403 A.H. — Which it could be, seeing that Ibn Sinā could very well be "about 32" also in 403 A.H. even assuming that Al-Jūzjānī was being very exact in his statement. In any case, Al-Nizāmī's statement remains quite improbable, for, Abū ʿUbayd only mentions ʿAlī and not Abū al-ʿAbbās, and therefore, Ibn Sinā may be taken as having left Khwārizm as early as 399 A.H. — four years before 403 A.H.

<sup>146</sup> I do not remember where. However, I hope I am not mistaken in attributing this argument to Aristotle!

account) stated that Al-Bayrūnī was born at a place called Bayrūn, but as he had not heard of any such city, felt called upon to make that place an excellent and marvellous town, believing perhaps that just as “a pearl is found only in a sea-shell”, so a man of Al-Bayrūnī’s excellence could belong only to an equally marvellous place;<sup>147</sup> the latter (who was writing on *ansāb* and who must have known that Al-Bayrūnī’s early life had been spent in the province of Khwārizm), of Khwārizm and that the word “Bīrūnī” (means “foreign” or “foreigner”) assumed, it appears, that the Khwarizmians must have been in the habit of giving this epithet to everyone who came from outside the province and did not belong to themselves, stated that Al-Bayrūnī was known by this *nisbah* and that Khwarizmians called all foreigners by that name, implying that Al-Bayrūnī did not belong to the province of Khāwarizm.<sup>148</sup>

Now, in the third/fourth century Hegira (also earlier and possibly later as well) there used to be a place in Sind somewhere between the then cities of Al-Daybul and Al-Manṣūrah, which has been mentioned (among others) by Al-Balādhurī,<sup>149</sup> Al-Iṣṭakhrī,<sup>150</sup> Ibn Hawqal,<sup>151</sup> Al-Muhallabī,<sup>152</sup>

<sup>147</sup> *Op. cit.*, p. 63. (I am disregarding the possibility of his mistaking “Al-Nayrūn” for “Al-Bayrūn”)

<sup>148</sup> *Op. cit.*, fol. 98b.

(We have here assumed “balad” to have been used by Al-Sam‘ānī in the sense of “district province” and not that of a town. It is however quite possible that — as we had earlier assumed — he had used “balad” as a synonym for “madīnah” meaning “town” or “capital”. If so, his statement would amount only to the assertion that Al-Bayrūnī did not belong to the city, or the capital, of Khwārizm-Kāth. While the language used allows of either interpretation, I think that “balad” should here be taken in the sense of a district/province, because it does not appear probable that the inhabitants of a town would regard every person from outside that town as a foreigner. However if this was not actually the practice, but only Al-Sam‘ānī’s guess, then it is difficult to decide what his guess might actually have been — for, we do not know what exactly were the factual data he had to go upon.)

<sup>149</sup> *Futūh al-Buldān*, ed. Ridwān Muhammed Ridwān, Egypt, 1350 A.H. 1932, p. 425.

<sup>150</sup> *Op. cit.*, pp. 182 and 185 (De Goeje’s reading is “البيرون” with Bā).

<sup>151</sup> *Op. cit.*, p. 323. (Ibn Hawqal has copied here too from Al-Iṣṭakhrī verbatim, unless, of course, both have copied from a common source. J.H. Kramers’ reading however is “النرون” with “Nūn”. Facsimile of a map of Sind from Ibn Hawqal’s book is found in Sir H.M. Elliot, *op. cit.*, vol. 1, facing page 32. In this map, there is a place between Al-Manṣūrah and Al-Daybul whose name is given as العرون which can be read both with B and N. However, Barani, *Al-Bērūnī*, pp. 34-35, reports that there is an old MS. of *Kitāb Ṣūrah al-Ard* in Lucknow in which there is, he further states, a map showing the location of Nirūn. I wonder if Barani has read it as Nirūn or the diacritical marks are also found; the location, of course, must have been marked in any case.)

<sup>152</sup> Abū al-Fidā’, *Taqwīm al-Buldān*, ed. Reinaud and De Slane, Paris, 1840, p. 349,

and above all, by Al-Bayrūnī himself<sup>153</sup> (In all likelihood, the name of that place was “Nīrūn” or “Nayrūn Kot”<sup>154</sup>). In Arabic the name of the city, even assuming that the writer intended it to be read as “Nīrūn”, can easily be read as “Bīrūn/Bayrūn”, and this is what appears to have been done by some persons in the seventh century Hegira. Thus, the next step appears to have been taken (possibly among others) by Ibn abī Uṣaybi‘ah<sup>155</sup> and Ibn Sa‘īd<sup>156</sup>, who located Bayrūn in Sind and related Al-Bayrūnī to it, without however stating it to have been his actual place of birth. (Abū al-Fidā’<sup>157</sup> and Al-Qalqashandī<sup>158</sup> did the same on the authority of Ibn Sa‘īd) Finally, it was Al-Shahrazūrī who, I believe, for the first time combined all these reports into its present form: the fine city of excellent and marvellous things called “Bayrūn/Bīrūn”, was a place in Sind where Al-Bayrūnī was born and grew up.<sup>159</sup>

Earlier, Yāqūt had led us to yet another wrong course. Not having heard of any place called Bayrūn, he concluded that the *nisbah* came from “Bayrūnī” which he knew to mean “alien” in Persian. He asked a learned man about it who stated that the Khwarizmians called aliens by that name (on al-Sam‘ānī’s authority?) and that when Al-Bayrūnī’s separation from the Khwarizmians became long he became an alien for them, implying thereby that it was the Khwarizmians who started calling

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quotes Al-Muhallabī as stating that Al-Bīrūn is a city inhabited by Muslims. (This Al-Muhallabī, in all probability, is Abū al-Ḥusayn al-Ḥasan b. Aḥmad al-Muhallabī (d. 380 A.H.), the author of *Āl-Masālik al-Mamālik*. See, Ismā‘il Pāshā, *Hadiyah al-‘Ārifīn*, vol. 1, Istanbul, 1951, p. 272. I.I. Krachkovski, *Istoria Arabskoi Geograficheskoi Literatury*, Moscow and Leningrad, 1957 (tr. Salāh al-Din ‘Uthmān Hāshim, *Ta’rikh al-Adab al-Jughrāfiy al-‘Arabiy*, Cairo, 1963, p. 230), states that Abū al-Fidā’ has made considerable use of Al-Ḥasan b. Aḥmad al-Muhallabī’s work. (Krachkovski’s authority for this view is Reinaud, one of the editors of Abū al-Fidā’s *Taqwim*).

<sup>153</sup> *Al-Qānūn*, p. 552.

In the published text, the name of the place is given as Nayrūn (نيرون) with Nūn. The co-ordinates of this city are given by Al-Bayrūnī as longitude 94° 30’ (East), and, latitude 24° 45’ (North) [صدل كلمه]

<sup>154</sup> See, H.M. Elliot, *The History of India as Told by Its Own Historians*, ed. J. Dowson, Vol. I, London, 1867, pp. 396-401.

<sup>155</sup> *‘Uyūn al-Anbā’ fi Tabaqāt al-Atibbā*, Vol. III, Beirut, 1957, pp. 29-30.

<sup>156</sup> See *supra*, note 29.

<sup>157</sup> Abū al-Fidā’, *op. cit.*, p. 349.

<sup>158</sup> *Subh al-‘Ashā*, p. 64.

<sup>159</sup> See extract from his *Nuzhah al-Arwāḥ* in E.C. Sachau’s introduction to *Al-Āthār al-Bāqiyah*, p. LIII.

him "Al-Bayrūnī".<sup>160</sup> Yāqūt, who was obviously not satisfied with this explanation but who appears to have shared with that learned man the beliefs that Al-Bayrūnī had belonged to Khwārizm and that it were the Khwarizmians who used to call him by that name, concluded that Al-Bayrūnī must have been from the countryside — *min ahl al-rustāq* — and not the capital of Khwārizm, and that it must have been the inhabitants of that city who gave him that name. E.C. Sachau, to whom (more than to anyone else) we are indebted for resurrecting Al-Bayrūnī, had before him the statements of Al-Samʿānī, Abū al-Ḥasan al-Bayhaqī, Al-Shahrazūrī, Al-Ghaḍanfar and possibly Yāqūt al-Ḥamawī, and of course, the problem of the *raison d'être* for the *nisbah*, discounted the theory of his having been born at, or having belonged to, Bayrūn in Sind, probably interpreted Al-Samʿānī's statement as referring to *Madinah Khwārizm*, and, thus concluded that Al-Bayrūnī was born in the province of Khwārizm but not in *Madinah Khwārizm* itself, leaving it open whether his birth-place was in the outskirts of *Madinah Khwārizm* or just some place in the province. S.H. Barani, who in his *Al-Bērūnī* drew heavily upon Sachau (via. I believe, Ḥawāshī to *Chahār Maqāleh*, in which Muḥammed al-Qazwīnī has given a summary of Sachau's views), seems, however, to have thought it more likely that "Al-Bayrūnī" was derived from "Bayrūn"; but, as he was aware of Sir H.M. Elliot's attack upon "Bayrūn in Sind", he concluded that there must have been a place of that name in the countryside (*nawāh*) of Khwārizm where Al-Bayrūnī must have been born. F. Krenkow, it appears, accepted Sachau's authority, going beyond him in only specifying "*Madinah Khwārizm*" which he took to have been Kurkānj (either because he was not aware of Kāth having been the *Madinah Khwārizm* at the relevant time, or more probably because he interpreted Al-Ghaḍanfar and Sachau as having referred to Kurkānj by the expression "*Madinah Khwārizm*"). ʿAbd al-Salām Nadwī, being aware of Elliot's work as had Barani been earlier, saw no reason to believe that Al-Bayrūnī was born in, or belonged to, any place outside the province of Khwārizm; nor did he see any chance for explaining the *nisbah* if he was born in *Madinah Khwārizm* itself; he therefore concluded that he must have been born in some village of the province of Khwārizm. S.H. Barani, in his *Al-Qānūn* paper, revised his earlier stand, giving up Bayrūn altogether and locating the birth-place in the outskirts of Kāth. This is in effect the same stand as the view that

<sup>160</sup> Yāqūt, *Muʿjam al-Udabāʾ*, p. 180.

he was born outside, or in the vicinity of, *Madinah Khwā-rizm*; only that *Madinah Khwā-rizm* has been specified as "Kâth", Ḥamid ʿAskarī, who was probably unaware that Barani had revised his stand, stated that Al-Bayrūnī was born in a village called Bayrūn—in the countryside around "the historical city of Khwā-rizm";<sup>161</sup> Idārah Taṣnīf-o-Tālif appear to have done the same (minus the "historical city"). Fikr-o-Nazar editorial, in an endeavour to combine the view originating with al-Samʿānī regarding the *nisbah* with the account of his having been born at Bayrūn in Sind, but being altogether unaware of the fact that the location of Bayrūn/Nayrūn had been given by among others, no less a person than Al-Bayrūnī himself, but knowing of a quarter of the city of Hyderabad (Deccan) called "Bērūn", speculated that the medieval city of Al-Manṣūrah might have spread over to the other bank of the River Indus, the postulated quarter across the river might have been called "Bērūn" and this Bērūn might have been the place of origin of Al-Bayrūnī's family! (While no categorical statements appear to have been made, and thus no erroneous views appear to be involved, it commits several blunders on the way. Nirūn/Birūn was a township which, according to the same early sources who are our sources for the name, was located between the cities of Al-Manṣūrah and al-Daybul,<sup>162</sup> and therefore no question of Al-Manṣūrah sprawling over to the other bank, etc., arises.)

<sup>161</sup> Ḥamid ʿAskarī, *op. cit.*, p. 457.

<sup>162</sup> See, (i) Al-Balādhuri, *Futūḥ al-Buldān*, ed. Ridwān Muhammad Ridwān, Egypt, 1350 A.H./1932 A.D., pp. 424-426.

(Muḥammad ibn al-Qāsim first comes to Al-Daybul, then goes to Al-Bayrūn (i.e., Nayrūn or Nayrūn Kot) and finally appears at Brahmanābādh. Al-Balādhuri also states (p. 426) that Al-Manṣūrah was afterwards built at a distance of two farsakhs from Brahmanābādh).

(ii) Al-Iṣṭakhri, *Kitāb Masālik al-Mamālik*, ed. De Goeje Leyden, 1927, p. 185. (Al-Bayrūn is a city midway between Al-Daybul and Al-Manṣūrah, a little nearer to Al-Manṣūrah)

(iii) Ibn Hawqal, *Kitāb Ṣūrah al-Ard*, ed. J.H. Kramers, 2nd. ed., 1938, p. 323. (As in Al-Iṣṭakhri)

(iv) Al Bayrūnī, *Al-Qānūn al-Maʿūdī*, p. 552.

(Co-ordinates of Al-Daybul, Al-Nayrūn and Al-Manṣūrah are given as under:

Al-Daybul -Longitude	92°	30'	Latitude	24°	10'
Nayrūn -Longitude	94°	30'	Latitude	24°	45'
Bamhanwā-Longitude	95°	0'	Latitude	26°	40'

Al-Bayrūnī also says that Bamhanwā is called Al-Manṣūrah. In his *Kitāb Al-Hind*, Al-Bayrūnī states that Muḥammad b. al-Qāsim conquered the city of Bahmanwā which, he further states, is now called Al-Manṣūrah (See, Alberuni's India, p.21).

Al-Ghaḍanfar appears to have been the ultimate authority for the third wrong course. In probably copying from Al-Bayrūnī, he failed to realize that "*Madīnah Khwārizm*" did not then refer to the same city to which Al-Bayrūnī must have referred. Thus E.G. Browne, I believe, thought that "*Madīnah Khwārizm*" must refer to the city of Khiva which had been the capital of the province for quite a long time and which is an ancient city. (He might have been misled by the co-ordinates of *Madīnah Khwārizm* also: the co-ordinates given for Al-Bayrūnī's place of birth seem very closely to accord to the modern figures for the city of Khiva.) J.H. Kramers, who happens to have edited Ibn Ḥawqal's *Kitāb Ṣūrah al-Ard*, appears to have been misled by (some of) the evidence cited earlier in support of the hypothesis that by "*Madīnah Khwārizm*" Al-Bayrūnī must have meant the city of Kurkânj.

Had Al-Bayrūnī been in the shoes of anyone of these bio-bibliographers he would have frankly confessed his inability to discover the place of birth and/or the reason for the *nisbah*; not so those who have written about him. Surely, Al-Bayrūnī *versus* Maḥmūd is a case that was decided against Al-Bayrūnī, and the judgement of the court of first instance has not yet been set aside.

## APPENDIX

### I. *An Abridged Translation of the Qaṣīdah*

The greater part of my days have passed gracefully and I have enjoyed appointments to high offices. The House of ʿIrāq nursed me with their milk, and one of them, Maṣṣūr, undertook my upbringing. Shams al-Maʿālī (Qābūs) was desirous of my company even though I hated him for his cruelty. The children of Maʾmūn too patronized me: ʿAlī began kindly and immediately became a healer (of old wounds), and Maʾmūn, the last of them, made my life pleasant, elevated my name, and made me a ruler over men. Nor was Maḥmūd miserly in lavishing his favours on me: he made me rich, connived at my boastings and excesses, treated me nobly, and elevated my station in life.

Would that I also were gone with them! Would that I had been with them longer!

Their successors invite me but rarely, even which (i.e., the rare invitation) I consider a boon. I am left in Ghaznīn as a piece of meat for the birds to prey upon — I am no more in command even of my learning. In the shoes of my patrons are now those who are not like them; not all men can (perform) be equal.

In my day, I beat the greatest masters who—unlike me, not having devoted themselves to research and solution of problems—were no match unto me in the extent of their learning. Ask the Indians and the Scholars of the West for the magnitude of my intellectual attainments. Nothing could induce them not to acknowledge my achievements; in fact, everyone has refrained from belittling them.

Abū al-Faṭḥ (! He) is in this world the master of my neck; come, sing his praises with fervour. May he flourish in this world and the hereafter! And may he continue to succour the needy!

### II. *A Translation of the Poem with (Possibly) Biographical References*

O ye poet! Thou hast come upon me evacuating thy bowels on good manners, and hast been profuse in eulogizing me even though to satirize me (as thou hast shown it) is just the way to pay respect to me.

I found him insolently breaking wind in my beards—nay, in his own tail-like beards. He has mentioned my genealogy in his verses by way of *double entendre*. By God! I do not really know my genealogy, for I know not my grandfather with certitude—how should I know my grandfather when I am not cognizant even of my father? I am indeed Abū Lahab, an impudent old man, and yes! my mother is a carrier of woods. Eulogy and satire, O Abū Ḥasan, are both the same to me, just as earnestness and jest are the same (to thee). So, dismiss me from both thy eulogy and thy satire; do not devote thyself to (either of) the two: For God's sake do not put thy anus to exertion!