Chapter 5

Scientific and Cultural Conspectus under the Fatimids

Practically nothing is known about the Isma'ili religious literature from the beginning of the movement till the rise of the Fatimid state in North Africa.¹ The reason for this appears to be that the movement was run in a secretive manner when, according to the Isma'ili belief, the movement was led by hidden Imams (*masturin*) Literature by the Isma'ili is forthcoming only from the period the Fatimid state came into being The Fatimid period, especially until the region of the caliph al-Mustansir (1036-1094) was indeed the golden age of the Fatimids It was during this part of the classical phase in their history that the Fatimid thought and literature attained their summit, while the Fatimid caliphs ruled over a vast Caliphate stretching from North Africa and Sicily to Syria and Palestine.

The Fatimids paid considerable attention to the Islamic sciences (the Fatimid period coincides with the great foundation work of the Islamic philosophy and science) and other cultural as well as commercial activities.² The production of this literature coincided with the Fatimid rule in Ifriqiya (modern-day Tunisia) and Egypt when the Isma'ili authors and *da'is* embarked on their activities. Largely, it were the scholars of Iranian origin, working as the Isma'ili *da'is*, who produced the early Isma'ili literature in Arabic ³

¹ Op Cit, A Guide to the Isma'ili Literature, P 15

² Mediaeval Isma'ili History and Thought, P 3 & A Guide to the Isma'ili Literature, Pp 15-17

³ Op Cit, A Guide to Isma'ili Literature, Pp 15-16

Works of History under the Fatimids

By far, the greater part of the new Isma'ılı material is religious and philosophical in character However, surprisingly it throws very little light on the early history of the Isma'ılı movement ⁴

Amongst historical works, *Sirat al-ustadh Jawdhar* by Abu 'Ali Mansur al-Azizi al-Jawdhari, a secretary of *ustadh* Jawhar, an important official at the time of al-Mu'izz, is of special importance, and hence this work has been regarded as of fundamental importance ⁵

The *Sirat Ja'far al-Hajib* (Memoirs of Ja'far al-Hajib), is another important work giving account of the departure of al-Mahdi from Salamıyyah in central Syria to Sijilmasa in eastern morocco, and later, to his departure to Raqqada near Qayrawan. This work was compiled by Muhammad bin Muhammad al-Yamani during the reign of caliph al-Aziz (365-86/975-96)⁶ This *Sirat* appears as a section of another work called *Istitar al-Imam* It may be noted that the *Sirat* nowhere mentions the *Istitar al-Imam* by name, but the fact that it is a part of the *Istitar* suggests that it must have had some connection with it, though its nature is unknown⁷

Abu Hanifa al-Nu'man bin Muhammad b Mansur b Ahmad al-Tamimi known al-Qadi Nu'man, (d 363/974) an Arab scholar, wrote the earliest historical work of the Fatimid period, first in the Yemen and then in North Africa, *Iftitah al-Da'wa wa Ibtida al-Dawla*. Al-Nu'man had served

⁴ Op Cit, The origins of Isma'ilism, P 15

⁵ Ibid, A Guide to Isma'ili Literature, P 41and Op Cit, The Isma'ilis, P 181

⁶ Op Cit, Sirat Ja'far al-Hajib (Bulletin, Pp 107-108) in The Rise of the Fatimids, Pp 184-185

⁷ Op Cit, The Rise of the Fatimids, Pp 10-11

the first four Caliphs in different capacities also he was an official historian of the Fatimids and an eminent exponent of Isma'ili jurisprudence, as well as being perhaps the most prolific and versatile of all the Fatimid thinkers and thus was an eyewitness to many events ⁸ He completed his work in Muharam 346 A H April 957 A D, and it covers the immediate background to the establishment of the Fatimid Caliphate This work has been the basic source of information on the period for all later Isma'ili historians and some non-Isma'ili writings on the subject.⁹

Amongst the early historians of the period mention may be made of the great historian Ab Ja'far Muhammad b. Jarir al-Tabari who died in the year 311/922. Since he was a Sunni, his work represents the earliest Sunni perception of the Isma'ılı or Batıni movement. However, he cannot be taken as an authority on the Isma'ılı doctrine as he had little acquaintance with it. Al-Tabari history was resumed and continued till 932/320 by the historian Arib bin Sa'd al-Qurtubi, who died in the year 370/980. Arib gives a detailed history of the Fatimid *da'wa* in North Africa, and the final victory of al-Mahdi in 297/909, who overcame the Sunni Aghlabid rule in Ifriqiyah ¹⁰

Another historian of the period is Ibn Zulaq (d 996/386), his name being Abu Muhammad al-Hasan bin Ibrahim. He is credited to have written many books of most of them have not been located so far A work credited to him and lost was *Siratu'l-Qa'id Jawhar*, life of the famous Fatimid general, Jawhar. Amongst the extant works of Ibn

⁸ Op Cit, Zuhur al-Khilafah al-Fatimiah wa Suqutuha, P 18 & Op Op Cit, The Isma'ilis, P 92 & Op Cit, Tarikh al-Dawlah al-Fatimiah, P 474-475 & A Guide to Isma'ili Literature, P 4

⁹Op Cit, A Guide to Isma'ili Literature, P 4

¹⁰ Op Cit, The Origins of Isma'ilism, P 4

Zulaq is *Fada'al Misr wa Akhbaruha wa khawasuha*, a book on the reign of the Fatimid caliph's al-Mu'izz, al-'Aziz, al-Hakim and the earlier period of the caliph al-Zahir Its only manuscript is in the Biblitheque Nationale, Paris.¹¹

The tradition of local historiography in Fatimid Egypt was continued by Muhammad b Ubidallah b Ahmad, popularly known as al-Musabbihi (d 1029), a high official under the Fatimids He wrote the history of the period 975-1025 However, only a very small portion of the work covering the period A H 414-415 is extant, as volume forty of al-Musabbihi's vast history Its only manuscript is preserved at the Escorial Library, Madrid ¹²

Kitab Tajarib al-Umam is one of the better-known works of history written during the Fatimid Egypt. It was written by the famous historian Miskawayh (d. 421/1030), and the same was continued after his death by the vizier Abu Shuja' al-Rudhrawari (d 488/1095). Miskawayh's *Tarikh* is a very useful and reliable source of information on the Fatimid conquest of Egypt.¹³

Abu Abdi'l-lah Muhammad bin Salama bin Ja'far b Ali b Hakmun (d 1062), also known al-Quda'i, a learned Qadi (Judge) and a trusted Shafi'ite in the service of the Fatimid caliphs, al-Zahir and al-Mustansir was another well known historian of the period His works are not extant, but some of the later historians, such as al Maqrizi

¹¹ B N no 1817. Op Cit, *A Guide to Isma'ılı Literature*, Pp 42 and Op Cit, *Tarikh al-Dawlah al-Fatimiah*, P 511 and Op Cit, *al-Dawlah al-Fatimiah fi Misr*, P 18 and Op Cit, *The Isma'ılıs* P 146

¹² Op Cit, Tarikh al-Dawlah al-Fatimiah, Pp 512-513 and Op Cit, The Isma'ilis P 146

¹³ Ibid, Tarikh al-Dawlah al-Fatimiah, Pp 513-514 and Ibid, The Isma'iis, P 149

(d 845/1441), al-Qalqashandı (d 821/1418) and Abu al-Mahasin, Yusef bın Taghrıbırdi (d.874/1470)- have utilized some of the extracts from al-Quda'ı work called '*Kıtab* '*Uyun al-Ma'arıf wa-Funun Akhbar al-Khala'ıf*.¹⁴

Tankh al-Antaki written by the Arab Christian Yahya bin Sa'id al-Antaki, (d. 458/1066) is the only detailed contemporary work on the Fatimids that has survived The author had spent the earlier part of his life in Egypt and then, during the caliphate of al-Hakim, migrated to the Byzantine City of Antioch in Syria where he composed his history of the Fatimids and other dynasties, covering the period 937 to1033 A D ¹⁵

Amongst the later Egyptian historians, who were for the most part also civil servants in Fatimid administration, mention may be made of Abu al-Qasim Ali bin Munjib bin Sulyman, known as Ibn al-Sayrafi (d 542/1148) He worked in the chancery of the Fatimids in Cairo from 1101 until his death. A historical work by Ibn al-Sayrafi, apparently an abridgement and continuation of an earlier Fatimid chronicle, has not survived, but other works dealing with different aspects of Fatimid institutions have been preserved and published ¹⁶ His *Kitab al-Qanun fi Diwan al-Rasa'ıl Wa al-Isharah ila Min Nal al-Wazarah* contains laws and procedures of administration of *Diwan al-Rasa'ıl* or *al-Insha* (the chancery of state) and talks mentions the qualifications required for the position of the *Diwan.*¹⁷

¹⁴ Op Cit, History of the Arabs, P 627and Ibid, Tarikh al-Dawlah al-Fatimiah, P 515

¹⁵Op Cit, The Isma'ilis, P 146

¹⁶ Ibid, The Isma'ilis, P 147

¹⁷ Op Cit, al-Dawlah al-Fatimiah fi Misr, P 266

Another Important history work produced under the Fatimids is *Kitab al-Nukat al-Asriah*, by Najm al-Din 'Umara bin Ali al-Hakami, the Yamani. The author had migrated from Yemen to Egypt. 'Umara was also the court poet of the Fatimids during the reign of caliphs, al-Fa'iz (1149-1160), and al-'Adid (1160-1171) *Kitab al-Nukat* gives valuable information on the Fatimid doctrines, their teachings and the Fatimid missionary activities The author also gave an eyewitness account of the defeat of al-'Adid, the last Fatimid Caliph, at the hands of Salah al-Din Ayyubi¹⁸

The biggest source of information on social and cultural life under the Fatimids of Egypt is from the pen of Nasir Khusraw, a Persian poet of repute who traveled all over the Fatimid Empire Nasir Khusraw was born in 349/1004 in Qubadiyan, in the eastern Iranian province of Khurasan. He belonged to a family of government officials and landowners. He rose to prominence in the courts of the Ghaznavids and the Saljugs. Amidst this overwhelming pomp and prestige, he began to question his surroundings and search for a truth that would transcend life's outward form.¹⁹ He set out on a journey from Persia to the Mediterranean coast that lasted seven years and took him to Arabia and Egypt and back to Persia. He had in his 40th year been converted to the Isma'ılı faith Out of seven years of his journey, understandably he spent three years (1047-50) in Egypt, the seat of Fatimid power. While in Cairo, he studied Isma'ili doctrines, law and governance from leading Isma'ılı scholars²⁰ On his return to Khurasan, he became an Isma'ill da'i There he encountered severe persecution

¹⁸ Op Cit, Tarikh al-Dawlah al-Fatimiah, P 517

¹⁹ Op Cit, The Isma'ilis, P 215

²⁰ Hujjat Proof, a high position in the hierarchy of Isma'ilism Op Cit, John Norman Hollister, P 414

from anti-Isma'ılı religious scholars, which compelled him to seek refuge in a remote part of the Pamir Mountains of Badakhshan, (covering areas of present-day Tajıkıstan and Afghanistan), where he composed most of his works

His famous work *Safar Nama*, Nasir Khusraw has left us a glowing description, not only of the splendors of the Fatimid court in vivid detail, but of the extraordinary wealth and prosperity of the bazaars and their merchants, with its Great Eastern palace, gates, gardens, libraries and observation on the Egyptian army, etc, this at a time which, we generally regard as one of the less fortunate periods of the Fatimid caliphate ²¹ His observations about the opulence of Egypt can be gauged from his remarks.

"I saw such personal wealth there that where I to describe it, the people of Persia would never believe it. I could discover no end or limit to their (Fatimids') wealth, and I never saw such ease and comfort anywhere "²²

Nasir Khusraw provides detailed description of art and architecture of the Fatimid and has given valuable details of social life under them that we have discussed elsewhere ²³ The *Safarnama*, therefore, is an invaluable source of information on the Fatimids. Though it was written by a Persian and in Farsi, unlike other Fatimid works that were written in Arabic, but we must keep in mind that Nasir Khusraw was an Isma'ili

²¹ Op Cit, *History of the Arabs*, Pp 625-626 and Op Cit, *The Isma'ilis*, Pp 215-216 and Op Cit, A Short History of the Fatimid Kaliphate, P 201

²² Safarnama, 55

²³ Cf Chapter, 3

convert who had drank deep at the well of Fatimid culture and religion at Cairo His Safarnama could easily be included as a Fatimid contribution.

The religious and philosophical works

Rasa'il Ikhwan al-Safa (Epistles of the Brethren of Purity)

A body of literature of philosophical nature that was to influence and mould the Isma'ili thought preceded the establishment of the Fatid state. According to the Isma'ili tradition, Ahmad bin Abd Allah b. Muhammad bin Isma'il, the second of the hidden Imams, who flourished at the end of the second and beginning of the third century A H and who is rarely mentioned by name (the Isma'ili authors refer to him as *Sahib al-Rasa'l*), is credited to have written an encyclopedia of sciences, natural and humanitarian This work consists of 52 write-ups (*rasa'il*) arranged in four groups The encyclopedia to the Isma'ilis is regarded as the ''ladder to salvation'' ²⁴ This work has been a source of inspiration and knowledge amongst the Isma'ili all through the ages

This work was actually done by a body of scholars at Basrah where, towards the close of the 10th century, a Philosophical Society known as *lkhwan al-Safa* (Brethren of Purity) had come into being. The scholars working with the *lkhwan* tried to reconcile religion with science ²⁵ This Society produced the *Rasa'ıl lkhwan al-Safa* (Epistles of the Brethren of Purity), a store of information on doctrinal and philosophic matters, containing quite a few hints of historic value. This body of literature in

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²⁴ Ivanow, A Guide to Isma'ili Literature, P 30,

²⁵ Op Cit, Heritage of Islam, P 287

later times became the basis of Druze scriptures, representing as they do an early and relatively pure Isma'ili current, and owing to their special character as the scriptures of a secret revolutionary sect, less reserved than the official Fatimid literature ²⁶

Amongst the notable contributors to the *Rasa'ıl Ikhwan as-Safa* were Abu Sulayman Muhammad b Nushir al-Busti known al-Muqaddasi, Abu al-Hasan Ali b. Harun al-Zanjani, Muhammad b Ahmad al-Nahrjuri or al-Mihrjani, and al-'Awfi, and Zayid bin Rifa'ah Also amongst of them was the father of Modern Medicine, Ibn Sina (980-1037A D) the author of *Al-Qanun*²⁷

Philosophical Works

The Fatimid-Isma'ili sect of Islam, it is important to bear in mind, was the first sect of Islam to have systematically attempted to interpret Islam in the light of Greek philosophy, drawing heavily from Platonic ideas. They applied these ideas even to explain genesis of the universe ²⁸ The Isma'ili leadership came from among eminent Persian intellectuals Greek ideas were systematically applied by scholars such as 'Abu Hatim Ahmad al-Razi, al-Nasafi, Hamidud-Din Kirmani, Muayyad Shirazi, etc , they preached esoteric doctrines which were based on Hellenic concepts ²⁹

The Faylasuf (philosopher) Abu hatim Abd al-Rhman al-Razi al-Warsinani, the chief da'i at Daylem in Persia, who died in the year

²⁶ Op Cit, The Origins of Isma'ilism, P 17 Also Cf Lewis, The Assassins A Radical sect in Islam, Pp-29-30

²⁷ Op Cit, A Guide to Isma'ili Literature, Pp 30-31 & Tarikh al-Dawlah al-Fatimiah, P 466

 ²⁸ Asghar Ali Engineer, *The Origin and Development of Islam*, Published by Priya Adarkar, Orient Longman Ltd Kamani Marg, Ballard Estate, Bombay 400 038, 1980, Pp 205-206
²⁹ Op Cit, *The Origin and Development of Islam*, P 206

322/934, belong to the period of the Isma'ılı *da'wa* that preceded the full emergence to political power of the Fatimid Caliphate ³⁰ His extant work *al-Zina*, a large book of a bout 1,200 pages, covered many expects of ritual, such as purity, prayers, fasting, pilgrimage, and also aspects of law dealing with marriage, divorce and inheritance. However, as the author's primary objective was the etymology of Islamic nomenclature, he does not dwell on the points of law ³¹

Another work of Importance on the Isma'ılı *Falsafah* is *Kitab A'lam al-Nubuwwah* It was composed to give a reply to a heretic (*mulhid*). Abu Hatim al-Razi in this work summarizes his arguments in the debate and also extends the discussion to ideas attributed to past sages and prophet-like figures, not part of a normatively conceived chain of prophets. His defense of the institution of prophecy develops into a broader treatment of the role of foundational figures in the history of past religions and a reconciliation of revealed religion and rationality ³²

Another work of al-Razi dealing with the *ta'wil* (Interpretation) called *Kitab al-Islah* (The Book of Reform) is a fairly large work of some 500 pages. It is *Islah* divided into six parts. The first part is entirely devoted to the discussion of professional ethics of the *da'is* in their relations with each to other. He is devotes a lesser part of his *Islah* to the discussion of philosophical matters, and the greater portion of it is filled.

³⁰ Op Cit, Tarikh al-Dawlah al-Fatimiah, Pp 467-468

³¹ Op Cit, *Mediaeval Isma'ili History and Thought*, P 119 Also, Op Cit, *A Guide to Isma'ili literature*, P 32 and Op Cit, *Tarikh al-Dawlah al-Fatimiah*, P 468, and Op Cit, *Studies in Early Persian Isma'ilism*, P 90

³² Op Cit The Mediaeval Isma'ili History and Thought, Pp 157-158 and Op Cit, A Guide to Isma'ili literature, Pp 32-33 and Op Cit, Tarikh al-Dawlah al-Fatimiah, P 468

with the *ta'wil* of the Quran This work is referred to in the Kitab al-Riyad, by Hamid al-Din al-Kirmani (d 408 A.H).³³

Another work on philosophy by an Isma'ılı philosopher and *da'ı* Muhammad bin Ahmad al-Bartha'ı (d 331/943), called popularly as al-Nasafi He wrote a work called *Kıtab al-Mahsul* (Book of the Yıeld/Revenue) The first half of the work seemingly contained the exposition of a type of Neoplatonic metaphysical system which al-Nasafi himself introduced into Isma'ilism, while the second half of *al-Mahsul* deals with the seven eras of prophecy in human history. This work sometimes is attributed to Hamid al-Din al-Kirmani.³⁴ Another work of al-Nasafi is *Kıtab Kawn al-Alam* that deals with astronomy and cosmography, seemingly from the religious standpoint ³⁵

Al-Sijzi or al-Sijistani (d.942/331)

The philosopher Abu Ya'qub Ishaq bin Ahmad al-Sijzi or al-Sijistani, who was executed in Bukhara in 360/971, was among the eminent early Isma'ili *da'is* of Persia His contributions to various philosophical and cosmological doctrines of the Fatimid Isma'ilis can be traced through his numerous works, of which at least some are extant.³⁶ He was considered to be an authority in his field and his works such as *Kitab al-Da'wa*, *Kitab al-Shara'a*, *Kitab Kashaf al-Asrar* are cited by Al-

³³ Op Cit, *Tarikh al-Dawlah al-Fatimiah*, Pp 468-469 and Op Cit, *A Guide to Isma'ili Literature*, P 33 For more details on *Kitab al-Islah* and Op Cit, *Studies in early Persian Isma'ilism*, Pp 14-15 and Pp 89- 98& Pp 101-104

³⁴ Op Cit, A Guide to Isma'ili Literature, P 36 and Op Cit, The Isma'ilis, P 235

 ³⁵ Op Cit, Tarikh al-Dawlah al-Fatimiah, P 471 & A Guide to Isma'ili Literature, P 36
³⁶Op Cit, Tarikh al-Dawlah al-Fatimiah, P 472

Baghdadı, abd al-Qahır bin Tahır, (d 1037/429), an eminent jurist, in his *Kıtab al-Farq Baın al-Fıraq* ³⁷

Ivanow in his book *A Guide to Isma'ili literature* mentions more than 20 books produced by al-Sijistani, among more important of his works was the *Kitab Ithbatu al-Nubuwwat* It is divided into seven *Maqalat*, each sub-divided into twelve *Fasl* or chapter The *Maqalat* (Chapters) are 1 *at-Tafawut al-Mawjud fi'l-Makhluqin*, 2. *Wajbu al-Risalat*, 3. *Ithbatu al-Nubwwat min Jihati'l- Ashya'i'ttabi'iyya*, 4 *Min Jihati'l- Ashya'r-ri Haniyya*, 5 *al-Anbiya' Kano Muttafiqin fi'l-Haqa'iq wa Kanu Mukhtalifin fi'z-Zawahir*, 6. *Kamiyyat Adwari-him wa Ma' Iayn Kull Dawer wa'd-Dawri'l-Akhar*, and 7. *al-'Aja'ibu'l-Mawjuudat fi'l-Qur'an Wa'shshari'at Wa'd-Dala'il 'Ala Ithbat Nubuwwat Muhammad* ³⁸

In his *Maqalat*, there is a discussion about the concept of prophecy, the reasons for the appearance of prophets and their periods (*adwar*), and finally, about the proof (*Ithpat*) of Muhammad prophet hood.³⁹

His *Kitab al-Yanabia'(The Book of Wellsprings)*, referred in short as *al-Yanabia'*, is divided into 40 *Yanbu's* (a chapter referred to as 'wellspring') and is thematically arranged, each individual theme being the subject of its own section or chapter (*yanbu'*). The *Kitab al-Yanabia'* presents a theory of knowledge that accounts for the totality of the cosmos, seen by al-Sijistani as a macrocosm, and of humankind,

³⁷Ibid, *Tarikh al-Dawlah al-Fatimiah*, P 472 See also Al-Baghdadi, Abu Mansur Abd al-Qahir bin Tahir, *Kitab al-Farq bayn al-Firaq*, ed M Badir, Matba'at Dar al-Ma'arif, Cairo, 1328/1910 P 267

³⁸ Op Cit, A Guide to Isma'ili Literature, P 34

³⁹ Op Cit, Tarikh al-Dawlah al-Fatimiah, P 472

as its microcosm.⁴⁰ This work deals with the meaning of the "Source" (*Mubda'*), *amr* (divine command), '*aql* (intellect),⁴¹ *nafs* (soul), *saba'ab al-khalq* (purposes of creation), *ibadat* (acts of devotion) *al-malaikah* (angels) *ma'rifat* (knowledge), *al-janah wa an-nar* (Paradise and Hell), *ma'na salb Isa* (meaning of the Jesus' cross), *hawiyyat* (personality) of al-Qa'im, plurality and unity, the return of mankind to the eternal reward (*thawab*), the meaning of the *kalimah* (word) of the Creator, and those who helped in the world Al-Sijistani also discusses in his *Yanabia'*, spheres, and omnipresence of God, origin of man, and the forces of nature.⁴²

The most important work of Al-Sijistani that deals with matters dealing with the origins of Isma'ili doctrines is *al-Mawazın* It is divided into 19 chapters called *mizan*. The work begins with a discussion of *ma'rıfat al-mubda'* (knowledge of Originator) There is an important *mizans* about *Nutaqa* (speaking, or law-announcing prophets); *al-A'ımma* (leadership); *hujaj wa du'at*⁴³ He mentions also the various branches of the two fundamentals of the human self (*almutafarrrı'a min al-aslayn*)⁻ intellect (*al-'aql*) and soul (*al-nafs*) Then are discussed *al-Furu*

⁴⁰ Abu Ya'qub al-Sijistani, *Kitab al-Yanabi*, Ed And tr H Corbin in his *Trilogie Ismaelienne*, Tehran-Paris, 196, Arabic text Pp 41-43 and Op Cit, *The Mediaeval Isma'ili History and Thought*, P 85 and Op Cit, *A Guide A Guide to Isma'ili Literature*, P 34-35

⁴¹ In His *Kitab al-Yanabi*', al-Sijistani describes the seven faculties *quwa* which were, he says, originated together with the Universal Intellect all at once and which necessarily accompany it The first among them is Eternal Time *dahr*. The second faculty of the intellect is Truth *haqq*. The third is Joy *surur*. The forth is Demonstration *burhan*. The fifth is Life *hayat*. The sixth is Perfection *Kamal*. According to H. Corbin in his edition of *the Kitab al-Yanabi* he preserved the reading ghayba, absence or occultation as the seventh faculty, which he found in his manuscripts. Op. Cit, *Kitab al-Yanabi*', P.62. Op. Cit, *The Mediaeval Isma'ili History and Thought*, Pp. 85-86.

⁴² Op Cit, A Guide to Isma'ili Literature, P 35 & Tarikh al-Dawlah al-Fatimiah, P 473

⁴³The Imam was followed by a single *hujjah*, or the great *hujja* Normally residing at the headquarters of the *da'wa* Like the imam himself, he was the highest religious and administrative officer of the *da'wa* and the Imam's chief assistant. The *hujja* was often selected from amongst the close relatives of the Imam, persons who were not in the direct line of succession to the Imamate Op Cit, *The Isma'ilis*, P 475

al-thalatha (The Three Branches of Knowledge) *aL-Zaman* (time), *al-Makan* (place) and *Hayula* (matter) ⁴⁴

Another important work of al- Sijistani is the *Kitab Sullamu an-Najat* (Ladder of Salvation) This work discusses spiritual leadership (*Imamate*), Prophecy (*Nubwwat*) and other connected philosophical issues. Another noteablw work of al-Sijistani is the *Kitab al-Iftikar* It is divided into seventeen chapters (*babs*), and deals with basic Islamic concepts such as unity of God (*tawhid amru'l-lah*), successor to the Prophet (*al-wasayat*); Islamic alms (*az-zakat*), fasting (*as-Sawm*) etc ⁴⁵

Al-Nu'man bin Muhammad, al-Qadi Abu Hanifa

Qadi Nu'man wrote a treatise on the Isma'ılı *fiqh* (jurisprudence), *Da* 'a'ımu Al-Islam fi Dhıkrı al-Halal wa al-Hram wa al-Qadaya wa al-Ahkam, which is considered to be his principal work amongst others that he produced It is divided into two volumes, each contains 700 pages. The first volume deals with the fundamental beliefs and commandments of the Isma'ılı faith (*Ibadat*)⁴⁶ It includes acts of devotion and religious duties, consisting of the seven *d'ai'm* or pillars of Islam according to the Isma'ılı doctrines, namely *walaya* (devotion of imams), *tahara* (ritual purity), *salat* (prayer), *zakat* (alms), *sawm* (fasting) *hajj* (pilgrimage to Mecca), and *jihad* (holy war) Thus al-Nu 'man added *walaya* and *tahara* to the five pillars recognized by the

⁴⁴Op Cit, A Guide to Isma'ılı Literature, P 34 & Tarikh al-Dawlah al-Fatimiah, P 473

⁴⁵Op Cit, A Guide to Isma'ili Literature, Pp 33-35

⁴⁶ Ibid, A Guide to Isma'ili Literature, P 37

Islam Sunni The second volume of da'aim deals with worldly affairs, such as clothing, food, marriage, divorce and so forth ⁴⁷

Amongst several works written by Nu'man on *fiqh* only two are extant: *Kitab Mukhtasar al-Athar* and *al-Yanbu. Kitab Mukhtasar al-Athar* was composed on the order of the Fourth Fatimid caliph, al-Mu'izz This work enjoys the same status amongst the Isma'ilis as the *Kitab al-Da'aim* and it is considered an authoritative work on Isma'ili law and it proved to be of great help in the propagation and promulgation of the Isma'ili law ⁴⁸ *Al-Yanbu*, wose only the second volume is extant, deals with worldly affairs There are references to many other works by Nu'man in the works of other writes but they have not survived. Mention may be made of *Kitab Mukhtasaru al-Idah, Kitab al-Itifaq wa al-Iftaraq,* and *Kitab al-Muqtasir,* an abridgment of the preceding work, and also *Kitab Kayfiyat al-Salah* ⁴⁹

Qadi Nu'man was a prolific writer who not only wrote history and *fiqh*, but also wrote on many other aspects of theology and philosophy. Thus he wrote *Kitab Asasu al-Ta'wil* (Basic Book of Esoteric Interpretation of the Quran). The work traces the 'indications' in the Biblical stories of the ancient prophets and patriarchs about the Promised Imams (*Imam al-hujjats*) This work was translated into Persian by the Isma'ılı *da'ı* and author, al-Mu'ayyad fi'l-Din al-Shirazi⁵⁰ *Kitab Ta'wilu al-Da'aim*, another work of Nu'man is devoted to the esoteric interpretation of the affairs of the world. Also by him is an

 ⁴⁷ Op Cit, Some unknown Isma'ili Authors and their Works, P 369, and Tarikh al-Dawlah al-Fatimiah, P 475, and Op Cit, The Isma'ilis, Pp 250-251 and Op Cit, The Bohras, P 55
⁴⁸ Op Cit, The Mediaeval Isma'ili History and Thought, P 123

⁴⁹ Op Cit, A Guide to Isma'ılı Literature, P 37 & Tarikh al-Dawlah al-Fatimiah, P 476

⁵⁰ Ibid, A Guide to Isma'ili Literature, P 38

elementary work on the esoteric truths *Kitab Ta'wil al-Shari'at*; a small work of about 16 leafs Other works of Nu'man of the same nature include *Kitab Sharhu al-Khuab al-Latı li-Amir al-Mu'minin 'Alı*; *Kitab Hudud al-Ma'rifat*, *Kitab al-Tawhid wa al-Imamat*; *Kitab al-Imamat*, and *Kitab Ithbatu al-Haqaq fi Ma'rifat Tawhid al-Khaliq Kitab Sirat al-Aimmat* and *Kitab Taqwim al-Ahkam* are also sometimes ascribed to him.⁵¹

Works produced by al-Nu'man, on the wa'z or Ethics, Nu'man's *Kitab al- Majalis wa al-Musayarat wa al-Mawaqif wa al-Tawqi'at* is a work on *wa'z* or moral teachings based on the sayings of caliphate of al-Mu'iz that Nu'man had noted down in a diary ⁵² Thus he says⁻¹

"In this book there is all that I heard from al-Mu'izz li-Dini'l-lah, of his wisdom instruction, knowledge, as expressed by him in conversations with him or at is assemblies, at the time of his residence or during his travels" ⁵³

Al-Nu'man also composed several works refuting the Sunni schools and their founders, especially Malik, Abu Hanifa, and Shafi'i and defending his own views Unfortunately, none of these works, with the exception of the *Kitab Ikhtilaf Usul al-Madhahib*, and the *Risalah dhat*

⁵¹ Fayzzee, *al-Qadı al-Nu'man*, Journal of Bombay Branch of the Royal Asiatic Society, 1934, and *A Guide to Isma'ılı Literature*, Pp. 38-39

⁵² Op Cit, Tarikh al-dawlah al-Fatimiah, P 478

⁵³ Op Cit, A Guide to Isma'ili Literature, p 40

al-Bayan fi al-Radd 'Ala Ibn Qutayba, dealing with the principles of Islamic laws, have survived ⁵⁴

A work on *Akhbar* and *Sıyar* (tradition) titled *Kitab Sharu al-Akhbar fi fada'ili al-Aimmati al-Athar* is also from the pen of Nu'man. It is divided into 16 parts dealing with issues such as *ilm* (knowledge), Ali being the first to embrace Islam, *Jihads* of Ali; his wars against heretics, his war with Mu'awiya, on revelation concerning the *Ahl al-bayt* etc ⁵⁵ Amongst the works on Tradition (*Sirat*) ascribed to him but not extant is *Al-Urjuza dhat al-Mihan*. This work also contained some historical information such as the revolt of Abu Yazid Makhlad bin Kaydad, *kharijite* Berber, in 333/944. We have discussed this revolt in Chapter One ⁵⁶.

Another important author who produced works on Isma'ili philosophy was Ja'far b Mansur al-Yaman Abu al-Qasim. His *Kitab al-Kashf*, deals with the tradition of the return of the *Sahib al-Zaman* (the Promised Mahdi) as the seventh *Natiq*.⁵⁷ Another work by the same author is *Kitab Asrar al-Nutaqa*, composed about 990/380 It deals with the proofs of the right of Isma'il bin Ja'far al-Sadiq to the Imamate It contains a strong controversial element, directed against the *Ithna 'Ashariyya* (Twelver Imami Shi'ism) This work is interesting as it deals with one of the earliest controversies on the doctrine of the Imamate. It also contains information on Jesus and Prophet Muhammad and

⁵⁴ Op Cit, *al-Qadi al-Nu'man*, Journal of Bombay Branch of the Royal Asiatic Society, Pp 15-18 and Op Cit, *The Mediaeval Isma'ili History and Thought*, P 124

⁵⁵ Op Cit, A Guide to Isma'ili Literature, p 38

⁵⁶ Op Cit, *The Cambridge History of Islam*, Volume 2, P 218 For more details on revolution Abu Yazid, fore said,

⁵⁷ This work has been edited by R Stothmann (London, 1952) and also by Mustafa Ghalib (Beirut, 1984), Op Cit, *The Isma'ilis*, P 105

connected affairs, though very briefly ⁵⁸ His *Kitab al-Shawahid wa al-Bayan* refers to the passages in which 'Ali is mentioned in the Qur'an It also deals with *Akhbar* of the Prophets Other works of the author include *Kitab al-Fatrat wa al-qiranat* also called *Kitab al-Jafr al-Aswad*, dealing with prophecies and other connected affairs; *Kitab Ta'wil al-Zakah*, and *Kitab al-Fara'id wa Hudud al-Din* ⁵⁹

Hamid al-Din Ahmad b. Abdallah Known al-Kirmani (d. 408 A.H)

Hamid al-Dın al-Kirmanı, an Iranian born in Kırman was the most eminent Isma'ili philosopher, theologian and author of the Fatimid period. He was known as Hamid ad-Din Ahmed b. 'Abd Allah al-Kırmanı Hıs title was *Hujjat al- ıraqayn* He seems to have spent to greater part of hıs life as Fatimid *da'ı* in Baghdad and Basra In fact hıs title *hujat al-Iraqayn*, meaning the Chief *da'ı* or *hujja* of both Iraqs (Iraq and Western Persia), he was also active in the northwestern and westcentral parts of Persia Known as the Iraqı '*Ajam* or Farsı Also some Isma'ili scholar calls him Sayyıdna (our Master) Hamid ad-Din al-Kirmanı⁶⁰

For his learning, the author of many important works, He wrote his principal work on the Isma'ili *Falsafah* or philosophy, *Rahat al-'Aql* (Peace of Rational Mind) in 411/1020-1021, and died soon afterwards,

⁵⁸ Op Cit, *The Rise of the Fatimids*, Pp 18-19, & *Tarikh al-Dawlah al-Fatimiah*, Pp 486-487 ⁵⁹ Op Cit, *A Guide to Isma'ılı Literature*, P 36, & *Tarikh al-Dawlah al-Fatimiah*, Pp 484-487

⁶⁰ It is not known, for certain, when he was born nor when he died, but modern scholars suggest that his death occurred in about 412/1021 And judging from the quality and quantity of his works it appears that he spent a long life in the fields of learning which suggests that he may have been born during the first half of the 4th/10th century His name al-Kirmani indicates that he was a native of the city of Kirman in Persia, but whether he was born there or whether he was a Persian by race is not certain & *The Isma'ilis*, P 193 and Op Cit, *Tarikh al-Dawlah al-Fatimiah*, P 488 and al-Kirmani, Hamid al-Din Ahmad bin Abd Allah, *Rahat al-'aql*, ed Muhammad k Husayn and Muhammad Mustafa Hilmi, Cairo, 1953, Pp 2-3

The work is the earliest attempt at a systematic exposition of the Fatimid philosophy, in this work he introduces many new ideas, including a new cosmological system, showing the influence of the earlier Greek and *Falasifat* al-Muslimiyn⁶¹

In fact the time of al-Kirmani's arrival into Egypt is not known but it appears more likely that it was in about 400/1009. In Cairo he wrote a number of Rasa'il (epistles) in which he explained the fundamental principles of the Isma'ili *Da'wa* and particularly the position of *Imamate* and its relations to divinity. In one of his epistles known as *Risalat Mabasim al-Bisharat*, on the Imamate of the caliph al-Hakim bi Amr Allah he emphasized that al-Hakim, like any previous *Imam*, was divinely appointed and guided but he was not divine himself. Perhaps the most important of his epistles on this issue is *al-Risala al-Wa'za* (Epistle of Advice) that he wrote in a reply to Questions put to him by al-Akhram, an extremist. It confirms that Kirmani, together with other official leaders, was trying to persuade the *Ghulat* (extremists) to abandon extremism and rejoin the true teachings of Ismailism.⁶²

Al-Kirmanı wrote many other works Important amongst them are al-Rısala al-Durıyya fı Ma'na al-Tawhıd, al-Rısala al-Mudi'a fı al-Amr wa al-Amır wa al-Ma'mur, dealıng with God's creation of the Universe; al-Rısala al-Zahıra, al-Rısala al-Hawıya fı al-Layl wa al-Nahar, a work on the ta'wıl, al-Rısala al-Kafıya, Rısalat al-Fıhrıst, Rısalat al-Maqadır wa al-Hada'iq, Kıtab al-Naqıd wa al-Ilzam, Kıtab Iklıl al-Nafs, Kıtab al-

⁶¹ Op Cit, The Isma'ilis, P 193

⁶² Mustafa Ghalib, A'lam al-Ismailiyya, Beirut, 1964, P 99 and Op Cit, A Guide to Isma'ili Literature, pp-40-46 and Op Cit, al-kirmani, Rahat al-'aql, Pp-4-9

Maqayıs and *Kıtab al-Majalıs al-Baghdadıyya wa al-Basrıyya*⁶³ Mention may also be made of *Kıtab al-Masabıh fi Ithbat al-Imamat*, dealıng with proofs of existence of God, concept of soul, and retribution on the Day of Judgment, sharı'a and *Ta'wıl* The second chapter or *maqala* deals with the Imamat of Isma'il bin Ja'far al-Sadıq and his descendants, and 'proofs' (*Ithbat*) of the imamat of the Fatimid caliph al-Hakim bi Amr Allah.⁶⁴ Other notable works of al-Kirmani include *Tanbih al-Hadi wa al-Mustahdi*, an esoteric work dealing with morality and ethics, probably amongst his latest compositions, done at the beginning of the 11th century⁶⁵

Al-Mu'ayyad fi'd-Din Hibat Allah, known as al-Shirazi (d.470/1077)

Another notable scholar of the Fatimids was Al-Shirazi. He was born around 1000/490 in Shiraz He succeeded his father as the chief da'_i of Faris (Iran). He arrived at Cairo in the year 1047 during the reign of the Fatimid caliph al-Mustansir He was a prolific writer and a poet and his works are still amongst the most revered amongst the Isma'ilis ⁶⁶

The most notable work of al-Shırazı is the *Majalıs al-Mu'ayyidiyya* containing 800 *Muhazarah* (discourses) on the Isma'ili doctrine. It consists of eight volumes (Mujallad) containing 100 *muhazarah* in each M. K Husayn, an Egyptian scholar tells us that al-Shirazi taught his *muhazarat* when he became the *da'ı al-du'at* (the chief *da'ı*) of the

⁶³ Op Cit, Rahat al-'aql, Pp-4-9, and Op Cit, A Guide to Isma'ili Literature, Pp-44-46

⁶⁴ Op Cit, A Guide to Isma'ili Literature, P 43

⁶⁵ Op Cit, *The Rise of The Fatimids*, P 46 and Op Cit, *A Guide to Isma'ili Literature*, P 43, and Op Cit, *Tarikh al-Dawlah al-Fatimiah*, P 489

⁶⁶ Op Cit, *Tarikh al-Dawlah al-Fatimiah*, Pp 492-493, and Op Cit, *Some unknown Isma'ılı Authors and their Works*, P 130, and Op Cit, *A Guide to Isma'ılı literature*, Pp 47-48

Fatimid state in 451⁶⁷ Another work rated highly amongst the Isma'ilis and ascribed to al-Shirazi is Kitab al-Majalis al-Mustansiriyya. This work gives the summary of the philosopher's impression of the assemblies of the Fatimid caliph al-Mustansir.⁶⁸ This work is, however, sometimes ascribed to other writers of the Fatimid period. Sometimes its authorship is ascribed to amir al-juyush Badr al-Jamali 69 M. K Husayn, the editor of the text, on the basis of internal evidence that refers to the period 446/1054 to 455/1063 concludes that it must have been written by Fatimid chief Qadi Muhammad bin al-Nu'man Samuel Stern contends that the algab or titles mentioned in the work itself point to the supreme qadı (judge) al-Maliji as the official author 70 Other works by the author include Sharhu al-Mua'ad, dealing with resurrection of human body, and Kitab al-Idah wa al-Tabsir fi Fadl Yawm al-Ghadir, dealing with Prophet's declaration of 'Ali as his wasi at Ghadır Khum⁷¹ Yet another work of al-Shırazı of an esoteric nature is al-Ibtida wa al-Intiha, on Ibda'a (an Isma'ili doctrine which has been obviously borrowed from Greek sources) The doctrine of ibda'a belongs to the realm of '*ilm al-haqiga* and is taught only to those who have reached higher grades of learning. This doctrine entails the Isma'ili theory of creation of universe ⁷² It deals concepts such as 'Agl (Intelligence), nafs (soul), al-mala'ıka (angels), and other connected matters.73

⁶⁸ Op Cit, A Guide to Isma'ili Literature, p 48

⁶⁷ A Guide to Isma'ili Literature, P 49, and Op Cit, Tarikh al-Dawlah al-Fatimiah, P 495

⁶⁹ Op Cit, The Medieval Isma'ili History and Thought, P 110

⁷⁰ Stern, Samuel M, *Cairo as The Center of the Isma'ılı Movement*, in Colloque international sur l'histoire du Caire, (Cairo), 1972, Pp 239 ff and Op Cit, *The Medieval Isma'ılı History and Thought*, P 110

⁷¹ Ibid, A Guide to Isma'ili Literature, P 48

⁷² Op Cit, The Bohras, P 48

⁷³ Op Cit, A Guide to Isma'ili Literature, Pp 48-49

Other significant compilations by al-Shirazi include poetical anthology or *Diwan* of *al-Mu'ayyad* This work contains verses in praise of the Fatimid caliphs Poems are also devoted to the exposition of the Fatimid doctrines (*'aqa'id*) such as al-*walayah* (devotion to the imam and his authority) and *al-Tawhid*⁷⁴ Of other poetical work by the author, mention may be made of *Qasidat al-Iskandariyya*, also called *Dhatu al-Dawat*; *Kitab Ta'wil al-arwah*, *Kitab Nahju al-Ibadat*, *Kitab al-Mas'ala wa al-Jawab* dealing with *ta'wil*, *adwar* (periods), the names of the *Natiqs* and their *hujjats* (proofs), and *Kitab Asasu al-ta'wil* (Basics of Esoteric Interpretations)⁷⁵

Lastly, there is the autobiography of the author entitled *Sirat al-Mu'ayyad fi al-Din* In the *Sirat*, written for Imad al-Dawla Abu Kalinjar (1024-1048), the Buyide ruler of Fars, al-Shirazi describes his own career, and also gives account of the persecutions of the Shi'ites in Southern Persia. This work is composed in a florid language, and is filled with poetical quotations ⁷⁶

⁷⁴ Op Cit, *Tarikh al-Dawlah al-Fatimiah*, P 496 The Fatimid belief system is the theory of *mathal* and *mamthul*, for every corresponding corporeal appearance there is higher spiritual or super-sensible form (called *mamthul*) The theory of *mathel* of *mamthul* is the basis of the Fatimid belief in *ta'wil* and all the rituals of religion, not only were all the sessions of discourse in wisdom themselves based on comparison between *shari'ah* and *'adq* (higher spiritual realm) and extracting examples from religion and applying them to creation and extracting examples from material world and applying them to religion. In these sessions (on religious discourses) they used to apply their theory of *mathel* and *mamthul*. This theory is not a creation of the Fatimids but is an old theory referred to by Plato repeatedly in his books and criticized by Aristotle who did not accept it. See Op. Cit, Engineer, *The Bohras*, Pp 50-51 Op. Cit, *Tarikh al-Dawlah al-Fatimiah*, P 496, and Op. Cit, *A Guide to Isma'ili Literature*, P 48 according of the Fatimids the real meaning of *tawhid* "unity of God" is denuding God of all attributes), Op. Cit, *The Bohras*, P 48

 ⁷⁵ Ibid, A Guide to Isma'ili Literature, p 49 and Op Cit, Tarikh al-Dawlah al-Fatimiah, P 495
⁷⁶ Op Cit, A Guide to Isma'ili Literature, P 48

Physicians, Scientists and Poets

The Fatimids rule in al-Maghreb and Egypt and the patronage accorded by the Fatimid caliphs to the men of learning and scholarship gave great impetus to the production of learned literature on a variety of subjects (we have already taken note of some above), including medicine and natural sciences. There are stray references to physicians and scientists in the works produced during the Fatimid period. The following account is based on collection of data on the subjects from such sources.

The most brilliant physician of Fatimid times was Abu Ya'qub Ishaq ibn Sulaiman al-Israeli He was born in Egypt but attained name and fame in Ifriqiya where he became court physician to the first Fatimid caliph, Ubayd Allah al-Mahdi By order of al-Mahdi he wrote in Arabic several medical treatises.⁷⁷ We do not get any work written by him on his craft. He is mentioned only as a brilliant physician of his times

The caliph al-Mu'izz employed the Jewish physician Musa bin al-Ghazzar al-Israili and his two sons Ishaq (d 363 A H) and Isma'il. These were not only eminent practitioners but Musa bin al-Ghazzar was distinguished as a writer on the *Aqrabadhin* (the pharmacopoeia), and all three were regarded as leading authorities on medicine. Another distinguished physician was the Christian Eutyehius or Sa'id bin Batriq, patriarch of the Malkite church of Alexandria who died in

⁷⁷ Op Cit, Glimpses of Islam, P 4

943 A D, the author of a history of which an edition in Arabic and Latin was published at Oxford in 1654.⁷⁸

Abu Abdallah Muhammad bin Ahmad bin Sa'aid al-Tamimi (d after 370 A H) who rose and taught of '*llm al-Tibb* (medicine) in Jerusalem was another Fatimid physician of repute He was brought to Egypt by the Fatimd vizier, Ya'qub ibn Killis, His achievement in the realm of medical science under the Fatimids are contained in his *Kitab Madhatu al-Baqaa bi Islah Fasad al-Hawa*, *Kitab Mukhalis al-Nafoos*, and *Kitab al-Fahas wa al-Akhabar* He also wrote an article on optics titled *Mahiyatu al-Ramad* (essence of ophthalmic)⁷⁹

Another physician and author of very great erudition during the reign of the Fatimid caliph al-'Aziz was Abu al-Hasan Ali bin Radwan (about 998-1061), an Egyptian who became the chief physicians of the Fatimid caliph He was also the author of many works on the philosophy and logic. His work on medicine *Kitab al-Nafi fi Ta'lim Sina'at at-Tibb* (The Useful Book to Teach the Profession of Medicine) was considered very authoritative.⁸⁰

Another distinguished physician of the time was Abu al-Fatih Mansur bin Sahlan al-Nasrani He was the private physician of the Sixth Fatimid Caliph, al-Hakim bi Amr Allah⁸¹

⁷⁸ Op Cit, *A Short History of the Fatimid Kaliphate*, P 138 and Ibn- Abi Usaybi'ah, Muafaq al-Din Abu al-Abas Ahmad bin al-Qasim *Kitab 'uyun al-anba'a fi akhbar al-atiba*, 2 vols Cairo, 1299-1300 A H vol 2, P 86 and Op Cit, *Tarikh al-Dawlah al-Fatimiah*, P 502

⁷⁹ Op Cit, 'Uyun al-Anba'a fi akhbar al-Atibba, vol 2, Pp 88-89

⁸⁰ Op Cit, 'Uyun al-Anba'a fi akhbar al-Atiba, vol 2, P 100 & Glimpses of Islam, P 44

⁸¹ Op Cit, Tarikh al-Dawlah al-Fatimiah, P 503

Another important work composed under the Fatimids in the days of al-Hakim bi Amr Allah is al-*Muntakhab fi 'llaj al-Ayn*, on ophthalmology, by Ammar Ibn-Ali al- Mawsili In this work, Ammar shows more originality than Ibn 'Isa in his *Tadhkirah*, which however, on account of its completeness, became the slandered work on ophthalmology. 'Ammar in his *al-Muntakhab* describes a radical operation for soft cataract by suction through a hollow tube of his own invention ⁸²

Scholars specializing in various branches of sciences also produced many works relating to various branches of science during the Fatimid period Amongst such scholars was one Ibn al-Haytham, sometimes called al-Basri as he was born in the city of al-Basra in Iraq about 965 A.D He is also referred to as al-Misri as he lived in Misr (Egypt) for a long time He is known as Alhazen to the West as it being the Latinised version of his first name "al-Hasan" In particular this name occurs in the naming of the problem for which he is best remembered, namely Alhazen's problem. *Given a light source and a spherical mirror, find the point on the mirror were the light would be reflected to the eye of an observer.* We shall discuss ibn al-Haytham's works, after giving some biographical details.⁸³ It shows how the confusing religious climate drove individuals to areas of knowledge other than religion, and how they surmounted difficulties to make valuable contribution in their fields.

We know little of ibn al-Haytham's years in Basra In his autobiography he explains how, as a youth, he thought about the conflicting religious

⁸² Op Cit, History of the Arabs, P 629

⁸³ Ibn al-Qifti, Jamal al-Din Abi al-Hasan Ali bin Yusif (d 646/1248), Kitab akhbar al-ulama Bi akhbar al-Hukma, Germany, Leipzig, 1903, Pp 166-168 and Op Cit, 'Uyun al-Anba'a fi akhbar al-Atiba, Pp 90-92

views of the various religious movements and came to the conclusion that none of them represented the truth It appears that he did not devote himself to the study of mathematics and other academic topics at a young age but trained for what might be best described as a civil service job. He was appointed as a minister for Basra and the surrounding region

However, ibn al-Haytham became increasingly unhappy with his deep studies of religion and made a decision to devote himself entirely to a study of science that he found most clearly described in the writings of Aristotle 384-322 B C Having made this decision, ibn al-Haytham kept to it for the rest of his life devoting all his energies to mathematics, physics, and other sciences ⁸⁴

6

Ibn al-Haytham stayed in Egypt for some considerable time after he made the decision to give up his job as a minister and to devote himself to science, for he had made his reputation as a famous scientist while still in Basra We do know that al-Hakim was Caliph when ibn al-Haytham reached Egypt Our knowledge of ibn al-Haytham's interaction with al-Hakim comes from a number of sources. The most important of which is the writing of Ibn al-Qifti (d 646/1248) and Ibn abi Usaybi'ah (d 6671270)⁸⁵

We are told that al-Hakim learnt of a proposal by ibn al-Haytham to regulate the flow of water down the Nile He requested that ibn al-Haytham come to Egypt to carry out his proposal and al-Hakim

⁸⁴ Aristotle 384-322 B C Greek philosopher, pupil of Plato, Op Cit, Webster Comprehensive Dictionary, vol 1, P 78

⁸⁵ Kitab akhbar al-ulama Bi akhbar al-Hukma, Pp 166-168 and Op Cit, 'Uyun al-Anba'a fi akhbar al-Atiba, Pp 90-92

appointed him to head an engineering team, which would undertake the task. However, as the team traveled further and further up the Nile, ibn al-Haytham realized that his idea to regulate the flow of water with large constructions would not work Ibn al-Haytham returned with his engineering team and reported to al-Hakim that they could not achieve their aim.⁸⁶

Al-Hakim, disappointed with ibn al-Haytham's scientific abilities, appointed him to an administrative post At first ibn al-Haytham accepted this but soon realized that al-Hakim was a dangerous man whom he could not trust. It appears that ibn al-Haytham pretended to be mad and as a result was confined to his house until after al-Hakim's death in 1021. And during this time he undertook scientific work and after al-Hakim's death he was able to show that he had only pretended to be mad.⁸⁷

According to Ibn abi Usaybi'ah's *Kitab 'Uyun al-Anbaa fi Tabaqaat al-Atiba*, ibn al-Haytham lived for the rest of his life near the al-Azhar Mosque in Cairo writing texts on mathematics and by teaching and making his earnings by copying texts. Since the Fatimids founded the University of Al-Azhar based on this mosque in 970, ibn al-Haytham must have been associated with this center of learning.⁸⁸

Ibn al-Haytham's writings are too extensive for us to be able to cover even a reasonable amount, he seems to have written around 92 works

⁸⁶ Kitab akhbar al-'ulama Bi akhbar al-hukma, Pp 166-168 and Op Cit, 'Uyun al-Anba'a fi akhbar al-Atiba, Pp 90-92 and Op Cit, Tarikh al-Dawlah al-Fatimiah, Pp 504-505 Op Cit, History of the Arabs, p 628 and Op Cit, History of Islam Peoples, P 160 and Op Cit, Article ⁸⁷ Op Cit, Kitab akhbar al-'ulama Bi akhbar al-hukma, Pp 166-168 and Op Cit, 'Uyun al-Anba'a fi Akhbar al-Atiba, Pp 90-92 and Op Cit, Tarikh al-Dawlah al-Fatimiah, Pp 504-505 ⁸⁸Kitab 'uyun al-anba'a fi akhbar al-atibba, Pp 90-91

of which, remarkably, over 55 have survived The main topics on which he wrote were optics, including a theory of light and a theory of vision.⁸⁹

He wrote a lot of works on mathematics, astronomy, philosophy and medicine including geometry A seven-volume work for which he is known *Kitab al-Manazir* is on optics. This work is only available in the Latin translation that was published in 1572 while the original work is lost to posterity. This work significantly influenced the development of the science of optics in middle ages. He ranks next to Ptolemy in the field of optics study. He laid out the principles on which his enquiry was to be based in his introduction. He says that he will begin "the inquiry into the principles and premises". His methods will involve "criticizing premises and exercising caution in drawing conclusions" while he aimed "to employ justice, not follow prejudice, and to take care in all that we judge and criticize that we seek the truth and not be swayed by opinions".⁹⁰

Ibn al-Haythem produced twenty-five books in the realm of the science of mathematics Amongst eminent works on the subject produced by him are *Kitab Sharh Usul Iqlidis fi al-Hindasa wa al-'Adad* (Explanation of origins Euclid in the arithmetic and Numerals), *Kitab Sharh al-*

⁸⁹Ibn al-Haytham makes it clear that his investigation of light will be based on experimental evidence rather than on abstract theory. He notes that light is the same irrespective of the source and gives the examples of sunlight, light from a fire, or light reflected from a mirror that are all of the same nature. He gives the first correct explanation of vision, showing that light is reflected from an object into the eye. Most of the rest of Book I is devoted to the structure of the eye but here his explanations are necessarily in error since he does not have the concept of a lens which is necessary to understand the way the eye functions. His studies of optics did lead him, however, to propose the use of a camera obscure, and he was the first person to mention it Article by J. J. O'Connor and E. F. Robertson, Mac Tutor History of Mathematics, UK. London, 1999

⁹⁰ Op Cit, History the Arabs, P 628 and History of Islam Peoples, P 160 and Op Cit, Article

Majasti (dealing with astronomical concepts of Ptolemy); *Kitab al-Jami fi Usul al-Hisab* (a comprehensive work on Euclidean arithmetic), *Kitab* **fi** *Tahlil al-Msa'al al-Hindasiyatu* (Solving of Arithmetical Problems), *Kitab fi Tahlil al-Masa'al al-'Adadiyah bi al-Jabr wa al-Muqablat* (Analysis of Equations in Algebra and Antilogarithm); *Kitab fi Hisab al-Mu'amlat* (arithmetic of coefficient; modulus) and *Maqalah fi al-Hisab al-Hindi* (article in arithmetic of India), and other books⁹¹

Abul Hasan Ali bin Yunis al-Misri who died in the year 399 A.H, was a learned astronomer who flourished during the reign of the Fatimid caliph al-Hakim bi Amr Allah He prepared an astronomical table called *Zij al-Hakimi*. The work is not extant and we know from Ibn Khalikan that it comprised of four volumes and that it was compiled on orders from caliph al-Aziz.⁹²

According of patronage to poets and men of letters by the rulers had become a hallmark of royalty in the Islamic world during the medieval period. The Fatimid rulers too patronized poets at their court. So also did the Veziers and other high dignitaries. Ibn khallikan tells us that after demise of the vizier Ibn Killis, a hundred poets visited his tomb and lamented his death ⁹³ The poets extolled the rulers by writing *qasidah* and they received generous gifts from the caliphs in return Such a patronage to poets encouraged them to make innovation in their presentations thereby enriching the genre of poetry. The Fatimid period thus produced some very eminent poets who made great contribution to the Arabic poetical literature

⁹¹ Op Cit, Kitab 'uyun al-anba'a fi tabaqat al-atiba, vol 2, Pp 93-94

⁹²Op Cit, *Tarikh al-Dawlah al-Fatimiah*, P 508

⁹³Op Cit, Wafyat al-a'iyan wa anba abna al-zman vol 7, P 34

Poets

Among the notable poets (*shu'ara*) of the Fatimid period mention may be made of Abu al-Qasim Muhammad b Hani al-Andalusi He was the court poet of the Fatimids during their North Africa phase 94 Another poet of significance was Abu al-Fatyan Mufadal bin Hasan bin Khidr al-'Asgalani, a native of 'Asgalan in Palestine He composed panegyrics to the caliph as well as to al-Afda'al Ibn Amir al-Juyush (son of Bdr al-Jamalı) Abu al-Hasan Alı b Ibrahım known as Ibn al-'Allani, who immigrated from Ma'aratu al-Nu'man (region lying between Hims and Halab in Sirva) to Egypt, was another well-known poet of the period. Both the above poets also wrote in praise of the vizier al-Afdal and seemed to have enjoyed his confidence.⁹⁵ Another well-known poet of the time was Ibn al-Daif who lived during the reign of the Fatimid caliph al-Amir. Because of his deep commitment to the Fatimid Ismai'li faith, Imad al-Din al-Isfahani, a Sunni, refers to him as a *mulhid* Another well-known poet of the time was Abi al- Hasan Ali b Muhammad al-Akhfash, who belonged to a family of nobiles of al-Maghreb. He wrote many poems in praise of the Fatimid caliphs, al-Amir and al-Hafiz

Abul Qasim belonged to Azad tribe He moved from Seville to Tunisia when he was about 27 years old in 958 (according t some in 964) He seemed to have had a comfortable life and was introduced to the Fatimid court at Ifriqiyah by Jawhar, the famous Fatimid general, and served under caliphs al-Mansur and al-Mu'izz. He was assassinated by someone at Barqa (City in Tunisia) in 30 April 973 Ibn Hani has left

⁹⁴ Ibid, Pp 439-442

⁹⁵ Imad al-Din al-Asfahani, Abu Abd Allah Muhammad bin Abi al-Rajaa d 597/1201, *Kharidatu al-Qasr wa Jaridatu al-Asr*, Makhtut Bi al-Makhtaba al-ahliah, Paris N 3326-3331, paper, No 181, 131 B and Yaqut al-Hamawi, shahab al-Din Abu Abd Allah al-Romi (d 626/1229), *Mua'jam al-Buldan*, vol 5, Beirut, P 156

behind an anthology of his poems (*diwan*) The poems are in praise of Fatimid caliphs, especially in praise of al-Mu'izz. The *diwan* consists of 246 pages.⁹⁶

Another brilliant poet (*sha'ir*) who lived during the reign of the caliph al-Aziz was Abu Abdallah Muhammad bin Abi al-Jara' He has written poems in praise of Ibn Killis, the Vizier, and his master caliph al-Aziz. In one of his poems he expresses his anguish and pain, as Ibn Killis was sad due to illness Thus Abu Abdullah wrote poems to please the rulers, whether by praising them or by sympathizing with them in their pain and anguish ⁹⁷

Abu Hamid Ahmad al-Intaki was another notable poet under the Fatimids. He was born in Intakyah, a city of Turkey, which at that time was as part of the Bilad al-Sham Ibn Khallikan tells us that the poet lived in Egypt for a long time, and according to the al-Musabbihi (d 1029) in his *Kitab Tarikh Misr*, the poet died in 1008/1009 and wrote most his poetry in praise of the Fatimid caliphs, al-Mu'izz, al-'Aziz, and al-Hakim bi Amr Allah He also extolled in his poetry the Fatimid general Jawhar al-Siqilli, and the Fatimid vizier, Ibn Killis.⁹⁸ Another poet, Abu Muhamad al-Hasan bin Ali b al-Zubayr, known al-Muhadhab, was the brilliant poet amongst the poets in the times of the Fatimids, in one of his poems praised of the vizier al-Salih Tala'i b Ruzzik and described the vizier as hero (Faris) of hero Muslims, also

⁹⁶ lbid, Pp 442-443

⁹⁷Op Cit, Khitat, vol 2, P 7

⁹⁸ Op Cit, *Tarikh al-Dawlah al-Fatimiah*, Pp 44-45 and a-Sa'alabi Abu Mansur Abdallah, *Yatiymatu al-Dahar*, edition Damascus, 1302 A H, P 39

wrote poetry in praise the vizier Rudwan bin al-Walkhashi, describing his hospitality and generosity.⁹⁹

Abu Muhamad al-Hasan bin Ali b al-Zubayr, known as al-Muhazzab, was another recognized poet of the Fatimid period. He wrote panegyrics to the Viziers Salih Tala'i bin Ruzzık and Rudwan b. al-Walkhashi, extolling their hospitality and generosity.¹⁰⁰ Another noteworthy poet of the Fatimid times was Umarah Abu al-Hasan Najim al-Din Yamanı. He was a Sunnı by faith and also a historian He emigrated from the Yemen to Egypt at 550/1155, and flourished at the court of the Fatimid caliph al-Fa'iz (1154-1160), and al-Adid (1160-1171). He recited his first poem in praise of the caliph al-Fa'iz and his vizier Ibn Ruzzık Though he never abjured the Sunni faith, he expressed in his poetry beliefs in caliph al-Fai'z being a ma'sum (infallible) and *imama anwar mugaddasa* (Imam of the Sacred Light).¹⁰¹ Yamani had refused to convert to Ismai'lism when he was asked to do so by Vizier Ibn Ruzzik replying politely, "In generosity and munificence there is no difference of the Sunni with other faiths; the difference with the Shi'a is only in beliefs" ¹⁰² It speaks of religious tolerance of the Fatimid rulers that they patronized poets of other religious faiths and gave them a place of honour at their court as long as they were respectful to the Ismai'll doctrines and faith

The life of the poets who received patronage from rulers in the medieval Islamic world was certainly of ease and comfort Besides

⁹⁹ lbid, Pp 455

¹⁰⁰ Ibid, Pp 455-456

¹⁰¹ Umara al-Yamani, Abu al-Hasan Najim al-Din (d 569/1174 *al-Nukat al-'asriah fi akhbar al-wzraa al-masriah*, edition Hartwing Derenbourg, Paris, 1897, Pp 7-42

¹⁰² Tarikh al_Daula al-Fatimiyah, P 463 & al-Nukat al-'asriah fi akhbar al-wzraa al-masriah, Pp 7-42

that, they also received social respectability However, they also could be drawn to the factional and professional rivalries that the medieval Islamic courts had come to be associated with. This made things difficult for them sometimes and they could pay with their lives The following cases may serve as examples

Abi al-Hasan bin al-Zubad was an accomplished poet of the Fatimids who contributed greatly to the spread of Ismai'li doctrine, he explained the Fatimid Ismai'li doctrine through his poetry. In one of his poems he congratulated the Fatimid caliph, al-Hafiz for his victory over the Crusaders Ironically the poet met a tragic end as he was executed on the orders of al-Hasan, son of the caliph al-Hafiz, on the charge that he wrote a poem disparaging him. Imad al-Din al-Asfahani thinks that Ibn Zubad was wrongly charged, another poet, Ibn Qadus, wrote the abusive two lines on his own and placed them amongst the papers of Ibn Zubad due to his rivalry with the latter.¹⁰³ Another brilliant poet of the time who met a tragic end was 'Ali b. 'Abad, a native of Alexandria, who lived and flourished at the court of the Fatimid caliph al-Hafiz. In one of his poem he ridiculed caliph al-Hafiz when Abu Ali Ahmad, son of the vizier al-Afdal, held the latter in captivity. When the caliph was set free, he executed the poet ¹⁰⁴

¹⁰³ Op Cit, Kharidatu al-Qasr wa Jaridatu al-Asr, paper, No 110 B

¹⁰⁴ Op Cit, Tarikh al-Dawlah al-Fatimiah, Pp 453-454