

CHAPTER 1

INTRODUCTION

The most crucial problem facing the Muslim *Ummah* of today is that of being misunderstood by the non-Muslim world. It is widely felt by even the young Muslim child, how the non-Muslim world has mistakenly looked down on the Muslims as uncivilized beings who terrorize and create chaos and disorder amongst people in the world. Respect and tolerance towards Muslims and Islam as a religion, if not as a way of life, seems to be dwindling or may have vanished in their hearts and souls. This disrespect and animosity have been exhibited by a number of their actions, which includes among others the publications of the caricatures of the Holy Prophet Muhammad SAW^{*1} and claiming that Islam suppresses women's rights. To worsen the problem they undertake to protect and sponsors, figures regarded as blasphemers such as Salman Rusdie, Naslima Taslim. and others. Rushdie who wrote '*The Satanic Rites*' has been given protection by the Danish government and just recently given the knighthood by the British Government². The writings of these blasphemers are in contradiction to Islamic teachings, however received recognition and support from the non-Muslim world especially in Europe and the US. Due to their lack of understanding and prejudice, they have also ridiculed the Islamic Laws as unjust and curtailing the freedom and the rights of the individuals and unfortunately the United Nations were used many times as a forum

* Prophet Mohamad Sallallah Alaihi Wassalam. The short form SAW will be used to denote this salutation to the Prophet which means blessings and peace be upon him (PBUH) which is also used by some

and vehicle to attack Islam and Muslims³. The most popular amongst their claims are in the rulings of the '*Faraidh*,' the Islamic system for the distribution of inheritance where women receive less than men, the Islamic criminal law (*Hudud and Qisas*) such as the cutting of a thief's hand and a hundred lashes for illicit sexual offenders, polygamy and the disqualification of a woman to leadership positions. The most recent incident was a speech by the Pope on 12 September 2006 which insinuated that Islam expanded forcibly by aggression {through the sword}. Even though the Pope claimed he was quoting from others⁴ but his words manifested his negative thoughts and animosity towards Islam and Muslims. This animosity and distrust towards Islam and Muslims started very much earlier even during the period of the Prophet Mohamad SAW when he first propagated Islam to the '*quraish musyrikin*'* of Mekah. Most of the leaders of the *quraish* and their followers were openly against the teachings of the Prophet Mohamad SAW and most of the few who became Muslims were boycotted, persecuted and tortured and some of them were even killed. The Prophet Mohamad SAW did not escape these harassments and finally to safeguard the faith and lives of the Muslims they were allowed to migrate (*Hijrah*) to Ethiopia and later to Yathrib (Madinah). In Madinah although the Muslims ruled it, the animosity was continued by a few local leaders and the Jews. The animosity and confrontations were continued later by the Roman and Persian Empires and persisted until today by successive governments of Europe⁵ with the addition of the Americans in the recent century. The negative portrayals seem to be a concerted effort by many including politicians whether rightists or leftists and even by moderates and liberals who with the help of the media play a major role in dispensing these negative portrayals.

* Quraish: the noble Arabs tribes of Mekah were categorized in to this, while the nomadic Bedouins were not. Musyrikin : are people who enjoin other gods (such as idols etc) with Allah SWT the Mighty Creator

Salim Zaimeche noted in an article how in a BBC program, a guest revealed that when UK children were asked what is a Muslim, virtually all answered “ .. is a terrorist.”⁶ There are many more incidences and evidences that can be forwarded here but it is unnecessary for the author to list every details of events and accusations towards the Muslim world as this is not the intention of this dissertation.

In a way the Muslim world is also at fault since most of the time, the Muslim world prefers to remain silent and insensitive to the various issues that have tarnished and belittled their reputation and there are a few Muslims who sometimes add to the confusion by making statements unbecoming of a Muslim. Very little effort, if any have been undertaken to clarify the confusion that even the most tolerant of the non-Muslim communities have become confused and began to have second thoughts about their Muslim neighbors.

Why has this happened ?

Many scholars from all over the world know that Islam is a tolerant and just religion that encourages love and respect amongst their neighbors whether they are Muslims or non-Muslims. The so-called scholars also know that Islam inculcates good habits, emphasize justice for all regardless of race, colour or religion. There are many evidences of this through out the Islamic world and history, from the time of the Prophet Mohamad SAW until now⁷. Non-Muslims are to be treated justly and with respect even though they live in an Islamic State. Their rights to live peacefully, adhere and practice their beliefs are not hindered by Islam. From the *Al Hadith*, the Prophet Mohamad SAW had

categorically stated his stand on this issue which is a ruling which must be adhered to by all Muslims..

“ Whoever hurts a *zimmi*^{*} will be my foe, and whoever is my foe will also be my foe in the day of reckoning”⁸

In today's modern world, information is the weapon which is used to control the world. Information becomes knowledge. Knowledge leads to strength and it is being used by the superpowers and the most developed countries of today to safeguard and fortify their interests throughout the globe. These countries emphasize the pursuit of knowledge and they spend billions of dollars on education, research and development. The United States spends about USD 100 billion on R & D with studies covering from the most fundamental research on the sciences to the most advanced space travel and the most destructive of weapons, biological and nuclear, which can kill millions of human beings or devastate large cities in the shortest of time. These R & D are being carried out by government agencies, universities, private institutions and corporations, large or small. Japan spend about USD 100 billion on R & D concentrating more on the consumer and automotive industries according to the records of the late seventies, we can look at the results today when they practically dominate the world with their automobiles and consumer products⁹.

^{*} *Zimmi*, is a non-Muslim who resides in an Islamic State and professes allegiance to the government

In Islam the importance of knowledge has been emphasized, in the Al Quran, for example in the *Surah Az Zumar* 39:9. [Al Quran 39:9]¹⁰

أَمَّنْ هُوَ قَنْتٌ ءَانَاءَ اللَّيْلِ سَاجِدًا وَقَائِمًا يَحْذَرُ الْآخِرَةَ وَيَرْجُوا رَحْمَةَ رَبِّهِ ۗ قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ ۚ إِنَّمَا يَتَذَكَّرُ أُولُوا الْأَلْبَابِ ﴿٩﴾

9. Is one who worships devoutly during the hour of the night prostrating himself or standing (in adoration), who takes heed of the Hereafter, and who places his hope In the Mercy of His Lord - (Like one who does not)? say: "Are those equal, those who know and those who do not know? It is those who are endued with understanding that receive admonition."¹¹

Some translators have used the word education or lessons (*pelajaran/pengajaran*) for the word admonition.¹² Thus from this verse it is clear that only the man of knowledge can understand and can act accordingly in any situation. The man of knowledge will always have the advantage over the unlearned and the ignorant. In another verse from the Al Quran, *Surah Al Khafi* 018:109 which dictate the scope and extent of knowledge.[Al Quran 018:109]¹³

وَلَوْ أَنَّمَا فِي الْأَرْضِ مِنْ شَجَرَةٍ أَقْلَمٌ وَالْبَحْرُ يَمُدُّهُ مِنْ بَعْدِهِ سَبْعَةُ أَنْهَارٍ مَا نَفِدَتْ كَلِمَاتُ اللَّهِ ۚ إِنَّ اللَّهَ عَزِيزٌ حَكِيمٌ ﴿١٠٩﴾

27. And if all the trees on earth were pens and the ocean (were ink), with seven oceans behind it to add to its (supply), yet would not the words of Allah be exhausted (in the writing): for Allah is Exalted In power, full of wisdom.¹⁴

The words of Allah are translated by many commentators to mean knowledge and thus it is clear from this verse that the extent of knowledge is very wide and the knowledge that has been revealed and discovered by man is very little indeed. The possibility of uncovering new knowledge can be anticipated and it is up to the man of knowledge to seek it out. Knowledge is from Allah and the first knowledge was imparted to the first man created as revealed in this verse from the Al Quran, Surah Al Baqarah 02: 31-33

[Al Quran : 02: 31-33]¹⁵

وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلَائِكَةِ فَقَالَ أَنْبِئُونِي بِأَسْمَاءِ هَٰؤُلَاءِ إِنْ كُنْتُمْ صَادِقِينَ ﴿٣١﴾ قَالُوا سُبْحَنَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ ﴿٣٢﴾ قَالَ يَتَذَكَّرُ أُنْبِيَائِهِمْ بِأَسْمَائِهِمْ فَلَمَّا أَنْبَأَهُمْ بِأَسْمَائِهِمْ قَالَ أَلَمْ أَقُلْ لَكُمْ إِنِّي أَعْلَمُ الْغَيْبِ السَّمَوَاتِ وَالْأَرْضِ وَأَعْلَمُ مَا تُبْدُونَ وَمَا كُنْتُمْ تَكْتُمُونَ ﴿٣٣﴾

31. And He taught Adam the nature of all things; then He placed them before the angels, and said: "Tell me the nature of these if ye are right."

32. They said: "Glory to Thee, of knowledge we have none, save what Thou hast taught us: In truth it is Thou who art perfect in knowledge and wisdom."

33. He said: "O Adam! Tell them their natures." When he had told them, Allah said: "Did I not Tell you that I know the secrets of heaven and earth, and I know what ye reveal and what ye conceal?"¹⁶

The quest for knowledge can be considered to begin since the time of Prophet Adam AS*

* Prophet Adam *Alaihi Salam*, the short form AS will be used to denote this salutation to the Prophets besides the Prophet Mohamad SAW

and have been continued ever since. The author would like to put the beginning of the Islamic Civilization from the time of the Prophet Muhammad SAW. During the period of the Prophet there had been advancement of knowledge in various fields amongst which were in sociology, business and administrative management and jurisprudence etc. This advancement is in accordance to the Islamic perspective. Advances in these fields continued further during the reigns of the four great caliphs of Islam and proceeded into the era of the Umayyid Caliphate until the Ottoman Caliphate.¹⁷ The advances in knowledge during the tenure of these caliphates are clear proof of how society of that time realizes the importance of knowledge. It has been stated in the Al Quran in Surah Al Mujadalah 059:11 [Al Quran 059:11]¹⁸

يَتَأْتِيهَا الَّذِينَ ءَامَنُوا إِذَا قِيلَ لَكُمْ تَفَسَّحُوا فِي الْمَجَالِسِ فَافْسَحُوا يَفْسَحَ اللَّهُ لَكُمْ وَإِذَا قِيلَ اذْشُرُوا فَاشْزُرُوا يَرْفَعِ اللَّهُ الَّذِينَ ءَامَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ ۚ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ ﴿١١﴾

11. O ye who believe! when ye are told to make room in the assemblies, (spread out and) make room: (ample) room will Allah provide for you. and when ye are told to rise up, rise up Allah will rise up, to (suitable) ranks (and degrees), those of you who believe and who have been granted (mystic) knowledge. and Allah is well- acquainted with all ye do.¹⁹

The phrase in this verse “ Allah will rise up to (suitable) ranks (and degrees) those whowho have been granted knowledge “. Some commentators have said that Allah has raised the man of knowledge to a significantly higher level than those without knowledge.²⁰ Significantly higher levels and degrees would mean at the side of Allah

SWT and in the eyes of his fellow men. They are respected and revered by their fellow men for their knowledge and become a person whose advice and opinions are sought in many situations.

The era of the caliphates have produced many great men in Islam who are recognized by the whole world for their immense contributions to knowledge, men such as Ibn Sina, Al Khwarizmi, Al Haytham, Al Biruni, Ar Razi, Jabir Ibn Hayan, Al Kindi and many others ²¹

The glory of the Islamic Civilization can be said to end with the demise of the Ottoman Empire. It is not the wish of the author to indulge in depth regarding what happens after this. What is realized is that the glory of Islamic Civilization keeps fading. The question is what happened during this era of glory. Why is it today we can no longer have Muslims like Ibn Sina, Al Khawarizmi, Al Biruni etc? It must be understood here that it is not the intention of the author to belittle the Muslim scholars especially scientists of today. The intention of the author is to suggest solutions, if these suggestions can be considered as viable, to the Muslim societies of today, how new versions of 'Ibn Sina' or 'Ar Rhazi' or others may emerge during our time through our revisiting and recapitulating the habits of excellence which existed during the time of glory of the Islamic Civilization. Through this study we hope to find the reasons for their excellence and also to find out what went wrong which resulted in the decline of the civilization after this time.

As a start, it is deemed necessary to understand the qualities of such great men. By this the author thinks it is very important to know some details about their upbringing and educational background. It is well established that Ibn Sina²² and many other great Muslim scientists were *Al-Hafiz*^{*23} at a very young age, for example Ibn Bajjah, Al-Kindi.²⁴ They were taught and were well versed in religious knowledge. Could these have motivated them to learn other worldly knowledge and that they were able to unveil the secrets of herbal medicine, surgery, mathematics, astronomy, chemistry, physics etc ? Many authors have beautifully reported their achievements.²⁵ Secondly the social and political environment in which they lived must also be considered. It has been said that the environment shapes the making of a man. What was the nature of the environment that they lived in which led to the growth and enrichment of knowledge by the Muslims of yesterdays? Can this environment be rebuilt and incorporated in the so called “modern“ world of today? If so, can we guarantee that these conditions will work again? Finally it is of utmost importance to seek what went wrong during the final part of the Ottoman caliphate or even earlier that could have led to the disastrous fading of the glory of Islamic Civilization and of knowledge and the long drought in the significant contributions to the growth of knowledge and the birth of renowned scientists from the Muslim world.

* *Al Hafiz* : A Muslim who is able to memorize the whole of the Al Quran.

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CHAPTER 2

OVERVIEW, DEFINITIONS AND LITERATURE REVIEW

Introduction

In this chapter, the author will define excellence from the Islamic world view and also present the hypothesis of the study. A brief outline of the achievement of Muslim scientists and the scope of the study will also be presented.

2.1 OVERVIEW

The pursuit of knowledge in the period of Islamic Civilization was the norm especially in the period between 7th to the 14th century. Every Muslim was required to pursue knowledge especially related to Islamic religious knowledge. The Al-Quran and Al Hadith were studied and remembered by heart. The translation and meanings of the two sources of knowledge were studied and enormous written works were done by many ‘*ulama*’. Enormous knowledge from the Al Quran and Al Hadith, unheard and unknown to man was revealed and formed the basis for further research and studies. Islamic Civilization produced many men of knowledge who had pursued and contributed to various fields of studies ranging from philosophy to management. They had made contributions to the sciences incomparable to any known civilization. Robert Briffault in his book, *The Making of Humanity* wrote : “ it was under the influence of the Arabs and the Moorish revival of culture and not in the 15th century, that a real renaissance took place. Spain, not Italy was the cradle of the rebirth of Europe ”¹

This period of Excellence were nurtured through various kingdoms and rulers. Most of these rulers patronized these people of knowledge and some of them were even provided with shelter and a place to congregate and continue their work. These scholars were given access to the libraries and collection of artifacts owned by the rulers. These scholars were often appointed as government advisors and administrators. Their wide knowledge and intelligence were put to good use. As a result, civilization prospered.

Not enough attention is paid to the question of why the Islamic Civilization could not sustain itself? During the times of glory, Islamic Culture and Civilization had seen perfect harmony between the scientists or scholars and the government that had led to worldly and heavenly prosperity. What are the reasons that Muslims scholars of today could not continue the glory of their learned predecessors? What were the qualities of their predecessors that they are lacking? Why have Allah SWT “stopped helping” those who recited the same ‘*kalimah*’^{*} as their predecessors? How much “wrongs” have the Muslims committed that Allah SWT has not let the flame of glory of Muslim science be rekindled? Before we dwell into answering these questions, let us agree upon certain definitions first.

2.2 Definition of Excellence

As this dissertation is in a way about excellence, it is important to define the word in particular from the view point of Islam. There may be significant differences between the Islamic view and the western/secular view on excellence.

^{*} *Kalimah* : the vow of a Muslim professing Islam believing in Allah SWT as his god and the Prophet Mohamad SAW as the Messenger of Allah

Excellence is synonymous with brilliance, superiority, fineness, distinction, merit, best, greatest, marvelous, supreme which are all the superlatives in accolades of praises.² In ‘Bahasa Melayu’ it will mean or have the similar meanings as *terbaik*, *tercermelang*, *tersohor*³ In Arabic, it means *mumtaz* (ممتاز), *jayyid* etc⁴

Many researchers and scholars had tried to define excellence each in its own context. Jim Keys of Pure Excellence Initiative defined excellence as when “ you surpass mere adequacy and you press beyond mediocrity.” He also put forward this definition of excellence attributed to Aristotle who quoted :⁵

“Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but rather we have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit.”

Jenny Orr, from Willamette University in Oregon, US said that “Academic excellence is the desire and ability to seek out new knowledge and to explore and exchange ideas,” and “The only way we can grow personally and as a society is through the discovery of new and better ways of thinking and functioning.”⁶

As a measure to determine excellence, certain criteria will be need to be set. From the above definitions and many other definitions, the author formulated the criteria to be set as follows :

1. Achievements that benefit humankind and all living things
2. Achievements that are superior to or supersede other achievements

3. Achievements that sets the standards in a particular field
4. Achievements that are acknowledged by experts and laymen
5. Achievements that are beyond the expectations of the present period
6. Achievements that are considered pioneering efforts
7. Achievements that are used and studied by many people
8. Achievements that are made despite the conditions and odds of the moment

Hence if an achievement meets the above criteria, it will be considered as excellent in the world view.

The Islamic view on excellence is related to a person position with Allah SWT. Allah SWT and the Prophet Mohamad SAW had given the criteria and the path to excellence. Allah SWT had said in the Al Quran that the Prophet Mohamad SAW is the most excellent of humans and also as a blessing to the whole universe and is the best example for humankind. From the Al Quran, *Surah Al Anbia* (The Prophets), verse 107. [Al Quran 021:107]⁷

وَمَا أَرْسَلْنَاكَ إِلَّا رَحْمَةً لِّلْعَالَمِينَ

107. We sent Thee not, but As a Mercy for all creatures.⁸

From the Al Quran, *Surah Al Ahzab* (The Confederates), verse 21 [Al Quran 033:021]⁹

21. Ye have indeed in the Messenger of Allah a beautiful pattern (of conduct) for any one whose hope is in Allah and the final Day, and who engages much in the Praise of Allah.¹⁰

Allah SWT has stated that the best person is the one with '*Taqwa*' (most righteous),
From the Al Quran, *Surah Al Hujjrat* (The Dwellings) [Al Quran 049:13]¹¹

13. O mankind! We created you from a single (pair) of a male and a female, and made you into nations and tribes, that ye may know each other (not that ye may despise (each other). Verily the most honoured of you in the sight of Allah is (he who is) the most righteous of you. and Allah has full knowledge and is well acquainted (with all things).¹²

Thus from the above arguments, the excellent man is the person who is the most righteous and submit fully to the dominion of Allah SWT in his everyday life. A person who is excellent in the 'eyes' of Allah SWT will be seen as excellent in the eyes of other men. The earlier generations of the *Ummah* possessed this excellence in the 'eyes' of Allah SWT and thus they were respected and managed to rule and overwhelm the countries and inhabitants of their time. Spiritual excellence is the aim of all Muslim.

The western/secular view of excellence is based on material excellence unlike the Islamic view which emphasizes on spiritual excellence. Since we live in this world for the moment whatever the virtues of excellence that is not contrary to Islam can and should be used. Thus the definition and virtues of excellence will be a fusion of the Islamic and the world view point. A man with spiritual excellence can better manage the material world and not cause the destruction and confusion that usually come with material excellence only.

2.3 Achievements of Muslim Scientists

Excellence as defined above and based on the set criteria listed was compared against the achievements of Muslim scientists in the period when Islamic Civilization was at its peak that is in the period between 7th to 14th century AD or 1st to 7th century AH which is clearly incomparable with any known civilization to date.¹³ Why do we need to evaluate the achievement of Muslim scientists of such time?

Ever since the second world war ended, the world has been dominated by the western powers. Due to this they were able to belittle Islam and the Arabs.¹⁴ Their animosity towards Muslims and Arabs is clearly proven by their labeling of Muslims and Arabs as uncivilized religion or races and added with their ignorance, prejudice and superiority complex, they have downplayed the excellent contributions of Muslim scientists.¹⁵ The animosity in fact started much earlier. During the Renaissance, knowledge from the Islamic Civilisation were downplayed by the church and some European scholars. Leonardo da Vinci were reported to have rejected Ibn Sina's work on anatomy but still used the Arabic terms because he cannot come up with the appropriate terms in latin. Paracelsus was also reported to have burnt *The Qanun* in Basle.¹⁶ They have manipulated the numerous contributions from Islamic or other civilisations by attributing success to their own people and people they held with awe and mystified such as the Chinese. They must have purposely Latinised names of Muslim scientists and scientific terms so that the public will not be able to relate these scientists and terms to Islam and its civilisation. Some examples are : Ibn Sina was called Avicenna, Al Jabar from which the

mathematical term Algebra arises was called Geber, Ibn Razi was called Rhazes, Ibn Rushd was called Averroes. Not only were the scientists the victims but names of places and objects also received the same treatment, examples are *Jabal Tariq* was latinised to Gibraltar¹⁷, Alchemy, Logarithm (Khawarizmi) etc. Other civilisations were also the victims of these prejudices. As a result of these manipulations, even most of the Muslims of this modern era is ignorant of the contributions of the Islamic Civilization and its scholars.

According to Zahoor Ahmad,¹⁸ many of the major scientific contributions that the world recognized as contributions from well known figures in Europe were actually imitations, translation or minor advances from work done and recorded by Muslim scientists. The findings and works of these Muslim scientists had been recorded very much earlier than as claimed by the European scientists. Some examples of these were : the flying machine invented and tested by Ibn Firnas of Islamic Spain, around AD 800's. That was about 500 years earlier than Roger Bacon and 700 years earlier than Leonardo da Vinci. Glass mirrors were already in use in Islamic Spain during the 11th century, but we are taught that it was first produced in 1291 in Venice. This is a perfect example of an attempt to ignore scientific contributions by Muslim scientists. The pendulum and its oscillatory motion was discovered and recorded by Ibn Yunus Al-Masri during the 10th century and its principles were used by other Muslim scientists to build clocks. The list of discoveries and studies originally by Muslim scientists is almost endless and only now being seriously exposed to the general public

Table 2.1 : List of Latinized names ¹⁹

Actual Name (Muslim/Arabic)	Latinized Name	Year
Jabir Ibn Haiyan	Geber :	Died 803
Al-Khawarizmi	Algorizm :	770 - 840
Al-Kindi	Alkindus :	800 - 873
Al-Farghani	Al-Fraganus :	860
Ibn Rhazi	Rhazes :	864 - 930
Al-Battani	Albategnius :	868 - 929
Al-Farabi	Al-Pharabius :	870 - 950
Ibn Rusd	Averoes :	
Abu Al-Qasim Al-Zahravi	Albucasis :	936 - 1013
Al-Haitham	Alhazen :	965 - 1040
Abu Al-Hasan Al-Mawardi	Alboacen :	972 - 1058
Ibn Sina	Avicenna :	980 - 1037
Ibn Bajah	Avempace :	

Robert Briffault in the ‘Making of Humanity’ had stated

“ It was under the successors at Oxford School (that is, successors to the Muslims of Spain) that Roger Bacon learned Arabic and Arabic Sciences. Neither Roger Bacon nor later namesake has any title to be credited with having introduced the experimental method. Roger Bacon was no more than one of the apostles of Muslim sciences and Method to Christian Europe, and he never wearied of declaring that, knowledge of Arabic and Arabic sciences was for his contemporaries, the only way to true knowledge.” ²⁰

There is no doubt that the works of Muslim scholars are of excellent qualities. The conducive and supporting environment for studies and research by the rulers and the general public were encouraging and really helpful. It is now thought necessary to examine briefly some of these scholars.

1. Ibn Sina (Avicenna)

The *ulamas*' and men of knowledge during the period of study were usually well versed in the Al Quran and the Al Hadith similar to the four Leading Imams of the various schools of fiqh or jurisprudence and the imams of Al Hadith have committed to memory the Al Quran and thousands of verses of the Al Hadith. Ibn Sina (Avicenna) for instance, memorized the whole Al-Quran by the age of ten. Ibn Sina (Avicenna) had contributed much in the fields of science, medicine and philosophy. His book *Al Kanunn fil Tibbs* (*The Cannon of Medicine*) was the textbook of medicine for several centuries throughout the Islamic empire and Europe.

2. Khwarzimi :

Muhammad Bin Musa Alkhwarzmi is considered to be one of the founders of algebra. The word 'algorithm' is a corruption of his name or the name of the province in Afghanistan, where he was born. He used the 'cipher' (zero), that was devised in India some centuries earlier. The word 'zero' is derived from the Arabic '*sifr*' or an associated word, the 'cipher'. His treatise on '*Algebra and Equations*' (*Kitab-ul-Hisab-wal-jabr-wal-Muqabala*) was taught for centuries in European Universities. In his book, which is available in an English translation, (Pakistan Hejira Council, Islamabad), using analytical geometry, he proved various Islamic laws of inheritance. Muslims, were hence, the pioneers in analytical geometry.²¹

3. Al Battani :

Al-Battani excelled in trigonometry. The words 'sine', 'cosine' and 'tangent', which millions of students and scientists used in their studies and work were derived from

Arabic words, coined by Muslims scientists. For example, 'sine' is a corruption of the word 'jeib'. Muslims were the first to introduce the concept of inverse trigonometric functions.²²

3. **Jabir-bin-Hayyan (Geber):**

The science of chemistry was initiated and developed by Muslims. The word 'alchemy' is a recognition of this fact. Jabir-bin-Hayyan is recognised as the father of chemistry. His works preceded Boyle by about 700 years. Muslims chemists invented nitric, hydrochloric and sulphuric acids, salt of nitre, salt of petre, calcium carbonate and numerous other salts. They invented laboratory analytical techniques like distillation, sublimation, calcination, crystallization and many others. Many modern laboratory glassware apparatus owe their designs to Muslim geniuses.²³

4. **Khazini:**

Khazini was the Muslim scientist, who explained why the density of water increased towards the centre of the earth. Roger Bacon, many years later proved the same hypothesis, based his proof on the theories advanced by Khazini. His brilliant work *Mizanul Hikma* deals with gravity and contains tables of densities of many solids and liquids. It also contains "observation on capillarity, uses of aerometer to measure densities and appreciate the temperature of liquids, theory of the lever and the application of balance to building."²⁴

Numerous other Muslim scientists such as Al Majid, Al-Biruni, Al Khawarizmi, Ar Razi, Ibnu Bajjah and others have gone through the same or similar process of education.²⁵ Some of them, their earlier education were recorded while others we have no information

but we believe the process of education was similar based on the fact that almost all Muslims of the said period were taught the basic knowledge on Islam and the reading and understanding of the Al Quran. Based on the above facts and also obtained from the literature, we will now formulate the hypothesis of the present investigation.

2.4 The Hypothesis

The hypothesis that we are presenting and will try to prove in our research are the factors that are responsible for the excellence of the Muslim scientists of yesteryears. These factors were incumbent to the success of these scientists during the period at the height of Islamic Civilisation. We are focusing on Ibn Sina because of the acceptance of his excellence by all and sundry and the availability of abundant information of his work and the many researches done on his work and ideas. However to the author's knowledge information on his life, personal and family though is quite limited and thus his characteristics that enabled him to excel in his life as a Muslim and scientist.

These factors and criteria that we are trying to prove their influences on Ibn Sina and any person in fact are commonly studied factors and are universally accepted as among the criteria needed for achieving excellence. These factors such as :

1. Early education
2. Conducive environment
3. Motivation, Self or from outwards motivation
4. Exposure to educational culture and discourse
5. Availability of Sponsors and Scholarship

These are among the factors which will contribute to excellence but these criteria can be available to any person in any country or civilization regardless of creed or religion. The Europeans during the Renaissance and the present period; America, Russia, Japan, China or Korea have expanded the sciences tremendously and hold the edge in the field of science. They may have nurtured these capabilities by adapting and using the above criteria successfully and thus they have produced scholars of excellence which have contributed to the development and advancement of their knowledge and their countries. Islamic Civilisation at its height have produced far more excellent scientists and scholars who were pioneers in their fields and have contributed tremendously to the advancement of science bringing it to the level of today. Considering the resources, the difficulties and the absence of facilities as compared to what are available today, their achievements are incomparable. So what make them so incomparable in achievement ? There must be other criteria that has contributed to this excellence in achievement. So besides the criteria mentioned above we wish to forward an additional factor which has so influenced the Muslims to achieve their level of excellence.

That extra criteria that we intend to prove is that related with *Iman* or Believe or Faith. Excellence in Islam is related to *Iman*. *Iman* will ensure excellence in a Muslim and examples towards its effects will be given later. So what is *Iman*? From the Kamus Al Jadid, *Iman* is described as the faith/believe of the heart (*kepercayaan hati*)²⁶ From the *Hadith of Shahih Muslim*, Rasulullah SAW was visited by the Angel Gabriel disguised

as a man and asked the Prophet what is *Iman* and the Prophet replied as reported in this hadith :

‘He (again) said: Messenger of Allah, what *al-Iman* (the faith) is? He (the Holy Prophet) said: That you affirm your faith in Allah, His angels, His Books, His meeting, His Apostles, and that you believe in Resurrection and that you believe in *Qadr* (Divine Decree) in all its entirety. He (the inquirer) said: You (have) told the truth. ‘²⁷

These are the six principles of *Iman* and it pertains to things which are incomprehensible to the sight. These principles are matters that only the heart can ascertain if a person truly has faith.²⁸ In another hadith Prophet Mohamad SAW gave this definition :

” Iman is conviction in the heart, testifying by the tongue and acting upon the pillars of the actions. “²⁹

The Muslims pursue excellence because it is ordained for Muslims to be excellent. They are ordained to pursue excellence in every deed that they carry out, in their prayers, in their *amal* or deeds, in their role as a human, neighbor, as a child or parent, as a leader, that is in all their pursuits. They pursue to be an ‘*abd*’ (slave or servant)) of the Mighty Creator in the most humble of level. They endeavor to achieve the level ‘*Mardhotillah* ‘ or Allah’s Favor, the highest of status of an *abd*’ (a slave in it wholesome sense). Muslims pursue excellence with a purpose, they study, research and investigate any knowledge with a purpose of Exalting his Creator. He pleads for The Mighty Creator’s guidance and support in his pursuit of knowledge.³⁰

The question here is, why do we need to emulate the former successes ?

The Muslim *Ummah* at this moment is undergoing its utmost challenge. The Muslims and Islam itself is being portrayed in a negative image, everywhere in this era of globalization.³¹ The Muslims have been downtrodden since the decline in their power and influence. The Muslims countries were conquered then, one by one by the colonists' powers. The colonials infused their ideology and systems on the Muslims around the world. The Muslims were not free to practice and live their life according to Islam in the wholesome sense, the educational, social, jurisdictional and political. Independence that was then given to Muslim countries was in the mould of the colonials systems. The Muslim *Ummah* has lost their credence and personality. The morale of the Muslim *Ummah* is at the lowest ebb.³²

In this modern era of globalisation again Islam and Muslims are being portrayed negatively³³. They are being portrayed as violent, terrorists and fundamentalists in the negative sense. A person who lives by his fundamentals should be praised and respected but instead the former colonial powers that is the western countries have put a negative label on it. The countries who try to be independent of western ideals and influence were branded as hostile and non-progressive countries and thus a threat to western civilization. These countries are embargoed, sanctioned and some are even invaded by the western countries and puppet governments were installed to safeguard the western interests.

With this scenario the Muslim *Ummah* must rise to overcome their problems. One specific area that the *Ummah* can rise and be respected again is through education.³⁴ If the *Ummah*

of the earlier periods at the height of Islamic Civilisation can excel in the field of knowledge and their contributions towards mankind in the various field of knowledge were accoladed and recognized, why not then the present *Ummah*, they also can achieved that excellence, *Insyallah..*

2.5 Objective of Study:

The aim of this dissertation will be to study the route to excellence of the Muslim scientists with a special reference to Ibn Sina. The educational, family and religious background of Ibn Sina were scrutinized. The social and cultural conditions and their thinking, the perception of fellow scientists and man of knowledge were studied. Some of their achievements, works, books and writings were also studied.

From the above factors and the contrast of it which happened later causing the decline in scientific excellence, it is hoped for, that a trend , a methodology of approach or some sort of formula can be extracted out of this study and may be used as part of a guideline or approach to emulate the success of the earlier renown Muslim scientists .

The question then is how to achieve the same level of excellence or maybe better ? The *Ummah* has to rise to the occasion. Efforts must be made to retrace the secrets of the earlier *Ummah's* success. Their route to excellence, their efforts and the motivation and conditions that make them as they were, should be studied and scrutinized. Then maybe their secrets and formulae for success can be known and thus can be emulated by the present *Ummah* to achieve the level of success of the previous *Ummah*.

The objective of the study maybe summarized as follows:

1. To study the route to excellence by Muslim scientists, their efforts, motivation and the conditions prevailing during the height of Islamic Civilization with a special reference to Ibn Sina.
2. To study the factors contributing to the decline of Islamic Civilization and thus the decline in the number of excellent Muslim scientists.
3. Reprising and presenting the secrets and formulae for success for the benefit of the present *Ummah* so that the level of success of the previous *Ummah* can be emulated again.

It is hopeful that this study besides maybe others being done by various individuals and organisations from the whole *Ummah* everywhere in the world, will be able to shed some light on the secrets and formulae for success of the previous *Ummah*. The efforts of each and everyone of us are required no matter how small or insignificant we may think it to be, to bring the glorious days of the previous *Ummah* to the present *Ummah*. May Allah, bless us in our quest and guide us to His True Path.

2.6 Scope of Study

It is the author's opinion that the specific scope of study that will be done have not been covered by any researcher or author but there are some books, thesis and articles which have similar motives. The author will present some work by some authors, which is relevant to topics and subjects that will be discussed. Ibn Sina was chosen as a special

reference since he represent an excellent example of an excellent Muslim scientist. The topics will be divided into :

1. Islamic Civilization : An overview and to understand the culture of knowledge, and the reasons for the rise and decline of Islamic sciences and civilization.
2. Muslim Scientists : An overview and to establish their contributions to knowledge
3. Ibn Sina: His life and route to excellence, his works and contribution to knowledge in the context of the rise of science in medieval Islam

2.7 Literature Review

2.7.1. Ibn Sina

Ibn Sina is the most famous and many believed to be the most excellent of all the Muslim scientists.³⁵ He is most well known as a doctor and philosopher although his contributions to knowledge covers many varying fields such as astronomy, Arabic language, mathematics, management, ethics, religion and others. Ibn Sina is the most studied* Muslim scientists and there are many books, thesis, articles written about him, his voluminous work which some have set the number as many as 450 works³⁶ while Gohlman has put it at 100 works.³⁷ His most famous book is the *Al Qanun Fil Tibbs or The Canon of Medicine*, sometimes simply referred to as the *Al Qanun* or The Canon and learned people will know that it is Ibn Sina's book that is being referred to.

Ibn Sina's place of birth is agreed by most including Gohlman,³⁸ Afnan,³⁹ Zainal⁴⁰ to be in Afsana and the year of birth, most agreed at about 980 AD (370 AH). There is some

information about Ibn Sina's father and his profession but not much information on his mother, Sitarah and brother Mahmud (Ali)⁴¹ His latinized name Avicenna according to Darmani and a few others, to the hebrewised name of Ibn Sina,⁴² while Zainal Abidin⁴³ mentioned that the calling of Sina came from the word 'sien' that is 'China' His early education has been in religious knowledge and most author agreed that he was able to memorized the whole of the Al Quran and many 'baits' of literature, Arabian and Persian, by the age of ten. Zainal Abidin in his book has given a clearer picture on Ibn Sina's religious education. Zainal Abidin had also noted some of Ibn Sina's characters and traits which are laudable and should be emulated in order to achieve excellence, especially his intense devotion and power of concentration in undertaking his writings and researches under diverse and at times difficult situation⁴⁴

Ibn Sina's later education according to Darmani⁴⁵ was varied, learning metaphysics, Indian calculation, astronomy, jurisprudence, philosophy, sciences, medicine etc. His father played a major role in Ibn Sina's education, sending Ibn Sina to learn from learned teachers and making arrangement for tutors to teach Ibn Sina at home. Ibn Sina claimed he was self taught and most of his knowledge came from his readings of books made available to him. He later had access to the well-stocked library of Amir Nuh ibn Mansur when Ibn Sina was able to cure Amir Nuh of his illness⁴⁶

Ibn Sina's work which is numerous have been studied by many learned men and researchers from his time until at present time and we believe will continue. Ibn Sina's most celebrated work, The *Canon of Medicine* was translated into latin, the language of

knowledge then in medieval Europe and various other languages. It was studied and used as a text book on medicine in many European universities until the 17th and 18th centuries.⁴⁷ A version printed in Arabic dated 1593 is still available and can be downloaded from the Saab Digital Library⁴⁸ Besides his *Al Qanun*, Ibn Sina's works on philosophy had been also much studied by many scholars.

The author will in the later chapters discuss in more detail about Ibn Sina and try to analyze his characters and traits and will try to prise some wisdom and guides which could be useful to the *Ummah*.

2.7.2. Islamic Civilisation

Many have written about Islamic Civilisation with their own perspectives and aims. Some wrote in the historical perspective outlining the various rulers and caliphates, their roles and contributions towards the making of the Islamic Civilization. According to Hamka, some writers, especially non-Muslim seems to be cynical and prejudice.⁴⁹ This is so maybe because being an unbeliever they failed to appreciate the beauty of Islam and they do not understand the trials and tribulations of being a believer. Professor Hamka, a renown Islamic scholar from Indonesia, wrote the “*Sejarah Umat Islam*” (History of the Muslim *Ummah*) in 4 volumes with the first volume printed in 1950 and the last in 1961.⁵⁰ The book starts with information on the geographical, socio-political situation of the Arabs in the Arab world which stretches from Sham (an area encompassing modern day Syria, Jordan, Iraq, Palestine) in the north to Yemen, the southern most tip of the *Jazirah Al Arabia* (Arabian peninsula). He wrote in detail on the origin of the Arab tribes

and the various subsequent sub-tribes and factions and the situation before the coming of Islam. He furnished many details of the various rulers and caliphates, from the beginning of Islamic Civilization with details of the life and role of the Prophet Mohamad SAW, the Khulafah ArRasyidin (The Four Rightly Guided Caliphs) ie Khalifahs Abu Bakar, Umar, Othman and Ali. He also wrote about the Ummaiyah, Abbasiah, Uthmaniah (Ottoman) Caliphates, the Caliphs, the birth of the Caliphates, their ruling, contributions and their demise. The various smaller localized dynasties and emirates were also detailed, from the Andalucia(Spain), Northern Africa, Southern Europe, Central Asia, Indian subcontinent and the Malay Archipelago i.e. Aceh, Malacca, Java, Sulu sultanates etc.

Professor Dr Ahmad Shalaby, an Egyptian who received his Ph D from Cambridge University wrote the “*at-Tarikh al-Islamy wal-Hadharah al-Islamiyah*”. The book was translated by Prof Muchtar Jahia and named “ *Sejarah dan Kebudayaan Islam* “ (The History and Cultural of Islam). The book starts with the pre-Islamic period of the Arab, where Islamic Civilization started, the period of the Prophet Mohamad SAW and the Four Rightly Guided Caliphs. A later volume detailed the later successive Caliphates.⁵¹

Many writers including Hamka⁵² have put the starting point of Islamic Civilisation with the first propagation of Islam by the Prophet Mohamad SAW ⁵³ and continues up to the present day. Many have put the height of Islamic Civilization as the period between 700 to 1400 AD. ⁵⁴ Many have also put the peak during the reign of Harun Al Rashid of the Abbasid around 786 AD.⁵⁵ During this period, the centre of Islamic Civilization was based basically in Baghdad with other major centres in Andalucia (Spain), Bukhara

(Uzbek) etc. According to Al Faruqi⁵⁶ many other minor or localized centres of culture and knowledge were also setup in many areas by the local Emirs (rulers) for various reasons. Some of these centres were Tripoli in Northern Africa, Alexandria and Cairo in Egypt, Gundishapur in Persia. The fortunes of each centre fluctuating, depending on the local political scenario but the University of Al Azhar in Cairo managed to survive until today and has become the foremost centre of knowledge and learning of the Islamic religion and Arabic language.

Why was this period accepted as the height of Islamic Civilization? This period was when the achievement of Islamic Civilization was most outstanding. Many renown scholars and scientists, Muslims or non-Muslims were produced during this period in the Islamic territories which stretches from the Spanish peninsula to the west, to the borders of China to the east. Many works of science, literature, philosophy, social sciences and others were done and written by numerous scholars. Many of their works are still available today and are being studied by present day researchers while many more were destroyed during the numerous conflicts and the destructions which resulted, while there are still many works which were stolen and being kept by the colonial powers in their museums, archives and stores and are not available to the public or the researchers. According to Philip Hitti in his book, *Short History of the Arabs*”, he wrote :

"During all the first part of the Middle Ages, no other people made as important a contribution to human progress as did the Arabs, if we take this term to mean all those whose mother-tongue was Arabic, and not merely those living in the Arabian peninsula. For centuries, Arabic was the language of learning, culture and intellectual progress for the whole of the civilized world with the exception of the Far East. From the IXth to the XIIth century there were more philosophical, medical, historical, religious, astronomical and geographical works written in Arabic than in any other human tongue."⁵⁷

The animosity of the Europeans and the west towards Islam and Muslims are clearly evident through various statements and actions. The statement by Thomas Carlyle shows clearly the animosity towards Islam but in it he also praised the Prophet Mohamad SAW and the Muslims. He must have made the speech in what he thought to be a truly agreeable audience. Thomas Carlyle in 'Heroes, Hero Worship, and the Heroic in History,' Lecture 2, Friday, 8th May 1840, said : ⁵⁸

"As there is no danger of our becoming, any of us, Mahometans (i.e. Muslim), I mean to say all the good of him I justly can...

"When Pococke inquired of Grotius, where the **proof** was of that story of the pigeon, trained to pick peas from Mahomet's (Muhammad's) ear, and pass for an angel dictating to him? Grotius answered that there was **no proof!**...

"A poor, hard-toiling, ill-provided man;Not a bad man, I should say;or these wild arab men, fighting and jostling three-and-twenty years at his hand, in close contact with him always, would not revered him so! They were wild men bursting ever and anon into quarrel, into all kinds of fierce sincerity; without right worth and manhood, no man could have commanded them. They called him prophet you say? Why he stood there face to face with them; bare, not enshrined in any mystery; visibly clouting his own cloak, cobbling his own shoes; fighting, counseling, ordering in the midst of them: they must have seen what kind of man he was, let him be called what you like! No emperor with his tiaras was obeyed as this man in a cloak of his own clouting.I find something of a veritable Hero

"These Arabs, the man Mahomet, and that one century, - is it not as if a spark had fallen, one spark, on a world of what proves explosive powder, blazes heaven-high from to Granada! I said, the Great man was always as lightning out of Heaven; the rest of men waited for him like fuel, and then they too would flame..."

Another scholar, John William Draper criticized the Europeans and exhorted the contributions of the Islamic Civilization in his outspoken book '*The intellectual Development of Europe*', John William Draper says,

"I have to deplore the systematic manner in which the literature of Europe has contrived to put out of sight our scientific obligations to the Mohammadans. Surely they can not be much longer hidden. Injustice founded

on religious rancour and national conceit cannot be perpetuated for ever. What should the modern astronomer say, when, remembering the contemporary barbarism of Europe, he finds the Arab Abul Hassan speaking of turbes, to the extremities of which ocular and object diopters, perhaps sights, were attached, as used at Meragha? What when he reads of the attempts of Abdur Rahman Sufi at improving the photometry of stars? Are the astronomical tables of Ibn Junis (A.D. 1008) called the Hakemite tables, or the Ilkanic tables of Nasir-ud-din Toosi, constructed at the great observatory just mentioned, Meragha near Tauris (1259 A.D.), or the measurement of time by pendulum oscillations, and the method of correcting astronomical tables by systematic observations are such things worthless indications of the mental State? The Arab has left his intellectual impress on Europe, as, before long, Christendom will have to confess; he has indelibly Written it on the heavens, as any one may see who reads the names of the stars on a common celestial globe. ⁵⁹

Even though the period of glory was set between 7th to 14th century, Islamic Civilization may have consolidated itself after this period. The improvement in knowledge and culture continued but in a slower pace, isolated and less exposed and studied. According to Arslan Terzioğlu⁶⁰ and also stated in the *Encycolpedia Britannica*,⁶¹ that many improvements in the management, production-industrial or agricultural, medical fields etc continued on during the Ottoman Caliphate.

Marcel Clerget in '*La Turquie, Passe et Present*,' Paris, 1938. wrote : ⁶²

"Many proofs of high cultural level of the Ottoman Empire during the reign of **Suleiman the Magnificent** are to be found in the development of science and law; in the flowering of literary works in Arabic, Persian and Turkish; in the contemporary monuments in Istanbul, Bursa and Edirne; in the boom in luxury industries; in the sumptuous life of the court and high dignitaries, and last but not least in its **religious tolerance**. All the various influences - notably Turkish, Byzantine and Italian mingle together and help to make this the most brilliant epoch of the Ottomans."

There are many stories about the might and prosperity of the Ottoman Caliphate. One interesting story was about a battle during the Bosphorus War when the Turkish Ottoman fought against the western powers where it was told that when the Ottoman armies fired

their canons, the bright day became dark as night because of the dark smoke emitted by the canons and while during the night the flashes from the firing canons brighten up the area as if it was daylight.⁶³ From this story it can be inferred that the military might and industrial production of armaments of the Ottoman were quite large. The science and technology of armaments and the industrial production were quite advance and were developed by the Muslim themselves.

2.7.3. Muslim Scientists

Muslim scientists contribution to the world of knowledge was immense and incomparable with any known civilization. The period of glory of the Islamic Civilization that is between 7th and 14th century produced numerous scientists and man of knowledge incomparable to any period of time from any civilizations.⁶⁴ These men are not just mere scientists or scholars but excellent scientists and scholars who discovered, introduced and formulated many new findings, innovations and improvements on existing knowledge at the time. This fact have been well accepted only during the recent years but some famous historians and scholars had acknowledged this way back during their time. Many of them had written or made remarkable acknowledgments on the contributions of Muslim scientists and the Islamic Civilization itself towards the advancement of knowledge and science. The Europeans and the west owed its awakening and progress to these excellent scientists produced by the Islamic Civilization.

George Sarton's Tribute to Muslim Scientists in the *"Introduction to the History of Science,"*

"It will suffice here to evoke a few glorious names without contemporary

equivalents in the West: Jabir ibn Haiyan, al-Kindi, al-Khwarizmi, al-Fargani, al-Razi, Thabit ibn Qurra, al-Battani, Hunain ibn Ishaq, al-Farabi, Ibrahim ibn Sinan, al-Masudi, al-Tabari, Abul Wafa, 'Ali ibn Abbas, Abul Qasim, Ibn al-Jazzar, al-Biruni, Ibn Sina, Ibn Yunus, al-Kashi, Ibn al-Haitham, 'Ali Ibn 'Isa al-Ghazali, al-zarqab, Omar Khayyam. A magnificent array of names which it would not be difficult to extend. If anyone tells you that the Middle Ages were scientifically sterile, just quote these men to him, all of whom flourished within a short period, 750 to 1100 A.D." ⁶⁵

Afnan,⁶⁶ in the introduction of his book on Ibn Sina stated that the Muslim scientists were the product of Islamic Civilization as a results of the fusing of the Islamic way of life with knowledge and culture from many sources such as the Greek, Persian, Arab knowledge and cultures. Besides scientists who were Muslim, many others scientists and scholars of other faiths, such as the Christians (Orthodox, Catholic, Syriac), Zoroastarians, Jews and others were also produced during this period. They live and carried out their study without much encumbrance and were accepted as part of the society. They were sometimes hired by the rulers, their work and knowledge were appreciated and rewarded, sometimes generously.

To present the entire list of Muslim scientists may not be practical and not the main intention of our dissertation, so we have listed out some of the more famous and some of the less famous to illustrate the scope and expanse of the Muslim scientists contributions to his fellow man.

Timeline of Muslim Scientists (700-1400)

This chart show the period the key Islamic Scientists lives in, from the 8th to the end of the 13th century. Placing the scientists chronologically will will help us understand the influences and borrowing of ideas.

Table 2.2 : Timeline of Muslim Scientists

Year	Name of scientist	Field of study
701 (died)	Khalid Ibn Yazeed	Alchemy
721	Jabir Ibn Haiyan (Geber)	Great Muslim Alchemist
740	Al-Asmai	Zoology, Botany, Animal Husbandry
780	Al-Khwarizmi (Algorizm)	Mathematics, Astronomy
787	Al Balkhi, Ja'Far Ibn Muhammad (Albumasar)	Astronomy, Fortune-telling
796 (died)	Al-Fazari, Ibrahim Ibn Habeeb	Astronomy, Translation
800	Ibn Ishaq Al-Kindi (Alkindus)	Philosophy, Physics, Optics
808	Hunain Ibn Is'haq	Medicine, Translator
815	Al-Dinawari, Abu-Hanifa Ahmed Ibn Dawood	Mathematics Linguistics
836	Thabit Ibn Qurrah (Thebit)	Astronomy, Mechanics
838	Ali Ibn Rabban Al-Tabari	Medicine, Mathematics
852	Al Battani Abu abdillah (Albategni)	Mathematics, Astronomy, Engineering
857	Ibn Masawaih You'hanna	Medicine
858	Al-Battani (Albategnius)	Astronomy, mathematics
860	Al-Farghani (Al-Fraganus)	Astronomy, Civil Engineering
884	Al-Razi (Rhazes)	Medicine, Ophthalmology, Chemistry
870	Al-Farabi (Al-Pharabius)	Sociology, Logic, Science, Music
900 (died)	Abu Hamed Al-ustrulabi	Astronomy
903	Al-Sufi (Azophi)	Astronomy
908	Thabit Ibn Qurrah	Medicine, Engineering
912 (died)	Al-Tamimi Muhammad Ibn Amyal (Attmimi)	Alchemy
923 (died)	Al-Nirizi, AlFadl Ibn Ahmed (wronge Altibrizi)	Mathematics, Astronomy
930	Ibn Miskawayh, Ahmed Abuali	Medicine, Alchemy
932	Ahmed Al-Tabari	Medicine
936	Abu Al-Qasim Al-Zahravi (Albucasis)	Surgery, Medicine
940	Muhammad Al-Buzjani	Mathematics, Astronomy, Geometry
950	Al Majrett'ti Abu-alQasim	Astronomy, Alchemy, Mathematics

960 (died)	Ibn Wahshiyh, Abu Baker	Alchemy, Botany
965	Ibn Al-Haitham (Alhazen)	Physics, Optics, Mathematics)
973	Abu Raihan Al-Biruni	Astronomy, Mathematics
976	Ibn Abil Ashath	Medicine
980	Ibn Sina (Avicenna)	Medicine, Philosophy, Mathematics
983	Ikhwan A-Safa (Assafa)	Scientists group
1019	Al-Hasib Alkarji	Mathematics
1029	Al-Zarqali (Arzachel)	Astronomy (Invented Astrolabe)
1044	Omar Al-Khayyam	Mathematics, Poetry
1060(died)	Ali Ibn Ridwan Abu'Hassan Ali	Medicine
1077	Ibn Abi-Sadia Abul Qasim	Medicine
1090	Ibn Zuhr (Avenzoar)	Surgery, Medicine
1095	Ibn Bajah, Mohammed Ibn Yahya, (Avenpace)	Medicine, Philosophy
1097	Ibn Al-Baitar Diauddin (Bitar)	Botany, Medicine, Pharmacology
1099	Al-Idrisi (Dreses)	Geography, World Map (First Globe)
1100	Ibn Tufayl Al-Qaysi	Philosophy, Medicine
1120- (died)	Al-Tuhra-ee, Al-Husain Ibn Ali	Alchemy, Poem
1128	Ibn Rushd (Averroes's)	Philosophy, Medicine
1135	Ibn Maymun, Musa (Maimonides)	Medicine, Philosophy
1140	Al-Badee Al-Ustralabi	Astronomy, Mathematics
1155 (died)	Abdel-al Rahman AlKhazin	Astronomy
1162	Al Baghdadi, Abdellateef Muwaffaq	Medicine, Geography
1165	Ibn A-Rumiyyah Abul'Abbas (Annabati)	Botany
1173	Rasheed AlDeen Al-Suri	Botany
1184	Al-Tifashi, Shihabud-Deen (Attifashi)	Metallurgy, Stones
1201	Nasir Al-Din Al-Tusi	Astronomy, Non-Euclidean Geometry
1203	Ibn Abi-Usaibi'ah, Muwaffaq Al-Din	Medicine
1204(died)	Al-Bitruji (Alpetragius)	Astronomy
1213	Ibn Al-Nafis Damishqui	Anatomy
1236	Kutb Aldeen Al-Shirazi	Astronomy, Geography
1248 (died)	Ibn Al-Baitar	Pharmacy, Botany

1258	Ibn Al-Banna (Al Murrakishi), Azdi	Medicine, Mathematics
1262(died)	Al-Hassan Al-Murarakishi	Mathematics, Astronomy, Geography
1273	Al-Fida (Abdulfeda)	Astronomy, Geography
1306	Ibn Al-Shater Al Dimashqi	Astronomy, Mathematics
1320 (died)	Al Farisi Kamalud-deen Abul-Hassan	Astronomy, Physics
1341 (died)	Al-Jildaki, Muhammad Ibn Aidamer	Alchemy
1351	Ibn Al-Majdi, Abu Abbas Ibn Tanbugha	Mathematics, Astronomy
1359	Ibn Al-Magdi,Shihab-Udden Ibn Tanbugha	Mathematic, Astronomy

[Excerpted from : Timeline of Islamic Scientists : edited by Prof. Hamed Abdel-reheem Ead, Professor of Chemistry at Faculty of Science-University of Cairo Giza-Egypt and director of Science Heritage Center]⁶⁷

Some of the excellent achievements of Muslim scientists that we have noted earlier in this chapter and with the various statements from renown scholars who have done much researches before making their remarks and accolades, thus it has become an undeniable fact, the excellent role and contributions of the Muslim scientists and so the Islamic Civilization towards the progress of mankind.

2.7.4. The Decline of Islamic Civilization

The decline of Islamic Civilization is a topic widely discussed and written about but from my observation not much have been learned from this depressing episode, the *Ummah* have not learnt the lessons of history and seems to be making the same mistakes all over, again and again. The Al Quran had brought many stories of the previous *Ummahs* which were doomed to oblivion, destroyed, punished by the Al Mighty Creator because of their excessiveness, arrogance, adamant and deviant behaviors. The *Ummah* should be aware

and take heed of the warning from Allah SWT about a previous *Ummah* which was destroyed because of their excessiveness and deviant behaviors as was told in the Al Quran, *Surah An Naml* (The Ants) verses 54-57 and *Surah Hud* (Prophet Hud) verse 082

The deviant practice of the previous *Ummah* seems to be a regular occurrence today. So it is not to be unexpected if the wrath of the Al Mighty Creator has fallen on Muslims and non-Muslim alike and thus the unthinkable calamities that have fallen upon mankind. The tsunamis, earthquakes, typhoons, unpredictable weather, the incurable aids etc may just not be natural disasters but a sign of the Al Mighty's displeasure with mankind and their doings. Maybe the decline in Islamic Civilization is also sign of displeasure of the Al Mighty towards the Muslims.

Many writers have given their opinions on the causes and reasons for the decline in the glory of Islamic Civilization. Some had attributed the decline to the various infightings and power struggle between the ruling elite and opposing factions. Some of the writers had also proposed the remedies to curb the decline and revive the glory of Islamic Civilization. Arslan in his book, '*The Rise and Decline of Islam, Causes and Remedies*' had put forward some causes and remedies on this issue.⁶⁸ A well-known and highly respected Malay scholar *Pendeta Zaaba*[†] also wrote about the causes of decline emphasizing the points of *Iman*, independence and self-reliance.⁶⁹ Marmaduke Pictkhall in his lectures attributed orthodoxy has one of the causes of decline. Many western writers such as E G Browne⁷⁰ and Wiet et al⁷¹, attributed the decline on orthodoxy blaming Abu Hassan Ashari, a well-known Muslim religious scholar, as instrumental and acknowledged by R P

[†] *Pendeta Zaaba* : He is the only Malay scholar bestowed the title of *Pendeta* for his excellence contributions in many areas especially Malay literature, social issues and religion

Multhauf.⁷² Salah Zaimeche⁷³ strongly disagreed with these contentions attributing the decline to decadence and excesses of the rulers and the alliance between the Christians and the Mongols against the Muslims. George Saliba attributed one of the factors of the decline was due to the expanding European powers which diminishes the economic resources of the Islamic empire.

2.8 Methodology of Research

The study focuses on two main areas.

- i. The pursuit of excellence in sciences by Muslim scientists
- ii. Ibn Sina and his approach towards science and his contributions to Islamic science

In this study a methodology of the research was formulated and outlined as shown below:

A . Search of materials

1. Primary sources will be the Al Quran, Al Hadith, Ibn Sina's autobiography, Ibn Sina's *Kanun* and material from Ibn Sina's students and peers
2. Secondary sources will be material written by various writers, researchers and commenter's on Ibn Sina, Islamic Civilization and Muslim scientists during the height of Islamic Civilization i.e. between 600-1400 AD

Sources of material:

- i. University of Malaya Library
- ii. International Islamic University of Malaysia Library

- iii. Private Libraries and Personal Library
- iv. Internet e-books and Periodicals, websites

B. Analysis of materials

Evaluation of materials

The primary and secondary sources on Ibn Sina, Islamic Civilisation and Muslim Scientists were evaluated and material deemed relevant and appropriate to the scope of study were incorporated into the dissertation.

Deduction of analysis

From the material incorporated in the thesis , various deduction were made relevant to the study. Deductions were made from the qualitative analysis of the educational background, the family background, the social and cultural environment, the historical background and religious factors affecting the life of Ibn Sina. Further deductions were made on the various factors affecting the pursuit of excellence and the later decline in the pursuit of scientific excellence.

Conclusion

From the analysis and deductions, a conclusion was derived stating the factors that affect the pursuit of excellence and its decline and justify the hypothesis forwarded. The author will also try to make some proposals that maybe used as a remedy to solve the present predicament of the Muslim *Ummah* of today which has failed to produce the excellent scientists as in the days of glories during the 7-14 th centuries.

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CHAPTER 3

ISLAMIC CIVILISATION AND THE PURSUIT OF EXCELLENCE

Introduction

In this Chapter, the author will present the chronology of the Islamic Civilization starting from the source, that is from the time of the Prophet Mohamad SAW which is regarded as the starting point. The pursuit of excellence started with the Prophet Mohamad SAW and his companions which were the best generation of Muslims in terms of *Iman* and the later generations expanded the scope of excellence in the field of knowledge and their achievements. The achievements of the Muslims and the Islamic Civilization can only be appreciated and acknowledged if the depth and extent of their excellence and achievement is fully presented.

3.1 Islamic Civilization

In the earlier chapters the author has set the start of Islamic Civilization with the first revelation of the Al Quran that is the first six verses of *surah Iqra'* to the Prophet Mohamad SAW in 610 AD in the cave of Hira'. The establishment of the first Islamic State (*Daulah*) in Madinah with the proclaiming of the *Sahifah Madinah* (The Madinah Charter) in 623 AD established the early period of the Islamic Civilization.¹ The *Hijrah* (Migration) to Yathrib which was later called Madinah (City of Religion) was set as the first year of the *Hijrah*, the Muslim Calendar by Khalifah Omar Al Khatab RA.² He was a close *sahabah* (companion) of the Prophet Mohamad SAW and the second of the *Khulafah Ar-Rasyidin*. The Islamic nation expanded from Madinah to Mekah and most of

the Arabian peninsula during the Prophet Mohamad SAW's time. It later expanded by the acceptance Islam of the whole Arabian peninsula and the areas of Sham (ie Palestine, Jordan Syria)³. During the Ummaiyid Caliphate reign, Islam had reached the Spanish peninsula when Tariq Ibn Ziad and his entourage set their footing on the shore of Spain near a mountain in 711 AD (91 AH). The mountain was later named *Jabal Tariq* in his honour and was later famously known until today as Gibraltar.⁴

The periods of the Islamic Civilization can be listed as follows:

3.1.1. Years between 610-632 AD (13 BH-11 AH)*

The Prophet Mohamad SAW

This period starts from the first revelation to the Prophet Mohamad SAW and thus his appointment as The Messenger of Allah (Prophet) at the age of forty around 610 AD or thirteen years before the Hijrah which happened in 622 AD and his life in Madinah until his *wafat* (demise) in 632 AD(11H). The Islamic nation started in Madinah and later expanded to Mekah with its liberation in the year of 8 AH and later expanding to most of the Arabian Peninsula.⁵ Prophet Mohamad SAW worked strenuously to develop the Muslim Ummah and established a society which was just and prosperous with the full blessings of Allah SWT.⁶ His accomplishments resulted in the excellence of the Islamic Civilization and prevailed over seven hundred years and his teachings and ideals were continued to this day, being the largest professed and practiced religion.

* The dates quoted by authors differed on these dates normally by about a year. 13 Before Hijrah-11 After Hijrah. Hijrah, the Muslim lunar calendar year is about 355 days as compared to the Gregorian solar calendar of 365/366 days

The period in Mekah was a difficult period in which the Prophet Mohamad SAW faced the opposition from the *Qurayish* Arabs who were the leaders and nobility in Mekah. The *Qurayish* Arabs were blood relatives of the Prophet Mohamad SAW but most of them refused to accept the teachings of the Islam. During this period the teachings of Islam were basically on the matters of *tauhid*, that is the beliefs in one God only that is Allah SWT, the Mighty Creator. Most of the *Qurayish* Arabs were idolaters and build many idols around the *Kaaba*.

3.1.2. Years between 632-661 AD (11-40 AH)

Khulafah Ar-Rasyidin

Abu Bakar As-Sidiq, the first Khalifah Ar-Rasyidin was elected in 632 AD (11AH) and ruled for about two years until 634 AD (13 AH). Islam expanded to the whole Arabian Peninsula and was in confrontation with the Roman Byzantine Empire in Sham in the north and the Persian Empire in the north east.⁷

Omar Al-Khatab, the second Khalifah Ar-Rasyidin was elected in 634 AD (13-23 AH) and ruled for about ten years. Islam expanded to the north east and eastwards with the defeat of the Persian Sasanid Empire and reached up to the Central Asia regions of Azerbaijan and nearby territories. To the north it reached Sham and onwards to parts of Turkey (Anattolia). Towards the west the Muslim rule reached Egypt (Mesir).⁸

The third Khalifah Ar-Rasyidin, Othman ibn Affan was elected in 644 AD (23H) and he reigned for about twelve years until 656 AD(35H). The Islamic territories during

his rule, expanded in northern Africa to Tripoli and later to Cyprus when the first naval armada was setup. Muawiyah Abi Sufian, the Amir of the northern region setup the naval armada and appointed Abdullah ibn Qiys as the “*Amir Albahar*” which Hamka in his book noted as the origin of the word ‘Admiral’ now being used in the navy.⁹ Northwards the ruled extended to parts of Armenia and some area of Turkistan.

The fourth Khalifah Ar-Rasyidin was Ali ibn Abi Talib and was elected in 656 AD (35 AH) and died in 661 AD (40 AH) after ruling for about five years, setting up his centre of administration in Kufah, Iraq. His rule was then faced with internal rebellion by apostates and groups with different political convictions such as the Umaiyyah clan and the *Khawarij*.¹⁰

3.1.3. Years between 661-750 AD (40-132 AH)

Umaiyyid Caliphate

The Umaiyyid Caliphate was started in 661 AD (40 AH) by Muawiyah ibn Abi Sufian after the abdication of Hassan the son of Ali ibn Abi Talib and grandson of the Prophet Mohamad SAW. He abdicated with the hope of uniting the Muslim nation which were divided into two opposing factions, one supporting Ali and his descendants and the other supporting Muawiyah. The Muslim nation thus had only one acclaimed Khalifah ruling through its territories. Damsyik (Damascus) in Sham was the capital of Khalifah Muawiyah and the Umayyid Caliphate. Muawiyah ruled for about nineteen years and later succeeded upon his death by his son Yazid

ibn Muawiyah. The Umayyid Caliphate lasted for about 89 years and was the first aristocratic Muslim government and started the hereditary succession of the position of khalifah.¹¹ Some authors claimed the Caliphate as an Arabic government rather than a Muslim caliphate.¹² The territories of the Caliphate extended across the shores of northern Africa to Sicily and reached the Andalusia (Spain) in 711 AD, to the north towards Constantinople, which was cornered but not overwhelmed and it extended into Transoxania in eastern Europe

Eastwards it reached the Indus Valley of the Indian sub-continent. During this Caliphate there was a khalifah which some ulamas has classified as the fifth of the Khalifah Ar-Rasyidin, that is Khalifah Omar ibn Abdul Aziz, a great grand son of Khalifah Omar ibn Al-Khatib.¹³ During his short reign of about two years, he ruled justly and adhered wholeheartedly to the principles of Islam. Many stories were told about the peace and tranquility of his reign. A particular story was about how the wolves were able to mingle with the sheep not attacking them but when Khalifah Omar Abdul Aziz died, the wolves started to attack again the sheep.¹⁴

3.1.4. Years between 750 - 1258 AD (132 – 656 AH)

Abbasid Caliphate

The Abbasid Caliphate was setup by Abul Abbas As-Saffah, a descendant of Abbas ibn Abdul Mutallib, the uncle of the Prophet Mohamad SAW, in 750 AD (132 AH). A rebellion headed by him supported by the Bani Abbas clansman managed to overthrow the Umayyid's last khalifah Marwan ibn Mohamad. A prince of the

Ummaiyid, Abdul Rahman ibn Muawiyah ibn Hisham managed to escaped to Spain and became the Amir of Spain.¹⁵ The Spanish Ummaiyid Caliphate was only setup in 912 AD when the Abbasid Caliphate was powerless and was ignored by many smaller dynasties which were setup throughout the Muslim world.^{16 17}

During the Abbasid Caliphate there were two very prominent Khalifah who had contributed immensely towards the expansion of knowledge. They were Khalifah Harun Al- Rashid (r.786-809AD/170-193AH) and Khalifah Al-Maamun (r. 813- 833AD/ 198-218 AH)^{18 19}

Early in the ninth century, many smaller dynasties were setup in various localities, some paying allegiance and accepting the Khalifah's role as the supreme ruler of the Muslims while others ignore or rebel against the khalifahs of the Abbasiah. Some of these smaller dynasties that were setup were in Egypt (Fatimids), Northern Africa (Idrisi), Spain or Andalucia (Ummayids), Khorasan or Central Asia (Tahirids, Safarids, Samanids). The first Crusade between 1097-1099 AD, managed to capture and setup governments in Baitul Maqdis, Tripoli-Sham, Enthiochie and Raha. There were massive destruction and genocide done by the crusaders. The second crusade was in 1137-1140 AD but the crusaders retreated. The third crusade was between 1189-1192 AD but was defeated by Salahudin Al-Ayubi and Baitul Maqdis (Jerusalem) was liberated from the Christians. In 1258 AD (656 AH) during the reign of Khalifah Al-Mutassim, the Mongols attacked Baghdad razing it to the ground, destroying and burning many of its building and killing many of its inhabitants. There is a famous story being told

since then about how the books from the libraries of Baghdad were thrown into the Dajlah river to enable the Mongol armies to cross. The ink from the books made the water of the river pitch black. The Mongols under the command of Hulagu Khan entered Baghdad without much resistance, the Muslim inhabitants were complacent and of the opinion that the Mongols will be willing to negotiate and accept a truce.²⁰ The reason for this maybe because of the softening of the spirit of *Jihad* as result of the riches and the good life. Many Muslims were involved with wrongdoings and excesses in their habits and lifestyles. They preferred to indulge themselves in immoral activities and spend their time in trivial pursuits in entertainment, music and unproductive literature, as was done by the '*jahiliyah musyrikin*' of Mekah before the proclamation of the Prophet Mohamad SAW. The Prophet Mohamad SAW had in a hadith stated his concern and worries about the situation of the later *ummah*.²¹

Hulagu Khan purposely let off his hordes onto the streets of Baghdad for three days to do the utmost of destruction before being rein in by their commanders. The Mongols practiced this method of conquest to subjugate and put fear into the hearts of the conquered as a warning to the conquered and the enemies of the Mongols. The conquered will not be willing to rebel, while the other enemies to escape the destruction will seek to end hostilities by being a vassal state by paying tributes to the Mongols. Most of the relatives and descendants of the khalifah and thus of the Abbasid Caliphate were killed. Ahmad ibn Al Zahir ibn Al Nasir, an uncle of Khalifah Al Mutassim who was not in Baghdad when the Mongols entered, managed to escape and presented himself to the Amir in Egypt. After verifying his claim, he

was appointed the titular post of khalifah although the political power rest with the Amir, Sultan Al Zahir Baibars Al-Bunduqdari.²²

3.1.5. The years between 1290- 1924 AD

Ottoman Caliphate

The Ottoman Caliphate was setup in 1290 AD (687 AH),²³ Hamka put the date as 1300 AD (700 AH), by Othman I who was a governor in Erzerum, Anatolia, a province in the present day Turkey and a staunch supporter of Sultan Al ed-Din of the Seljuk Rumi government. He managed to consolidate his rule and established his capital in Iskishiar, after the passing away of Sultan Al ed-din when there was no one, influential and powerful enough to take over the Seljuk government. He inherited the Seljuk territories and managed to expand his rule over the neighboring provinces with his ultimatum and actions. From his name thus was called the Othmaniyah or the Ottoman Caliphate. The successive caliphs after him were strong and managed to expand the Islamic territories up to the Balkan ie Serbia, Bosnia, Bulgaria to the Caucus mountains which until today there are many practicing Muslims inhabitants especially in Chechnya. During these periods the Muslims were antagonized and attacked by the European Christians which formed alliances between their opposing kingdoms under the direction of the Roman Catholic Pope in Rome. The Muslims also have to face the Orthodox Byzantium Romans in Constantinople (Istanbul) and from the east the Mongols hordes under Timurlane and others. Some of the smaller dynasties allied themselves to face the Mongols but there others which allied with the Mongols thinking that the Mongols will annihilate them if they were to oppose the powerful Mongols. The Ottoman Caliphate was the longest reign among the various Caliphates ruling for about six hundred years²⁴

3.2 Pursuit of Excellence

The pursuit of excellence was at the optimum level at the height of Islamic Civilisation between the 7th-14th centuries.²⁵ In this context the pursuit of excellence encompasses excellence in the wholesome sense, specifically in the moral and intellectual excellence. The pursuit of excellence started with the Prophet Mohamad SAW's propagation of Islam to the Quraish Arabs of Mekah, his close relations and later to the various Arab and non Arabs inhabitants of Mekah and those that came to trade and on pilgrimage to the Holy Kaabah. Some came from the Byzantine Roman ruled Sham and Persia in search of the Prophet Mohamad SAW to learn about the new religion, Islam which the Prophet propagated. The coming of the last Prophet was revealed in the original Books of The Torah and The Injil and many old books written by religious scholars.²⁶ The Muslims then, learn about Islam from the Prophet Mohamad SAW secretly in person or in secret gatherings in the house of Arqam ibn Abi Arqam.²⁷ They listened diligently, trying to understand every word of the verses of the Al Quran that were revealed then and what ever the Prophet Mohamad SAW said, and committing them to memory. They put into practice what ever they have learned albeit secretly to safeguard themselves against the Quraish idolaters. Many even then were persecuted and some killed because of their new beliefs. The pursuit of excellence that we can trace from here was their diligence, committing to memory and putting into practice immediately of what they have learned.²⁸ These are the characteristic of a man pursuing excellence unlike most people nowadays, contemplating and indecisive, always putting to tomorrow what should be done immediately or in the imminent future.

Muslims during the period of the Prophet's life was motivated towards excellence. They were steadfast and had the ability to persevere through difficult circumstances. During the Hijrah, the *muhajirin* (the Muslims from Mekah) shifted to Madinah leaving their wealth and some even their family to escaped persecution from the *Quraish musyrikin* but in a short span of time the *muhajirin* and the *ansar* (the Muslims of Madinah) managed to rise up and challenge the powerful *Quraish musyrikin* of Mekah and their allies. The dedication and diligence towards the teachings of Islam by the Prophet Mohamad SAW enabled them to become a powerful nation.

The Arabs before the teachings of Islam were revealed to the Prophet Mohamad SAW were uncivilized and morally corrupt. Their abhorrent practice of killing their young daughters, enslaving of their father's wives(stepmothers), the enslaving of the poor and captured people from other tribes and many more atrocious practices. The Arabs were well known for their literature, they were able to compose very long poem, most were memorized and transmitted through the generations while others were written. The best poem sometimes were written on a plaque and put near the Kaabah. The poems were masterly and creatively composed but the subject of their creativity were normally in praise of wine, woman and their idols. There were many idols around the Kaabah, some said about 365 of these idols and all of them were removed from the Kaabah upon the liberation of Mekah from the Quraish Musyrikin in 630 AD (8 AH).²⁹

The Arabs of the Arabian Peninsula were divided into various clans or kabilah, based on their forefathers. The brothers of a family, some times established their own clans. Some

of these clans were the Bani Abdi Manaf, Bani Ummaiyah, Bani Aus, Bani Khazraj Bani Asad and many others, some reside in a particular region of the peninsula while others had dispersed communities in a few regions. Most of the clans are related to one another because of the same forefathers or by intermarriages. Some of these clans had treaties or allied between them through intermarriages, political or other reasons. Very often clashes between the clans occur due to animosity, jealousy, political, economical or for some trivial reasons. The animosities sometimes were drawn out through many generation and revenge killings were normal.³⁰

The only time there is calm and peace were during the pilgrimage season when the Arab clans from all over the peninsula and Sham congregated in Mekah to offer their prayers at the Kaabah. Fighting during this season has been accepted as taboo and the clans tried to practice restraint even though at times clashes do happened during this season.³¹

The arrival of Islam propagated by the Prophet Mohamad SAW managed to change thoroughly the Arabs. The Arabs were able to unite themselves under Islam and dispenses with their uncivilized manners, unending feud and repugnant traditional practices.³²

The Arabs became a united nation and were able to face the super powers of that time, the Byzantine Romans and the mighty Persians. The early Muslims with their small numbers and lack of weapons, were able to defeat the larger and well equipped armies of the *Quraish musyrikin* of Mekah and then later the much larger and well trained armies

of the Romans and the Persians. They face their opponents with their most important weapon ‘*Iman*’ plus their excellent commitment and discipline as a practicing Muslim. There are many stories being told about their commitments to their brethren and purpose, which came from comments by their opponents.³³

The early generation, *sahabah* and ‘*tabiin*’ commitment towards knowledge of the Al Quran and the Sunnah (Al Hadith) had been well established. The companions gather around the Prophet Mohamad SAW, most of the time waiting eagerly for new revelations of the verses of the Al Quran and to hear and learn from the Prophet Mohamad SAW. What ever was revealed and said by the Prophet Mohamad SAW was adhered to and acted upon immediately and readily. The pursuit of knowledge during the time of the first generation of Muslims were predominantly religious in nature but were also related to their everyday life. Knowledge of politics (*siasah*), economy, ethics, jurisprudence, medicine and many other subjects were taught by the Prophet Mohamad SAW and were discussed and related to others. Many hadiths were reported on the actions and sayings of the Prophet Mohamad that covered these subjects. In politics, are the declaration of the Sahifah Madinah (Madinahs Charter) which proclaimed the first daulah. The Prophet Mohamad SAW managed to forge the feelings of brotherhood between the Aus and Khazraj of Madinah who were called the Ansar (helpers) and the Muhajirin (shifters) from Mekah and managed to convince the Jews of Madinah to accept the Prophet Mohamad SAW’s leadership of Madinah. It was a colossal political feat taking into consideration that the Muslims in Madinah at that time was as about ten percent of the ten

thousand population of Madinah.³⁴ Some writers put the figures at between a quarter to a third of the Madinah's population.

One very pertinent example of the excellence of Muslims were in the compilation of the Al Quran and the Al Hadith. The Al Quran was compiled by writing and cross checking with many *sahabahs*, from verses written on barks, tablets and bones, attention to details such as the words and letters used, the position of each verse and even the way of pronouncing the verses. The study of the Al Quran later expanded with works of *Tafsir*, the meanings and translation of the Al Quran by various scholars. Some scholars studied and translated the Al Quran in its literal meanings, language, the commands and many various aspects using the Al Quran, the Al Hadith and the *sahabahs* opinions to ascribe the meanings of each verses of the Al Quran. Then there is the *Asbabun Nuzul*, the study of the reasons and point in time each verses of the Al Quran were revealed. The study of the Al Quran had expanded and there are thousands and thousands of books written in the study of the Al Quran. In the compilation of the Al Hadith, the work done by the various scholars in compiling and memorizing each hadith is beyond ordinary men. Only a person full of dedication, intelligence, diligence were able to undertake it. The scholars travelled far and wide to collect the ahadith, each were memorized and recorded. The *sanad and rawi* (the chain of commenters upto the Prophet SAW) were noted and memorized, scrutinizing and discussing the reliability of each commenter before categorizing each hadith into *sahih, hasan, daif or mauduk* (authenticated, good, weak or false). Any hadith from commenters who is hard of hearing, too old, bad memory, bad attitudes or not practicing the *sunnah* will not be accepted. Each of the renown Al

Hadith scholars memorized hundreds of thousand of ahadith and able to differentiate each and every one of the ahadith.

3.2.1 Source s of knowledge

There are many verses of the Al Quran and from the Al Hadith which covers various topics besides strictly religious matters. These verses and ahadith were and still are the magnificent sources of knowledge which without its revelation humankind may not discover the knowledge or if they managed to unveil, only at a much later time and incomplete. Below the author has presented a few of the many verses and ahadith.

Medicine :

From the Al Quran :

1. Al Quran : Al Nahl 016:068-69 [Al Quran 016:068-69]³⁵

Honey from bee as medication

وَأَوْحَىٰ رَبُّكَ إِلَى النَّحْلِ أَنْ اتَّخِذِي مِنَ الْجِبَالِ بُيُوتًا وَمِنَ الشَّجَرِ وَمِمَّا يَعْرِشُونَ ﴿٦٨﴾
ثُمَّ كُلِي مِن كُلِّ الثَّمَرَاتِ فَاسْلُكِي سُبُلَ رَبِّكِ ذُلَالًا ۚ تَخْرُجُ مِنْ بُطُونِهَا شَرَابٌ مُّخْتَلَفٌ
أَلْوَانُهُ فِيهِ شِفَاءٌ لِلنَّاسِ ۚ إِنَّ فِي ذَٰلِكَ لَآيَةً لِّقَوْمٍ يَتَفَكَّرُونَ ﴿٦٩﴾

68. And Thy Lord taught the Bee to build its cells in hills, on trees, and in (men's) habitations;

69. Then to eat of all the produce (of the earth), and find with skill the spacious paths of its Lord: there issues from within their bodies a drink varying colors(honey), wherein is healing for men: Verily In This is a Sign for those who thought.³⁶

2. Al Quran Surah Maryam 19:23-26 [Al Quran 19:23-26]³⁷

مَنْسِيًّا جَاءَهَا ﴿٢٣﴾ فَنَادَاهَا مِنْ تَحْتِهَا أَلَّا تَحْزَنِي قَدْ جَعَلَ رَبُّكِ تَحْتَكِ سَرِيًّا ﴿٢٤﴾ وَهَؤُلَاءِ
إِلَيْكَ يَجْذَعُ فَخْلَةٌ الْمَخَاضُ إِلَى جِذْعِ النَّخْلَةِ قَالَتْ يَلَيْتَنِي مِتُّ قَبْلَ هَذَا وَكُنْتُ
نَسِيًّا أَلَمْ تَسْقِطْ عَلَيَّ رُطْبًا جَنِيًّا ﴿٢٥﴾ فَكُلِي وَاشْرَبِي وَقَرِّي عَيْنًا ۖ فَإِمَّا تَرِينِ مِنَ الْبَشَرِ
أَحَدًا فَقُولِي إِنِّي نَذَرْتُ لِلرَّحْمَنِ صَوْمًا فَلَنْ أُكَلِّمَ الْيَوْمَ إِنْسِيًّا ﴿٢٦﴾

23. And the pains of childbirth drove Her to the trunk of a palm-tree: she cried (in Her anguish): "Ah! would that I had died before this! would that I had been a thing forgotten and out of sight!" 24. But (A voice) cried to Her from beneath the (palm-tree): "Grieve not! for Thy Lord hath provided a rivulet beneath thee; 25. "And shake towards Thyself the trunk of the palm-tree: it will let fall fresh ripe dates upon thee. 26. "So eat and drink and cool (thine) eye. and if Thou dost see any man, say, 'I have vowed a fast to ((Allah)) Most Gracious, and This Day will I enter into not talk with any human being'" ³⁸

From the Al Hadith :

1, A hadith narated By Abu Huraira : The Prophet said, "There is no disease that Allah has created, except that He also has created its treatment." ³⁹

2. Hadith narated By Abu Said Al-Khudri : A man came to the Prophet and said, "My brother has some abdominal trouble." The Prophet said to him "Let him drink honey." The man came for the second time and the Prophet said to him, 'Let him drink honey.' He came for the third time and the Prophet said, "Let him drink honey." He returned again and said, "I have done that ' The Prophet then said, "Allah has said the truth, but your

brother's abdomen has told a lie. Let him drink honey." So he made him drink honey and he was cured.⁴⁰

3. Hadith narated By Abu Huraira : I heard Allah's Apostle saying, "There is healing in black cumin for all diseases except death." ⁴¹

4. Hadith narated By 'Abdullah bin 'Amir : 'Umar went to Sham and when he reached Sargh, he got the news that an epidemic (of plague) had broken out in Sham. 'Abdur-Rahman bin 'Auf told him that Allah's Apostle said, "If you hear that it (plague) has broken out in a land, do not go to it; but if it breaks out in a land where you are present, do not go out escaping from it." ⁴²

5. Hadith narated By 'Ursa : 'Aisha used to recommend At-Talbina for the sick and for such a person as grieved over a dead person. She used to say, "I heard Allah's Apostle saying, 'At-Talbina gives rest to the heart of the patient and makes it active and relieves some of his sorrow and grief.'" ⁴³

6. Hadith narated By Nazi' : Abdullah bin 'Umar said, "The Prophet said, 'Fever is from the heat of Hell, so put it out (cool it) with water.'" Nafi' added: 'Abdullah used to say, "O Allah! Relieve us from the punishment," (when he suffered from fever).⁴⁴

The method of healing as indicated in the Al Quran and from the Al Hadith had inspired many writers to compile into books such as *al-Tibbs al-Nabawi* (The Healing Methods /Way of the Prophet) by Ibn Qayim al-Jawziyah (1292-1350) and *Mukhtasar al-tibb al-Nabawi* by Suyuti (1445-1505)

Economy and Business (*Muamalat*)

A hadith narated By Az-Zuhri from Malik bin Aus : That the latter said, "Who has change?" Talha said, "I (will have change) when our store-keeper comes from the forest."

Narrated 'Umar bin Al-Khattab: Allah's Apostle said, "The bartering of gold for silver is *Riba*, (usury), except if it is from hand to hand and equal in amount, and wheat grain for wheat grain is usury except if it is from hand to hand and equal in amount, and dates for dates is usury except if it is from hand to hand and equal in amount, and barley for barley is usury except if it is from hand to hand and equal in amount."⁴⁵

These verses of the Al Quran and ahadith shows that they were sources of knowledge which the scholars studied and then further enhanced their knowledge based on the verses.

3.2.2 Pursuit of Excellence after the Prophet's Period

The pursuit of excellence continued after the Prophet Mohamad SAW passed away. The *sahabahs* seek each other to enquire on any verses of the Al Quran and the Al Hadith that they missed out or have forgotten. When they are faced with questions or problems in their everyday affairs they would refer to the more knowledgeable *sahabahs*. Many of the *sahabahs* traveled to distant land to propagate Islam, some even traveled to China and thus the knowledge that they brought spreads throughout the Muslim world and the neighboring regions.⁴⁶ The *tabi'in* the second generation of Muslims which did not meet the Prophet. Mohamad SAW but lived during the life of the *sahabahs* continued this pursuit of knowledge. They seek knowledge from the *sahabahs*, some travelled from distant places to learn from the *sahabahs* in Madinah, Mekah, Kufah and many other places.⁴⁷ Knowledge expanded with the diversity in opinions and cultures. . With the expansion of the Muslim territories, many new problems and situations arisen, localities,

each with its set of problems and issues, which needed to be addressed. The *sahabahs* and the *tabiins* had to study these problems and issues and make rulings (*fatwa*) to guide the *ummah*. This resulted in extensive studies in the knowledge of *Fiqh* and other branches of knowledge. Various schools of *fiqh* studies which later become the *mazhabs* emerged during this time and the following period. The more famous are the four *Imams*(leaders) of the *mazhabs* they are Imam Malik, Imam Shafie, Imam Ahmad Ibn Hambal and Imam Abu Hanifah from which the *mazhabs* of the *sunni* tradition of Maliki, Shafie, Hambali and Hanafi were based on. The other main tradition is of the *Syiah* school with its various *mazhabs*.⁴⁸ The schools of *fiqh* basically made their rulings and opinions from their understandings of and based on the Al Quran, Al Hadith, the *Qias* and *Ijma'* *Ulama'*⁴⁹ Imam Malik was based in Madinah and made his opinions and rulings according to the situation in Madinah. Imam Shafie was born in Palestine and stayed in Mekah with his family. At the age of ten, he went to Madinah to study under Imam Malik and later traveled to Yemen, Mesir and many other places. Imam Ahmad ibn Hambal was a student of Imam Shafie. Imam Abu Hanifah lived in Baghdad, a cosmopolitan at that time in a densely populated region with interactions with people of various races and religions and thus civilizations. This sort of environment influenced many of his opinions or '*fatwas*' that he gave during his lifetime which at times seems at odds with the other Imams, who presided over a predominantly Muslim and Arabic population. Each of them wrote many books covering various subjects not only on the purely religious subjects. Among the more famous books from them were *The Muwatta'* written by Imam Malik, *Al Umm* by Imam Shafie, *Musnad Ahmad* by Imam Ahmad and Imam Hanafi wrote *Fiqh al-Akbar*. They put their knowledge in writing for the

benefit of the later *ummah*. Many other man religious scholars later aligned themselves with these various schools of fiqh, elaborating on the writings and opinions of these *Imams* and expanding further the knowledge. They themselves wrote various books and commentaries(syarah) based on the prior Imams writings. Among them were Imam An Nawawi a follower of Mazhab Shafie, Qadi Yusof, a student of Imam Hanafi and The four leading Imams lived during the reigned of the Ummayyid and Abbasid Caliphates.⁵⁰

During the Umayyid Caliphate which based their capital in Damsyik, the expansion of knowledge diversified on to other subjects. The interaction of the Muslim populace with other civilizations and people from various races and religions lead to pursuit of new knowledge and the expansion of the existing knowledge on many various subjects of the sciences and philosophy etc.

The period of the Abbasid Caliphate was seen as the ultimate height of excellence of the Islamic Civilization.

Afnan in his book on Ibn Sina stated :

“The setting up of the capital in Baghdad has gathered together men from distant countries, and the stimulating élan of Islam was everywhere at work.”
It was a case of religion uniting people and giving purpose and direction to their lives .”⁵¹

Bassiuoini, in his book *Introduction to Islam* wrote :

“The Abbasids, who displaced the Umayyids and moved the seat of government from Damascus to Baghdad, made the first serious effort to accommodate Greek science and philosophy to Islam. The Abbasid rulers, unlike the Umayyids who

remained Arab in their tastes and customs, conceived an Islamic polity based on religious affiliation rather than nationality or race. This made it easier for people of differing cultural, racial, and intellectual heritages to mingle and exchange ideas as equals. Persian astronomers from Gandeshapur could work side by side with mathematicians from Alexandria in the cosmopolitan atmosphere of Baghdad”.⁵²

The khalifahs of the Abbasids played a major role in setting the pace of the expansion of knowledge. Khalifah Al Mansur (d.775AD) who was considered to be a liberal, had a passion for learning. Khalifah Harun Al Rashid, who succeeded him, was keen on the knowledge of medicine, jurisprudence and theology, established the library known as the *Khazanah al Hikma*[†] (Treasure-house of Wisdom).⁵³ Khalifah Harun Al Rashid's reign has been named as the best period of excellence of the Abbasid's.⁵⁴ The peace and tranquility around Baghdad and the prosperity of the society at that time enabled the populace to seek other pursuits namely in cultural and educational fields. The Arabic language and grammar were studied by many scholars with some contribution from Ibn Sina. The more famous schools in the Arabic language and grammar were the Kufah and the Basra schools.⁵⁵ The more famous style of reading of the Al Quran is based on the Kufah school. With the prosperity also came sponsorship and scholarship. Many libraries were setup, either public or private, sponsored by the rulers and the more affluent public. This led to the high prices of manuscripts and the search of them transgresses across the Muslim nations to the older Greek Civilization and others. The setting of *Darul/Bait Al Hikmah* (Academy of Knowledge) during the reign of Khalifah Al Mamun of the Abbasids⁵⁶ was a priceless contribution to the advancement of knowledge during this

[†] Various authors gave different names and attributed the establishment to different caliphs of the Abbasids. The author here has quoted Afnan for reference on the establishment of *Khazanah Al Hikma* and by Goldschmidt on the *Dar al Hikmah* which to the author believes to be two different establishments.

period and beyond. Khalifah Al Mamun corresponded with the Byzantium Roman Emperor in Constantinople asking the Emperor to send some Greek books of knowledge to Baghdad. The Emperor hesitated initially but finally complied with Khalifah Al Mamun's request and thus send many books and manuscripts of Greek learning to Baghdad. Khalifah Al Mamun also took an interest in the old medical and philosophical schools of Gundishapur in southern Persia and he also lavishly rewarded the poets, scholars and translators.⁵⁷

The benefit was not only felt by Muslims but the non-Muslims too. The non-Muslim man of knowledge also benefited from the open-mindedness and the patronage of the Muslim rulers. Hunain ibn Ishaq, a Syriac Christian was appointed the head of the translation bureau of the Academy of Knowledge in Baghdad. He hired many translators, Christian and Muslims to work under him and he was instrumental in translating many manuscripts from Greek and other languages to Arabic. The translation works were done by many translators, translating from various languages to other languages particularly into Arabic and Syriac. Greek works were translated to Syriac or Arabic and then later translated again into Arabic or Syriac. Often a single Greek work would be translated by a few translators, each sometimes adding their own comments thus diversifying and adding new knowledge to the subject concerned. The Christian Syriacs were known for their language abilities and were accepted into the predominantly Muslim society of that time. The translators were mostly proficient in more than two languages and had many aids in the forms of glossaries and some sort of dictionaries to do their translation works.⁵⁸ This shows how advanced and dedicated they were in handling their work. Other non-Muslim

scientists who made their name during this golden age includes Thabit ibn Qurra (826-901), a Sabian from Higher Mesopotamia(Turkey) who studied and lived in Baghdad, Sahl ibn Bashir al-israilli (786-845) from Tabaristan whose son Ali ibn Sahl also a famous scientist who later became a Muslim, Qusta ibn Luqa al-BaBa'albakki(860), a Greek Melkite Christian from Baalbek (Lebanon) and many others. Many non-Muslim scientists also flourished in other centres such as in Persia, Andalusia (Spain), Egypt and other places.⁵⁹

While the expansion of knowledge was centered in Baghdad, other centers of learning were established under the local rulers who were under the influence of the Abbasid Caliphate, as in Egypt and Persia, or the independent territories in Andalusia (Spain) or in Bukhara. Andalusia were under the rulers of the toppled Umayyid Caliphate. Some of its descendants managed to escaped to Andalusia

The advances in knowledge continued further beyond the Abbasid Caliphate but it seems to have advanced at a slower pace. Lesser new findings were made but many improvements on the work of the earlier Muslim scientists were done. This may have been due to the devastation done by the Mongols who attacked many Muslim territories destroying the towns, villages (the libraries included) and the populace. The siege on Baghdad and the ransacking and the destruction of the city and the libraries and books by the barbarous Mongols must had a profound impact on the pursuit of knowledge. The barbarous acts of the Mongols must have destroyed numerous work done by numerous scientists, scholars and writers. Many new discoveries and new knowledge, rare books

and manuscripts may have been destroyed. The famous often told stories about how the Mongols threw thousands or maybe millions of books into the river in order for their hordes to cross a river near Baghdad.⁶⁰ Many scientists and new budding talents were killed or maimed by the merciless Mongols. Unexpected was what happened later to the Mongols. Never in the history of mankind the conqueror took the religion and the manners of the conquered. The Mongols became Muslims and adopted many of the traditions of the Arabs and the Persians. Initially a few of their rulers tried inventing a new religion which incorporated the teachings of the Mongols, Islam and others. The Mongols were not able to propagate widely their new religion, the local Muslims were not attracted to the new religion and thus the new religion became less popular with very few followers. The later rulers of the Mongols became better Muslims and tried to adhere to the Islamic code of life. Islam has shown its excellence and its special attributes with this unexpected turn of events.⁶¹

The first hospital in the Islamic Civilisation was probably the mobile dispensary which accompanied the Muslim armies in their expeditions. The first known hospital built, was in Damsyik in 706 AD by Khalifah al Walid of the Ummayid Caliphate. This hospital was a model to later hospitals built in its organization, equipping and staffing. The Abbasids also built hospitals in Baghdad and the first in Cairo was established at Al-Fustat by Ibn Tulun, the governor, in 872 AD. By the 12th century, the hospital had become a very advanced institution an example which is the Al Nuri Hospital built in 1156 AD by Nur Al din Zangi, was well equipped, with very good patient care and even a

library. The largest, Hospital Al Mansur was built in Cairo in 1285 AD[‡] by Sultan Qalaun, was very advanced with an excellent organization, amiable surroundings and wards for the diverse diseases and for convalescents. There were also laboratories, dispensary, out-patient clinics, diet kitchen, baths, library, lecture hall and a mussola (prayer hall). The treatment was given to all, rich or poor or slave without any charges. Some money was disbursed to the convalescent on their departure. The sleepless were provided with soothing music and storytellers were also hired maybe to lessen the boredom and anxiety of the patients as with the pleasant landscaping that was done.⁶² The author believes this is the first hospital of such nature ever built and really fit in the concept of total treatment that is physical and emotional treatment which even the so called sophisticated and modern hospitals of these modern days are rarely equipped with.

Conclusion

Without doubt pursuit of excellence was the norm during the Islamic Civilisation. The pursuit of excellence started from the time of the Prophet Mohamad SAW and continued during the *sahabahs*, *tabiin*, the various caliphates period. Many Muslim scientists and scholars were born during this period. Their achievements and dedication were outstanding. The fields that they covered were limitless and pioneering besides significantly improving the knowledge available then. They, the Muslim scientists paved the way for the European scientists to follow much later.

[‡] Ibrahim Syed from Islamic Research Foundation International in an article cited 1248 AD but Qalawun became the Sultan in 1279 AD. The author believes that the date given is more accurate from the overall facts that are available.

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CHAPTER 4

IBN SINA AS A CASE STUDY :

Introduction

In this chapter, the author will discuss Ibn Sina, presenting his background and education, the social conditions of his time and a brief history of the period that he lived to further elucidate and understand the factors that may have helped in his excellence. The environmental factors and geographical factors will also be presented to find a correlation, if there is, to his excellence. The food factor will be emphasized to show the effects of the staple and other foods to the achievement of excellence. Here, the author will present some verses from the Al Quran and the Al Hadith and studies done by scientists to support the proposition on the effects of food towards the health of the body and mind.

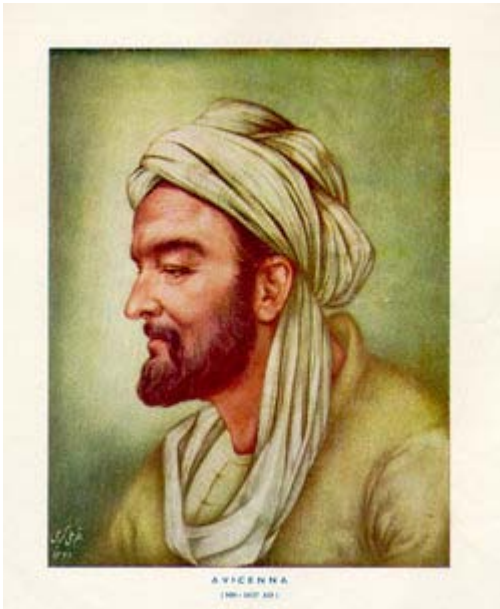


Figure 4.1 Ibn Sina or Avicenna

Source : [EncyclopediaWikipedia, www.wikipedia.com/ibnsina]

Accessed on 12.3.2007

4.1 Ibn Sina, The Man

Ibn Sina or his Latinized name of Avicenna as popularly known to the western world is accepted by many renowned scholars to be the most famous and brilliant Muslim Scholar.¹ The name of Avicenna according to Afnan, was the Hebrew version of Ibn Sina and later Europeanized to Avicenna.² The spelling of his real name in Arabic is ابن سينا. In English or *Bahasa Melayu*, some have spelt it as Ibnu Sina, Ibnu Sinna, Ibnu Siena³, Ibn-i Sina⁴ etc, maybe these were just the writers way of interpreting the Arabic name depending on the writers competency and understanding of the Arabic language. The more famous name being used nowadays is of Ibn Sina.

4.1.1 Background

Ibn Sina was born in the month of *Safar** 370 AH or August-September 980 AD in Afshana near Bukhara. He was named Abu Ali al-Hussain ibn Abdallah ibn Sina, أبو علي الحسين بن عبد الله بن علي بن سينا. The name may reflect the Shiá influence which revered Saidina Ali (*KaramAllahu Wajhah* : which means May Allah Bless his face) * and his descendants and thus the naming of the children normally will include the names of Ali, Fatimah, his wife and daughter of the Prophet Mohamad SAW, and his two children Hassan and Hussain. The Shiá's belief was prominent in Persia, which is now called Iran and the surrounding regions such as Iraq, nowadays Afghanistan, Uzbekistan etc and is still prominent to this day. Ibn Sina's father was stated by most writers to be of Persian origin. His famous calling of Ibn Sina is a common Arabic or middle eastern tradition of calling a person by the son of so and so or by attributing to the grandfather.

* *Safar* : a month of the Islamic lunar-based calendar. The exact birth date of Ibn Sina was not mentioned.

While some others were attributed to their place of origin such as, Salman al Farisi, a Persian (Farsi) *sahabah* of the Prophet Mohamad SAW, the famous Muhadithin (expert in Al Hadith), Imam Al Bukhari who was from Bukhara or named by his famous abode or some interesting character or information about him. It is a tradition used to better identify a person. When Ibn Sina was five, after the birth of his brother Mahmud (or Ali as mentioned in a treatise written by Ibn Sina from the bibliographies),⁵ the family moved to Bukhara where Ibn Sina had a greater opportunity to study. His father, Abdallah ibn Sina was a Persian from Balkh, Persia and was the governor of Karamaithan at the time of Ibn Sina's birth. Karamaithan was among the more important village under the rule of Amir Nuh ibn Mansur. Abdallah was said to be a man who loved knowledge, his house being the meeting place of learned men where various topics of knowledge were discussed. His mother, named Sitarah by Ibn Funduq in his "*Tatimat siwan al-hikma*" was a native of Afshanah. His father married Sitarah in Afshanah and lived there until Ibn Sina was five years old.⁶

4.1.2 Ibn Sina's Education

Ibn Sina's early education was in religious matters. The learning of the Al Quran, the basic religious knowledge and simple and common verses of the Al Hadith were among the first introduction to religious studies. He later studied other subjects such as didactic literature (*adab*) under several teachers⁷. According to Zainal Abidin,⁸ Ibn Sina also studied theology and *fiqh*. By the age of ten, he had memorized the whole Al Quran and many works of literature in Arabic and Persian. Many people were amazed at his capability at so young an age. In the Muslim world, all young children are taught the basics of the Islamic religion that is the *Taharah* (cleanliness and hygiene), the basics of

prayers and learning of the Al Quran. It is also common for young children to be taught some of the Al Hadith. His capability at so young an age shows Ibn Sina's level of intelligence which nowadays is called as a gifted child or prodigy. We can also deduce that he may have something close to photographic memory, being able to memorize so many facts. The advantage of memorizing the whole of the Al Quran is a significant blessing and Allah SWT and the Prophet has promised certain advantages for these special persons.. From the Al Quran, Surah Al Baqarah (The Cow), verse 269. [Al Quran 2: 269]⁹

يُؤْتِي الْحِكْمَةَ مَنْ يَشَاءُ ۚ وَمَنْ يُؤْتَ الْحِكْمَةَ فَقَدْ أُوتِيَ خَيْرًا كَثِيرًا ۚ وَمَا يَذَّكَّرُ إِلَّا أُولُو الْأَلْبَابِ ﴿٢٦٩﴾

269. He Granteth wisdom to whom He pleaseth; and he to whom wisdom is granted receiveth indeed a benefit overflowing; but none will grasp the Message but men of understanding.¹⁰

Some commentators translate *al Hikma* or “Wisdom” which means the Al Quran and Hadith *

His father was “reckoned” as an Ismailiyya and Ibn Sina and his brother were exposed to the Ismailiyya's discussions and deliberations about the soul and the intellect. Although he listened and understood their discussions, he stated that his soul would not accept the Ismailiyya's doctrines. The Ismailiyya's discussions were intellectual discussions traversing topics of the mind or intellect, philosophy, geometry and Indian calculations.

* Al Baqarah 2:269. Allah menganugerahkan al hikmah (kefahaman yang dalam tentang Al Quran dan As Sunnah) kepada siapa yang dikehendaki-Nya. Dan barangsiapa yang dianugerahi hikmah, ia benar-benar telah dianugerahi karunia yang banyak. Dan hanya orang-orang yang berakallah yang dapat mengambil pelajaran (dari firman Allah). [AlQuran Translation :: Indon]

Ismailiyya is a branch of Shi'ism, the other major branch being the Ithna Ashariyya (The Twelve Imams). In the middle of the ninth century, they had organized a secret, revolutionary movement designated as the da'wa, or mission. The overall aim of this religio-political movement of social protest was to uproot the Abbasids and install the *imam* recognized by the Ismailis. The Abbasids were still ruling in Baghdad then and thus this explains the secrecy of the Ismaili's discussions in Ibn Sina's father's house.¹¹

Ibn Sina's father also sent him to study from a vegetable seller who used Indian calculations. The vegetable seller was Al Mahmud al-Massahi, al-Massahi being translated by some as the Surveyor or Mathematician. According to Ibn Funduq, Ibn Sina also studied geometry and algebra under Al-Massahi. During this time he also studied Islamic jurisprudence from Ismail the Ascetic with his frequent visits to Ismail and Ibn Sina became a skilful questioner and was well-versed in the prosecution and rebuttal procedures as 'practiced by its practitioners.'¹²

When the philosopher, Abu Abdallah al-Natili arrived in Bukhara, he was invited by Ibn Sina's father to stay at his house. Al-Hakim Abu Abdallah Husain ibn Ibrahim al-Tabari al-Natili is written in Ibn Funduq as a philosopher from Natil in Tabaristan while ibn Abu Usaybiya named him as a physician. Al-Natili devoted his time to teaching Ibn Sina on the topics of philosophy, geometry. Ibn Sina studied under al-Natili the *Isagoge*, Prophy's introduction to the *Organon of Aristotle*. Ibn Sina studied the simple parts of logic under al-Natili while undertaking the deeper intricacies and the commentaries on

his own. He also studied the first five or six chapters of Euclid's *The Elements* (also called *The Elements of Geometry* by Ibn Al-Nadim), under al-Natili and then undertook the solution or understanding of the rest by himself. Under al-Natili also, he studied the introduction of *The Almagest (al-majisti)* of Claudius Ptolemy's *Syntaxis Mathematica* and proceeded to the geometrical figures and the rest again by himself. He then explained his understanding of the subject to al-Natili who Ibn Sina claims, do not really understand it. At this stage, al-Natili left to seek the patronage of Khwarazanshah Abu Ali Maamun ibn Muhammad in Gurganj. Ibn Sina by some accounts was about 15 years old then.¹³ It is maybe helpful if present day undergraduates studying geometry and mathematics to also study subjects such as philosophy and jurisprudence as Ibn Sina did.

Ibn Sina then put his effort into studying the natural sciences and metaphysics, studying the original text and commentaries available to him. He then proceeded to read books on medicine excelling it in a short time describing it as not the more difficult sciences.¹⁴ He thus began teaching it to even more distinguished physicians of his time. He began caring for the sick and it exposed him to the methods of medical treatment which can only be experienced and learned from practice. In addition to this, he also involved himself in jurisprudence by engaging in legal disputations.¹⁵

At the age of 16, he again dedicated himself to studying logic and philosophy. For one and a half years, each single day he stated, “devoted himself to it by compiling a set of files and stated that he studied, recorded and reexamined his work, filing accordingly the results and proof” in other words he thoroughly documented his works.. He persevered

until he managed to solve the problems that arisen. After mastering the logical, natural and mathematical sciences, he then concentrated on metaphysics by studying Aristotle's "*Metaphysics*" but was not able to comprehend the contents. He read up to 40 times and was able to memorize it but still could not understand, exclaiming that the subject was beyond comprehension.¹⁶ Reading a subject or sentence for 40 times has been ascribed by some to be a method for memorizing.

Ibn Sina later met a bookseller in the local book's bazaar who approached him to sell a book. He refused to buy the book thinking it was of not much use. The salesman then told him that the owner was in need of money and is putting it out for sale and thus Ibn Sina bought it for 3 dirhams. The book, *Intentions of Aristotle's Metaphysics*, an essay written by Abu Nasr Al-Farabi (870-950AD), whose real name was Muhammad ibn Muhammad ibn Tarkhan, was cited as the second teacher to Ibn Sina after Aristotle, on the subjects of metaphysics. He read the book and the gist of metaphysics dawned upon him and began to comprehend the *Metaphysics* of Aristotle. He was so happy and rejoiced in it by giving much alms to the poor the next day, as gratitude for God's gift as stated in his autobiography.¹⁷ This is a normal practice among Muslims when they received good news, blessed with a new born child or escaped from harm, as gratitude for Allah SWT's gift or leeway or kindness to him. It is part of being a person with "*Iman*" who understand his dependence on the Almighty Creator and thus showing his thankfulness by reciprocating the kindness shown to him, to his fellow men. From the Al Quran, Surah Ibrahim (Abraham) [Al Quran 14: 07]¹⁸

وَاِذْ تَأَذَّرَ رَبُّكُمْ لَئِنْ شَكَرْتُمْ لَأَزِيدَنَّكُمْ وَلَئِنْ كَفَرْتُمْ إِنَّ عَذَابِي لَشَدِيدٌ ﴿٧﴾

7. And Remember! your Lord caused to be declared (publicly): "If ye are grateful, I will add more (favours) unto you; but if ye show ingratitude, truly My punishment is terrible indeed." ¹⁹

Ibn Sina's acquisition of knowledge knows no bounds. During this time, Sultan Noh Ibn Mansur of Bukhara was down with a sickness which the sultan's doctors could not cure. Ibn Sina was recommended by them to the sultan and they together treated the sultan until he was cured. As a reward for his success, Ibn Sina was then appointed a court physician and he asked for permission to use the sultan's extensive library. Such request will only be made by a person who is really motivated and has a tremendous love for books and knowledge. The library was stocked with many rare books and well cataloged. The library has many rooms with each dedicated to a particular science. He made full use of the library and requested whatever books or topics of interest from the guardian of the library. By the age of 18 he was able to master a lot of topics from reading and studying the books and manuscripts available in the library and came to know the various scientists and their contributions.²⁰ At such a tender age of eighteen, if compared to today's situation, especially in Malaysia, most young men and women had only finished their secondary school level or doing their matriculation level and about to enter the universities and will require many more years as undergraduates and at post graduate level to understand and normally very few amongst them will be able to master a few fields at the same time. Ibn Sina was able to master and further more, able to write and comment in depth on many fields, a feat which is most extraordinary for a brilliant young man in any period of civilization. **What did Ibn Sina had which the Muslims**

students in Malaysia or anywhere else, do not have? At this moment, we know his education started at the age of 5, his first knowledge was about religious affairs which included the learning of the Al Quran and the Al Hadith. He was an Al Hafiz at ten. He had a father who loved knowledge and sent him to study under learned people.

At the request of a neighbor by the name of Abu Al Hasan Ahmad ibn Abdullah also called The Prosodist, Ibn Sina wrote the *Majmu (Compendium or The Compilation)* covering all the sciences except the mathematical sciences. He was then about 21 years old and then wrote “*al-Hasil wa al-Mahsul*” (*The Import and The Substance*) in 20 volumes to comment on the books of sciences that he has read. He wrote this book to fulfill the request by Abu Bakar Al Baraqi. Some literature mentioned it as Al-Baraqi’s son, Abu Abdullah Muhamad Al Baraqi. Al Baraqi was of noble descendents and was renowned as a lawyer, Quran commentator, poet and a ‘sufi’. Ibn Sina also later wrote a book on ethics called “*al-Birr wa al-Ithm*” (*Good Work and Evil*).[Gohlman]²¹ After this period Ibn Sina claimed that he acquired no new knowledge but a maturing of his knowledge.²²

4.1.3 Ibn Sina’s Exploits

History of The Period of His Life

In order to understand and appreciate the brilliance of Ibn Sina and his continuous achievements, it is necessary to look into the happenings before and during Ibn Sina’s time. We begin from the beginning of the ninth century from the time of the Tahmids

who ruled Khorasan (Persia) between 809-873 AD. The Tahmids were of Arabic origin. From their capital in Nashapur, their territories extended eastwards to the frontiers of India. The Tahmids were later defeated by Yaqub, son of Laith who was also known as ‘al Saffar ‘ (The Coppersmith) who founded a short lived dynasty and ruled over a greater part of Persia up to the fringes of Baghdad. He openly defied the Khalifah in Baghdad and took an army to capture Baghdad but failed. His dynasty ended when his brother who succeeded him was defeated by the Samanids in 900 AD. This period when Persians start to rule over Persian territories was called the Persian Renaissance* (between 900-1200 AD), where these rulers had loose or no allegiance at all to the Abbasid’s Khalifahs in Baghdad. The Samanid dynasty was founded by Saman Khudat, a Persian Zoroastrian who converted to Islam, Saman Khudat rose to power in Transoxiana and made Bukhara his capital. He then defeated the Saffarids and extended his rule from the Jaxartes near Baghdad and from the Caspian to the borders of India. The dynasty lasted for about a hundred years and the rulers were well known for being liberal and patronizing the scholars such as the poets, theologians and philosophers including Ibn Sina. Late in the tenth century, when Ibn Sina was born in 980 AD, there were three other local dynasties. These four dynasties determined many of the events of Ibn Sina’s life when he was given patronage by some while persecuted by others.²³

The Ziyarids established their power in 928 AD in Tabaristan around the Caspian. They ruled for over a century from which some of the rulers were known as scholars themselves and contributed to the promotion of learning. To the west of the Ziyarids

* Persian Renaissance : During this period Persians manage to rule over their regions and moved towards the use of the language and culture more predominantly as compared to the Arabic origins or influenced of the previous rulers [Afnan]18

were the Buyids, who were of Persian origin and they also reigned for about a hundred years. They were more powerful and conquered the whole of western Persia. Ala al-Dawla was their most successful ruler and a great patron of scholars and poets especially on theology and jurisprudence and was a great contributor to the Persian Renaissance. between 900-1200 AD. The Ghaznavid dynasty was founded by a Turkish slave of the Samanids who fled from Khurasan to established their base in Ghazna. The third ruler, Mahmud of Ghazna conquered almost the whole of Persia proclaimed himself as Sultan. He gathered the acclaimed poets and scholars of the time, spending very generously on them. He was also known as “The kidnapper of scholars“ for his sometimes forceful internment of some scholars. The dynasty although of Turkish origin, was credited with the eastward expansion of Persian literature.²⁴

When Ibn Sina was about 22 years old, in about 1002 AD²⁵ his father died. Ibn Sina was thus free to govern his own affairs and took an administrative post with the Sultan’s government. Ibn Sina in his own words “ Out of necessity he forsaked Bukhara for Gurganji “. According to Ibn Funduq, when the affairs of the Samanids became disordered and maybe to escape persecution because of his Ismaili’s origin, Ibn Sina left for Gurganji, in 1002AD. The administration was probably under the regime of Illig Noor who disposed of Nuh ibn Mansor’s son Abu AlFawaris Abdul Malik. Illig Noor started the Qarakhind dynasty in 999 AD.²⁶ According to Afnan, Ibn Sina’s move to Gurganji may have been due to his fathers Ismaili background which were frowned upon by the Turks who were gaining ascendancy during that time.²⁷



Fig 4.2 Map of Ibn Sina's Travels

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In Gurganji, Abu Husayn Al Suhayli or better known as Al Sahli , an amateur scientist, was a minister under the Amir Ali bin Maamun. Al Sahli presented Ibn Sina to the Amir and was appointed to the court with a monthly salary which he said was enough for a man like him. . He then moved to Nasa, a city in Khorasan south of Gurganji and then to Baward, a city a day's journey from Nasa. Both cities were under the jurisdiction of the Khwarazamshah . According to Nizam Arudi,²⁸ Ibn Sina's move was due to Mahmud of Ghazna's demands on the Khwarazamshah Abul Al Abas Maamun ibn Maamun to send a number of learned men, Ibn Sina included, from Gurganji to Ghazna. Some of the learned men went willingly or resignedly to Mahmud's court. Ibn Sina and Abu Sahli Al

Masihi refused and fled hoping to be in the court of Amir Qabus, Shams Al Melahi Qabus bin Wushmagir. Amir Qabus was aligned to the Samanids and was known as a poet and patron of poets and scholars. Ibn Sina's escape was a difficult journey across the desert south of Gurganji. According to Gohlman this account was inaccurate due to inaccuracies in dates and circumstances.²⁹ From Baward, he went to Tus, then to Samanqan, to Jajarm and finally reaching Jurjan. In Jurjan, Amir Qabus was desposed and imprisoned. Upon news of this Ibn Sina departed for Dihistan where he became very ill and thus returned back to Jurjan.

Abu Ubayd al Juzjani joined him in Jurjan and recited a poetic verse describing Ibn Sina's state of affairs.

“ When I became great, no country could hold me

When my price went up, I lacked a buyer “

Abu Ubayd Abdul Wahid ibn Muhammad Al Juzjani was a pupil, faithful companion and biographer of Ibn Sina.. He was credited with the addition of some sections in the topics of mathematics in the *Najat* and the *Alai* and also wrote some commentaries on the *Qanun* and *Hayy Ibn Yaqzan*. Ibn Funduq quoted a comment from one of his teachers “ Abu Ubayd seemed like a novice (*murid*) rather than a learned pupil (*mustafid*) “³⁰

In Jurjan Abu Muhammad al Shirazi, an amateur scientist bought a house nearby for Ibn Sina to live in. Abu Ubayad stayed with Ibn Sina and studied *the Almagest* under him and wrote Ibn Sina's dictations on logic, *al-Mukhtasar al-Awsat (The Middle Summary on Logic)*. Ibn Sina then wrote for Al Shirazi *al-Mabda' wa al-Ma'ad (The*

Origin and The Return) and *al-Arsad al-Kulliya* (*Comprehensive Observations*). He also wrote the first part of *the Qanun* and *Mukhtasar al-Majisti* (*Summary of the Almagest*). He also wrote some treatises and books in the mountain country, the province of Jibal or ‘*ard al-jabal*’ or *al-iraq al-ajami* (Persian Iraq).³¹

In 1014 AD Ibn Sina moved to Ray a capital city in the province of Jibal. Here he served under al-Sayyida, the widow of Fakhr al Dawla Ali and mother of the still young Majid al-Dawla. She fully controlled Ray until her death in 1028 AD. Ibn Sina also wrote *The Return* in Ray. When al-Sayyida died, the troops mutinied against Majid al-Dawla who then asked for assistance from Mahmud of Ghazna. Mahmud attacked Ray and imprisoned Majid al Dawla. Ibn Sina, maybe fearing for his independence and life because of his earlier escape from Mahmud of Ghazna had escaped to Qazwin and then to Hamadan to run away from being captured by Mahmud of Ghazna.³²

In Hamadan Ibn Sina worked for Kadhabanuyah, managing her business affairs. Kadhabanuyah according to some historian refers to al Sayyida. . When Sham al Dawla was afflicted with colic, he summoned Ibn Sina to treat him. Ibn Sina succeeded in curing Sham al Dawla and was rewarded with robes of honour and became his companion, staying with the Amir Sham al Dawla for forty days. Ibn Sina then returned to his own house. Sham al Dawla or Abu Tahir ibn Fakhr al Dawla Ali was appointed the amir or governor of Hamadan and Qizmisin under the domain of Majid al Dawla, when his father died. He ignored Majid al Dawla or al Sayyida’s rule and acted independently of them. When Sham al Dawla attacked Qirmisin which was seized by

Annaz or Husam al Din Abu Shawk Faris ibn Muhammad ibn Annaz, Ibn Sina accompanied him but later was asked to be the Vizier in Hamadan. The soldiers mutinied against Ibn Sina ransacking and seizing his belongings and demanding the Amir to execute him. The compromise by the Amir resulted in Ibn Sina being banished from Hamadan. Ibn Sina during this time had hidden himself in the house of Syeikh Abu Saad ibn Dakhdul for about forty days. When Sham al-Dawla was again afflicted with colic, he again summoned for Ibn Sina's help. The Amir apologized profusely and later appointed Ibn Sina to be the Vizier again. During this second viziership, Ibn Sina wrote *the Shifa* (Healing) and started teaching it and the first book of *the Qanun* that he has written in his house. During the day he managed the affairs of the Amir as Vizier and thus only managed to teach his pupils in the evening.. The pupils gathered at his house each night reading and studying under his tutelage. After each night session there were treated with feastings and singing.³³

Sham al Dawla later attacked al Tarum and during this expedition, was again down with colic and aggravated by other ailments which crops up due to unheeded advice from Ibn Sina. The troops retreated with him in a litter to Hamadan but he died before reaching it. His son Sama al Dawla or Abu al Hasan Ali who became the new Amir was requested to appoint Ibn Sina as Vizier but Ibn Sina refused and wrote secretly to Ala al Dawla desiring to serve under Ala Al Dawla. He resided secretly in Abu Ghalib the Druggist's house where he finished *the Shifa*. To finish *the Shifa* he wrote the main topics for two days without referring or consulting any books, notes or person. He later examined each point and wrote his commentaries. He wrote up to 50 pages a day

finishing the Physics and Metaphysics parts except the topic on Animals in twenty days and he then started writing the first part of the Logic.

Taj al Mulk the Vizier appointed after Ibn Sina's refusal, became jealous and suspicious of Ibn Sina's correspondence with Ala al Dawla. A search for Ibn Sina was ordered and when an enemy of him informed Taj al Mulk of his hideaway, he was seized and imprisoned in a castle called Fardajan. In the castle he recited an ode

“ As you can see my going in is a certainty”

“ And all the doubt is on the point of getting out “

He wrote *the Guidance* and *Hayy ibn Yaqzan (Alive, the Son of Awake)* while imprisoned in this castle. He was imprisoned for four months until Ala al Dawla's seizure of Hamadan. Taj al Mulk withdrew to the Fardajan castle and then returned to Hamadan with Ibn Sina when Ala al Dawla marched back to Isfahan. Ibn Sina stayed in Alid al Alawi's (a Shiite) house, and wrote *Cardiac Remedies* dedicated to al Shariff al Said Abu al- Husayn Ali ibn al Husayn ibn al-Hassan (supposedly by some to be Alid al Alawi). During this time Taj al-Mulk tried enticing Ibn Sina with rewards and promises but without success.³⁴

Ibn Sina then fled to Isfahan with Abu Ubayd, Ibn Sina's brother and two slaves, disguising as Sufis'. They reached Tehran near Isfahan after a very difficult journey. Ibn Sina's friends and some courtiers of Ala al Dawla was present to receive his entourage. He then resided in the house of Abdullah ibn Bibi in the Kuy Kunbadh (suburb?). Amir Ala al-Dawla accorded Ibn Sina due respect for his abilities and even designated Friday

night as a night for learned discussions in his court. The discussions between the scholars of different classes and discipline invited to Ala al-Dawla's court were carried out in his presence. According to Abu Ubayd, Ibn Sina was never outclassed in these discussions in any of the sciences. In Isfahan, Ibn Sina summarized *the Euclid, the Arithmetics* and the music. He also completed the Logic in *the Shifa* and *the Almagest*. In *the Almagest* he presented materials which according to Abu Ubayad, was unprecedented.³⁵

During one of the discussions, some one pointed out the discrepancies in the ephemerides compiled according to ancient astronomical observations. Amir Ala al-Dawla ordered Ibn Sina to investigate these discrepancies providing an allocation for the investigation. Ibn Sina set about to investigate it and assigned Abu Ubayd to procure the necessary instruments needed by hiring skilled craftsmen to make them. Ibn Sina was able with the help of the instruments to solve these problem of the discrepancies. According to Abu Ubayd these discrepancies were the results of many journeys and the attendant problems.³⁶ According to Ibn Khaldun in his *Muqadimah*, he wrote that little concern was accorded to astronomical observations, most of it were done during Khalifah al-Maamun of the Abbasid in Baghdad. The work done was incomplete and so was the instrument used for the observations, the armillary sphere.³⁷ Ibn Sina also wrote *the Ala'i* in Isfahan.

Abu Ubayd commented that during his twenty five years accompanying Ibn Sina, not once did Ibn Sina examine a new book from start to end but rather directly going to the most difficult passages and the intricate problems in the book, examining the author's

opinions and problems. He did this to ascertain his level of knowledge and understanding of the subject written by the author. One day in the presence of the Amir, Ibn Sina was talking about philology when Abu Mansur al-Jabban commented that Ibn Sina was a philosopher and physician and does not know much about philology. Ibn Sina was infuriated by this comment and devoted himself to studying philology for three years. He was then able to prove his command of philology was much more than that of Abu Mansur al-Jabban who then apologized and retracted his earlier statement. Ibn Sina then wrote a book on philology which he called *The Arabic Language* but the book in its draft stage was difficult for others to understand. Ibn Sina finished *the Shifa* by writing the topics on Plants and Animals while accompanying Ala al-Dawla in one of his numerous expeditions to attack Sabur Khwast. He also managed to write *the Najat* on the same expedition. Ibn Sina also accompanied Ala al-Dawla's attack on Hamadan earlier and was a constant companion in these expeditions. He also wrote *The Judgment* but the book was lost when Sultan Mas'ud soldiers ransacked Ibn Sina's baggage.³⁸ Under these trying and difficult situations, Ibn Sina still managed to exercise his intellectual mind and power of concentration and still able to write these books. The battles in the front, with heat and uncomfortable quarters as compared to modern days camps for soldiers or their commanders with had fans and air conditioning. He was able to write with no reference materials or very few indeed if there were, under these circumstances. This just shows the extraordinary abilities and his intense power of concentration and exceptional memory. One factor which is maybe lacking in the later scientists and unfortunately the author himself, is this exceptional ability of intense concentration. Much information and knowledge presented before us escaped us because

of this inability to focus and concentrate. We should learn from Ibn Sina's capabilities and try to emulate them. Perhaps his ability as an Al Hafiz could have given him this quality. An Al Hafiz needs to memorize and be able to recite back all the 605 pages of verses with the correct *tajwid** and able to continue a recitation from any verse of the Al Quran and needs to recite the whole of the Al Quran on a regular basis, weekly or fortnightly. This will surely require the ability for intense concentration and dedication in order to complete and maintain his ability to memorize.

In the expedition against Tash Farrash, a commander of Sultan Masud troops at al-Karaj, Ibn Sina was stricken with colic. He administered his own medications over zealously because of the probability of retreat of Ala al-Dawla forces. He wanted to be strong enough to accompany Ala al-Dawla's retreat to Idhaj when Ala al-Dawla forces were routed. Although strong enough to travel, other complications such as seizures and ulcerated intestines persisted him.³⁹

His medications were made under his prescriptions by his assistants, doctors trained by him or by his servants. According to Abu Ubayd, the assistant instructed to prepare Ibn Sina's medications, whether out of negligence or on purpose put extra dose of celery seeds which resulted in aggravated abrasion of the intestines. While preparing for another medication, mithridate, his slaves put a lot of opium into the preparation, hoping that Ibn Sina's illness would worsen and maybe die from the illness and its many complications as a result of tampering of the medicine. According to Abu Ubayd, the servants have been stealing from Ibn Sina's coffers and wish to cover up their misdeeds.⁴⁰

* *tajwid* : the correct way of reading the Al Quran

In this condition, Ibn Sina was carried to Isfahan, where he then treated himself until he was strong enough to walk and attend the court of Ala al-Dawla although not completely cured. He then accompanied Ala al-Dawla expedition to Hamadan and he was again stricken down with his illness. In Hamadan, realizing that his condition was critical he stopped treating his illness and said “ The governor who used to govern my body is now incapable of governing, and so treatment is no longer of any use “. Here maybe Ibn Sina was talking as doctor and felt that his body system had failed. His condition remained critical for a few days before passing away at the age of 58 in Hamadan.⁴¹

4.2 Environmental/Geographical factors

Bukhara and the surroundings area



Fig 4.3 Physical map of **Central Asia** from the Caucasus in the northwest, to Mongolia in the northeast Accessed on : 15.6.2010

Central Asia is an extremely large region of varied geography, including high plateaus and mountains (Tian Shan), vast deserts (Kara Kum, Kyzyl Kum, Taklamakan), and especially treeless, grassy steppes. Much of the land is too dry or too rugged for farming. The Gobi desert extends from the foot of the Pamirs, 77° east, to the Great Khingan (Da Hinggan) Mountains, 116°-118° east.



Fig 4.4 : Map of Buxoro Province

Source :[en.wikipedia\Buxoro] Accessed on : 15.6.2010

Bukhara (بُخارا in Persian, **Buxoro** or **Byxopo** in Uzbek (the Cyrillic alphabet was officially phased out for Uzbek after independence); Byxapa in Russian; also Boxara in Tatar) is one of the major cities of Uzbekistan, and capital of the Bukhara region (Bukhoro Wiloyati). The majority of the city's population are Persian-speaking Tajiks. Bukhara and Samarkand are the two major centers of the Tajiki-Persian culture and history.

The **Kyzyl Kum** (Uzbek: *red sand*; also called *Qyzylqum*) is a desert in Kazakhstan and Uzbekistan. It is located near the city of Bukhara. It covers about 298,000 km² (approximately 115,000 square miles), making it the 11th largest desert in the world. It is known to have deposits of gold and natural gas. There are agricultural settlements along

the rivers and oases. The Midwestern United States and most of Russia are examples of areas of the world with continental climates, which do not exist at all in the Southern Hemisphere due to the lack of broad land masses at high enough latitudes there.⁴²

The staple food of the period and that region until now remains basically the same that is cereal based food. Bread from wheat flour, barley or other cereals are the main diet with milk from sheep and camels constituted the main liquid diet. Wheat and barley based food have been expounded as very nutritional and contains components that promotes health and mental capabilities. Wheat grass made into a cereal drink have been reported in the hadith as a health drink which was consumed by the Prophet Muhammad SAW besides eating bread made from barley.⁴³

Sheep's milk other than cool water was a favorite drink of the Prophet.⁴⁴ Sheep's or goat's milk virtues has been expounded by many from the earliest of time. Recent studies have proven these virtues and lately it has been used as a remedy or cure for leukimia. In a recent study by Margarita S. Campos and coworkers, it was found out that consumption of caprine milk (sheep's or goat's milk) improves the metabolism of calcium and phosphorous as compared to consumption of bovine milk (cows milk). They recommended the consumption of caprine milk (sheep and goat's milk) for the public.⁴⁵ In another study by Maria J.M. Alfe'rez and co workers, it was found that the iron bioavailability improves when consuming goat's milk as compared to cow's milk and suggested that a goat milk diet will reduce Fe-deficiency anaemia."⁴⁶ An article

entitling, *Goat milk in human nutrition* by G.F.W. Haenlein from Newark University, detailed many of the benefits of goat milk and its products to human. Some of the benefits include the use of capric, caprylic acids and MCT (middle chain triglycerides) which have become established as medical treatments for many clinical disorders such as premature infant nutrition, non-thriftiness of children, infant malnutrition, gallstone, coronary by-pass, epilepsy and many others. This is due their special metabolic ability of providing direct energy.⁴⁷

The fruits abundant around these regions are dates, grapes, pistachios, citrus fruits, olives etc. The fresh dates, rhotab from Iran and the surrounding region is very famous nowadays especially during the fasting month, Ramadan. Dates have been reported in the the Al Quran and Hadith as having many virtues and being the cure for many diseases. In the Al Quran Surah Maryam verse 25, dates or rhotab(fresh dates) was mentioned.

[Al Quran 019:25]⁴⁸

وَهَزَىٰ إِلَيْكَ بِجِذْعِ النَّخْلَةِ تُسْقِطُ عَلَيْكَ رَطْبًا جَنِيًّا ﴿٢٥﴾

25. "And shake towards Thyself the trunk of the palm-tree: it will let fall fresh ripe dates upon thee."⁴⁹

This verse concerning Maryam was revealed when Maryam was in seclusion and bearing her son the Prophet Isa Al Masih *. The voice told her to shake the trunk of the palm tree which is beyond comprehension, as the palm tree is very stout and a very strong man

* Maryam is known as Mary and Prophet Isa Al Masih is known as Jesus in Christianity.

would not be able to shake it much less to make the fruits fall, Allah's Will work in wondrous ways and human effort is minute in comparison but the reward is many fold . Why the date palm trees of all trees? This is a clear sign from of Allah The Almighty on the benefits of dates to the humankind. Some scholars infer from this verse that rhotab (fresh dates) with its nutritious value is beneficial to a pregnant woman and helps to ease the process of childbirth. There are many stories from the Hadith about the virtues and benefits of the date fruits and many more stories narrated about how man survived on a few dates and water only for many days and according to some account for many years..

From the Hadith .:

Narated By 'Aisha : That she said to Urwa, "O, the son of my sister! We used to see three crescents in two months, and no fire used to be made in the houses of Allah's Apostle (i.e. nothing used to be cooked)." 'Urwa said, "What used to sustain you?" 'Aisha said, "The two black things i.e. dates and water, except that Allah's Apostle had neighbors from the Ansar who had some milked she-camels, and they used to give the Prophet some milk from their house, and he used to make us drink it." ⁵⁰

Researches done by many, have proven the benefits and the contents of these fruits. A common food of these regions is the helva, a candy made from pistachios and other ingredients. Pistachios have been reported by many researchers as having constituents which are necessary for the health of the body. ⁵¹

Raisins which are made from dried grapes have also been described in the Al Hadith and mentioned as helping the development of the brain. The students studying to become a 'Hafiz' (a person who memorized the whole of the Al Quran) are recommended to consume raisins daily to increase their mental capabilities and thus able to memorize the whole of the Al Quran.⁵²

Recent studies have proven the benefits of the consumption of the raisin and have been advocated as a mind building food. The Alzheimer Association in Austin, Texas in their website recommends food which is high in Vitamins " Vitamin E, or vitamins E and C together, vitamin B12 and folate (content of raisins) may be important in lowering the risk of developing Alzheimer's disease."⁵³ These vitamins and compounds are found in raisins.⁵⁴ Ancient physicians prescribed raisins as potions that could cure everything from mushroom poisoning to old age.⁵⁵ Raisins are also recommended in ayurvedic medicine as beneficial to the brain beside the lungs, colon and increasing of fertility among others.⁵⁶ Steve Gillman his book "*A Book of Secrets*" recommended some interesting suggestions to increase brain power. Some of his recommendations are :

1. Eating foods high in antioxidants. Antioxidants are chemicals that protect the cells from free radicals which can cause the deterioration of the cells, including brain cells (age-related) decline. Examples of foods high antioxidants include: prunes, raisins, blueberries, blackberries, garlic, kale, cranberries, strawberries, spinach, and raspberries..

2. Avoid diabetes. Since the development of diabetes coincides with lower IQ scores. In other words, if you want to maintain your brain power, follow your doctors dietary recommendations for preventing or treating diabetes.
3. Eat food rich in fibers. Fibrous foods can help relieve constipation. Toxic build-up in the body and brain can cause "brain fog." ⁵⁷

Antioxidants which are considered as healthy chemicals, can dramatically reverse memory loss, restore motor coordination and balance. It helps clean the brain from free radicals that cause cell deterioration. ^{58*}

Research have shown that raisins can maintain and increase energy level of athletes. Raisins can sustain the blood sugar levels, to close to fasting after three hours, whereas glucose and table sugar caused a drop to levels significantly lower. ⁵⁹ In another work, it was suggested that the consumption of snacks with raisins and nuts combinations, will supply a steady fuel levels and maintain low levels of circulating insulin for children's activities thus optimizing the child's activity but may also be useful in preventing obesity and type 2 diabetes, which have become common among America's youth. ⁶⁰ Another study carried out by Spiller and coworkers showed that sun-dried raisins are an effective, practical way to maintain blood sugar levels and support the demand of energy in young players during sports activities. ⁶¹ In a study to investigate the effect of a plant-based diet high in phytochemicals, unsaturated fatty acids and dietary fiber, on the level of

* Reference: Book: *Your Miracle Brain* by Jean Carper

cholesterol oxidation, sun-dried raisins, as part of a diet rich in whole grains, nuts, seeds and other unrefined plant foods, affect the level of cholesterol oxidation in the blood and may help protect against atherosclerosis and may help reduced the risk of cancer.⁶² Raisins are also rich in phenolic compounds such as quercetin etc which are protective antioxidants and helps in the relieving of heart diseases and cancer.⁶³ Raisins also contain boron in comparatively large quantity with respect to other fruits and the United States Food and Drug Administration recommends in their recent nutrition guidelines for a higher intake of boron in the daily diet intake.^{64, 65} Boron is also figuring very prominently in recent researches to cure cancer.⁶⁶ Raisins were also found to help in oral hygiene, being good for the teeth and gums.⁶⁷

The region suurounding Bukhara is also famous for their very high quality honey. The rugged and mountainous terrain and the type of vegetation are most suitable in producing the best honey. Honey has been emphatically stated in the Al Quran and the Al Hadith as having many virtues and cure for various illness. In the Al Quran there is a surah{chapter} called the Bee which clearly states the attributes and benefits of honey produced from the bee. From the Al Quran Surah An Nahli (The Bee) verses 68-69

[Al Quran 016: 68-69]⁶⁸

68. And Thy Lord taught the Bee to build its cells in hills, on trees, and in (men's)
 habitations; 69. Then to eat of all the produce (of the earth), and find with skill
 the spacious paths of its Lord: there issues from within their bodies a drink
 {honey} in varying colours, wherein is healing for men: Verily In This is a Sign
 for those who thought. ⁶⁹

There are several ahadith which mentioned the honey and its benefits among them are::

1. In a hadith narated by 'Aisha : Allah's Apostle used to love sweet edible things and honey.⁷⁰
2. In another hadith narated by Ibn 'Abbas : (The Prophet said), "Healing is in three things: A gulp of honey, cupping, and branding with fire (cauterizing)." But I forbid my followers to use (cauterization) branding with fire."⁷¹

Olive fruits and its oil is also a common dietary intake in theser regions. Ibn Sina in his *Al Qanun*, mentioned it as a blessed tree. The Olive tree is mentioned in the Al Quran and Al Hadith, its fruit have also many benefits for mankind. In the Al Quran from surah An Nur (The Light) verse 35

[Al Quran 024: 035]⁷²

35. Allah is the light of the heavens and the earth. the parable of His light is As if there were a Niche and within it a Lamp: the Lamp enclosed In Glass: the glass As it were a brilliant star: Lit from a Blessed tree, an Olive, neither of the east nor of the west, whose oil is well-nigh luminous, though Fire scarce touched it: light upon Light! Allah doth guide whom He will to His Light: Allah doth set forth parables for men: and Allah doth know all things.^{* 73}

* ' Blessed Tree ' In an Indonesian translation : lampu itu dinyalakan dengan minyak dari pokok yang banyak manfaatnya, ie the lamp is lighted from oil of a tree with many benefits

Olive trees have been blessed by Allah the Creator and have been known to live more than a thousand years and still productive with the fruits from the older trees producing the best fruits and thus the higher quality grade of oil.

The food consumed in these regions have good nutritional values for the development of the brain. It is highly probable that these were also the food consumed during Ibn Sina's time. Apart from his father's influence and also the people surrounding him and the early religious education which included memorizing of the Al Quran, the consumption of these foods could be an additional factor contributing to the making of Ibn Sina. Would the benefits that these food are known to provide help our children of today so that they will be able to "accept" knowledge easily, able to understand and then apply their knowledge usefully and correctly.

4.3 Contributions and Bibliography of Ibn Sina

To further understand and really appreciate the extent and brilliance of Ibn Sina, it is necessary to present some of his work and ideas. In the following paragraphs, the author wish to list out some of Ibn Sina's contributions and vast writings. His writings were his greatest contributions to mankind from which he discussed and wrote his opinions, observations and results of his many experiments. He wrote on many varying topics from the sciences, such as medicines, mathematics, plants, animals, physics, astronomy, music and topics such as meta physics, philosophy, literature, philology (language), religion and many more.

4.3.1 Contributions

Among the significant contributions, besides the voluminous written works, by Ibn Sina which were far in advance of his time were as follows :

1. Ibn Sina suggested that diseases can be spread through water and that the air can be infected. He explained that in the water and air, there are minute animals which cannot be seen by the human eyes. He was very closed to the much later discovered microbic theory.⁷⁴
2. Ibn Sina taught his students the theory of vision where the form (the ray from) of an object enters into the eyes and was transmuted by the transparent body or lens.⁷⁵
3. He suggested that as a result of the above that the speed of light must be finite.⁷⁶
4. Ibn Sina invented an instrument for observing the coordinates of a star.⁷⁷
5. Ibn Sina developed a theory of motion which some commented similar to Newton's first and second law of motion.^{*78}
6. Ibn Sina's book, *The Canon of Medicine* was the first in describing experimental medicine and formed the basis for clinical pharmacology.*
7. Ibn Sina was the pioneer of neuropsychiatry.*
8. Ibn Sina was a pioneer in psychophysiology and psychosomatic medicine.*
9. Ibn Sina was the first to described chemical process of steam distillation and invented the refrigerated coil.*
10. Ibn Sina refuted the transmutation of substances believing the metals differ in a fundamental base.*

* Same reference

11. Ibn Sina's influence on western philosophy was extensive with followers among many western philosophers such as Thomas Aquinas, Roger Bacon, Galilei, Descartes and others.*
12. Ibn Sina's philosophy became known as the Avicennian Philosophy

Ibn Sina's contribution were numerous besides what are stated above, among other contributions were in geology, identifying of meningitis, inventing a measuring device⁷⁹ etc.

4.3.2 Ibn Sina's Philosophy

Ibn Sina, according to De Boer^{80*}, “ the great philosopher of accommodation in the East, who knew how to synthesize what he learned throughout his travels and experiences and present them in an intelligent yet understandable form.” Ibn Sina's influence in philosophy was due to his introduction of the characteristics of being, essence and existence and thus the distinction between them. This invention led to the scholastic tradition of proving the existence of God and also of contingency, necessity and possibility. Ibn Sina is regarded as the foremost Islamic philosopher and among the first to correlate philosophy and religion.⁸¹ He claimed his philosophy teachers to be Aristotle and Al Farabi, attributing Al Farabi's book *Intentions of Aristotle's Metaphysics* towards his understanding of Aristotle's metaphysics.

* De Boer (1904)

Ibn Sina was not bound by any philosophical system, he used what he favoured and sidelining some others. He expanded on the Neoplatonic concept of emanation while rejecting the pre-existence of the soul. He used Aristotelian logic to expand his arguments but was critical of “ a substance consists of form and matter.” Ibn Sina preferred the shallow paraphrases of Tharmitius which resulted in him being called ‘the philosopher of accommodation in the east.’

Ibn Sina in his cosmology put God as the Creator, ie the First Cause, the necessary Being from whom the 10 intelligence was originated. The First intelligence goes down to the Active Intelligence and imparted to the human. This philosophy of devotion to the Creator and celestial hierarchy was readily accepted by the medieval European philosophers.*

Ibn sina’s major work on philosophy is the *al-Shifa* (The Cure); his philosophical encyclopedia, was focused on the curing of the soul while his *Kanun Fil Tibbs* (The Canon of Medicine) was more on the man’s body.

Ibn Sina through his philosophy attempt to build philosophical system that goes in harmony with the religious doctrines and culture and trying to provide a philosophical perspective to certain religious doctrines. Through his tremendous work and dedication, Islamic philosophy was developed, although there many critics and detractors. The critics and detractors consistently used Ibn Sina’s arguments and ideas to

* De Boer (1904),

form their own understanding of philosophy while also using it to criticize Ibn Sina and the other philosophers.

4.3.3 Bibliography

Ibn Sina's works, according to some amounted to 450 works, some of which were up to 12 volumes, having more than a thousand pages while some were in the form of treatises. Below we list some of the works with explanatory notes and the translation works done by some writers.

1. *al-Qanun fi'l-tibb* (Canon of Medicine), year wrote between 980-1037AD

Ibn Sina's most famous book, were translated into Latin and many other languages later. The book was in fourteen volumes and about a million words⁸² and over a thousand pages. It became a major text book and reference for study on medicine in many universities in Europe during the 15th century. Recently printed edited copies in Arabic are available today edited by I. a-Qashsh, Cairo, 1987. An Arabic edition of the *Canon* appeared at Rome in 1593, and a Hebrew version at Naples in 1491. In the Latin, version based on the original translation by Gerard of Cremona, in the 12th century and there were about thirty editions. Many commentaries were also added to the *Canon*.⁸³ At Montpellier University up to 1555, lectures continued to be given based upon the text-books of Rhazes and Avicenna. In the University of Brussels, surprisingly maybe by some curious oversight, the lectures based on Ibn Sina's *Al Qanun* persisted until 1909.⁸⁴

four parts ie Logic, Physics, Mathematics and Metaphysics, each part further divided into sections, among the many sections were Isagoge, Analytics, Sophistics, The Heaven, The Earth, Psychology, Soul, Plants, Animals, Geometry, Music, Astronomy etc. Many critical editions and translation were done but each covers a certain topic only unlike Ibn Sina's voluminous work. This book besides others greatly influenced many philosophers from the Muslim countries and Europe.

3. *Sirat al-shaykh al-ra'is* (The Life of Ibn Sina), 980-1037 AD. This book was Ibn Sina's autobiography which was supplemented with information from a biography by his student and faithful companion, Abu 'Ubayd al-Juzjani. A translation and critical edition of the autobiography was done by WE. Gohlman, Albany, NY State University of New York Press, 1974. A recent translation was done by D. Gutas, *Avicenna and the Aristotelian Tradition: Introduction to Reading Avicenna's Philosophical Works*, Leiden:Brill, 1988

4. *al-Isharat wa-'l-tanbihat (the Directives and Admonitions)*, (980-1037)

Gohlmann remarked that this work was the last and best work on philosophy that Ibn Sina wrote and held steadfastly to this. Different authors gave slightly different translation of name of the books in Arabic. Gohlman translated this as Instructions and Admonitions while Afnan translated it as The Directives and Admonitions while another author translated it as Remarks and Admonitions*

5. *Danishnama-i 'ala'i* (The Book of Scientific Knowledge), (980-1037)

One of Ibn Sina's work written in Persian.

6. *Kitab al-Najat*, (The Book of Salvation), written between 1014-20 AD

* The name of other works by Ibn Sina were also translated differently by different authors.

7. *Kitab al-Insaf (The Book of Equitable Judgment)*

Written in Isfahan, much of the book was destroyed by the army of Sultan Masud, which invaded Isfahan but parts of the book survived.

8. *Kitab al-hidaya (Guide of wisdom);*

9. *Al-Mabda wa-l-ma'ad (Book of the beginning and return)*

10. *Mantiq al- masriqiyyin (Eastern logic or The Logic of the Orientals)*

11. *Kitab al- hudud (Book of definitions)*

12. *Al-Mubahatat (Discussions)*

13. *Risala Hayy ibn Yaqzan (The story of Hayy ibn Yaqzan)*

14. *Risala fi'l 'ashq (Treatise on Love)*

15. *al-Mukhtasar al-Awsat" (The Middle Summary on Logic)*

16. *al-Arsad al-Kulliyya, (Comprehensive Observations)*

17. *Mukhtasar al-Majisti," (Summary of the Almagest)*

18. *Majmu' (Compendium)*

Ibn Sina claimed this book as his first attempt as an author at the age of twenty one.

19. *al-Hasil wa al-Mahsul, (The Import and the Substance)*

This was Ibn Sina's second book and was in about twenty volumes, covering topics on Islamic jurisprudence

20. *al-Birr wa al-Ithm, (Good Work and Evil)*

This work covers the subject of ethics and was written in Bukhara

21. *Kitab al-Ma'ad (Book of the return)*

This work was written in Ray

22. *Kitab al-Qulanj (The Book of Cholic)*

A medical work written while imprisoned in a fortress near Hamadan

23. *al-Adiwiyat al-Qalbiya* (*The Cardia Remedy*)

He composed this work in Hamadan

24. *Lisan al-Arab* (*The Language of the Arabs*)

25. *al-Mukhtasar al-Ashpar fil Mantiq* (*The Smaller Epitome*)

An essay on logic which was later placed at the beginning of the *Najat*. This work written in Isfahan created some controversy and he wrote a letter of fifty sheets in one night explaining his work to a group of scholars in Shiraz in southern Persia who had taken exception to some of the statements in the essay.

26. *al-Hikamat al-Mashriqiyya* (*The Philosophy of the Orientals*)

This book was seen by some as Ibn Sina's attempt towards the end of his life to develop his own idea of philosophy, deviating some what from Aristotle's philosophy.

27. *allul Haq* (*The Supplements*)

A commentary on the al-Shifa'

28. *Uyun al-Hikmat* (*Essential Philosophy*)

29. *al-Majzur al-Kabir* (*The Larger Epitome*)

A book on logic

30. *al-Qasidah*, (*The Ode*)

He wrote this topic on logic for al-Suhayli in Gurganj

31. *al-Khutbah al-Tauhidiyyah* (*Discourse on Unity*) in metaphysics

32. *Tadbir al-Jundu al-Mimliik wa al-askar wa arzakahum wa khuruj al mamlik*

(*The Management and Provisioning of Soldiers, Slave Troops and Armies and the*

Taxation of Kingdoms)

The title of the work explains itself and probably written during his tenure as a vizier.

33. *Qawanin wa Maaljat Thibbiyah (Medical Principles and Practice)*

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- ⁷⁴ Darmani, N.A. *Avicenna : The Prince of Physicians and A Giant in Pharmacology,* *The Journal of Islamic Medical Association of America, Volume 26, 1995,* pp 78-81
- ⁷⁵ ibid

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- ⁷⁷ ibid
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CHAPTER 5

ANALYSIS OF FACTORS FOR IBN SINA/S SUCCESS

Introduction

In this chapter, the analysis of the factors that were presented in Chapter 3 will be done. The factors of patronage and religion will also be discussed since it will have a significant effect on the pursuit of excellence. Ibn Sina's motivation to be excellence will be discussed and also the Hypothesis of the Iman will be correlated with Ibn Sina to ascertain if it is relevant to Ibn Sina.

5.1 Education

Ibn Sina's early education was religious in nature.¹ Arabic was the language of knowledge at that time in the Islamic world. The Persian language was, maybe the layman language and mother tongue but in this period Arabic language and culture were very dominant especially among the aristocrats and the learned men. Ibn Sina's early education was in Arabic and Persian. At the age of ten he was able to memorize the whole of the Al Quran and many literature and poetry in Arabic and Persian. All young Muslim children are taught the basics of the Islamic religion that is the basics of prayers, reading of the Al Quran and the *Taharah* (cleanliness and hygiene). It is also common for young children to be taught some of the Al Hadith. His capability at so young an age shows Ibn Sina's level of intelligence what some may nowadays call as a gifted child or prodigy. We can also deduce that he may have something close to photographic memory, being able to memorize so many facts. His tutoring by various creditable teachers in

various fields of study such as arithmetic, geometry, logic and the natural sciences further strengthen his basic understanding of the sciences.

His father being a governor under the Amir Nuh ibn Mansur has the resources to give his son the best of education available at that time. His dedication to give Ibn Sina the best education is shown in his efforts to get the best available tutors to teach his son. His father being a high government official has the resources, influence and the funds to hire well known scholars as private tutors. His father's house was also the meeting place of scholars where these scholars discussed various topics of knowledge. According to Ibn Sina in his autobiography, his father being an Ismaili also held discussions among the followers of the Ismaili sect at his house. They discussed various topics amongst which were about the soul and the intellect. Ibn Sina and his brother used to attend these discussions but could not accept the doctrine of the Ismaili. So at a very young age he was exposed to these intellectual discussions and was able to form his own opinion. This shows that he was able to comprehend the topics of these discussions. The exposure had been an intellectual exercise which further widens his knowledge and thinking skills which I believe is pertinent to the development and expansion of the mind.²

From what we can gleaned from his early education we can infer that the education can start at an early age. Abundant of resources and suitable environment and the role of the parents plays a very important factor in education. Exposure to intellectual discussions has the capability to expand the horizon of the mind and this helps to develop the interest

in knowledge. A conducive environment for learning is very important to develop the spirit and quest for knowledge in a child. A child has an inquisitive nature, he may have questions for everything around him and if these questions can be answered appropriately, he may be further motivated to ask and seek for more details. Appropriately means answering a question in such a way that can stimulate the mind to think and assess the answers.

5,2 Social and Geographical/Environmental Factors

5.2.1 Social Factor

The social environment during Ibn Sina time must have a great bearing in his life. The social environment at that time promotes the spread of knowledge. People of knowledge were honored and revered. People gathered around the people of knowledge to acquire, listen and even discussed what ever knowledge that were dispensed.

Every person in the society is expected to learn and acquire as much knowledge and accoladed for their level of knowledge. Children at an early age were sent to study under religious teachers. They are expected to learn to read and memorize many verses if not all of the Al Quran and Al Hadith and understand their meanings. The basic religious knowledge of the *fiqh* and the *syariah* are taught so that they can practice Islam as a way of life. Muslim children at a very young are exposed to the culture of knowledge. Their knowledge of their religion is very much more as compared to children from other religions about their own religion. At an early age they are provided with the motivation to pursue knowledge.

The society at that period helps to setup institutions for their children's early education. Informal classes of education were setup by the religious teachers and later formal educational institutions were setup. The society gave their support to these institutions in the form of funds, by providing places and land to build these institutions. With their support these institutions managed to sustain and later grew and some were recognized regionally or internationally and students from other regions and countries come to receive their education there. The institutions when they grew also expanded their curriculum to include non-religious related subjects. One very good example for this is the *Al-Azhar Jameyah* or University which was setup in the 10th century (984 AD). This university was set up and funded from the contributions of the society. Until today the university provides free education that is with very minimal tuition fees, at present about RM 100 a year or less. The funds for the operation of the university were provided by the *waqafs** from individuals or organizations since it was setup. The *waqafs* also grew in numbers and types. The *waqafs* can be in the form of land, buildings or businesses that were given to the university. The proceeds from these *waqafs* whether from rental or profits from businesses and others are used to operate the university since then until the present day. The university at present have an enrollment of more than 200,000 students with several campuses in Cairo and other cities. The university is considered among the oldest university in the world and is the foremost place for religious knowledge in the Islamic world.³

* *Waqafs* : a gift in terms of land, buildings or businesses etc that are given in charity with a general or specific purpose for the benefit of the public or segment of it. Examples are *waqafs* of land to built mosques, schools, cemeteries etc

Thus a society that inculcate, promote and support the spirit for the pursuit of knowledge will be able to produce people of knowledge. The conducive environment provided will have a snowballing effect and will be able to produce the excellent scientists and intellectuals.

5.2.2 Geographical /Environmental

Ibn Sina was born in Karmaithan near Bukhara which is located in what is now called Central Asia. The village with a small population has the advantage of a calm and tranquil environment, more so his father as the governor of Karmaithan must have lived in a house befitting his position. The house must have been spacious and lively. From the autobiography the father's house was also a meeting place for learned people. The house must have a meeting room or at least a spacious living hall to accommodate the people attending. The father's interest in education surely will provide his children with a study room and/or library in the house and thus an environment that is conducive to learning.

The climate in Karmaithan or Bukhara are similar. Being a landlocked and mountainous in the temperate zone, the weather is from the extreme of hot summer and very cold and windy winter. The air must have been clean and invigorating. The source of water must be from the mountains and famous for its spring water. The water are pure and full of minerals which helps the growing body and mind. Nowadays, mineral water has become a commercial product and promoted as a health drink and its benefits are touted .

In this region the staple food was and until now wheat based. Wheat were grounded using traditional grinding utensils that preserved the nutritional contents. Bread were made from the wheat flour or flour from similar grain bearing plants. Wheat based food are known for its nutritional values and its effects on the brain. Other food plants such as grapes were grown and it was made into grape juices and raisins which are well known for its benefits. Goat's milk is another drink which has excellent nutritional values besides camel and horse milks. We have presented the evidences from the various studies done by many scientists in Chapter 4: Ibn Sina. These animals were reared for the meat, milk, hides, furs and transportation and the people of this region were known for being excellent horseman and feasting on barbecued lambs and goats.

All the above factors will have an effect on the growing body and mind. The healthy environment, clean air and water and nutritious food will help to develop a healthy body and brain that will react positively towards knowledge.

5.3 Patronage /Political

Patronage seems prevalent and the in thing during this period. Many rich people and government officials took pride in sponsoring or providing for the needs of the learned people. They provided places of abode, meeting and discussion forums and libraries to the man of knowledge.^{4 5}

The man of knowledge are held in high esteem and were treated with due respect from

their benefactors and the society at large. People sought and gathered around these man of knowledge to learn and seek their wisdom. The benefactors were also sometimes man of knowledge themselves or were interested in knowledge and frequently attended these lectures and discussions.^{6 7} Some other benefactors did not have such interest but wanted to be known as a benefactor as a matter of pride and a sign of wealth

This benevolent attitude towards the learned man becomes a motivation for people to pursue knowledge. They will be respected and have a place for shelter and funds to continue with their studies and experiments. The man of knowledge can thus focus on enhancing knowledge through intellectual discussions, reading from the libraries and doing their experiments. The reduced burden to seek food and shelter for themselves and their families will surely clear their mind from thinking of their responsibilities and family commitments and concentrate on the problems at hand in the field of knowledge.

Ibn Sina has benefited much from this benevolent attitude of the rich and powerful. Ibn Sina's patrons such as Amir Nuh Ibn Mansur who appointed Ibn Sina as a physician and was allowed use of Amir Nuh's impressive library, Amir Sham al-Dawla , Amir Ala al-Dawla who provided funds and forums for intellectual discussions.⁸ . These patrons were instrumental in providing the resources and the environment for some of Ibn Sina's successes

The rulers of a state or province also plays an important role in the pursuit of knowledge. The rulers set up schools or academy of learning or places for discussions

where students or interested people can go to learn or hear intellectual discussions. Public libraries besides the private libraries of the rulers and the government officials and business elite were setup and were generally available to the society. This help towards the development of a knowledgeable and intellectual society.

5.4 Religious factors

Islam as a way of life have set the guidelines for its disciples to manage their life, from the smallest matters of personal hygiene to the matters relating to governing a nation. The AL Quran is the book of Hidayah or guidance for the human beings. The first surah that is the surah Al Fatihah set the scene for a Muslim specifying his position with respect to Allah, The Mighty Creator. [Al Quran 1: 1-7]⁹

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ ۝ الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ ۝ الرَّحْمَنِ الرَّحِيمِ ۝
مَلِكِ يَوْمِ الدِّينِ ۝ إِلَهِكَ نَعْبُدُ وَإِيَّاكَ نَسْتَعِينُ ۝ اهْدِنَا الصِّرَاطَ الْمُسْتَقِيمَ
صِرَاطَ الَّذِينَ أَنْعَمْتَ عَلَيْهِمْ غَيْرِ الْمَغْضُوبِ عَلَيْهِمْ وَلَا الضَّالِّينَ ۝

1. In the name of Allah, Most Gracious, Most Merciful.
2. Praise be to Allah, the Cherisher and Sustainer of the worlds;
3. Most Gracious, Most Merciful;
4. Master of the Day of Judgment.
5. Thee do we worship, and Thine aid we seek.
6. Show us the straight way,
7. The way of those on whom Thou hast bestowed Thy Grace, those whose
(portion) is not wrath, and who go not astray.¹⁰

The surah tells a Muslim who he is and to whom he should worship and seek guidance. The second surah as mention earlier set the reference for guidance. This surah empathically states that the Al Quran is the book of guidance.. Al Quran Surah Al Baqarah (The Cow) [Al Quran 2: 1-5]¹¹

الَمْ ۝ ذَٰلِكَ الْكِتَابُ لَا رَيْبَ ۚ فِيهِ ۚ هُدًى لِّلْمُتَّقِينَ ۝ الَّذِينَ يُؤْمِنُونَ بِالْغَيْبِ وَيُقِيمُونَ الصَّلَاةَ وَمِمَّا رَزَقْنَاهُمْ يُنْفِقُونَ ۝ وَالَّذِينَ يُؤْمِنُونَ بِمَا أُنزِلَ إِلَيْكَ وَمَا أُنزِلَ مِن قَبْلِكَ وَبِالْآخِرَةِ هُمْ يُوقِنُونَ ۝ أُولَٰئِكَ عَلَىٰ هُدًى مِّن رَّبِّهِمْ ۚ وَأُولَٰئِكَ هُمُ الْمُفْلِحُونَ ۝

1. A.L.M. (Only Allah knows the meaning)
2. This is the Book; In it is guidance sure, without doubt, to those who fear Allah.
3. Who believe In the Unseen, are steadfast In prayer, and spend out of what we have provided for them;
4. And who believe In the Revelation sent to thee, and sent before Thy time, and (in their hearts) have the assurance of the Hereafter.
5. They are on (true) guidance, from their Lord, and it is these who will prosper.¹²

Al Quran is the book of guidance without doubt and disputes. An analogy which maybe we can use here, is about a manufactured item such as car. To operate and maintain a car, we refer to the manufacturer's manual. The manufacturer being the designer and maker of the car knows it inside out, its capabilities, performance and limitations. The

manufacturer recommends the mode of usage, maintenance and can diagnose, recommend and carry out the necessary repairs if there are any problem with the car..

So Allah SWT as the Mighty Creator of the universe and all its contents has full knowledge of His creations and being the Most Gracious and Most Merciful has given manuals, : ‘The Books’ to guide human beings that He had created to go through their life . The Books are The *Zabur* (The Psalms), The *Taurat* (The Torah), The *Injil* (The Bible) and The Al Quran. The Books came with an expert each that is the Prophets AS, who understood the messages of these Books and can explain its working. These Prophets receive guidance direct from Allah SWT or through the angel Gabrail (*Jibril*) and thus able to attend to the problems and questions of their *ummah* promptly.¹³

For the Al Quran, Prophet Muhamad SAW, was the expert. This is clearly stated in the Al Quran. Prophet Muhamad SAW was the interpreter and clarifier of the Al Quran. He interpreted, clarify and set out the details of the verses of the Al Quran whenever necessary. The Al Quran as the Book of Guidance sets out the general principles and outlines. The interpretations, clarifications, the details and the activities of the Prophet SAW are categorized as The Sunnah or The Al Hadith. The Sunnah or Al Hadith is the second set of Guidance to complement the Al Quran. In the Al Quran, this second set of guidance is clearly stated and supported by the Al Hadith.

In Surah An Najm (The Star) [AlQuran 53: 3-5]¹⁴

وَمَا يَنْطِقُ عَنِ الْهَوَىٰ ۖ إِنْ هُوَ إِلَّا وَحْيٌ يُوحَىٰ ۖ عَلَّمَهُ شَدِيدُ الْقُوَىٰ ۖ

3. Nor does he say (aught) of (his own) desire.
4. It is no less than inspiration sent down to him:
5. He was taught by One mighty in power,¹⁵

These verses clearly states that what ever the Prophet Muhamad SAW said were inspired from the Mighty Creator. The verse from Surah An Nisa (Women) [Al Quran 4:59]¹⁶

59. O ye who believe! Obey Allah, and obey the Messenger, and those charged with authority among you. If ye differ in anything among yourselves, refer it to Allah and His Messenger, if ye do believe in Allah and the Last Day: That is best, and most suitable for final determination.¹⁷

These verses and others which could be quoted confirms the Al Hadith (or Sunnah) as the second set of manual as guidance for the Muslim. As a committed Muslim who believes and who has *Iman* (Faith) and *Taqwa* (Fear of Allah), his actions and purpose in life will be guided by The Al Quran and Al Hadith. The Al Quran and Al Hadith have many instructions and information on many things covering all aspects of a human life's existence in this world. It is just the matter of finding and understanding the relevant information given. A well known preacher Sheikh Ahmad Deedat from South Africa, in his lecture several years ago in Shah Alam which the author attended, was of the opinion that the Al Quran have the answer to any possible situation and questions. Even the making of bread is in the Al Quran he said quoting the verse 43 from Surah An Nahl (The Bee) from the Al Quran [Al Quran 016: 043]¹⁸

وَمَا أَرْسَلْنَا قَبْلَكَ إِلَّا رِجَالًا نُّوحِي إِلَيْهِمْ فَسْأَلُوا أَهْلَ الذِّكْرِ إِنْ كُنْتُمْ لَا تَعْلَمُونَ



7. Before thee, also, the apostles we sent were but men, to whom we granted inspiration: if ye realise This not, ask of those who possess the Message. ¹⁹

Allah states “ ask of those who possess the Message”. Ahmad Deedat has interpreted

أَهْلَ الذِّكْرِ (*ahli zikir*): as “ the people who knows”. Thus “ Ask from the people who knows”. Allah has given knowledge to whom He wishes of what He wishes. The knowledge of making bread, Allah has given to the baker and thus if someone wants to know how to make bread, he should then learn from the baker.

Islam is a religion of knowledge. The first ayat or verse from the AL Quran revealed to Prophet Mohamad S.A.W started with the word “ *Iqra* “ ²⁰ which was translated to mean “ Read “ ²¹ This verse was the first verse from six verses of the first revelation of the Al Quran and thus the appointment of Prophet Mohamad SAW as the Prophet (The Messenger) of Allah SWT. [Al Quran 096 : 01]²²

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ

1. Proclaim! (or read!) In the name of Thy Lord and Cherisher, who created. ²³

Proclaim! (or read!) in the name of thy Lord and Cherisher, Who created- So the first verse revealed commanded us to read. Reading is a very important tool of knowledge

without which no one person can expect to enrich his knowledge. “Read in the name of thy Lord “. this verse states also that the reading, that is knowledge is associated to the Creator. The purpose of knowledge is to know the Creator and submit to His will.

Read was what Ibn Sina did, he read whatever books available to him in the earlier developing years. He read to the extent of memorizing word by word and understanding the topics which he read.²⁴

Ibn Sina at a very young age has already memorized the Al Quran and being proficient in Arabic surely must have a grasp of the meanings of the Al Quran. The Al Quran contains much information about the sciences, the first revealed verses from Surah al Alaq (The Clot) itself contains information about the creation of man. The creation of the baby from the *Alaq*’ (clot of congealed blood) which scientists, much later then this verse was revealed, begins to comprehend. [AlQuran 96:1-6]²⁵

أَقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ﴿١﴾

خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ ﴿٢﴾ أَقْرَأْ وَرَبُّكَ الْأَكْرَمُ ﴿٣﴾ الَّذِي عَلَّمَ بِالْقَلَمِ ﴿٤﴾ عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ ﴿٥﴾ كَلَّا إِنَّ الْإِنْسَانَ لِرَبِّهِ لَكَنَاجٍ ﴿٦﴾

1. Proclaim! (or read!) In the name of Thy Lord and Cherisher, who created-
2. Created man, out of a (mere) clot of congealed blood
3. Proclaim! And thy Lord is Most Bountiful, :
4. He Who taught (the use of) the pen,
5. Taught man that which he knew not.

6. Nay, but man doth transgress all bounds,²⁶

In verse 96:4 :the use of *kalam* or pen is another evidence of Islam's proclamation towards knowledge. The use of pen to write and record information. This is another obsession of Ibn Sina . He wrote numerous books and treatises on various topics up to 450 books according to some researchers.²⁷ He wrote during the calm times in the comfort of his home or dwellings or during trying and tumultuous situations in incarceration or during his exploits accompanying his benefactors excursions.²⁸

In the verse 96:5 “ Taught man that which he knew not. “ In Islam, knowledge is from The Creator himself, The All Knowing (*Al 'Alim*), He bestows knowledge on whom He wishes “.

This surah is a commonly read surah, being short and being the first revealed verses to the Prophet Muhammad SAW, is often recited in the *solat* of a Muslim (or prayers). Ibn Sina surely understood the meaning and the significance of this *surah* and he evidently practiced this *surah* in his work as a scientist and physician.

Other verses such as from surah Al-Thariq (The Night Comer) which further describes the formation of The *Alaq* (embryo) should be a source for motivation for any scientists to study about the procreation of man.. [AlQuran:86:6-7]²⁹

خُلِقَ مِنْ مَّاءٍ دَافِقٍ ۖ تَخْرُجُ مِنْ بَيْنِ الصُّلْبِ وَالتَّرَائِبِ ﴿٦﴾

6. He is created from a drop emitted-

7. Proceeding from between the backbone and the ribs: ³⁰

And verse 2 from Surah Al Insan [AlQuran : 76:2]³¹

إِنَّا خَلَقْنَا الْإِنْسَانَ مِنْ نُطْفَةٍ أَمْشَاجٍ نَبْتَلِيهِ فَجَعَلْنَاهُ سَمِيعًا بَصِيرًا ﴿٢﴾

2. Verily we created man from a drop of mingled sperm, In order to try him:

so we gave Him (the gifts), of hearing and sight. ³²

These verses with such information intrigues the mind and must have lead to various researches to understand them and use them in science for the benefit of mankind. In the Al Quran there are many verses which gives information, also comes with certain catch words related with thinking, seeing . Some examples are words such “ a sign for those who give thought “ [Al Quran 16: 69] ³³

69. Then to eat of all the produce (of the earth), and find with skill the spacious paths of its Lord: there issues from within their bodies a drink of varying colours, wherein is healing for men: Verily In This is a Sign for those who give thought. ³⁴

From Surah An Nahl (The Bee) verse 11 [Al Quran 016 : 011]³⁵

11. With it He produces for you corn, olives, date-palms, grapes and every kind of fruit: Verily In This is a Sign for those who give thought.³⁶

These words bid the reader to think and witness Allah's creation. The uniqueness, the perfection to which Allah created the world and its content. The motivation to think and study Allah's creation is evident in many verses. To those who take the effort to think and study these verses, they will be able to get the knowledge that The Mighty Creator has given there.

Ibn Sina in his quest for knowledge has put his thinking process to work. He has written on the subjects of theology which require the understanding of various verses in the Al Quran and from the Al Hadith. His opinions in matters of theology was also used by Al Ghazali to discuss on matters of *Tauhid*.³⁷ Ibn Sina in his autobiography, mentioned that when he cannot solve a particular problem, he would visit the mosque and pray humbly to the Mighty Creator until He opened the mystery of it and made the difficult seem easy.³⁸ As discussed earlier, Allah bestows knowledge on whom He wishes. Ibn Sina had this experience and had felt Allah's blessings on him by opening the gate of knowledge when he really needed it. This is what some would call the revealed knowledge (*Ilmu laduni*). This knowledge is bestowed unto a person who has *Iman* and *Taqwa* and who seeks Allah's guidance in his work.³⁹

Allah will show the way out of a person's problems or predicaments enabling the person to solve and overcome them. Another route to knowledge is the inspired knowledge (*Ilham*). This type of knowledge is available to any person. It comes in the form of inspiration or ideas which come to the person's mind. We have often heard some people

telling us “ I had an inspiration “ while forwarding and arguing for their ideas and opinions.

The other category of knowledge is the Revealed Knowledge or *Wahyu* . This is a specific mode which is given to the prophets or apostles or messengers of Allah. This knowledge is given to them with the intermediary of the angel *Jibrail* (Gabriel) or at times directly from Allah SWT.⁴⁰

In the Al Quran, there are many verses that can be used as a ‘*Doa*’ (supplication) to request and plea for Allah’s guidance in our daily life’s pursuits. Some of them are used as pleas to Allah to bestow us His Guidance and understanding in anything that we face and are most appropriate for a student who is pursuing knowledge to practice it continuously.

The Prophet Muhamad SAW had mentioned many verses and methods to guide us in the pursuit of knowledge. He has mentioned about the *Doa* or prayers that can be recited and practiced continuously to ask from Allah for guidance and increase in knowledge. The Prophet has explained the uses and significance of these verses besides other verses from the Al Hadith which can be practiced for similar purposes. Some examples are Surah Thaha [Al Quran 20: 114]⁴¹

فَتَعَلَىٰ اللَّهُ الْمَلِكُ الْحَقُّ وَلَا تَعْجَلْ بِالْقُرْآنِ مِنْ قَبْلِ أَنْ يُقْضَىٰ إِلَيْكَ وَحْيُهُ وَقُل رَّبِّ

زِدْنِي عِلْمًا ﴿١١٤﴾

114. High above all is Allah, the king, the truth! be not in haste with the Qur'an before its Revelation to Thee is completed, but say, "O My Lord! advance me in knowledge."⁴²

This *doa* is often recited when starting a class with an addition of ‘*Fahma*’ which means understanding at the end of the verse..

رَبِّ زِدْنِي عِلْمًا

"O My Lord! advance me in knowledge and bestow on me understanding of it"

Surah Assyuara' (The Poets) [Al Quran 26: 83]⁴³

رَبِّ هَبْ لِي حُكْمًا وَأَلْحِقْنِي بِالصَّالِحِينَ

83. "O My Lord! bestow wisdom on me, and join me with the righteous;⁴⁴

Some of these *doas* are taught to Muslim children from a very young age and they memorized and recite these verses every day. They recite these *doas* when starting their classes or when studying and reading the Al Quran or other subjects and also at the end of their classes or studying.. The students vying to be an *Al-Hafiz* that is a person who memorized the whole of the Al Quran are required to recite these *doa* and many others to increase their capability to memorize. These *Al Hafiz* are able to memorized the whole of the Al Quran of about 605 pages which has 114 *Surahs* or chapters and some 6,232 *ayat* (or verses). During this period an *Al Hafiz* was a person who memorized the whole of the Al Quran and thousands of the Al Hadith but at the present especially in Malaysia, a person who memorized the whole of the Al Quran is already considered an

Al Hafiz. Ibn Sina at the age of ten was able to memorized the whole of the Al Quran and many literature in Arabic and Persian. And it is normal for a person who vies to be an *Al Hafiz* to practice these *doas* constantly.

A friend of the author, who happens to be an *Al Hafiz* after listening to a lecture has the ability to remember more substance of the lecture than the author, he was able to recite back the various Al Hadith and the explanations given during the lecture. His level of education is lower than the author but his capability to memorize is much better. This is the benefit and advantage of being an *Al Hafiz* and Ibn Sina is an *Al Hafiz* at a very young age. This criteria have given him an extra advantage and has greatly benefited him in his pursuit of knowledge.

The Prophet has also mentioned besides the *doas*, certain food to eat and also avoid to the increase the capability of the brain. He has mentioned food such as raisins and rhotab (dates), pomegranate etc as food which should be consumed daily to the enhance the brain's capabilities. He also advised people especially children to avoid food that are sour which is not beneficial for the brain.⁴⁵

In Islam the role of the parents are very crucial in the education of their children. It is they who will mould or shape the children in their earlier years. If they provide the necessary environment and motivation they can mould their children into the person that they want them to be. The Prophet Muhamad SAW has mentioned in his hadith that child born is like a piece of white cloth. It is the parents who will patterned it into who they want

him/her to be. ⁴⁶ Ibn Sina's father had succeeded to provide the environment and motivation by providing for his early education and continuing with private tutoring from the best available scholars of that time. He has launched Ibn Sina's career in the sciences with his efforts. The role of the parents is not limited to providing for his education and wellbeing but also in supplications to the Al Mighty Creator. They are encouraged to recite certain *doa*'s to to plea from the Al Mighty children and partners in life which are “ *Soleh* “ good and God fearing “ the *doa* such as this verse from Surah Al Furqan (The Criterion) [Al Quran 025:074]⁴⁷

وَالَّذِينَ يَقُولُونَ رَبَّنَا هَبْ لَنَا مِنْ أَزْوَاجِنَا وَذُرِّيَّاتِنَا قُرَّةَ أَعْيُنٍ وَاجْعَلْنَا لِلْمُتَّقِينَ



74. And those who pray, "Our Lord! grant unto us wives and offspring who will be the comfort of Our eyes, and give us (the grace) to lead the righteous." ⁴⁸

Since there is not much information about the details of his childhood, we do not know whether Ibn Sina's father recited this *doa* but this *doa* is recited almost everyday by a practicing Muslim especially after the *solat* (prayers) we can safely infer that it was often recited since he provided for Ibn Sina's religious education up to to the point of memorizing the whole of the Al Quran.

Conclusion

What can we learn from Ibn Sina ? No doubt we can also learn from the lives of other great Muslims scientists such as Al Biruni, Al-Farabi, Ar-Razi, and many others. The fact that Ibn Sina is recognized as among the most famous, most successful and most

documented make it much easier to analyse and glean lessons from his life. His life contained many lessons that can be learned such as his early education, his memorizing of the Al Quran, his father's role in educating and providing for him. Ibn Sina's abilities of concentration, perseverance and diligence should be emulated by present students and researchers in order to achieve excellence.

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CHAPTER 6

DISCUSSION

6.1 FACTORS/CRITERIA

6.1.1 Family's and Teachers' Influence

From the analysis of the factors we have associated the criteria as laid down in our hypothesis from Chapter 2, with the pursuit of excellence. We have shown the relevance of the criteria with what Ibn Sina has achieved. His early education in the religious subjects and his early introduction to the Al Quran has manifested itself in his life. He had benefited from his capability to memorize the whole of the Al Quran. His feat has given him an advantage over others who have not. His ability to memorize the whole of Al Quran is similar to the other great and respected religious scholars of Islam, such as the four prominent Imams of Mazhabs of the Sunni tradition, Imam Malik, Imam Hambali, Imam Syafie and Imam Abu Hanafi and other prominent scholars such as the imams of the Al Hadith, Imam Bukhari and Imam Muslim. These scholars were able to memorize the whole of the Al Quran between the ages of seven (Imam Shafie) to ten. There were also able to excell in the religious knowledge in their teens and had memorized hundreds of thousands with the *sanad* and complete *rawi* (authority and narrator) of the Al Hadith.¹

The advantage of memorizing the whole of the Al Quran is a significant blessing and Allah SWT and the Prophet has promised certain advantages for these special persons. From Al Quran Surah AL Baqarah [Al Quran 2: 269]²

يُؤْتِي الْحِكْمَةَ مَنْ يَشَاءُ ۚ وَمَنْ يُؤْتَ الْحِكْمَةَ فَقَدْ أُوتِيَ خَيْرًا كَثِيرًا ۚ وَمَا يَذَّكَّرُ إِلَّا أُولُو الْأَلْبَابِ ﴿٢٦٩﴾

269. He Granteth wisdom to whom He pleaseth; and He to whom wisdom is granted receiveth indeed a benefit overflowing; but none will grasp the Message but men of understanding.³

Some authors described the ‘granteth wisdom’ as knowledge of the Al Quran and the religion.⁴ A person who memorize the Al Quran will surely be included in the meaning of this verse and thus will receive many benefits from his ability.

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From a hadith narated by 'Aisha : The Prophet said, "Such a person who recites the Quran and masters it by heart, will be with the noble righteous scribes (in Heaven). And such a person exerts himself to learn the Quran by heart, and recites it with great difficulty, will have a double reward."⁵

From a hadith narated By Jabir bin Abdullah : The Prophet collected every two martyrs of Uhud in one piece of cloth, then he would ask, "Which of them had (knew) more of the Quran?" When one of them was pointed out for him, he would put that one first in the grave and say, "I will be a witness on these on the Day of Resurrection." He ordered them to be buried with their blood on their bodies and they were neither washed nor was a funeral prayer offered for them.⁶

His education with the best available teachers in the form of personal and private tutoring was an important criteria which had developed his learning capabilities. The personal and wholesome attention on him has benefited him as any student regardless of a person capabilities, only the level of achievement of excellence will vary

according to his personal capacity. From personal tutoring a student's capacity and understanding can be easily gauged and attention can be focused on the students shortcomings and inadequacies. Thus remedial measures can be carried out to overcome these shortcomings and the progress can be continuously monitored and rectifications can be done whenever necessary. A student's potential can be identified and further enhanced to suit his capabilities and aspirations. In a large class especially as being practiced today where forty or so students are grouped together in a class, the personal attention is lost amongst the crowd. The students capabilities and understanding are difficult to assess and exams or tests sometimes, do not give justice to the students. The smaller the class the better the odds of producing excellent students. The best form of education maybe is the personal attention in private tutoring with the least number of students.

Ibn Sina's father had played a very significant role in educating Ibn Sina. Ibn Sina was educated first with religious knowledge and later given private tutoring with the best available teachers in various subjects, had accessed to various literature and was exposed to intellectual discussions. Exposing him to intellectual discussions had further enhanced his mental faculties. Intellectual discussions with facts, probing questions, rational and in depth arguments are methods of practicing mental dexterity and are able to open up the frontiers of the mind. This must have benefited him in his studies on rational and philosophy later on.

The role of the parents in the early stages of a child is very important, providing for its care, food, shelter and clothing. The parents will also have to provide for his education and creating a conducive environment for the development of his mind.

6.1.2 The Role of the Parents in Islamic education

In Islamic teachings, the parents are responsible for his early education, religious and the *fardhu kifayah* (non-religious knowledge). The parents will be responsible for the traits and thinkings of the child. There are various verses in the Al Quran and the sayings from Al Hadith which signify the responsibility of the parents towards their siblings.

From Surah At Tahrim (The Banning), verse 6 [Al Quran 066:006]⁷

يَتَأْتِيهَا الَّذِينَ ءَامَنُوا قُتُوبًا أَنفُسُهُمْ وَأَهْلِيكُمْ نَارًا وَقُودُهَا النَّاسُ وَالْحِجَارَةُ عَلَيْهَا مَلَائِكَةٌ
غِلَظٌ شِدَادٌ لَا يَعْصُونَ اللَّهَ مَا أَمَرَهُمْ وَيَفْعَلُونَ مَا يُؤْمَرُونَ ﴿٦﴾

6. O ye who believe! Save yourselves and your families from a Fire whose fuel is men and stones, over which are (appointed) angels stern (and) severe, who flinch not (from executing) the commands They receive from Allah, but do (precisely) what they are commanded.⁸

From a hadith narated By Abu Huraira : The Prophet said, "Every child is born with a true faith of Islam (i.e. to worship none but Allah Alone) and his parents convert him to Judaism or Christianity or Magianism, as an animal delivers a perfect baby animal. Do you find it mutilated?"⁹

From the hadith above, the role of the parents was emphatically stated, they will be responsible for the future of their children. A child is like a piece of white cloth, the parents are the one who will pattern it accordingly. If the parents so wish they can colour or patterned it according to their choice but as a Muslim they have to pattern them according to the pattern of Islam. Thus the role of the parents are crucial in

determining the achievement of the children in their later life. To enable their children to achieve excellence in life then they have to provide the necessary environment conducive for the achievement of excellence from the early stages. To achieve excellence in education they have to provide an atmosphere which is conducive to learning. The parents have to provide for the best available teachers, a place of study and library and the motivation for their children. The healthiest of food and environment and as a Muslim pray and supplicate from the Almighty to bestow on them children who are *Soleh* (A good and practicing believer) who are excellent in their good deeds and character. In the Al Quran, from Surah Al Furqan. (The Criterion) [Al Quran 25:74] ¹⁰

وَالَّذِينَ يَقُولُونَ رَبَّنَا هَبْ لَنَا مِنْ أَزْوَاجِنَا وَذُرِّيَّاتِنَا قُرَّةَ أَعْيُنٍ وَاجْعَلْنَا
لِلْمُتَّقِينَ إِمَامًا ﴿٧٤﴾

74. And those who pray, "Our Lord! grant unto us wives and offspring who will be the comfort of Our eyes, and give us (the grace) to lead the righteous."¹¹

This verse is a supplication that is pleaded daily especially after the prayers. The supplication, pleads with Allah SWT to grant a person, wives and offspring's who will be a comfort to our eyes. The word 'أَزْوَاجِنَا' or 'wives' can also be interpreted as either wife or husband. or companion (*pasangan*). Comfort of our eyes means they are a joy and comfort to our heart, possessing the good attributes as a Muslim. The role of the parents actually starts very much earlier. The father is responsible to

find a wife who is a *Solehah* and pray for children who are *Soleh* and *Solehah*. In Islam the soul is the dominating factor and the body is only the clothing. The blessed soul has to be nurtured early while still in the mother's womb with the verses of the Al Quran recited by its mother. The parents are responsible towards nurturing the soul from the start. There are various unique stories of famous religious scholars who were the results of the parents care and scrutiny when living their life and the choosing of their life partner and thus nurturing the blessed soul for their children. One particular interesting story was about Sheikh Abdul Kadir Jailani, a renown Muslim scholar who was called the *Sultan of Aulia*, chief of the *Aulia*'. *Wali* (is the singular noun for *aulia*'), is a person who has attained a level that is the highest among the believers. Sheikh Abdul Qadir's father according to a story, was walking along a stream when he saw a fruit floating, he then took the fruit and ate it. Later he realized he had eaten the fruit without its owner's consent. So he tracked upstream and found an fruit tree with ripe fruits overlooking the stream. He went to the owner and told him, of his predicament. The owner set a condition as a punishment and retribution for the apple eaten that Sheikh Abdul Qadir's father had to work for him without wages for a number of years but will be provided with food and board. After working for the agreed term, Sheikh Abdul Qadir's father wanted to leave but the owner set another condition before he is free from his debt of eating the fruit. The owner demanded Sheikh Abdul Qadir's father to marry his daughter who is blind, deaf and dumb. Sheikh Abdul Qadir's father was quite reluctant but to atone for his misdeed he agreed. When he married the owner's daughter he was surprised that the daughter was pretty and without any handicap. Later her father explained that being blind means that the daughter has not seen anything which is not permissible in Islam. Being deaf means she had never heard anything that is bad or words of

maksiat (bad words) and being dumb means she has never uttered a word which is unpleasant. From the enjoinder of these two pleasing and blessed souls was born Sheikh Abdul Qadir Al Jilani famously known as the '*Sultan of Aulia*'.¹² There are many other stories that can be quoted to signify the importance of choosing the right life partner such as the story of Khalifah Omar and the milk seller's daughter, the prayer of Prophet Ibrahim AS to be bestowed good descendants the results which was the Prophet Mohamad SAW. Even the western scientists through studies in genetics tried to produce the genetically superior babies, plants and animals.

6.1.2 IMAN/FAITH

The extra criteria that we have hypothesized is the *Iman* or faith. The *Iman* will enable a person to receive that extra edge and help in his endeavors. *Iman* (faith) is something that is connected to the heart, but it can surface through a person's words and actions. What is in the heart we cannot ascertain but we can judge from his words and actions. Earlier in chapter 2 this hadith was stated to describe *Iman*.

” Iman is conviction in the heart, testifying by the tongue and acting upon the pillars of the actions. “¹³

So is Ibn Sina a person with *Iman*? There are many sceptics and detractors who have disputed the *Iman* and even the Islam of Ibn Sina. Among the critics were Imam Al Ghazali(1056-1111), al-Shahrastani (d. 1153) and Fakr Din Al Razi (d.1209). Their critics were mainly on the subject of Ibn Sina's philosophy. The author will discuss the aspect of *Iman* only since it is relevant to our study. So here we will try to furnish the various proofs that can be forwarded to defend and support the *Iman* and Islam of Ibn Sina. Some of the proofs are as follows :

1. Ibn Sina's memorizing of the whole of the Al Quran and using it in his life is proof of his *Iman* at a young age¹⁴ and proposing for its learning by young children.¹⁵
2. Ibn Sina's statement that when he was unable to solve a problem during his studies, he would frequently visit the mosque to "worship and pray humbly to the Al Creating and He (Allah SWT) would opened up the mystery of it to me and make the difficult seems easy."¹⁶

There are certain verses in the Al Quran which refers to the Muslim's appeal to Allah SWT for help in times of difficulty, such as in Surah Al Baqarah (The Cow) : 153 [Al Quran 2:153]¹⁷ and from Surah At Thalaq (The Divorce) : 3 [Al Quran 65:03]¹⁸. Since Ibn Sina was a hafiz and proficient in Arabic he surely understood theses verses and from his statement he was inspired to seek Divine help even in his scholarly works.

3. His statement after buying and reading the book of Abu Nasr al-Farabi on the topic of metaphysics and understanding the topic which he earlier stated as incomprehensible. He rejoiced in this achievement and gave much in alms to the poor in gratitude to God who had bestowed the understanding of the subject of metaphysics on him.¹⁹

From the Al Quran, Surah Ibrahim (Abraham), verse 7 [Al Quran 14:07]²⁰

7. And Remember! your Lord caused to be declared (publicly): "If ye are grateful, I will add more (favours) unto you; but if ye show ingratitude, truly My punishment is terrible indeed."²¹

Ibn Sina shows gratitude to the Al Mighty by being gracious himself as stated

in his autobiography.

4. There were various occasions where Al-Juzjani reported that Ibn Sina prayed²²
5. During his sickness when he was very weak and unable to go out, he would asked for somebody to recite the Al Quran every few days and he would listened attentively for a few hours while he was in bed.²³
6. During his lifetime, he also gave much in alms to the poor and the needy
7. His various treatises and books on the subject of religion. His writings on the attributes of the Al Mighty was used and quoted by several renown religious scholars such as Imam Al Ghazali, Abu Hasan Al Ashaari and others.²⁴
8. His writings on the attributes of the Prophet Mohamad SAW whom he wrote as a special individual who receive guidance from the Al Mighty was in conformance with the opinions of prominent religious scholars.²⁵
9. A story told about him and his student named Bahman Yar. Bahman was a bright young student who had studied under Ibn Sina. The young student revered his teacher so much that he suggested that Ibn Sina proclaimed himself a prophet because of his extensive knowledge and abilities and the student pledged that he will be Ibn Sina's first faithful follower. Ibn Sina did not answer immediately to his student until one extremely cold and snowing night. Ibn Sina woke up in the very early morning feeling thirsty, so he woke up his student and bade him many times to go out to get some water. His student refused to budge, giving all sort of reasons excuses not to get out of his warm bed and into the very cold night to fetch the water. After a while the *Azan* of the *Subuh* prayers was heard from the minaret of a nearby mosque and Ibn Sina decided to answer his student earlier suggestion and proclamation. When the words "I bear witness that Mohamad is the

Messenger of Allah “ Ibn Sina said to his student “....., You have been my close student for several years and have benefited from me a great deal, yet you did not think it prudent to obey meInstead you chose to put forward lame excuses but think of this man who is now calling to prayers.....after coming out into the coldest of weather and making ablution with cold water in the early hour of this morning. It is for no other purpose but in obedience to and respect for the command of Allah as conveyed by His apostle Prophet Muhammad Mustafa (SAW) some four hundred years ago. What a great difference there is between me and the Prophet sent by Allah “ ²⁶

The above examples that we have presented are amply sufficient to prove the *Iman* of Ibn Sina. In an article written by Sonaryo, he was of the opinion that Ibn Sina can be categorized as a person with *Iman* but not *waraq or tawadhu*’ ²⁷ A person who is a *waraq* will be more careful in his actions and words. and avoid anything which can be deemed as sins. Ibn Sina in his own words sometimes did digressed with his wine. Ibn Sina’s statement of receiving help at crucial time is a feature that is customary to a person with *Iman*. The *Iman* of Ibn Sina has greatly contributed to his success and par excellence.

6.1.3 HIS SELF-MOTIVATION AND PERSEVERANCE

It is quite difficult to identify his motivation since the information of his early development stage are sketchy and few. The motivation of a person normally starts in the developing early years.

The source of his motivation maybe is in his ability to absorb so much information at so early an age . His thirst of knowledge was insatiable being able to memorize the whole of the Al Quran and many works of literature. To expand his mental horizon and appetite for knowledge he sought and procured knowledge from any available sources available to him through his teachers and from the books made available to him. This self-motivation shows in the episode with the Amir Nuh ibn Mansur whereby he sought for more knowledge as a reward by his request for access and then making full use of the well-stocked royal library.²⁸

Another example of his self-motivation can be seen in his statement that he read the *Metaphysics* of Aristotle 40 times and able to memorized it but still cannot understand the subjects. Reading up to 40 times a book which a person seems unable to comprehend, is the author believe, a remarkable achievement by itself. Another interesting personality of Ibn Sina is a statement by Abu Ubayad on how he read books available to him. According to Abu Ubayd in his 25 years with Ibn Sina, the Master (Ibn Sina) would study a book by going to the most difficult passages and the more intricate problems in the book.²⁹ Most people would read a book from the first page proceeding to the end but Ibn Sina with his unusual way seeks to ascertain his level of knowledge and understanding of the subject he was studying. This surely must come from the self-motivation which propelled him to prove his excellence and gain recognition..

His self motivation can also be seen in his intense dedication and concentration to his work. At times he was able to write up to fifty pages of quality work without referring to any books or notes but just out of memory³⁰ is most extraordinary and we do not often hear of such feat by other famous and acclaimed scientists from then up to now. The secret must lie in the arguments above and about his ability to absorb much information and the understanding of the Al Quran. His self motivation also shows his high ego and high esteem of himself through various episodes of his life. The high esteem of himself may have been the result of his teacher Al-Natili's statement to Ibn Sina's father "He (Ibn Sina) should do nothing but learn."³¹ The numerous praises heaped upon him for his capabilities since his early years may have further contributed to this trait. His high ego and esteem in himself resulted in a magnificent book on philology as claimed by his pupil and companion Al Juzjani.³² His high esteem of himself as a multi-disciplinary man of knowledge resulted in his inability to accept refutations and criticism of his works and ideas.³³

The episode started when his opinion were refuted by Abu Mansur al-Jabban in the presence of Amir Ala al-Dawla who commented that Ibn Sina's opinions on philology were unacceptable since Ibn Sina is not well-versed enough in philology.³⁴ Ibn Sina was incensed by this remark and was motivated to proof his competency by studying for three years books on philology that he gathered from various sources. He then managed to write 3 odes with some rare words and three set of letters each in the style of three different well-known authors and then making them looked old and worn out. He presented the manuscript to Amir Ala Al-Dawla who then requested comments from Abu Mansur al-Jabban on the manuscript. After reading the manuscript, Abu Mansur then realised that it was written by Ibn Sina to prove his

mastery of philology. He also realized that his earlier remarks had brought about this situation and apologized to Ibn Sina.³⁵

Ibn Sina was known to have stated “ Everything which I knew at that time is just as I know it now. I have not added anything new to it to this day.”³⁶ He later commented “ but today my knowledge is more matured, otherwise it is the same, nothing new has come to me since.”³⁷ Some might argue that his episode on philology with Abu Mansor al-Jabban would indicate otherwise but he knows best his statement, we can only infer that his high ego and high self-esteem had resulted in these statements..

Ibn Sina seems to be motivated by praises and recognition of his capabilities. He was most benevolent towards people who requested for his knowledge. There were numerous occasions where he wrote books, articles and commentaries upon the request of others. A few examples of these were :

- i. the request by Abu Al Hasan the Prosodist who requested Ibn Sina to compose a comprehensive work on his learning. Ibn Sina as a result of this request composed “ *The Compilation* “ which covers all the sciences except mathematical science³⁸
- ii. The request by Abu Bakr al Baraqi to Ibn Sina to write commentaries on the book of sciences. Ibn Sina wrote “ *The Sun and Substance* “ in twenty volumes and also wrote for Abu Bakar a book on ethics called “ *Good Works and Evil* “³⁹
- iii. The request from the *Qadi* of Shiraz through Abu al-Qasim al-Kirmani to answer some problems regarding the *Najat*. Ibn Sina replied to the problems by writing 50 pages of his answers during one night and stated that he was in a hurry to answer.⁴⁰

Ibn Sina was also known for his benevolent attitude towards his fellow man and his students. He treated most of his patients for free while being employed by his benefactors and often gave alms to the poor. He also organized classes where he taught his pupils for free. Some of his students were provided with board and meals during their period of learning with Ibn Sina.. Ibn Sina also seems to be generous and gave much leeway to his servants to manage his personal and financial affairs. The servants took advantage of the situation by mismanaging his affairs and stealing from his coffers. Some even claimed that the worsening of Ibn Sina's illness which brought him to his death was the result of fiddling of the medication given to him by his servants to cover up their misdeeds.⁴¹

These acts must surely come from his understanding and commitment towards Islam which urges its disciples to be benevolent and dispenses goodness and knowledge.

From the Al Hadith:

Abu Huraira (Allah be pleased with him) reported Allah's Messenger (may peace be upon him) as saying: When a man dies, his acts come to an end, but three, recurring charity, or knowledge (by which people) benefit, or a pious son, who prays for him (for the deceased).⁴²

His high esteem of himself shows when he quoted an ode or poetic verse which was recited by Abu Ubayd al-Juzjani to him⁴³

‘ When I became great no country could hold me’

‘ When my price went up, I lacked a buyer ‘

6,2 ETHICS IN ISLAM

Islam as a way of life encompasses every aspect of human life. The Al Quran as the Book of Guidance and the Al Sunnah (or Al Hadith) must be referred by each and every man to find guidance and to manage his affairs whether physical or spiritual. The *Ijma' Ulama* and *Qiyas* are the other two referral points to guide him further, if the Al Quran and Al Sunnah does not mention a specific problem.⁴⁴

In this modern world where advances in scientific and technological innovations have reach a level approaching the fringes of procreation, ethics is much more needed than ever to address the various issues at hand. The advances in genetic engineering which has led to the splicing and reengineering of genes producing many varieties of species and variants of plants and animals in order to produce more in terms of productivity and quality. Some examples we have stated in the Introduction but there are many more that have been done and we believe this will continue despite the reservations and objections by many organizations and individuals concerned by these researches. We can understand the need to increase productivity and better quality food for man but sometimes it is done more because of the motivation to reap higher profits instead of the often touted noble intentions. The results of their researches and their long terms effects on the products and the consumers are not clearly known. Cloning of plants have taken place for quite sometime but cloning of animals and human have lately come to attention. The first public announcement of the cloned lamb Dolly created some sensation several years ago⁴⁵ but a recent announcement on the cloning of babies created an uproar.⁴⁶

Many conferences, seminars, dialogues and forums have been held and will continue to be held by the many international and localized organizations whether political, religious and professionals to discuss these innovations and advances. Some guidelines and regulations have resulted but there are still many issues which need to be attended to. Islam as a comprehensive and complete system and way of life provides guidelines that can be used address this matter.

Many prominent Islamic scholars whether religious, scientists and intellectuals had given their opinions and ideas on these issues. Sohail Inayatullah in his article in the *Futures* magazine quoted two prominent intellectuals, Munawar Anees and Abdulaziz Sachedina who wrote on this topic : ⁴⁷

Anees wrote:

“The Muslim view of gene therapy is generally best described by: gene therapy (not to mention cloning) transgresses everything that Islam is about, about what is natural and what is wrong. “

Sachedina added :

“ In Islamic discussions in eugenics, there is almost a consensus among Muslim scholars that it "having better rather than worse genes" does not play a part in the recognition of the good qualities of human beings; it is something that is designed by God, and therefore, it should be left to God, so there is no incentive for the improvement of the genetic composition of individuals to increase the value of that individual. Rather, the value of the individual depends on faith. ...

There is no encouragement of any kind to improve genetic composition through any kind of surgical or any kind of medical or choices to the marriage decisions; rather, the will of God is regarded as the one that really creates human beings the way there are, and there are potential improvements within that if faith is maintained, if moral and spiritual awareness are maintained within the life

These new technologies pose the most dramatic problems for those who consider the natural as fixed instead of as constantly changing and in the process of recreation. Strict traditionalists (those who do not take a dynamic view of knowledge, wherein ijihad (reasoned judgement) gives way to taqlid (blind

imitation), in particular, will find the next twenty or thirty years the best and worst times. The best because the forces of tradition will flock to them; worst because the technological imperative and humanity's struggle to constantly recreate itself and thus nature will not be easily forced back. For the Islamic world to survive, it will not only need to debate these technological developments but articulate an alternative science. “

Ibn Sina wrote some treatises on ethics expressing his views. He wrote :

“The human being must prepare for his soul both reward and punishment, and govern it thereby”

Ibn Sina viewed that morality is an acquired matter and the acquiring of it should start from the infant's birth through the developing years. The child's upbringing, education and experiences will influence his psychology, temperament and his ethical development. Ibn Sina proposed that the child should be taught the Al Quran and the basic religious knowledge to develop his knowledge and morality.⁴⁸ The UNESCO in recognition of Ibn Sina's achievement have named an award called Avicenna's Prize for Ethics in Science to be awarded to distinguished scientists who have contributed to science and ethics.⁴⁹

6.4 Islam and Science

The author and many others had never doubt the compatibility of Islam and Science. Islam is a comprehensive way of life, which covers every aspects of human life in this world and also as preparation to live in the everlasting world, ‘*Akhirat*’. Islam encourages the pursuit of knowledge to the point that some areas of knowledge, the basic religious knowledge of the *Solat* (prayers), *Taharah* (purification and cleanliness), the learning of how to read the Al Quran are categorized as compulsory ie *Fardhu Ain*, in which every Muslim, young or old, men or women have to learn

and understand. The other areas of knowledge, such as the advanced knowledge on Islam comprising the *Tafsir* of Al Quran and Al Hadith, the advanced *Feqah*, medicine, languages, management and many others are categorized as *Fardhu Kifayah* which means that it is compulsory to learn and understand these knowledge but it is not necessary for every Muslim to learn and understand them as such these knowledge studied by some Muslims is enough to lift the obligation on all Muslims.

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6.5 How the Excellence was achieved

How was excellence achieved? From the facts presented in the earlier chapters and opinions of various scholars Muslims or otherwise, maybe we can summarized them as follows :

1. Islam's requirement for all Muslims to pursue knowledge
2. The environment that is favorable to learning
3. Islamic values for excellence
4. The requirement to pursue their religious obligations
5. Sponsorship and scholarship
6. Islam's requirement for *dakwah*
7. Islam's insistence on precision and facts
8. Expanding territories
9. Allah's exhortation for its 'abd(slaves) to think and ponder on His creations
10. Islam's tolerance and multi ethnicity
11. Hostilities from Islam's enemies
12. Al Quran and Al Hadith as a source of inspiration and knowledge

To fully understand and appreciate the reasons for the excellence, we need to elaborate on the criteria given above.

1. Islam's requirement for all Muslims to pursue knowledge

Various proofs of the Islam's requirement for its adherents to pursue knowledge had been presented in the earlier chapters but the most compelling is the hadith from the Prophet Mohamad SAW, who said “ Pursuing knowledge is compulsory for all Muslims”⁵¹ and thus all Muslims regardless of creed, gender, young or old are required to pursue knowledge. Another often quoted hadith in which the Prophet Mohamad SAW said “ Seek for knowledge even to China.”⁵² There has been much debate of this hadith, many *ulamas* said this is not from the Prophet Mohamad SAW but from a *sahabah* or an *ulama*, while others claimed that it is. If it is from the Prophet SAW, than it shows the importance of seeking knowledge and the necessity to travel far and wide to seek knowledge. The west developed their sciences by travelling to the Muslim's center of excellence in Andalusia and Middle East in pursuit of knowledge. From our studies on Ibn Sina, he pursued knowledge and excellence with outstanding endeavor and diligence.

2. The environment that is conducive to learning

The requirement to pursue knowledge had resulted in an environment that is conducive to learning. The *sahabahs* diligently seek and gathered around the Prophet Mohamad SAW, often in the Masjid An Nabawi (the Prophet's Mosque) to hear and learn about the religion, through the revealed verses of the Al Quran and the Al Hadith. Every details of the Prophet's teaching was memorized and noted, sometimes written on pieces of barks, stone tablets or bones, to the extent of every detail of the Prophet's actions and inaction were noted and they tried to emulate them in their

everyday life. The teachings were put into practice immediately and conveyed to the other *sahabahs* who were unable to attend. The Prophet in a hadith was reported to say “ Convey to others, even if its only one verse “⁵³ and thus the teachings of the Prophet was spread rapidly.

The teachings of Islam is not confined to matters of prayers and worship to Allah SWT in the narrow concept but covers all aspect of human life whether in the relationship with Allah and with fellow humans and other creations. The spirit of learning were intoned on the first followers, the *sahabahs* and continued with the *tabiin* (the followers of the *sahabahs*) and further on. The *tabiin* journeyed from far away places to Madinah, Damsyik, Kufah and other places where the *sahabahs* lived to seek knowledge on the Al Quran, the Al Sunnah and also the *sahabahs* opinions.⁵⁴ The meeting place for this learning usually took place in the mosques and as such the mosques became the centre for learning and had continued until this day wherever there are Muslim communities. Unfortunately this is only one of the many functions of the mosques during the Prophet’s time that is being practiced today. The mosques particularly the Masjid An Nabawi in Madinah, was the Prophet’s command and administration headquarters, media centre, social centre and centre of knowledge, besides the place for the daily prayers. The role of the mosques as the centre of learning later resulted in the setting up of libraries and other facilities required for *ablution* (washing), boarding for the ‘*musafirs*’* and students etc. Some of these mosques later developed into institutions of learning, such as the *madrasahs* and universities.⁵⁵

* Musafirs : the travelers

The Prophet's insistence and concern on other areas of knowledge categorized as '*fardhu kifayah*' was shown in an incident after winning the first battle against the *Quraisyish musyrikin* of Mekah, that is the Battle of *Badr al Qubra*. Many of the enemies were captured and there was much debate on how to treat those prisoners, finally ransom was demanded from their families in Mekah for their release while some were required to teach ten Muslims each until they understood and became proficient in a particular subject taught, as ransom for their release.⁵⁶

3. Islamic values for excellence

Islam as way of life insists on its believers to excel in every thing that they do. They are required to pursue knowledge to the best of their abilities and do their outmost in their prayers and good tidings. The Prophet Mohamad SAW has stated that a Muslim should be a better person today as compared to yesterday and strive to be better tomorrow.⁵⁷ There is another hadith purportedly from the Prophet which said, "Seek your fortune as if you will live forever and do your prayers (worship Allah) as if you will die tomorrow."⁵⁸ There has been much debate also on this hadith, most do not accept it as from the Prophet but the message can be accepted with some constraints and fully adhering to the Islamic principles. Islam's insistence on excellence is more on being a person who humbly subject himself to all the rules and guiding principles of Islam, who strives to increase his devotion to worship Allah, the Al Mighty Creator in all his endeavors and in his mind, be it in his prayers, in his every day life, his learning's, social interactions and vocation. All these are done to attained the level of *Taqwa* and be accepted (well-pleased : *Redha*) as Allah's humble servant. Allah SWT has stated in his Al Quran, Surah Al Hujurat (The Dwellings) verse 13 [Al Quran 049:013]⁵⁹

يَتَأْتِيهَا النَّاسُ إِنَّا خَلَقْنَاهُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاهُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا ۚ إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاهُ ۚ إِنَّ اللَّهَ عَلِيمٌ خَبِيرٌ ﴿١٣﴾

13. O mankind! We created you from a single (pair) of a male and a female, and made you into nations and tribes, that ye may know each other (Not that ye may despise (each other). Verily the most honoured of you in the sight of Allah is (he who is) the most righteous of you (with Taqwa). and Allah has full knowledge and is well acquainted (with all things).⁶⁰

Being accepted and receiving the *redha* of Allah, the Al Mighty Creator, is the climax of being a Muslim with *Iman* and *Taqwa*, and The *Jannah* (The Heaven) is the glorious and most fitting reward. These two set of verses below signify this acceptance and the reward. From the Al Quran, Surah Al Ma'idah (The Table Spread) verse 119 [Al Quran 05:119]⁶¹

119. Allah will say: "This is a Day on which the truthful will profit from their truth: theirs are Gardens, with rivers flowing beneath,- their eternal home: Allah well-pleased with them (redha), and they with Allah. that is the great salvation, (the fulfilment of all desires).⁶²

The other set of verses is from Surah Al Fajr (The Dawn) verses 27-30 [Al Quran 089:27-30]⁶³

27. (to the righteous soul will be said:) "O (thou) soul, in (complete) rest and satisfaction! 28. "Come back Thou to Thy Lord,- well pleased (thyself), and well-pleasing (redha) unto Him! 29. "Enter thou, then, among My devotees! 30. "Yea, enter Thou My Heaven! ⁶⁴

Excellence in Islam is to be excellent and be well-pleased by Allah SWT, the ultimate goal and intention of every Muslim. By being excellent in the Sight of Allah, then all creations, human or others will accept a Muslim's excellence.

4. The requirement to fulfill their religious obligations

Every Muslim is required to fulfill certain obligations, some of them are daily in nature or weekly, monthly and yearly. The performance of these obligations sometimes require certain information which will be necessary to fulfill and comply with the obligations in accordance with its terms and conditions. These obligations such as the daily prayers, the fasting in the month of Ramadan, the *Eids*, the starting of a particular lunar month etc. The daily prayers require the Muslims to face the direction of the Holy Kaaba and since Muslims were spread, then and at present every where in the world, the need to ascertain the direction of the Holy Kaaba resulted in some Muslims as a *fardhu kifayah*, to undertake researches and extensive studies to find a way to correctly determine the direction of the Holy Kaaba. The fasting in the month of Ramadan, determinations of *Eids* and the first of the lunar month require information on the orbit and the cycle of the moon. The normal and traditional method is in the sighting of the new moon which has to be done at a certain period of time. The weather and other conditions sometimes interfere with the sighting of the new moon, thus some Muslims tried to seek others way of determining the new moon using astronomical information and mathematics. The other phenomenon which are related to worship are the eclipses of the moon and the sun, whereby Muslims are encouraged to perform prayers during these eclipses. These requirement and situations had resulted in extensive researches and studies on

astronomy by the Muslims and their achievement in this field are fully recognized. Many theories, knowledge and instruments to aid in astronomical studies were formulated and built. ⁶⁵ George Saliba commented that the advances made by Muslims especially in astronomy were related to the requirement to perform the prayers(*ibadah*) and other related objectives. He also pointed out that astronomy in the Muslim world thrived until the 16th century. ⁶⁶ The Muslims, such as Ibn Sina and many others, great contributions on astronomy are without dispute and had been noted by many scholars.

5. Sponsorship and scholarship

Another factor that had helped in the advancement of knowledge and thus all civilizations were the benevolent sponsors that provided support for the scholars and researchers. The sponsors provided support to the scholars and researchers in various ways, in the form of funds for researches and studies, living allowances, places to do researches and abode, forum for intellectual discussions and setting up of libraries. The sponsors which had a more significant effect were usually the rulers themselves followed by the aristocrats and businessmen who have the authority, the resources and funds. They usually have their own personal or national agenda but the fact is their sponsorships and scholarships provided the impetus for the advancement in knowledge and thus their civilizations.

In the Islamic Civilization, their contribution towards the advancement of knowledge and the Islamic Civilization were more significant. Islamic tenets itself, provided for the proliferation of sponsors in many ways. The earlier discussed factor in which a Muslim is required to pursue knowledge is further supported by the factor of

sponsorships. Islam has put the responsibility of pursuing knowledge but also of helping in the pursuit of knowledge on all Muslims from the ordinary man to the rulers. The ordinary man has the responsibility of pursuing knowledge themselves and is responsible for his immediate family, his neighbors and the *Ummah*. The rulers are responsible for the wellbeing of their citizens, taking care of their security and needs, irregardless of religion, making sure the Muslims fulfill their obligations in terms of prayers, the fasting, the Haj pilgrimage, the *zakat*. The responsibility also covers the moral, social and welfare of their citizens. In a Hadith from the Prophet Mohamad SAW who said:

As narated By 'Abdullah bin 'Umar : Allah's Apostle said, "Surely! Everyone of you is a guardian and is responsible for his charges: The Imam (ruler) of the people is a guardian and is responsible for his subjects; a man is the guardian of his family (household) and is responsible for his subjects; a woman is the guardian of her husband's home and of his children and is responsible for them; and the slave of a man is a guardian of his master's property and is responsible for it. Surely, everyone of you is a guardian and responsible for his charges."⁶⁷

The hadith means that every man is a leader, a father to his wife and children, the *imam* or leader on his subjects and will be responsible on the welfare of the people under his jurisdiction and will be questioned on whether he had fulfilled his obligations towards them including in providing for education of his subjects, when he faces Allah in the day of *Akhirat* (Day of Reckoning). Thus this responsibility entrusted in them, each man and the rulers are compelled to amongst others to ensure the education of their charges, the Muslims. The love of knowledge imbibed on them also made them more benevolent in the pursuit of knowledge. The combination of

responsibilities, love of knowledge and striving for excellence spurred the sponsorships and scholarship on knowledge. This resulted in the advancement of knowledge, the increased numbers of man of knowledge and the inevitable growth of Islamic Civilization. The compulsory *zakat* on the Muslims were put to use to help the needy, the *musafirs* (travelers), the *Fisabilillah* (people on the path to Allah) and others. The students who traveled in pursuit of education were considered as people on *Fisabilillah* and as *musafirs* and thus eligible for a share of the *zakat*. Beside the responsibilities of the man and the rulers, Islam also encouraged its disciples to be generous and benevolent towards the needy.⁶⁸ This encouragement and the promise of rewards in the next world had resulted in generous contributions by Muslims, whether by ordinary man, the businessmen and the rulers and thus expanding further the funds available for pursuit of knowledge and researches. The contributions come in many forms, some in terms of funds, food and lodging, forum for intellectual discussions, *waqaf* and others. Ibn Sina in his pursuit of knowledge had benefited from this benevolence by receiving sponsorship and patronage from the more affluent people and the rulers. The *waqfs* come in the form of lands, buildings, businesses and other methods of *waqaf*. The *waqaf* were usually given to be used for educational purposes such as the building and sustaining of the *madrasah* (schools, colleges), universities, mosques etc.⁶⁹ These *waqaf* were numerous and a special department were usually setup later to manage them. Most Muslim countries in the Middle East nowadays have a ministry (*Awqaf mministry*) managing the *waqaf* in their countries. Examples are in Qatar, Kuwait, Oman and others⁷⁰

All these were done because of the requirement by Islam and the promised rewards mentioned in the Al Quran and Al Hadith. Some verses of the Al Quran such as the verse from Surah An Nisa (Women) verse 162 [Al Quran 04:162]⁷¹

162. But those among them who are well-grounded in knowledge, and the believers, believe in what hath been revealed to thee and what was revealed before thee: and (especially) those who establish regular prayer and practise regular charity and believe In Allah and In the Last Day: to them shall we soon give a great reward.⁷²

The west also developed their knowledge through sponsorship and scholarship. The famed Oxford and Cambridge Universities were patronized by the churches and received endowments and support from the ruling elites.⁷³

6. Islam's requirement for *dakwah*

Islam require its believers to do the *dakwah* (propagate) to the non-believers the teachings of Islam. The Prophet Mohamad SAW went to Taif to propagate Islam to the inhabitants there but without success and instead was humiliated and beaten. The Prophet SAW also went to meet the various *kabilah* which were on pilgrimage to the Kaaba, meeting them in their camps outside Mekah, talking to them about Islam and bidding them to be believers. Most of the people on pilgrimage did not accept the *dakwah* of Rasulillah SAW except the people from the *Aus* and *Khazraj* tribes of *Yathrib* (Madinah). When the Prophet SAW went to *Yathrib* and set the first Islamic state in Madinah, he later sends many emissaries to the neighboring *kabilahs* and countries to propagate and bidding them to accept Islam as their religion. Emissaries were sent to the Roman Governor in Sham and the Persian Emperor but the Persians instead killed the emissaries.⁷⁴ Later emissaries were sent to further away places such

as the northern part of Africa, India, China and according to some account even the Americas, claiming Islam were accepted by some of the Red Indian tribes.⁷⁵ Leo Weiner of Havard University in his book *Africa and The Discovery of America*, stated that West Africans Muslims were living in the America continent and had intermarried with Iroquois and Algonquin Indians.⁷⁶

The Prophet Mohamad SAW was asked by a *sahabah* if tourism or traveling is allowed. The Prophet Mohamad SAW answered that tourism (traveling) is striving in the path of Allah SWT.⁷⁷

The need to travel and do the *dakwah* and the touring of foreign land which the Prophet Mohamad SAW had said is part of *jihad*.(striving in the path of Allah SWT) required the Muslims to study geography and astronomy to help them in their journey. Many maps and even the globe was built to facilitate their travels and had resulted in more maps drawn of the various places visited by the travelers. Many astronomical and navigational aids were also made to aid their journeys by land and by sea. As result of these missions of *dakwah*, Islam were spread through out the entire globe and the Muslims gained access to knowledge of the local inhabitants of the places that they visited.. The knowledge were brought back to their centres of learning in Baghdad, the Spanish peninsula, Bukhara and others. The Muslims studied and further expanded the knowledge with their intense interest and dedication. The travels besides the mission on *dakwah*, was also to seek new knowledge and the travelers also brought the knowledge that the Muslims have developed to the outside world. The knowledge of the geography and navigation later resulted in trading and *dakwah* missions to the far away regions. The economic prosperity from these trading

missions resulted in the expansion of knowledge and the Islamic Civilization through the benevolence of the rich merchants and rulers. These various factors had a symbiotic effect on the Islamic Civilization.⁷⁸

7. Islam's insistence on precision and facts

Islam's insistence on precision and facts also had a profound effect on the expansion of knowledge. The *fatwas* (religious rulings) and opinions from the scholars need to be precise and backed up by facts, either from the '*nas*' (evidences) from the Al Quran, Al Hadith and further supported by the opinions of the *sahabahs*, and the social and prevailing conditions. This has resulted in the search and documentation of the Al Quran, the Al Hadith and the opinions of the *sahabahs* and established the branches of knowledge on '*Fiqh, Usul Fiqh*, the Sciences of Al Quran and the Al Hadith, the Jurisprudence. Many scholars studied and formulated new branches of knowledge, writing and teaching their ideas on these knowledge. The rulings also required detailed knowledge of the sciences, the physical, social factors etc on the subjects that the rulings were required and thus these led to further studies and researches by scholars.⁷⁹

Marmaduke Pickthall said in his lecture,

These 'Ulama were no blind guides, no mere fanatics. The professors of those universities were the most enlightened thinkers of their time. In strict accordance with the Prophet's teaching, it was they who watched over the welfare of the people and pointed out to the Khalifah anything that was being done against the rights of man as guaranteed by the Qur'an. It was they, indeed, who kept down the fanatic element, discouraged persecution for religious opinion, and saved Islamic culture from deterioration in a thousand ways..... liberating and light-giving religion of the Qur'an and the Prophet,Islam, the religion of free thought, the religion which once seemed to have banished priestly

*superstition, and enslavement of men's minds to other men, for ever from the lands to which it came,.....*⁸⁰

Marmaduke's statement signify the role and influence of the *ulama* (the man of knowledge) in the society. The *ulama* pursue and encourage the quest for knowledge and they become role models for scholars with their diligence, care and detailed study.

8. Expanding territories

The ever expanding Islam's territories and at a very fast rate and thus also the population and the various problems related with it, required many improvement in the political and administrative machineries, the food and water supplies production and management. The rulers and the scholars took up the responsibilities to find the solutions to these problems and thus extensive studies and researches were done. The various systems and knowledge of the other civilizations were used and adapted with creative modifications to improve the system and the wellbeing of the population. The Persian system of management were adapted by the Abbasids to govern the expanding territories.⁸¹ The Uthmaniyah caliphs (Ottomans) setup their own system of administration by having a tier system of management to facilitate the collection of taxes and administration of the villages and the setting up of professional guilds to manage the business and industrial production.⁸²

The Islamic Civilizations produce many mechanical devices and machineries to aid the production of water for everyday use and for irrigation of agricultural lands. During the recent exhibition on Islamic Civilization between December 2006 to February 2007 in Kuala Lumpur organized by the Ministry of Science, Technology and Innovations with the assistance from the Wolfgang Goethe University from

Germany, many of the devices and machineries were exhibited in the form of miniaturized models made from the original designs developed by Muslims scientists more than five centuries ago. Many of the technological innovations on agricultural productions were developed in the Andalusia (Spain and Portugal) and some of them still exist to this day. Some scholars were of the opinion that the name Portugal was derived from the Arabic word ‘*Brotocol*’ “ بُرْتُغَالِي ” which means oranges and Portugal is famous for its oranges.⁸³

According to Pervez Hoodbhoy, “ circa 700, Islam was in a state of vigorous territorial and commercial expansion - the society was vibrant and dynamic. Prosperity from trade and conquest had created a leisure class able to pursue tasks demanding higher level of intellectual sophistication. Cultivation of arts and sciences began in this era...”⁸⁴

9. Allah’s exhortation for its ‘*abd* (slaves) to think and ponder on His creations

In the Al Quran there are many verses which exhorted the man to think and ponder upon Allah SWT’s many creations. Some of the verses we had presented in the earlier chapters and here we wish to present a few more verses to exemplify further. From the Al Quran, Surah Yunus (Jonah) verse 101 [Al Quran 10:101]⁸⁵

قُلْ أَنْظَرُوا مَاذَا فِي السَّمَوَاتِ وَالْأَرْضِ وَمَا تُغْنِي الْآيَاتُ وَالنُّذُرُ عَنْ قَوْمٍ لَا يُؤْمِنُونَ ﴿١٠١﴾

101. Say: "Behold all that is In the heavens and on earth"; but neither Signs nor warners profit those who believe not.⁸⁶

The translation in Malay clearly portrays the message in this verse.

“Katakanlah (wahai Muhammad): Perhatikan dan fikirkanlah apa yang ada di langit dan di bumi (dari segala kejadian yang menakjubkan, yang membuktikan keesaan Allah dan kekuasaanNya). Dalam pada itu, segala tanda dan bukti (yang menunjukkan kekuasaan Allah) dan segala Rasul (yang menyampaikan perintah-perintah Allah dan memberi amaran), tidak akan memberi faedah kepada orang-orang yang tidak menaruh kepercayaan kepadanya “⁸⁷

The word *أَنْظُرُوا*, which means look,⁸⁸ but just looking and not seeing would usually mean that a person do not use his mental faculty to think, evaluate and try to comprehend the things that he looked at and Allah SWT messages are full of meaning for those who want to think.

And from Al Quran, Surah Yunus (Jonah) verse 24, [Al Quran 10:024]⁸⁹

24. The likeness of the life of the present is as the rain which We send down from the skies: by its mingling arises the produce of the earth- which provides food for men and animals: (it grows) till the earth is clad with its golden ornaments and is decked out (in beauty): the people to whom it belongs think they have all powers of disposal over it: there reaches it Our command by night or by day, and We make it like a harvest clean-mown, as if it had not

flourished only the day before! Thus do We explain the Signs in detail for those who reflect.⁹⁰

In this verse, Allah SWT spoke about the creation of rain and as a results plants can grow and thus animals and man can benefit from them. As Allah SWT can bring rain and make plants grow, He can also make it all disappear just as suddenly. Those who reflect will understand the extent of Allah SWT power over all things and the purpose for every creation.. Thus the Muslim is exhorted to think, reflect, ponder all of Allah's creation which he can see and any good Muslim will take up on this in order to become a better Muslim and understanding his role and responsibilities and the Magnificence of the Al Mighty Creator. The thinking and reflection usually is the start of enquiry and from there the quest for more information will results in reading and further researches in order to fully understand the subject. The curiosity of man is such the he will always want to know more and more and this has led to more detail studies and researches and has led man to the moon and back and to the frontiers of creation which we will discuss further on the topic of ethics later in the chapter. Allah SWT had stated that the things He created can only be explained, thus understood by those who reflect.

10. Islam's tolerance and multiethnicity

Islam's tolerance had been proven time and again throughout history.⁹¹ Tolerance is a part of the teachings of Islam and clearly stated in the Al Quran and the Al Hadith. The tolerance covers many aspects and situations. The tolerance between Muslims themselves, between the rich and the poor, the rulers and their subjects, between the Arabs and the *Ajam* (non-Arabs) and between Muslims and non-Muslims. A particular aspect we wish to elaborate is on the tolerance of the Muslims towards non-Muslims. Tolerance in Islam is translated in being fair and doing justice to all

irregardless of religion, race, the poor or the rich. In the Al Quran, in Surah Al Maidah, (The Table Spread) verse 8, Allah SWT commanded Muslims to be fair in all their dealings. [Al Quran 05: 08]⁹²

8. O ye who believe! stand out firmly for Allah, As witnesses to fair dealing, and let not the hatred of others to you make you swerve to wrong and depart from justice. be just: that is next to piety: and fear Allah. for Allah is well-acquainted with all that ye do. ⁹³

There are many ahadith in which the Prophet Mohamad SAW, commanded and reminded Muslims to be fair to the non-Muslims and the Prophet Mohamad showed the examples through his dealings with the non-believers, if they do not wage war on the Muslims. The Prophet Mohamad SAW said :

‘ Who ever hurts a *kafir zimmi* then I will be his foe, who ever is my foe will be my foe in the day of reckoning’ ⁹⁴

A particularly famous incident involved Saidina Ali ibn Abi Talib when he was the Khalifah. His body armour that he had used in many battles was lost and he later found it in the possession of a Jew. He claimed it from the Jew but the Jew refused claiming it to be his own armour and the matter was brought to the court for trial. The judge requested Saidina Ali to provide proof of ownership of the armour but was unable to provide it, so the judge made a decision to retain ownership to the person who was in possession of the armour, that was the Jew. The decision was made irregardless of the position of Saidina Ali who was the Khalifah, the supreme leader of the Muslims at that time, or the religion of the person. The Jew, a non-Muslim and a race that had been condemned by Allah SWT⁹⁵ but still received a judgment in his favor based on the facts and proof provided in the Islamic court. The Jew realizing

the justice of Islam, gave back the armour to Saidina Ali, admitting he bought it from someone else and knew that it was Saidina Ali's armour and willingly embraced Islam.⁹⁶

Marmaduke Pictkhal in his lecture series on Islamic Civilization touch on this issue of tolerance of the Muslims..

Marmaduke Pickthal said, *"No color or race prejudice existed in Islam. Black, brown, white and yellow people mingled in its marts and mosques and places upon a footing of complete equality and friendliness. Some of the greatest rulers, saints and sages in Islam have been men as black as coal, like Jayyash, the saintly king of Yemen in the period of the Abbasid decline, and Ahmad Al-Jabarti, the great historian of Egypt in the time of Mohammad Ali, founder of the Khedivial dynasty. And if any one thinks that there were no white people in that mighty brotherhood, be it known that there are no men whiter than the blond Caucasians and the mountain folk of Anatolia who very early found a place in the Islamic confraternity. It was a civilization in which there were differences of rank and wealth, but these did not correspond to class distinctions as understood in the West, much less to Indian (Hindu) caste distinctions."*⁹⁷

This tolerance and fairness to all, made the non-Muslims to be comfortable and able to live in the Muslim's territories. They become part of the society, their religion tolerated, and not coerced to accept Islam, they can go about with their life and vocations and their rights as a citizen were guaranteed.⁹⁸ The Jews when they were prosecuted and expelled from Europe and other countries traveled and seek refuge in territories under the Muslim's rule. They were accepted into the Muslim's society and freely go about their affairs. Many remained a Jew while some embraced Islam and were assimilated in the Muslim's society. In Egypt, the old Coptic Christians sects still survived until today intact with their monasteries. Many Nestorian Christians lived in the area of Sham (Syria, Lebanon, Jordan and Palestine) and they used their mother tongue the Syriac and were equally proficient in Arabic. Every where in the

Muslim world, people from various religion and races lived together in harmony.⁹⁹ Seldom do we, had ever heard of atrocities against the non-Muslims population. If we were to look inside our own history of the Malay Archipelago, we can find many instances where the same situations prevailed. Malacca in the 15th century was a very important trading port and many travelers came to trade and some even stayed making it their new home, with some marrying into the local population.. These people came from India, the Arab Peninsula, China and later the Portuguese, the Dutch and English. The famous story of the arrival of the Chinese Princess Hang Li Po and the Muslim Admiral Cheng Ho from China in Malacca was during this period.. The Princess Hang Li Po and her entourage were given a piece of land to build their settlement.¹⁰⁰ The Portuguese when they first came were well received but it seems they had some other agenda besides trade. The tolerance and amicable manner of the Malays who were Muslims then, resulted in the prosperity of the Malacca Sultanate. To this day we can clearly see around us the tolerance of the Muslims. During the 19 and 20th centuries, there were a large influx of immigrants, many Indians, Chinese and some Europeans came to seek their fortune in the Malay Peninsula. They were able to live in harmony and some of them prospered more than the local inhabitants. Then came *Merdeka* (Independence) and the other races were invited to join the independence negotiations and were later given automatically, citizenship of the new independent Malaya. The Chinese or the Indians of a different religion can live and carry out their affairs in a predominantly Malay Muslim community, but could a Malay Muslim live in a predominantly Indian and Chinese community? .

The tolerance given to the non-Muslims enabled them to contribute their parts in the Islamic Civilization and some of them were well known for the contributions in the development of knowledge of the sciences. Hunain ibn Ishak, a Nestorian Christian and a physician, was well known for his contribution in the translation of many Greek books. He was even appointed the head of the Translation Bureau of the Dar Al Hikmah during the Abbasid Caliphate (second half of the ninth century).¹⁰¹ Thabit ibn Qurrah, a Christian, was also a translator during this period and made significant contributions in algebra, his son, Sinan ibn Thabit was also a translator and later embraced Islam. Sahl al-Masihi, a Christian, wrote a number of medical treatises and was one of the teachers of Ibn Sina, the famous prince of mediaeval physicians. During the tenth century a famous physician of that age was a Jew, Ishaq al-Isra'ili (Isaac Judaeus) who wrote the mediaeval treatise on urine. In Andalus, the centre of Muslim Civilization and knowledge, many Europeans went there to pursue their studies and made many contributions to the development of knowledge especially in the sciences. They studied Arabic in order to pursue their knowledge since everything was taught in Arabic. They later translated many books and research works of the Muslims into their own languages or into Latin. Hasdiah ibn Shaprut, a Jew was a distinguished Spanish physician who translated *Dioscorides* into Arabic with the help of Nicholas, a Greek monk. The European universities such as Oxford, Cambridge etc even set up Arabic language and studies department to translate Arabic works in the sciences and literature.¹⁰²

11. Hostilities from Islam's enemies

Man under trying and difficult situations tend to face up to the challenge. The Muslims were faced with hostilities from their very first day as a Muslim. The

Prophet Mohamad SAW and the *sahabahs* had to face the hostilities of some of their families and *Quraishiyah Musyrikin* in Mekah and when they *hijrah* to Madinah they had to face hostilities from the Jews, the *munafiqs* and later the Eastern Roman and the Persian Empires.¹⁰³ To face these hostilities, the Muslims had to use *Hikmah* (Wisdom) and knowledge, so they had to strive to learn and put these into practice. The prolong hostilities made the Muslims more creative in terms of management of the resources, tactics and weaponry. The use of tactics and wisdom gave the Muslims many victories against their enemies sometimes even without fighting as the case of the battle of Tabuk against the Roman in Sham during the Prophet's time, where the armies of the enemies outnumbered the Muslim's army by many times.¹⁰⁴ Later the Muslims were able to develop weaponry far in advance of their time to face their enemies.¹⁰⁵

[Al Quran 008:060]¹⁰⁶

60. Against them make ready your strength to the utmost of your power, including steeds of war, to strike terror into (the hearts of) the enemies, of Allah and your enemies, and others besides, whom ye may not know, but whom Allah doth know. Whatever ye shall spend in the cause of Allah, shall be repaid unto you, and ye shall not be treated unjustly.¹⁰⁷

Saidina Ali ibn Abi Talib in a well-known statement in which he said, ' A righteous group not well organized (managed) will be defeated by a deviant group which is

well organized.¹⁰⁸ Allah SWT in the Al Quran, Surah As Shaf(The Rows) verse 4, stated that He Loves those who organized themselves. [Al Quran 061:004]¹⁰⁹

4. Truly Allah loves those who fight in His cause in battle array, as if they were a solid cemented structure.¹¹⁰

So the Muslims during that time made the preparations to face their enemies by organizing themselves, using and advancing their knowledge in the related and other fields in accordance with Allah SWT's commands. The Muslims in the present time are facing their enemies with their hands tied. We can understand the position taken by Pakistan to develop their nuclear capabilities against India who have it. Lately Iran

The development of these weaponry required extensive and detailed also had started to further their researches in their nuclear capabilities in face of the knowledge of physics, mechanics, mathematics and chemistry. The development of hostilities from the Zionist regime and their cohorts especially the US, UK and these weapons were spurred by the necessity of the situation at hand. In the Al Quran, many other western countries.¹¹¹ The nuclear capability is necessary to address Surah Al Anfal, verse 60, Allah SWT commanded the Muslims to prepare the ever depleting oil sources and to face the hostilities of the western powers who themselves to the best of their abilities to face their enemies. want to dominate the world.

12. Al Quran and Al Hadith as a source of inspiration and knowledge

The Al Quran and the Al Hadith are to all Muslims the source of inspiration and knowledge. Both are the guides and reference for all Muslims to carry out their everyday affairs and in preparation for the next world. There are numerous information in the Al Quran and the Al Hadith which cannot be found anywhere else

and the information regarding the past, scientific information, the future and many other information besides the guidelines and the regulations on the Islamic religion. The Al Quran and the Al Hadith spoke of the past history but are not concerned on the specific dates and the historical details but more as a reminder and encouragement to the Muslims. There are lessons to be learnt from the past history to forge a vision of hope and expectations for the future.

There are various information in the Al Quran and the Al Hadith which inspired and exhorted the Muslims to ponder, reflect and see, as discussed in the earlier factors and these form the basis for further studies and researches by Muslims. They deliberated on the matter to uncover the marvel and perfection that Allah SWT has created the *Alam* (the Universe) with the intention of using the knowledge gleaned from them for the benefit of mankind and their own salvation. Some of the verses from the Al Quran which were an inspiration to the man of knowledge, revealed information that were beyond the grasp of man at that time.

i. The creation of the foetus. Al Quran Surah Al Mu'minun (The Believers)

[Al Quran 023:14]¹¹²

فَكَسَوْنَا عِظْمًا الِّمُضْغَةَ فَخَلَقْنَا مُمِضْغَةً اَلْعَلَقَةَ فَخَلَقْنَا عَلَقَةً اَلنُّطْفَةَ خَلَقْنَا ثُمَّ
 اَلْخَلِيقَيْنِ اَحْسَنُ اَللّٰهُ فَتَبَارَكَ ۚ ؕ اٰخَرَ خَلَقًا اَنْشَأْنٰهُ ثُمَّ لَحْمًا اَلْعِظَمَ

14. Then we made the sperm into a clot of congealed blood; then of that clot we made a (foetus) lump; then we made out of that lump bones and clothed the bones

with flesh; then we developed out of it another creature. so Blessed be Allah, the best to create! ¹¹³

ii. Creation of all living things, animals and plants, in pairs, that is male and female

From the Al Quran, Surah Yaasin (another name for the Prophet Mohamad SAW) verse 36 [Al Quran 036: 036] ¹¹⁴

سُبْحَنَ الَّذِي خَلَقَ الْأَزْوَاجَ كُلَّهَا مِمَّا تُنْبِتُ الْأَرْضُ وَمِنْ أَنْفُسِهِمْ وَمِمَّا لَا يَعْلَمُونَ

36. Glory to Allah, who created in pairs all things that the earth produces, As well as their own (human) kind and (other) things of which they have no knowledge. ¹¹⁵

iii. The sun and moon in their orbits

From the Al Quran, Surah An Anbia (The Prophets) verse 33 [Al Quran 021:033] ¹¹⁶

وَهُوَ الَّذِي خَلَقَ اللَّيْلَ وَالنَّهَارَ وَالشَّمْسَ وَالْقَمَرَ كُلٌّ فِي فَلَكٍ يَسْبَحُونَ ﴿٣٣﴾

33. It is He who created the night and the Day, and the sun and the moon: all (the celestial bodies) swim along, Each in its rounded course. ¹¹⁷

iv. Source of the sperm and ovum

From the Al Quran, Surah At Thariq (The New Comer) verses 6-7 which stated the source [Al Quran 086:6-7] ¹¹⁸

خُلِقَ مِنْ مَّاءٍ دَافِقٍ ﴿٦﴾ تَخْرُجُ مِنْ بَيْنِ الصُّلْبِ وَالتَّرَائِبِ ﴿٧﴾

6. He is created from a drop emitted-

7. Proceeding from between the backbone and the ribs: ¹¹⁹

v. The chlorophyll in leaves of plants

From the Al Quran, Surah Al Anaam (The Cattle) verse 99 [Al Quran 06:99]¹²⁰

99. It is He who sendeth down rain from the skies: with it we produce vegetation of all kinds: from some we produce green (crops), out of which we produce grain, heaped up (at harvest); out of the date-palm and its sheaths (or spathes) (come) clusters of dates hanging low and near: and (then there are) gardens of grapes, and olives, and pomegranates, Each similar (in kind) yet different (in variety): when They begin to bear fruit, feast your eyes with the fruit and the ripeness thereof. Behold! In these things there are Signs for people who believe. ¹²¹

In this verse Allah SWT pointed out that He created green crops or plants and there are many other verses with similar descriptions and there is a message here to be noted for those who think.. The green colour of the leaves of plants were later found by scientists to be chlorophyll which is essential in the growth of plants.¹²²

vi. The wind assisting in pollination of plants

From the Al Quran, Surah Al Hijr (The Rocky Track) verse 22 [Al Quran 015:22]¹²³

22. And we send the fecundating winds, then cause the rain to descend from the sky, therewith providing you with water (in abundance), though ye are not the

guardians of its stores. ¹²⁴

Fecundating winds mean the fruitful or fertile, that is they carry the pollens from a flower to the stigmas in order for the process of fertilization and the bearing of fruits to occur.

vii. The source of milk in the animals

From the Al Quran, Surah An Nahl (The Bee) verse 66 [Al Quran 016:66]¹²⁵

66. And Verily in cattle (too) will ye find an instructive sign. from what is within their bodies between excretions and blood, we produce, for your drink, milk, pure and agreeable to those who drink it. ¹²⁶

vii. The atmospheric pressure at higher altitude

From the Al Quran, Surah Al Anaam (The Cattle) verse 125 [Al Quran 06:125]¹²⁷

125. Those whom Allah (in His plan) willeth to guide,- He openeth their breast to Islam; those whom He willeth to leave straying,- He maketh their breast close and constricted, as if they had to climb up to the skies: Thus doth Allah (heap) the penalty on those who refuse to believe. ¹²⁸

viii. The Creation of the Universe

From the Al Quran Surah Al Anbiyaa' (The Prophets) verse 30 [Al Quran 21:30]¹²⁹

أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا ^طوَجَعَلْنَا مِنَ الْمَاءِ
كُلَّ شَيْءٍ حَيٍّ أَفَلَا يُؤْمِنُونَ ^ط

30. Do not the unbelievers see that the heavens and the earth were joined together (as one unit of creation), before we clove them asunder? we made from water every Living thing. will They not then believe? ¹³⁰

Present day scientists have put forward their Big Bang Theory on the creation of the universe. The universe they said started in one very condensed matter and exploded to form the stellar bodies, the galaxies with their suns, moons, planets, asteroids etc¹³¹

The Expansion of the Universe

From the Al Quran, Surah Adz-zariyat, verse 47 [Al Quran 051:47]¹³²

وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ

47. With power and skill did we construct the Firmament: for it is we who create the vastness of space. ¹³³

According to the writer, Yusuf who translated the verse to mean “ The Heavens, We have verily built it with power and Verily We are expanding it ” and he noted that in the *Muntakab*, a book of commentaries edited by the Supreme Council for Islamic Affairs, Cairo, the verse was translated to mean that the universe is expanding.¹³⁴ The famous writer and scientist, Harun Yahya had also presented similar views in his articles posted in his website.¹³⁵

The famous Prof Hawkings also espoused the phenomena of the expanding universe and also mentioned in his book that he is not agreeable to the dogma (faith) of the

religions, Christian, Islam and the rest.¹³⁶ If only he had read carefully and give thought on the translation of the Al Quran, he surely would have found the numerous scientific information in the Al Quran especially about the expanding universe, his area of interest, in the verses described above. Thus modern day scientists found out only lately, what Allah SWT had revealed in the Al Quran, to the Prophet Mohamad SAW about 1400 years ago.

ix. The function of the mountains

From the Al Quran, Surah Luqman (Luqman, a name of a pious man), verse 10

[Al Quran 031:10]¹³⁷

10. He created the heavens without any pillars that ye can see; He set on the earth mountains standing firm, Lest it should shake with you; and He scattered through it beasts of all kinds. We send down rain from the sky, and produce on the earth every kind of noble creature, in pairs.¹³⁸

Another verse is from Surah An Naba (The Great News), verse 7

[Al Quran 078:7]¹³⁹

وَالْجِبَالِ أَوْتَادًا

7. And the mountains as pegs?¹⁴⁰

There are several other verses that mentioned the functions of the mountains. The information on geography and geology are apparent here and also a warning that removing the mountains will result in the instability of the earth and thus prone to

earthquakes and erosion. Unfortunately, man because of its desire and greed had leveled and desecrated the mountains and the forests, resulting in many disasters such as floods, erosions, landslides, pollutions and lately the global warming phenomena.

There are many more verses in the Al Quran which revealed scientific phenomena and information. The verses are sometimes very direct and any layman can understand the information given but some are quite unclear and have intrinsic meanings. The information or message there can only be understood if we follow Allah SWT's exhortation and advice to think, ponder and reflect. Even the direct verses have their own intrinsic meanings and thus a Muslim can only hope to understand it by thinking, and reflecting upon it and there are other verses which are beyond understanding especially on the matters of the *ghaibiyyat* (the unseen) such as the *Zat* (matter) of Allah SWT, *Roh* (spirit), heaven, hell, the angels, the hereafter. These matters are among things that a Muslim has to accept it as it is and it is part of *Iman* (faith).¹⁴¹ These matters will only dawn on us when we are dead and nobody had come back from among the dead to talk about it and we have to rely in the information that was brought by the Prophet Mohamad SAW through the Al Quran and the Al Hadith. From the Al Quran, Surah Al Israa' (The Journey of the Night), verse 85.

[Al Quran 017: 085]¹⁴²

وَيَسْأَلُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا ﴿٨٥﴾

85. They ask thee concerning the spirit (of inspiration). say: "The spirit (cometh) by command of My Lord: of knowledge it is only a little that is communicated to you, (o men!)" ¹⁴³

And from Surah Al Anaam (The Cattle), verse 50 [Al Quran 06:050] ¹⁴⁴

50. Say: "I tell you not that with me are the treasures of Allah, nor do I know what is hidden, nor do I tell you I am an angel, I but follow what is revealed to me. " Say: "can the blind be held equal to the seeing?" will ye then consider not? ¹⁴⁵

The author have managed to reprised a few examples of earlier Muslim scientists who have specifically used the information from the Al Quran in their studies and there maybe many others which have not been found. One example is the use of the beginning alphabets of several surahs of the Al Quran in astronomy by al-Kindi(d.873). He calculated, using astrology and theory of conjunction and predicted the duration of Arab rule to be 693 years and confirmed his results with the numerical values of these alphabets. Arab rule of the Muslim empire started in 622 AD and ended in 1258 AD that is about 636 years (656 years Hijrah). Another Muslim scientist, Taufil Ar Rumi who lived during the Ummayyids also used astronomy to predict Islamic rule to be 960 years. ¹⁴⁶ There are also many other recent examples of Muslims scientists who used the Al Quran as a source for scientific research. Harun Yahya from Turkey have used several verses from the Al Quran on the creation of the universe in his studies. ¹⁴⁷

Thus we can conclude here that the Al Quran and the Al Hadith were the source of inspiration and source of knowledge by Muslims which made them excelled in the

field of knowledge and in the making of the glory of Islamic Civilization. Science in Islam is molded in the spirit of the Al Quran.¹⁴⁸ Ziauddin Sardar in an article wrote :

*“Islam attempts to synthesize reason and revelation, knowledge and values, in its approach to the study of nature. Knowledge acquired through rational human efforts and through the Qur'an are seen as complementary: both are 'signs of God' that enable humanity to study and understand nature.”*¹⁴⁹

A German Professor Joseph Hell, in a book on the Arab civilization which had been translated into English by Mr. S. Khuda Bukhsh, wrote ::

*“Even at the Universities religion retained its primacy, for was it not religion which first opened the path to learning? The Qur'an, tradition, jurisprudence therefore- all these preserved their pre-eminence there. But it is to the credit of Islam that it neither slighted nor ignored other branches of learning; nay, it offered the very same home to them as it did to theology - a place in the mosque. Until the 5th century of the Hijrah [12th century CE] the mosque was the university of Islam; and to this fact is due the most characteristic feature of Islamic culture “perfect freedom to teach.” The teacher had to pass no examination, required no diploma, no formality, to launch out in that capacity. What he needed was competence, efficiency, mastery of his subject.”*¹⁵⁰

6.6 The Decline

What causes this decline in the Islamic Civilization? Was the decline caused by the enemies from outside, the Mongols, the Europeans and others or from the enemies within? Maybe it is due to the never ending infightings and feuds between rulers and scholars as such?

The causes of decline of the Islamic Civilization were the culmination of all these factors and maybe others. Many scholars have studied the causes of the decline and have presented their opinions and results of their studies.

According to Marmaduke Pickthal, in the second lecture in a series of eight lectures on Islamic Civilization that he gave in 1927 in Madras, India,

“during the Ottoman’s rule, the people were contented in the decline as they had been in the prime of the civilization, for the decline came gradually, imperceptibly, and affected all alike: nor were they conscious of the deterioration which had actually taken place, since all the accustomed paraphernalia still existed, with a shadow of the former pomp.

The schools, primary and secondary, still existed; so did the universities, but they were now engaged in teaching, the Qur’an without the meaning, the latter all the hair-splitting niceties of Fiqh - religious jurisprudence - a science of great use to every Muslim, but taught in such a way as to imprison the intelligence. The machinery of justice, sanitation, police and public works still existed, only it had ceased to function properly....

In the eyes of history, religious toleration is the highest evidence of culture in a people. It was not until the Western nations broke away from their religious law that they became more tolerant, and it was only when the Muslims fell away from their religious law that they declined in tolerance and other evidences of the highest culture. Before the coming of Islam, tolerance had never been preached as an essential part of religion.¹⁵¹

The factors and the situation that prevailed during the Ottoman’s rule as stated by Marmaduke Pickthal in his lecture were similar to the opinion of Merryl Wyn Davies in his book, *Mutual Understanding, Forming an Islamic Anthropology* (*Saling Mengenal : Membentuk Antropologi Islam*) translated into Malay by Mohd Sahari Naph and Norsita Lin Ahmad and published by the Dewan Bahasa dan Pustaka. Davies cited among the reasons for the decline were, the factor of the closing of the door of *Ijtihad*, the making of Islamic rulings.¹⁵²

The Causes of Decline

The factors which caused the decline in the glory of Islamic Civilization maybe can be summarized into two major categories :

1. The External Threats

2. Internal Problems

The author will try to present and discuss factors involved under these two categories by putting forward his views and the views of other scholars which had attempted to dissect the causes of decline in Islamic Civilization.

6.6.1 The External Threat

The external threat from the enemies of Islam started from the first day Islam was propagated by the Prophet Mohamad SAW as presented in the earlier chapters and on the sub-topic of Hostilities of Islam's enemies under the preceding topic where we discussed about the achievement of excellence. The external threat was present as soon as the Prophet Mohamad SAW was born from amongst the Arabs and not from the Jews or Nasara. This was evident when the Prophet Mohamad SAW at the age of 12, followed his uncle on a trading trip to Sham and met an old priest who followed the true older Kitab. The priest, recognizing the signs of prophethood of the young Prophet Mohamad SAW advised the uncle to return immediately to Mekah for the Prophet's safety because if the Jews and Nasara knew the coming Messenger was an Arab, they would surely harm the Prophet Mohamad SAW.¹⁵³ The people of the Old *Kitabs* (*Ahlil Kitab*), the Old Testament (Torah) and the New Testament (The Bible or *Injil*) knew about the coming of the Prophet Mohamad SAW which was called by the name of Ahmad (The Exalted One). In the Al Quran they were called the '*Ahlil Kitab*' and they knew the Prophet Mohamad SAW like they knew their own children, as stated in Surah Al Anaäm (The Cattle), verse 20 and the mentioning of the coming Messenger called Ahmad by the Prophet Isa AS (Jesus) in Surah Ash Shaf (The Row), verse 6

From the Al Quran, Surah Al Anaam (The Cattle), verse 20 [Al Quran 06:020]¹⁵⁴

20. Those to whom We have given the Book (the Jews and Nasara-Christians) know this (The Prophet Mohamad SAW and the truth that he brought) as they know their own sons. those who have lost their own souls refuse therefore to believe. ¹⁵⁵ , ¹⁵⁶

From Surah Ash Shaf (The Row), verse 6 [Al Quran 061:06]¹⁵⁷

وَإِذْ قَالَ عِيسَى ابْنُ مَرْيَمَ يَبْنِي إِسْرَءِيلَ إِنَّي رَسُولُ اللَّهِ إِلَيْكُمْ مُصَدِّقًا لِمَا بَيْنَ يَدَيَّ
مِنَ التَّوْرَةِ وَمُبَشِّرًا بِرَسُولٍ يَأْتِي مِنْ بَعْدِي اسْمُهُ أَحْمَدُ ^ط فَلَمَّا جَاءَهُمْ بِالْبَيِّنَاتِ قَالُوا
هَذَا سِحْرٌ مُبِينٌ ﴿٦﴾

6. And remember, Jesus, the son of Mary, said: "O Children of Israel! I am the apostle of Allah (sent) to you, confirming the law (which came) before me, and giving glad tidings of a Messenger to come after me, whose name shall be "Ahmad." but when He came to them with Clear Signs, They said, "This is evident sorcery!" ¹⁵⁸

The Jew and Christians (*Yahudi and Nasara*) knew of the coming of the Prophet Mohamad SAW and they promoted the idea amongst the people of Yathrib as an intimidation, thinking that the coming Messenger would be from them and they would have an upper hand against the Arabs of Yathrib, so when they found out that the Messenger was born as an Arab, they immediately turn against the Prophet and the Arabs. Their jealousies and dissatisfaction with the Messenger who was an Arab, resulted in their hostilities towards the Prophet Mohamad SAW and Islam and the

Arabs as a whole, and caused many untoward incidents. They cohered with the *munafiqs* of Madinah and the Arab Musyrikin of Mekah, scheming and doing their utmost to undermine the Prophet Mohamad SAW and Islam, even though they had peace and non-partisan treaties with the Prophet and the Muslims of Madinah. Their conniving schemes and deceit were finally evident and many of them were killed in the skirmishes that followed and were later ordered to leave Madinah by the Prophet¹⁵⁹ Thus their hostilities towards the Prophet Mohamad SAW and Islam and the Arabs continued to this day and will continue till the appointed time with the return of The Prophet Isa AS (Jesus) and their deceit and atrocities were evident throughout history from the days of the Prophet Musa (Moses) as stated in the Al Quran and maybe earlier.¹⁶⁰ The Jews as discussed earlier received safe haven and protection from the Muslims during their journey and escape from the persecutions and injustice from Europe and other areas but still they hold the grudge and animosity towards Islam and in fact the whole non-Jews people.¹⁶¹ The Zionist movements with their Protocols and their sister organizations, the Freemasons and others had been unveiled by many, among them was Henry Ford, the inheritor of the first car manufacturer, Ford Motor of USA. He unveiled the planning and deceit of these movements in his book *The Ten Protocols*.¹⁶²

The Christians animosity towards Islam also existed since the Prophet Mohamad SAW's time when he had to confront the might of the Roman Byzantine Empire based in Istanbul. The territories of the Roman Byzantine Empire stretches into Sham and into Egypt. The Prophet Mohamad SAW sent emissaries to the Governor of the Roman Empire in Sham to preach Islam and remind them of what was written about the Last Messenger in the *Injil* (The Bible) that was revealed by Allah SWT to

Prophet Isa Al Masih AS (Jesus Christ). The Prophet's *dakwah* was not accepted by the Governor of the Romans in Sham but instead the Romans assembled their armies to confront the Muslims. Many battles were fought by the Muslims against the Romans and in most of the battles the Muslims were victorious despite the fact that the Roman armies and weaponry were much larger and better than the Muslim armies.¹⁶³ The victories were achieved because of the determination, the spirit of *Jihad* and the well planned strategies and tactics used by the Muslims. The spirit of *Jihad*, where the Muslims fight their enemies to be martyred and receive the coveted rewards of the *Jannah* (Heaven) petrified the Roman armies which usually were mercenaries without just cause. They join the Roman army to earn wages and glory of the name of Rome or were forcibly conscripted. They go to war with the hope of coming out of it alive while the Muslims go to war with the hope to die as martyrs.

There were two major expeditions sent by Rasulullah to fight against the Romans, they were the Battles of Tabuk and Hunain. The confrontation against the Romans continued and during the reign of the second Khalifah Ar Rasyidin, Omar Al Khatab, *Baitul Muqadis* (Jerusalem) was captured. Later on Egypt was also liberated by the Muslim armies headed by Amru Al As, a close *sahabah* of the Rasulullah and from there, later on, a naval expedition to Andalusia (Spain) was sent headed by Tariq ibn Ziad. The fighting against the Romans continued and later against the Christians of Europe with the urgings and the decrees of the Roman Catholic Popes in Rome. This resulted in several Crusades launched by the Europeans in the name of the Holy Wars for Christianity. Hundreds of thousands of Christians from all over Europe joined in each of the major Crusades while tens of thousands in the lesser Crusades. They brought destruction and genocide to the area of Sham and in the rims of the eastern

Mediterranean. Many cities and villages were destroyed and ransacked and tens of thousands of non-combatants Muslims, the woman, the children, the old and the sick were killed mercilessly in the name of their holy wars. Many of their inhumane atrocities were recorded by historians. Also destroyed in their merciless rampages were valuable books, manuscripts and artifacts of knowledge and many of these were also seized and brought back to their countries for use by their scholars.¹⁶⁴

In the Spanish Peninsula, the same situation also persisted. The European Christians were hostile towards the Muslims and persistently attacked the territories under Muslim's rule. Between 708-714AD, Charlemagne attacked the Muslims cities and destroyed many of the cities. The Christians when they captured a Muslim city exacted a terrible rampage and genocide against the Muslims. Hundreds of thousands of Muslims were killed and forced to renounce Islam. Again many books of knowledge were destroyed and the cities burned. The Umayyid caliphate survived the frequent attacks from the Christians and rebellion within its ranks. In 1492 the last stronghold of Granada was captured by the Christians, united under the rule of Ferdinand of Aragon and Isabella of Castile.¹⁶⁵ The damaged done to Muslims and Islamic Civilization in Spain was complete and Islam was never able to rise again in Andalucia. Some of the remnants of Islamic Civilization still existed until today especially in the magnificent architecture and engineering feat of the buildings and the advance irrigation system in agriculture but there were no Muslims left in Andalucia.

The hostilities and the destruction exacted by the Christians destroyed the Islamic Civilization in Spain but not the Islamic Civilization in the Middle East. The

Europeans hostilities towards Islam continued with the expansion of their influence and territories from the 14th century onwards. The Portuguese started their expansion with their trading ships and later armada to the Americas and the East. They managed to capture the West Indies and later Brazil, killing and pillaging the local civilizations. Their move east resulted in the conquest of some territories of Africa, Goa in India. Malacca and Macao in South China. They benefited from the navigational aids and knowledge they acquired from the Muslims. Then Spain also took up the idea of trade and voyages to far away places. Some experienced Portuguese captains and crew worked for the Spanish rulers and helped in expanding the trading routes and sphere of influence. The Spanish later with their conquistadors managed to make many of the South American territories came under their rule. Their territories include the now modern day Argentina, Peru, Venezuela, Mexico, Paraguay and the rest except for Brazil which remained under Portuguese rule. Spanish is the national language of the South American countries except Brazil. The Spanish when they reached South America exacted the same damage to local civilizations as did the Portuguese. The famous Spanish conquest of the South American region and the resultant destruction and pillaging of the Aztecs (Mexico), the Incas (Peru), the Mayas Civilizations among others remained a grave blight in Spanish history. Spain also captured the Philippines, their only territory in the East. Here they fought against the Muslim Sultanates of Sulu and Mindanao.¹⁶⁶

The Dutch, The French and the British later established their own navies and merchant marines and expanded their territories in many Muslim ruled countries. The Europeans fought amongst each other to establish their supremacy over the trading routes and territories. The Dutch managed to capture Malacca from the Portuguese

and later ruled over the whole of Indonesia. The British expanded their influence and territories in North America, Africa, the Indian subcontinent and, in Malaya and Hongkong in the East. The French established their territories in parts of Northern America especially in Canada and many Muslim territories in west Africa and northern Africa and in Lebanon.¹⁶⁷

As a result of these expansion of trading routes and territories, the Muslims traditional trading routes were disrupted. The market for the produce of the Muslims were curbed and the economies of the Muslim countries faltered.

The external threat from central Asia came in the form of the Mongol hordes (Tartars). They started their incursions into Muslim territories in the 11th century and finally reached Baghdad the centre of Islamic Civilization in 1258 AD (656AH). As presented earlier in Chapter 4: The Islamic Civilization, the Mongols exacted a terrible effect on the Islamic Civilizations with their destructions and genocide. They destroyed Baghdad and many works of knowledge which were destroyed were irrecoverable but the Mongols later became Muslims and helped to build up the Islamic Civilization again but the damaged done was difficult to repair.¹⁶⁸

The dwindling economies and the various battles fought with the external threats further depleted the funds available for the pursuit of knowledge. The Islamic Civilization in the Middle East somewhat stagnated and declined because of the incessant fighting's with the Christians. and the Mongols and the disruption of the Muslims trading routes and economic activities besides the destruction of the invaluable works of knowledge and their centres.

6.6.2 The Internal Problems

What were the internal problems and what were their effects on the Islamic Civilization?

The internal infightings started with the *wafat* (death) of the Rasulullah SAW in 632 AD or 10 AH. The election of a leader to lead the *Ummah* was essential to continue the work that the Prophet Mohamd SAW had started and also in compliance with Islam's teachings. The election of the *Amirul Mukminin* was done immediately after the *wafat* of Rasulullah SAW and Saidina Abu Bakar was elected by the senior members of the *sahabahs* to be the *Amirul Mukminin* or the *Khalifah* and was accepted by most Muslims which pronounced their '*Baiah*' that is their allegiance to the *Khalifah*. The decision was based on many factors, amongst them were Saidina Abu Bakar was the closest *sahabah* and several times lead the Muslims in congregational prayers when the Prophet Mohamad SAW was ill and was unable to be the Imam of the prayers. There were a few who disagreed thinking that Saidina Ali, the son in-law and nephew of the Prophet Mohamad SAW, should be the rightful heir to the Prophet Mohamad SAW. The problem at that time was not so serious but the antics of some who defied the teachings of Islam upon the news of the Prophet Mohamd SAW *wafat*'s (passing away) were more serious and needed to be attended to immediately. Khalifah Abu Bakar upon his election as the Khalifah immediately attended to these problems. Musilamah al-Khazab(The Liar) in Yamamah quickly proclaimed himself as the next prophet replacing Prophet Mohamad SAW and killing many Muslims who did not accept his claim of prophet hood. Then there were the clans of Handzalah in Yaman who refused to pay the *zakat* (*tithe*), one of the five pillars of Islam to the government in Madinah. Khalifah Abu Bakar immediately send troops to curbed the claims of Musailamah al Khazab and the clans which refused to

fulfill the *zakat* describing it as an act of apostasy. The problems were resolved and Khalifah Abu Bakar then was able to concentrate on the governance of Madinah and the Muslims and also the threat from the Byzantine Romans in the north. ¹⁶⁹

When Khalifah Abu Bakar died, the issue of appointment of the next Khalifah cropped up again, the senior *sahabahs* again sat down to elect the next Khalifah and in the spirit of *syura*' (meeting) elected Saidina Omar Al-Khatab RA. as the new *Amirul Mukminin* replacing Khalifah Abu Bakar. Most of the Muslims again offered their *Baiah* to Khalifah Omar Al- Khatab RA. Again the previous few who refused to accept Khalifah Abu Bakar RA refused to accept Khalifah Omar. They then formed their own secret group to oppose the Khalifah and plotted to kill him. During Khalifah Omar Al-Khatab RA's rule, the Muslim armies managed to secure the surrender of Jerusalem and the Christian Chief Priest requested that Khalifah Omar Al- Khatab RA come to Jerusalem, to personally accept the key to Jerusalem as a token of surrender. Upon acceptance of the surrender, Khalifah Omar Al- Khatab RA ordered that the lands and properties of the inhabitants to be returned to them and a reasonable tax was levied on their produce in return. As a result of his fair actions, many of the Christians and other inhabitants embraced Islam. During Khalifah Omar Al-Khatab RA's rule the territories of Islam expanded further receiving support from the local inhabitants who preferred to be ruled by the Muslims rather than their old unjust rulers.

The plot for killing Khalifah Omar Al-Khatab was carried out and he was killed when he was leading the congregational prayers in the Masjid An-Nabawi. Again the senior *sahabahs* met and elected, Saidina Osman Ibn Affan RA as the next *Amirul*

Mukminin. Khalifah Osman ibn Affan being a rich man had a few residences and stayed at different places depending on the weather. This situation of which some deemed as lavishness was not liked by some Muslims who were used to the simple life and piety of the Prophet Mohamad SAW and the two previous khalifahs. The detractors grew in numbers and begin to level accusations of nepotism because Khalifah Osman ibn Affan RA appointed Muawiyah, his relative to the post of Governor of Sham in Damsyik. Khalifah Osman ibn Affan was killed in his house by, according to some historians, the same group which plotted and killed Khalifah Omar Al-Khatab RA. The assasination of Khalifah Osman ibn Affan RA resulted in the dissatisfaction of his clan the Bani Umaiyah and became a contention for animosities between Khalifah Ali ibn Talib RA who was elected to replaced Khalifah Osman ibn Affan RA, and the Governor of Sham, Muawiyah ibn Abi Suffuan. Animosity later broke out into a full scale war between the two groups. Many Muslim lives from both groups were killed in the ensuing clashes. The *Khawarij* group dissatisfied with the situation plotted to kill those who they thought were responsible for the infightings of the Ummah and send assassins to killed Khalifah Ali ibn Abi Talib RA in Kufah, Muawiyah ibn Abi Suffian in Damsyik and Amru Al-As, the Governor of Egypt, at an appointed time. Khalifah Ali ibn Abi Talib was killed in Kufah, while Amru Al-As was injured and Muawiyah escaped unharmed. The assassinations further complicated the situation of the Muslim Ummah. The group supporting Saidina Ali ibn Abi Talib RA appointed his son and grandson of the Prophet Mohamad SAW, Saidina Husin RA as the new Khalifah. Saidina Husin ibn Abi Talib RA was killed with his followers in Qarbala, in present day Iraq, on the tenth of Muharram, 680AD/61H and was beheaded by the soldiers of Yazid ibn Muawiyah, the son of Muawiyah. Some of the followers of Khalifah Ali RA and his

sons Saidina Husin RA and Saidina Hasan RA, later formed the 'Shia' *Mazhab* which became bitter opponents of the Sunni Muslims. Qarbala became an episode which was bitterly remembered to this day and the Shia's designated it as a day of mourning where they dress in black as a sign of mourning and flogging themselves, inflicting self-injury to show their remorse and regret. The leadership of the Khalifah Ali RA's followers were given to Saidina Hasan ibn Ali RA, his other son and Saidina Hasan who abhorred the conflicts and meaningless killings, abdicated and presented the leadership of the Ummah to Muawiyah ibn Abi Sufyan who then became the Khalifah of the Muslim nation based in Damsyik. Muawiyah later appointed his son, Yazid as the crown prince and thus the designated heir to his caliphate. Muawiyah started the Ummaiyah Caliphate and started the hereditary system of the position of Khalifah. The later Khalifahs were all appointed by this hereditary system, from among the children or close relatives of the deceased khalifahs. The Ummaiyah caliphate was described as a predominantly aristocratic and Arabic caliphate.^{170, 171}

With the spread and acceptance of Islam from various non Arabs ethnics and their convergence on the centres of Islamic Civilization, many other problems begins to arise. The feelings of discrimination and dissatisfaction were common amongst the non-Arabs Muslims against the aristocratic Arabs of the Umaiyyah government. So when the Al-Abbas clan staked their claims as the rightful heir to the Prophet Mohamad SAW, who were from the Abdul Mutalib clan, the non Arabs Muslims rallied on their side willingly and helped the Al-Abbas clan to usurped the throne of the Ummaiyah. The Al-Abbas Clan managed to overthrow the last Ummayid Caliph in 750 AD (132 AH), killing all the heirs and also close relatives of the Caliph except

one who escaped to Andalusia. The Al-Abbas clan thus established their Abbasid Caliphate in Damsyik and later moving the capital to Baghdad. Regardless of the infighting and conflict, Islamic Civilization and the expansion of knowledge developed further and reached its height during the Abbasids Caliphate's rule. Towards the end of the Abbasid's Caliphate, the powers of the reigning khalifahs in Baghdad began to wane. The infightings became more serious and the local rulers appointed by the khalifahs became more powerful with the weakening of the powers and influence of the khalifahs in Baghdad. Some of these local rulers and governors refused to send to the khalifahs in Baghdad, as practiced earlier, part of the taxes and *zakat* which were collected or paid to them, thus depleting the coffers of the Abbasid's government. Their refusal to be subservient to the khalifahs in Baghdad was due to their greed and ambition and maybe their dissatisfaction with the khalifahs in Baghdad. Most of these rulers were local ethnics or if an Arab, their subjects were the local ethnics, such as the Persians in the eastern region, towards the north the Turks and the locals Arabs in other places. Some of them set up their own dynasties rivaling the khalifahs of Baghdad as mentioned in the earlier chapters. Many of these rulers also contributed to the advancement of knowledge and set up their own centres of knowledge, supporting and sponsoring the scholars in their work and as earlier described, their sponsorship were not always for noble reasons. During this earlier period, between the 9-11th centuries, the infightings resulted in more local dynasties and thus more sponsors and centres of knowledge, and during this period the likes of Ibn Sina, Al Farabi, al Biruni etc were born and made their marks.¹⁷² The ensuing and never ending conflicts, the usurpation of powers within the smaller dynasties and the wars fought between the smaller dynasties and also with the ruling khalifahs nevertheless had an effect on the ordinary Muslims and the scholars. There were

feelings of insecurity and aghast over the unending feuds. The ordinary Muslims and scholars became demoralized and many seek the safe way out or were burdened by the taxes and being conscripted in the warring armies. Many non-committal and some deviant groups were formed which resulted in less sources, funds and soldiers for the dynasties to continue with the governance and wars. These groups also promoted their ideas and opposing opinions and caused confusion among the *Ummah* with their new rulings and '*bidaah*' (innovations) in religious matters.¹⁷³

To address this confusion, many ideas were put forward by the religious scholars and some of these ideas managed to curb the confusion but created some other situations which effected the Muslims creativity and outlook. It is not the fault of the *Ulamas* who deeply studied and deliberated on the issues before issuing their solutions but maybe due to the overzealousness of the less knowledgeable *ulamas* and the authorities in implementing these solutions to defuse the confusion of the *Ummah* that resulted in these situations. Among the ideas proposed were the restrictions in the 13th century, on '*Ijtihad*', that is the ruling made to address new questions and situations that arises facing the *Ummah*. The restrictions when too strictly enforced resulted in the stifling of debate and research on expanding and finding new areas of knowledge which is important for the benefit of the *Ummah*¹⁷⁴

Many researchers have put the blame on Imam Al Ghazali and the Asharite Theology as among the causes of the decline in Islamic sciences with Pervez Hoodbhoy¹⁷⁵ blaming orthodoxy created by the Asharites and Wahabis, but George Saliba¹⁷⁶ pointed out that many advances in the sciences happened after Al Ghazali's time. Scholars such as Jazari (1205) working in mechanics and in logic mathematics and

astronomy scholars like Athir al-Din Al-Bhari (c.1240), Nasir al-Din Al-Tusi (d. 1274), Ibn Shatir (d. 1375), Al-Qushji (d. 1474), Shams al-Din al-Khafri (d. 1550); in optics, Kamal al-Din al-Farisi (d. 1320); in pharmacology, Ibn al-Bait (d. 1248); in medicine, Ibn al-Nafis (d. 1288). Many of the scholars were also related to religious institutions.

6.6.3 The Educational System

The educational system during the earlier period of the Islamic Civilization were based on the philosophy that knowledge is the dominion of Allah SWT and all efforts to gain knowledge were aimed to be subservient to the Al Mighty Creator. There were not many restrictions on the pursuit of knowledge and thus a student can pursue knowledge in any fields of knowledge that he was interested in. The students studied the knowledge of the Greeks in medicine, the sciences, philosophies etc and from other civilizations, the Persian, the Indians and the earlier civilizations that existed before Islam. These students were normally also well versed in the religious knowledge and many were *Al Hafiz* with Ibn Sina *as a good example*. Their education was multi disciplinary, adept in the sciences and in religious matters but with the advent of time and the circumstances, education became more constricted more so with the implementation of restrictions to curb the *bidaahs* and deviants ideologies. The educational system underwent changes which affected the pursuit of knowledge. The students were made to be engrossed in their own field of studies and had little time to reflect on other matters. The students studying to be an *Al Hafiz* were too engrossed in their efforts to become an *Al Hafiz* because the system that was formulated burdened them with trivialities and the necessity to maintain their status of an *Al Hafiz* and thus leaving them not much time to delve in the intrinsic meanings

of verses of the Al Quran that they recited, more so with other fields of knowledge. The study of *fiqh*, which was a major factor in the expansion of the branches of knowledge was reassessed and its importance downgraded and became too trivial and mundane with the restrictions. There were also efforts to restrict the curriculum of the *Madrasahs* to the religious fields only. The students of other fields of knowledge also suffered the same circumstances. As a result of the changes, the scholars produced, whether of the religious and sciences, were less multi-disciplinary and lacked in depth knowledge and thus some what affected the creativities and initiatives of these scholars.¹⁷⁷

According to Marmaduke Pickthall, in his 5th lecture,

*The Empire was apparently progressing but it was progressing on the wave of a bygone impulse. The 'Ulama who sought for knowledge "even though it were in China" were no more. In their place stood men bearing the same high name of 'Ulama claiming the same reverence, but who sought knowledge only in a limited area, the area of Islam as they conceived it - not the world-wide, liberating and light-giving religion of the Qur'an and the Prophet, but an Islam as narrow and hidebound as religion always will become when it admits the shadow of a man between man's mind and God. Islam, the religion of free thought, the religion which once seemed to have banished priestly superstition, and enslavement of men's minds to other men, for ever from the lands to which it came, had become - God forgive us! - priest-ridden....*¹⁷⁸

6.6.4 The Declining Iman

The Prophet Mohamad SAW in a hadith was reported to say that the *Iman* of Abu Bakar was better than the whole of the Ummah put together.¹⁷⁹ The Prophet Mohamad SAW also said in another hadith that the best Ummah was in his generation (the *sahabahs*), followed by their followers (the *tabiin*), then the followers of the followers (the *tabiq tabiin*) and so forth.¹⁸⁰ The *Iman* of the Ummah will gradually decline with time until the day of the '*Qiyamah*' when there will be none

with *Iman* and thus resulting in the complete destruction of the *Alam* (Universe).¹⁸¹

The excellence of the first few generations of the *Ummah* were in their indisputable *Iman*, which is the main objective of a Muslim and thus they were conferred the blessings of Allah SWT with the ultimate reward of the Paradise. The next few generations were bestowed the excellence in the form of knowledge and an advance civilization as result of their work and the work of the earlier generations. Their *Iman* were still strong but gradually declining. The teachings of Islam were carried out in full but more and more Muslims began to indulge in immoral activities and deviant ideologies. Prostitution, drinking of alcohol, non-ethical conducts begin to seep into the Muslim society albeit done secretly in the privacy of their home or palaces. The ruling elite and the rich held their immoral activities in their palaces and mansions with their harems and parties.¹⁸² The majority of the populace still upheld the sanctity of Islam and the *Ulamas* who were many and played their parts in promoting and in the dispensing of knowledge and thus Islamic civilization managed to expand because of this. The generations that came later towards the end of the zenith of Islamic Civilization were more susceptible to the worldly life and the decadence became more pronounce. The episode of the attack of the Tartars on Baghdad in 1258 AD clearly shows the situation of the *Ummah* then. The spirit of *Jihad* were gone in the people of Baghdad because of the love of worldly life style and decadence that set in. They were not willing to fight the Tartars who were *kafirs* and despite knowing the records of the Tartars who were well known for their atrocities and merciless attacks on other cities and villages. So the people of Baghdad paid dearly because of their decadence and folly. The destruction of Baghdad and its magnificent centre of knowledge was complete and was a major set back to Islamic Civilization. The decline in Islamic Civilization begin to set in although the seeds started earlier. Other

centres of civilization still existed in Andalusia and northern Africa but still incomparable with Baghdad. The Tartars themselves, a short while later became Muslims defying the oft quoted phenomena “ the conquered will incline towards the conqueror.” The earlier Tartar rulers tried to create their own religion, combining various aspects of Islam and their own beliefs but the later rulers became more devout Muslims.¹⁸³

With the mixing and exposure to other cultures, civilizations and religions, new ideas and differences in thought began to creep up. The new converts sometimes embraced Islam out of fear which was unfounded and maybe because they follow the majority. Some of them were not willing to abandon totally their older beliefs and cultures and thus practice Islam mixed with their own earlier beliefs and traditions, an example we presented earlier about the Tartar. This situation and internal squabbles between factions, political and social and opposing *fiqh* schools resulted in a very fragile and fractured society. The earlier leaders of the *fiqh* schools (*Mazhabs*) were tolerant and respected each other opinions but some of the later followers tend to be overzealous with their commitments thus resulting in animosities between the groups. The Shi'ism mazhab was born as a result of political and social conflicts between two opposing groups. It ripped and undermined the solidarity of the Ummah. Shiism later split into various groups such as the Twelvers (Imamiyah), the Jaafariyah, The Ismailiyah and many others. The Ismailiyah later also broke up into various groups. The author does not wish to delve too much on this but believe that it involves the matter of *Iman*. Some of these groups are categorized by some *Ulamas'* as deviant groups and some were prosecuted since the time of the earlier caliphates. The internal squabbles and the confusions arisen, affected the solidarity and the resolve of the

Ummah. Much resources and time were wasted on trivial and non-constructive issues and thus the more important issues of the *Ummah* to advance further in knowledge and civilization and to face the hostile enemies from the borders and within were sidelined. All this happened because the *Ummah* became less committed to Islam and the *Iman* waned.

6.6.5 The Internal Enemies

The role of these internal enemies which Allah SWT in the Al Quran labeled them as *Munafiqun* (Hypocrites) and there is even a *surah* in the Al Quran which is called Surah Al Munafiqun (The Hypocrites) describing the traits and scheming of the *munafiqun*. In the Al Quran, Surah Al Munafiqun, verses 1 and 4.

[Al Quran 063: 001]¹⁸⁴

إِذَا جَاءَكَ الْمُنَافِقُونَ قَالُوا نَشْهَدُ إِنَّكَ لَرَسُولُ اللَّهِ ﷺ وَاللَّهُ يَعْلَمُ إِنَّكَ لَرَسُولُهُ وَاللَّهُ يَشْهَدُ إِنَّ الْمُنَافِقِينَ لَكَاذِبُونَ ﴿١﴾

1. When the hypocrites come to thee, They say, "We bear witness that Thou art indeed the Messenger of Allah." yea, Allah knoweth that Thou art indeed His Messenger, and Allah beareth witness that the hypocrites are indeed liars.¹⁸⁵

From [Al Quran 063: 004]¹⁸⁶

When Thou lookest at them, their exteriors please thee; and when They speak, Thou listenest to their words. They are as (worthless as hollow) pieces of timber propped up, (unable to stand on their own). They think that every cry is against them. They are the enemies; so beware of them. the curse of Allah be on them! How are they deluded

(away from the Truth)! ¹⁸⁷

There are many more verses describing the *munafiguns* from the other *surahs* of the Al Quran. In Surah At Taubah (The Repentance) verse 67 [Al Quran 009:067] ¹⁸⁸

67. The hypocrites, men and women, (have an understanding) with each other: They enjoin evil, and forbid what is just, and are close with their hands. They have forgotten Allah. so He hath forgotten them. Verily the Hypocrites are rebellious and perverse. ¹⁸⁹

The Prophet Mohamad SAW when in Madinah had to face many antics and conniving schemings of the *munafigun*. They were people who professes Islam on their lips but not in their hearts as explained in the verses above and promoted evil deeds and do their utmost to prevent good and just deeds. The *munafigun* contingent of 300 men under the leadership of Abdullah ibn Ubay ibn Salol broke away from the ranks of the Prophet Mohamad SAW's army leaving only 700 hundred stout hearted *Mukmin* to face the 3,000 thousands soldiers of the *Quraish Musyrikin* of Mekah, in the battle of Uhud in the third year after Hijrah. They also schemed with the Jews of Madinah promising to help the Jews against the Muslims. They also allied themselves with the *Quraish Musyrikin* of Mekah and the Jews of Madinah in the Battle of Al Ahzab (The alliance of enemies of Islam) and spread the *fitnah* (accusation of promiscuity) on the Prophet Mohamad SAW dearest wife, Aishah RA. and many other devious acts. The *munafiguuns* are difficult to be identified and can only be identified by their devious actions since they professes Islam openly. They were categorized as internal enemies based on a hadith from Rasulullah SAW concerning the leader of the *munafigun* Abdullah ibn Ubay ibn

Salol who made disparaging remarks on the *Muhajirin*.. Omar Al-Khatab suggested that the *munaḥquun* leader be killed but Rasulillah SAW would not accept the suggestion because he did not want to be labeled as a person who killed a fellow Muslim.¹⁹⁰ The presence and deviousness of the *munaḥquun* still existed until today and their characters remained the same in fact more bold in their actions. Huzaifah ibn Yaman to whom the Prophet Mohamad SAW entrusted the name list of hypocrites and many confidential information was reported to say :

Narated By Abi Waih : Hudhaifa bin Al-Yaman said, 'The hypocrites of today are worse than those of the lifetime of the Prophet, because in those days they used to do evil deeds secretly but today they do such deeds openly.'¹⁹¹

The *munaḥquun* instilled the feeling of dissatisfaction and discontent among the Muslims using various issues such as ethnic differences, social differences and other reasons they could think of. They also were responsible for the setting up of some deviant groups starting with the *khawarij* group that conspired to kill the *Khalifah ArRasyidin* Omar, Osman and Ali RA.¹⁹² Some of the *munaḥquun* was able to assume leadership of some Muslims states and Islam were openly denigrated and Muslims who want to live by the precepts of Islam were persecuted

The internal problems which caused the decline of Islamic Civilization thus can be summarized as follows :

1. The political infightings for power and influence by the ruling elites and opposing factions. The decadent and lavish lifestyle of the ruling elites and the rich. Preferring to spend more on the comforts and trivialities of life and less

supportive to the institutions of knowledge and towards the needy. Much time and resources, human or funds were wasted by waging wars against their opponents to expand their territories and influence and/or personal glory and fame. The rise of the feelings of ethnicity and nationalities and thus resulting in persecution of the other ethnics and discrimination. The justice system were lopsided and abused by the ruling elites and the rich with corruption. The law was for the laymen but not the nobilities who escaped prosecution from their illegal activities. Many ordinary Muslims were persecuted and killed by the cruelty of the rulers and their associates. The rulers to maintain their lavishness and personal wars burdened the population with ever increasing taxes and levies which demoralized and demotivated the populace to increase their produce and with the curtailing of the sea trade routes by the Europeans the damaged done on the economies of the *Ummah* was tremendous and affected all sectors of life of the *Ummah*.

2. Ideological differences between the various groups promoting their own ideas sometime forcefully and thus creating animosities and distrust. The Sunnah and Shiism conflict, the squabbles between *mazhabs*, the deviants and sometimes aggressive groups which further confused and split the *Ummah* which should have been united.
3. The declining *Iman* of the *Ummah* resulting in the moral decadence and the loose feeling of Islamic brotherhood. The *Ummah* paying less attention to the implementation of Islamic precepts in their lives. The Al Quran became a book to read to gain the rewards of the hereafter but not be dissected,

understood and implemented in their lives. The mosques and *madarasahs* which were the centres of education and social activities became alien to most of the populace who only came for the compulsory congregational prayers. The spirit of *jihad* was diminished, not many were willing to sacrifice their lives, possessions or serene living in the righteous path of Allah SWT. The giving of alms, *sadaqah* and *waqafs* which were the main sources for the development and maintenance of the educational and social systems became less in numbers and amount. Less and less people paid attention to the system of *zakat* and the *barakah* (blessings) of giving *zakat* was lost on the *Ummah*.

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4. The changing educational and social system which resulted in less focus on education and social justice. The restrictions on multi-disciplinary education which resulted in less knowledgeable scholars and *ulamas*. The *Ummah* indulged in matters of trivialities and entertainment. More people will attend to the fairs of entertainment than the circles or assemblies of knowledge ¹⁹⁴

Allah SWT in the Al Quran has warned that if the *ummah* slackened in their beliefs and commitment He will dispose of it as were done to many of the previous *Ummah* of the earlier prophets. From Surah Al Qashash (The Narration) verse 59 [Al Quran 026:059]¹⁹⁵

وَمَا كَانَ رَبُّكَ مُهْلِكَ الْقُرَىٰ حَتَّىٰ يَبْعَثَ فِي أُمِّهَا رَسُولًا يَتْلُوا عَلَيْهِمْ ؕ أَيْنَمَا ۖ وَكُنَّا مُهْلِكِي الْقُرَىٰ ۖ إِلَّا وَأَهْلُهَا ظَالِمُونَ ﴿٥٩﴾

59. Nor was Thy Lord the one to destroy a population until He had sent to its centre an apostle, rehearsing to them Our Signs; nor are we going to destroy a population except when its members practice iniquity. ¹⁹⁶

By the mercy of Allah SWT, the *Ummah* of the Prophet Mohamad SAW were not totally destroyed. The Prophet Mohamad SAW in a supplication to the Al Mighty Creator which was accepted, pleaded that his *Ummah* should not be destroyed by external enemies but destroyed from within.¹⁹⁷ From the facts presented above, the pillage of the Tartars in Baghdad, of the Europeans in Spain and elsewhere, the *Ummah* was not totally destroyed. In Spain, the Muslims were annihilated completely but in Baghdad, the Muslims rebounded back and maintained the Islamic Civilization even though it decline further later and completed with the fall of the last Ottoman Sultan in 1924 at the hands of Kamal Attarturk, which many suffixed the calling of *Laknatullah* (Allah's condemnation on him) to his name, who wanted Turkey to be an European entity but to this modern day, scorned by the Europeans and distrusted by their fellow Muslims. Only lately with the winning of the pro-Islam party has Turkey gained more respect and role among the Muslim fraternity. The Muslim fraternity will have to play a crucial role in the recapping of excellence of the *Ummah*.

6.7 Recapitulating of Excellence

The question most pertinent today is how to recapitulate the excellence of the period of when the Islamic Civilization was at its height ? Many people after the period of the Prophet Mohamad SAW had discussed on the recapping of excellence of the *Ummah*. Some scholars had noted that Khalifah Omar Abdul Aziz, the Khalifah of the Umaiyid Caliphate as the first reformer (*mujadid*) of Islam, he reformed the *Ummah* during his time and strictly followed the teachings of Islam in his rule. The other reformers named were Ibn Taimiyah (10th century) , Imam Al Ghazali (12th

century), Jamaludin Al Afgahani (19th century), Hasan Al Bana(20th century) and many others.¹⁹⁸ The Prophet had said that for every century there will be a *Mujaddid* (reformer) who will renew the commitment of the *Ummah* to the religion.¹⁹⁹ No doubt as a Muslim everybody is concerned about the situation of the *Ummah*. Even songs lyrics were written lamenting the woes of the *Ummah* and hoping that the *Ummah* will be able to rise again. One particularly famous song, lovely and melodious with such a lyric is a song named My Ummah, sung by the popular Sami Yusof, a British of Pakistani origin. The English song's lyric was based on the last few words of the Prophet Mohamad SAW before his *wafat* (demise) which expressed his love and concern for his *Ummah*. He uttered ' *Umati , Umati* ' which means "My *Ummah*, My *Ummah*."²⁰⁰ The Prophet Mohamad SAW had stated in many ahadith about the situations of the *Ummah* after his time. The period of excellence, the decline and the rising again of the *Ummah*. Among these ahadith were :

1. The Hadith from Huzaifah ibn Yaman. The Hadith is quite long but the point we wish to highlight is that the Prophet Mohamad SAW told Huzaifah that Islam will reached its glory and then will decline and later assumed its glorious days again.²⁰¹
2. The coming of Imam Al Mahdi and the Prophet Isa Al Masih AS to lead the Muslims before the coming of the Appointed Day (*Qiamat*). Islam will rule the world and bring prosperity and peace²⁰²
3. The additions of new things that is detrimental to Islam by the later *Ummah*.²⁰³

The first Hadith gives us, the *Ummah* of today, hope, that the Glorious Days of Islam will come again. The second Hadith supports the first and confirmed that the period

of excellence and glory will come again but we do not know when it will come even though the signs are present today. The author has met with some people who promoted the idea of waiting for the coming of the Imam Al Mahdi and the Prophet Isa Al Masih AS but the problem is when will they come and in the meantime what should we do? Do we just wait and hope that they will come in our time? A true Muslim will believe in what the Prophet Mohamad SAW had informed us but Allah SWT and the Prophet Mohamad SAW would not condone the attitude of waiting without striving to improve ourselves. It is not the success or the failure which will be questioned but the efforts that we put in. The Al Quran in Surah Al Anfaal (The Spoils of War) verse 53, clearly stated that the fortunes of an *Ummah* will not be changed without their striving for it. [Al Quran 008:053]²⁰⁴

ذَٰلِكَ بِأَنَّ اللَّهَ لَمْ يَكُ مُغَيِّرًا نِّعْمَةً أَنْعَمَهَا عَلَىٰ قَوْمٍ حَتَّىٰ يُغَيِّرُوا مَا بِأَنفُسِهِمْ
وَأَنَّ اللَّهَ سَمِيعٌ عَلِيمٌ ﴿٥٣﴾

53. "Because Allah will never change the Grace which He hath bestowed on a people until they change what is in their (own) souls: and Verily Allah is He who heareth and knoweth (All things)." ²⁰⁵

We, the Ummah have to change and strive for the better, we cannot wait and do nothing or make do with our present situation. To strive and improve ourselves we have to look back at history, the period of the Prophet Mohamad SAW and how the *sahabahs* and the *tabiin* were developed from the grip and encumbrance of *Jahiliyah* (Uncivilized) to the glory and magnificence of Islam. We have to learn from history of the glorious days of Islam with its magnificent Civilization and excellence of knowledge during the period between the 7th to 14th centuries. We also

have to look into the decline of the Islamic Civilization. In order to fully comprehend the issue, we have to study both the causes of excellence and the causes of decline that we have presented in the earlier topics, and we also have the two sets of guidelines given to us, the Al Quran and the Al Hadith, which should be our main guide to extricate ourselves from this distressing predicament. The Prophet Mohamad SAW had stated that he left the *Ummah* two things or guides which if followed the *Ummah* will not go astray.²⁰⁶ The careful study of all the causes of excellence and the decline will be needed in order to find the formula or the steps needed for the *Ummah* to rise again in the words of Sami Yusof, a popular singer of Pakistani descent living in United Kingdom.

We can categorized the roles , steps and our arguments of how to recap the Glory of Islamic Civilization into these categories :

1. The Individuals
2. The Family
3. The Society
4. The Ulama'
5. The State
6. The International Islamic Fraternity

1. The Individuals

A Muslim individual is responsible to all his actions which is recorded by the two angels assigned to each and every individual. There is no place and way he can escape from his records which will be handed to him in the Day of Reckoning, the

Akhirat. A person who understand this and the teachings of Islam will realize his responsibilities towards his Al Mighty Creator, his self and the other creations. To fulfill theses responsibilities, he needs knowledge and knowledge has to be seek, it will not just suddenly come like rain on a hot day (even it, has its rule and conditions to happen) To be an excellent Muslim, he should strive to the best of his abilities and be willing to sacrifice his life, possessions and serene living in the path (cause) of Allah as the previous Ummahs and the earlier generations of Islam. Allah SWT in the Al Quran, Surah Al Hujurat (The Dwellings) verse 15 [Al Quran 049:015]²⁰⁷

إِنَّمَا الْمُؤْمِنُونَ الَّذِينَ ءَامَنُوا بِاللَّهِ وَرَسُولِهِ ثُمَّ لَمْ يَرْتَابُوا وَجَاهَدُوا بِأَمْوَالِهِمْ
وَأَنْفُسِهِمْ فِي سَبِيلِ اللَّهِ أُوتِيَكَ هُمُ الصَّدِيقُونَ ﴿١٥﴾

15. Only those are believers who have believed In Allah and His Messenger, and have never since doubted, but have striven with their belongings and their persons in the cause of Allah: such are the sincere ones. ²⁰⁸

An excellent Muslim is the one who is excellent in the ‘Eyes’ of Allah SWT, his Creator. He submits fully and sincerely to the Will and Regulations of Allah SWT, giving his utmost effort to adhere to the rules and guides, the commandments, the urgings, the prohibitions and the things discouraged by Allah SWT and the Prophet Mohamad SAW. Not everybody will be able to achieve excellence in the material world but every individual has the chance to achieve excellence in the ‘Eyes’ of Allah SWT. An individual who is not able to achieve excellence in the material world should give his support and encouragement to others to excel and thus he will be considered as a person who strived in the path of Allah SWT. An individual should ponder and reflect on his life and all around him, the creations by the Al Mighty

Creator and he will definitely discover the Greatness of Allah SWT and the Magnificence of Islam as away of life and will be fully committed to its cause. An individual is a part of a family and society, he or she has the responsibilities in them too.

2. The Family

The family, the smallest grouping of the society, consists of individuals who will be accountable for their own actions and will also be responsible towards each other. The husband/father will be responsible towards his wife/wives and his siblings, the wife/mother will be accountable towards the husband and siblings. The children also have their responsibilities towards the parents while they are young or old and when their parents had passed away with heir prayers and supplications.. The family unit have be intact and functioning properly according to the precepts of Islam. The man have to find a wife which will be the mother of his children carefully and the Prophet Mohamad SAW has given us the guide on choosing our spouses. The priority is to choose the woman who will be his spouse, a good and practicing Muslim (*Solehah*) rather than looks, possessions or lineage.²⁰⁹ The parents have the responsibility to choose spouses for their children according to the same guidelines.

The father has the responsibilities to provide for the needs of his family, the shelter, the food the clothing, the wellbeing and most important, the education of all the members of his family according to his means. All that he does for his family will be given the rewards of hereafter and in his life time. Even cohabiting with his wife is considered a *sadaqah* and will be justly rewarded.²¹⁰ The education of his family should be undertaken by the father and thus the need for him to be knowledgeable

himself and he should prepare himself for the responsibilities of marriage and building a family. If he is not capable of educating his family then he has to ensure and provide for their education. Ibn Sina's father had provided for his education by hiring tutors to teach him in the basics of religion and many other fields of study. The Al Quran and the Al Hadith had provided many guidelines in the care and education of a family and there are also guidelines from the *Ulama'* and the scholars who studied the Al Quran and the Al Hadith and from the researches that they had done on the subject of family care and education. Both spouses will need to play their role, supporting and complementing each other and the elder siblings are made to realized their role towards the younger siblings. The members of the family all have their responsibilities and role in the development of the family unit. The extended family unit of the grandfathers and grandmothers, their children's families, uncles, aunties, nephew, nieces, cousins and others which during the older period became the basic for the clans system, also have their role. Their roles had been described in various actions of the Prophet Mohamad SAW and the *sahabahs* and also the fact that in the Al Quran and Al Hadith, their rights in *Faraidh* (the Guidelines on the Distribution of Inheritance) were laid out. Their rights of receiving inheritance under certain circumstances and conditions means they also have their responsibilities in the extended family system.²¹¹ An excellent family unit is a part of the society and will have its role in it.

3. The Society

The society starts with the neighborhood which consists of these excellent family units. The neighbors have the responsibilities towards each other. The Prophet Mohamad SAW had taught the *sahabahs* on the responsibilities and rights of the

neighbors. *Rasulillah* SAW has taught that forty houses to the left, right, front and back are neighbors and they have the responsibilities for the wellbeing and cordial relationships regardless of religion, creed, social or economic statuses. Every member of the neighborhood needs to be concerned on the welfare and wellbeing of each other and the alms and *sadaqah* if required should be given priority to the neighbors and close relatives ²¹² If they adhered to these guidelines, the neighborhood will be peaceful and serene and thus a pleasant place to live and build a family. In Islam the neighborhood is known as a *kariah* (village or settlement) and thus required the building of a mosque or a *Musalla* (Surau), a place for congregational prayers which is compulsory on a *kariah*. The members of the *kariah* will be considered as doing unjust if there were no congregational prayers done for the five daily compulsory prayers. The intention of the congregational prayers is that the neighbors will have to meet everyday and thus able to establish the *silaturrahim* and *ukhwah* (bond of friendship) and thus knowing each other well and thus concerned on the wellbeing of the neighbors. Islam teachings and precepts are full of meaning and beneficial to mankind if only they know and willing to adhere to it, as described in the Al Quran many times. The mosques or the *suraus* should be the centres of the education and social activities as were done during the Prophet Mohamad SAW's time and during the glorious days of Islamic Civilization. Libraries and other facilities should be setup within or near them. All levels of the neighborhood should congregate towards the mosques and *suraus* to learn from the teachers which teach various subjects, religious or non-religious, be informed of the local and outside issues and events, to make use of the libraries and for other social activities. If this could be done then the neighborhood or the local society will become knowledgeable and conscientious, close knit and on the path of excellence. The functions of the society can be further

expanded to fulfill the aspirations of the *Ummah* by being conscientious of their role and the contributions that they can make to the society at large, the nation and the *Ummah*. Each member can play their role and collectively as a grouping, their contributions will be more significant either in the form of funds and resources which can be amassed or in giving suggestions towards the betterment of the *Ummah*. If many such neighborhoods or local societies can be groomed then the *Ummah* will be able to face the challenges of the world with more courage and hope. Arslan, in his book, lamented about the issue of Palestine during his time in the 1940's, when the Jews started to emigrate to Palestine and causing much trouble with their aggressive occupations of Palestinians' lands. There was a call for contributions to help in the Palestinians' struggle against the occupation of the Jews, a measly sum of thirteen thousand pounds sterling was collected for the Palestinians whereas, the Muslims in the Middle East itself if they were to give a dollar or a pound each, the sum would amount to a few millions dollars or pounds.²¹³

If the society which we envisioned can be developed, then if the call came again and surely the present situation in Palestine today called for it, then easily millions can be collected in a short time with each neighborhood or local society contributing a few hundred dollars each, which is easily within the capacity of most of them. The neighborhood and local societies with their conscientious attitude and knowledge can contribute much to the *Ummah*. They can be the driving force and pressure group and the resources for funds, leaderships and expertise to develop the nation and the *Ummah*. They can easily support the setup of universities, research institutions, the *Madrasahs*, hospitals and many others, with their resources as what the neighborhoods and societies of the glorious days did. They will be able to do more

while they have not through their '*doas*' (supplications). For all this to happen requires the role of leadership and guidance from the *Ulamas*' and the scholars.

5. The *Ulamas*' and Scholars

The Prophet Mohamad SAW, the Apostle of Allah SWT, the guiding light and leader of the first generation of the *Ummah* is not with us today in person to guide, advice, answer our questions, warn us of our wrongs and provide the leadership for us. So who should we turn to address our problems of today, no doubt all Muslims are responsible but not all Muslims have the knowledge and capacity to address these problems of the *Ummah*. Most will be followers but some will be the leaders and counselors, on them will be put the responsibilities to shoulder the continuing of the work of the Prophet Mohamad SAW. Prophet Mohamad SAW had provided the answer to us about 1400 years ago, he said "The *Ulamas*' are the inheritors to the Prophets ²¹⁴ and the Prophet Mohamad SAW did not leave materials possessions, only the Al Quran and Al Hadith, that is knowledge. Who else have the credentials if not the *Ulamas*'? The Al Quran had stated in Surah Faathir (The Originator of Creation) verse 28, that the persons who truly fear Allah SWT are they who have knowledge, that is the *Ulamas*. [Al Quran 035:28]²¹⁵

وَمِنَ النَّاسِ وَالْدَّوَابِّ وَالْأَنْعَامِ مُخْتَلِفٌ أَلْوَانُهُ كَذَلِكَ ۖ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ ۗ إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ ﴿٢٨﴾

28. And so amongst men and crawling creatures and cattle, are they of various colours. Those who truly fear Allah, among His servants, who have knowledge: for Allah is Exalted in Might, Oft-Forgiving. ²¹⁶

So the *ulamas* are the ones that had been given the responsibilities and they have a very important role in the subsistence of the *Ummah* and its advancement. They have the responsibility to continue the work that the Prophet Mohamad SAW had done before, more so when the *Ummah* is in dire state today and in desperate need of the guidance and leadership as what the Prophet Mohamad SAW gave to the first generation of the *Ummah*. Before the *Ulamas* take their responsibilities to reeducate the *Ummah*, they themselves have to look inside themselves. Are they fully equipped to face the challenges, the trials and tribulation that will surely come when they continue the works of the Prophets, just as the Prophet Mohamad SAW and the earlier prophets had to face when carrying out the *dakwah* (propagation) of Islam to the masses. They will be accused of causing trouble, splitting the *Ummah*, non-progressive, focusing on trivial issues of some *fiqh* matters when the world is pursuing to expand their economies and prosperity. They will also face the challenges of the advancement of science and technology which borders on the realm of Allah SWT, the Al Mighty Creator, with the delving in genetic engineering and cloning. The challenges will also come from the contrasting and varying new ideologies and philosophies which have influenced many segments of the *Ummah*. The challenges will come from outside and sadly to say will also come from within the *Ummah* who is confused about his existence, role and responsibilities towards the Al Mighty Creator, themselves and the other creations. To face these challenges and situations, the *Ulamas* themselves have to make a paradigm shift, they have to equip themselves with the best of knowledge in the religious matters and the other fields of knowledge such as the sciences, economy, management, psychology, sociology etc. The present ulama and scholars should follow the examples of the earlier ulama and scholars such

as al Ghazali, Ibn Sina and many others who were conversant in the religious and sciences. They have to master the Islamic views and knowledge of the varying fields of knowledge and also the present western influenced fields of knowledge and monitor the trends. Not all of the *Ulamas* have to master each and every field of knowledge but they should master as many as possible and be aware of the other fields. The *Ulamas* should have a pool of multi-disciplinary *Ulamas* and can seek the assistance and support from the Muslim intellectuals, scholars and scientists who cares about Islam. Most importantly, the *Ulamas* have to strive to improve their *Iman* and *Taqwa*, be humble, sincere in their intentions (*Ikhlas*) and practiced what they preaches. All this is necessary because the challenges can be harsh and complicated. If they do not prepare themselves adequately with knowledge and *Iman*, they may acquiesce to the worldly baits or demoralized. They may if unprepared and insincere become *Ulama* ‘*Suuk*’ (devious) who chase after the worldly rewards, fortune and fame, or taking the safe and easy way out of their crucial responsibilities.

The *Ulamas* have to take their role seriously and dedicate their life and work to educate the *Ummah*. The earlier *ulama* and scholars such as Imam Shafie, Imam Hanafi, Ibn Sina, Al Biruni and others whose dedication and perseverance should be emulated. The *Ulamas* from all the Muslim countries and communities in this world should assemble and discussed the debacle facing the *Ummah*. They should try to design a master plan and the ensuing actions to be taken to educate the *Ummah*. The *Ummah* needs to be reeducated about their roles and responsibilities. They are the Khalifahs of Allah SWT on Earth and a khalifah cannot rule according to Allah SWT’s edicts without knowledge, whether religious or non-religious. Knowledge will give rise to *Iman* and *Taqwa* when practiced sincerely and with understanding. This

will give them the confidence and the '*Izzah*' or '*Heibah*' (grandeur, magnificence or dignity) and will surely be able prevail over the inhabitants of the world and spread the magnificence, peace and prosperity that Islam can bring.

The *Ulamas* first priority, as what was done by the Prophet Mohamad SAW during his stay in Mekah after being appointed as the Apostle of Allah SWT, should be in the reeducation of the *Ummah* on the matters of '*Tawhid*', the essence of Islam, the believe that Allah SWT is the One and Only Creator and Master of the Universe (*Rabul Al Alamin*) and He has power over all things, to He only, we should be subservient. [Al Quran 1:1-5]²¹⁷ The problem of the *Ummah* of today, is that they do not understand this and tend to be subservient to others besides Allah SWT (*Syirik*). If the *Ummah* of today, understand the matters of *Tawhid*, then what ever new ideologies and philosophies of the modern world, which belittle the Supremacy and the Powers of Allah SWT over All Matters will not be accepted by the Muslims because they clearly are contrary to the teachings of Islam. The teaching of *Tawhid* during the earlier period of Islam by the Prophet Mohamad SAW made the first generation of *Ummah*, the best generation with their excellent *Iman* (Faith) and good exemplary behaviors and demeanors. The first generation was able to withstand the persecutions, the trials and tribulations from many quarters, the *Quraish Musyrikin* of Mekah, the Arab clans, the Jews and *munfiqun* of Madinah, the Romans and Persians superpowers and overcame them with flying colors.

The *Ulamas* have to emphasize to the *Ummah*, the importance of knowledge, be it of the matters related to religion or the other fields of knowledge. Let them realize the pursuit of knowledge in all fields is an '*Ibadah*' (the pious deeds) and will receive an

enormous reward in their present life and the hereafter as promised by Allah SWT and the Prophet Mohamad SAW. Knowledge is the weapon of today. Knowledge is power and influence over all mankind. The western world is using knowledge to overwhelm the world with their ways and ideologies and the Muslim *Ummah* will not be able to match or surmount these influences without equipping themselves with knowledge. Knowledge is expanding at a very fast rate with the use of modern equipment and computers to do research and analysis and the Muslim *Ummah* should follow the pace or it would slack far behind and then it will be very difficult to draw alongside or surge ahead of the western world.

The *Ulamas* have to advice, cajole, persuade and challenge the *Ummah* to pursue knowledge and strive to the most excellent level. The *Ulamas* should be firm and brave enough to speak out the truth and point out the weakness and shortcomings of the *Ummah* and propose the solutions. The *Ulamas* should not dwell on trivial issues which will confuse and sidestepped the major issues of the *Ummah*.

The *Iman* and Spirit of brotherhood of the present *Ummah* is weak. They need to be bolstered to face the challenges of the modern world. The *Iman* when weak will affect the dignity, the caring attitude to his brothers, the adherence to teachings of Islam and the commitment to *zakat* and the other principles of Islam. The *Ummah* have to be coached on the principles of Islam. *Iman* and *Ehsan*, its responsibilities towards his family, the neighbors, the society, the state and the whole *Ummah*. There maybe individuals who realized and persevere to carry out their responsibilities but the majority lacked this understanding and realization, that is why the *Ummah* is in their present predicament and situation. The *Ulamas* have to make the *Ummah* realized

their role and responsibilities and they have to go to their ‘*madu*’ (targets) to dispense their knowledge and counsel. They have to use all avenues available or create new avenues to deliver their message. They should go to dispense their knowledge and counsel, to the mosques, *madarasahs*, *suraus*, community centres, the offices, factories, the night clubs which was done by Hasan Al Bana, who is nowadays considered as a ‘*Mujaddid*’ (a reformer) of the 20th century.²¹⁸ The older audience should be made to realize their role in supporting, advising and providing the exemplary conduct, while the younger audience, to realize their role as a Muslim at present and in the future.

The non-religious scholars also have their role laid out for them to help the *Ummah*. The scholars and the intellectuals can use their knowledge and expertise. They can do the researches into various social issues of the *Ummah* and help formulate solutions for the *Ummah*. The Al Quran and Al Hadith provide many guidelines and many scholars before have studied the social issues and presented their studies and writings. One particular scholar was Ibn Khaldun who lived in the 14th century and named by the western sociologists as the father of sociology. His writings and by other Muslim scholars can be used in conjunction with the Al Quran and Al Hadith to develop an Islamic sociology to study the situation of the *Ummah*. The scholars will have to do an on hands approach and assimilate themselves into the society to do the researches and not stay in their air conditioned ivory towers, sitting on their cushioned armchairs while trying to dispense their wisdom on issues without first hand knowledge.²¹⁹ The scientists and other scholars will have to expose themselves, some if not all, to the public, presenting the work of the scholars and their relevance to the public and thus making the public aware of the role of the scholars and intellectuals. If

the public knows and understand then maybe they will be willing to provide the moral and material support and even become actively involved in the virtuous effort.

If the *Ulamas* and the Scholars are prepared to carry out this work that has been inherited to them, then the future of the *Ummah* will be brighter and the Glorious Days of the past maybe recapped. The *Ulamas* and the scholars have their limitations in that they can only dispense their knowledge and counsel but not able to formulate the policies and compel the *Ummah* towards excellent. It is the role of the 'Islamic State' (nation) to complement and assist by formulating and implementing policies that is geared towards excellence of the *Ummah*..

6. The State

The Islamic State according to Islam have its own responsibilities and we have presented in the earlier topics, its responsibilities. The Islamic State will have its Imam (Leader) called by various names, such as Khalifah, *Amirul Mukminin*, Amirs, in the earlier years or Sultans, Kings, Presidents, Chairmen, Prime Ministers in the present period. What ever name they assumed, the responsibilities as laid out in the Al Quran and Al Hadith remain the same and they will be accountable on the Day of Reckoning. Their role is very crucial and the Prophet Mohamad SAW had said, that if Allah SWT wants a nation to prosper and flourish, He will appoint leaders that are good and just but if He deemed a nation to be destroyed He will appoint leaders who are cruel and bad. ²²⁰ According to Ibn Khaldun, the citizens will follow the religion of the rulers. ²²¹

So the role of the state is crucial in formulating the policies that can help the *Ummah*

to achieve excellence. The state have the resources in terms of funds, facilities, expertise and machinery to implement the policies that are formulated. The state can garner from its citizens, the expertise and support for the policies. They can provide the rules and regulations to guide and compel the *Ummah* in the way that they desire. The state should encourage the populace to indulge in the pursuit of knowledge by providing the facilities and funds. Libraries should be set up all over state and are open to all, well stocked with books, magazines and relevant reading materials in all scope of knowledge and should be the one stop centre for information and knowledge. Some libraries in our country seems dreary and without life, dusty and with dark corners. The libraries should be well-lighted with a pleasing environment. The government should set up as many as possible, institutions of learning at all levels, from the tertiary level, to the craftsmanship, to classes that cater to skills such as cooking, sewing, domestic management etc.

The state should set up research institutions doing researches in various fields whether in sciences, medicine, economics, management, social studies, the religious studies etc etc. The government should provide the facilities and funds to run these institutions and encourage the populace, the corporations and others to participate in the funding and the researches, providing incentives and other benefits. Sponsors and scholarship should be provided for the pursuers of knowledge from the resources of the state and the corporations and industries. The graduates should have an avenue to continue their researches and with their life as what happened in the glorious days of Islamic Civilizations when there were no lacking of sponsors and scholarships, from the state or rich. Ibn Sina and many scholars during that time were the results of such sponsorship. In the western countries the corporations and philanthropists donated

generously, some of them donated hundreds of millions of dollars, to fund researches and institutions and even set-up universities under their names such as Carnegie-Hall University, Mac-Donald University, Colgate University, Nobel Institute and many more. The government and the private sectors spend billions of dollars on education and researches and the advances they made commensurate with their investment. The Muslim States will also have to do the same and stop spending lavishly and unnecessarily on trivial and unproductive projects which usually only a few benefits, especially the corrupt officials, cronies and the capitalists.

The government should encourage public debate and discussions without too much curbs and restrictions. Forums and seminars, should be organized to discuss openly and sincerely the issues of the *Ummah* and also to dispense new findings and advances in knowledge. The whole government machinery can be geared towards the achievement of excellent in all fields.

The state should be transparent in its actions and governance and accountable to its citizens and Allah SWT, sincere in the implementation of the policies formulated for the benefit of the *Ummah*. Corruption, abuse of power, nepotism, cronyism, mismanagement should be curtailed without fear and favour or the situation that caused the decline of the Islamic Civilization will linger and inhibit the achievement of the *Ummah*. The state on its own maybe can change the *Ummah* of the state but the *Ummah* elsewhere may not have that privilege, so the state or its leaders should think in a more global sense, the *Ummah* that are spread through out the Islamic countries and communities in the other countries. Thus the International Islamic Fraternity of nations have its role too.

7. The International Islamic Fraternity

The Islamic Fraternity (or Brotherhood) which binds the *Ummah* under one belief are spread all over the world in Islamic countries, in the western and the eastern countries and some put the entire *Ummah's* population at about 1.6 billion.²²² The *Ummah* in any of these places are brothers of the same faith and are responsible towards each other. The Prophet Mohamad SAW had stated in a hadith that the *Ummah* is like the whole body, if it is pinched on the thighs then the whole body will feel the pain.²²³ The *Ummah* of today is numerous in numbers but the value of it is way below par and easily manipulated and overwhelmed by the superpowers of the modern era, the Americans, the Europeans, the Russians, the Chinese and the Japanese. The issues of Palestine which remained a blight of the *Ummah*, the Bosnian debacle, Afghanistan, Iraq and lately Iran remained unsolved and lingers on the minds of the *Ummah*. The *Ummah* is large in numbers but low in the quality of *Iman* and *Taqwa*. The Prophet Mohamad SAW had given us a forewarning of the situation of the later *Ummah*. He said that there will come a time when the *Ummah* will be devoured by the *kafirs* (non-Muslims) as if devouring meat, the *Ummah* is numerous in numbers but like foam on the seas.²²⁴ The foam on the seas are fragile, easily burst and will be carried by the waves because it does not have the strength to chart its own course. Why has this happen, the Prophet Mohamad SAW had stated his concern about the *Ummah*, fearing that when they are granted riches and prosperity they will go astray.²²⁵ The Prophet also said the *Ummah* will be afflicted with disease called '*Wahnu*' that is the love of the world and fear of death.²²⁶ This disease will dampen the spirit of *Jihad*, the benevolence and compassion of the *Ummah* and will affect the perseverance, strength and dignity of the *Ummah*.

The International Islamic Fraternity functioning as a group in this modern era is the Organization of Islamic Countries (OIC) with about sixty member countries but remained a loose grouping and powerless to help the *Ummah*. Many have taunted about the ineptness and feebleness of the OIC in handling the many crises of the Muslim countries and the *Ummah*, and pressures from the western powers with a popular and heartrending joke by saying : “ Oh (O), I(I) see (C). “ It seems that is what the OIC is capable of, during the crises and conflicts which resulted in thousands of Muslims killed, maimed and raped, and some countries occupied by the *kufir* western powers lead by the United States unlike Khalifah Al-Maamun of the Abbasids, who send soldiers to deal with the Jews that had outraged the modesty of an old Muslim woman.

Unfortunately for the *Ummah* at present, the leaders of the Islamic countries mostly are secular in their thinking, some are even dictators, despots such in Algeria, Syria, Egypt, Tunisia, Saudi etc. etc., who maltreated their citizens, clamping hard on critics and detractors, curtailing the rights and freedom of the citizens and lavishly spending the coffers of the state as if their own, even worse than the actions of the western powers. Only a few countries can be considered an Islamic State per se, such as Saudi and Iran, implementing the laws and rules that had been ordained by Allah SWT and His Apostle, the Prophet Mohamad SAW. Nevertheless, still claiming to be a Muslim, maybe with a speck of *Iman*, they are concerned as the other leaders and Muslims all over the world, about the predicaments of the *Ummah*.

If the International Islamic Fraternity can not address the political problems of the *Ummah* then they should try to address the issue of knowledge and its advancement.

The OIC can setup an umbrella body to liaise and link up the various advancement in knowledge in all fields, religious, sciences, economics etc, so that the *Ummah* can share in the advancement of knowledge and its benefits, and assist each other to develop it further. Knowledge will bring the *Ummah* to the level of respect and dignity which Allah SWT has promised for the knowledgeable.

The International Islamic Fraternity also comprised of the various organizations, associations and individuals that are concerned on the well being of the *Ummah* such as the *Rabitah Al Alami*, World Muslim Youth (WAMY), the International Islamic Thought Institutes set up in many countries, the various International Muslims Professional Associations. All of them can and most have, played the roles for the benefit of the *Ummah*. Many scholars and intellectuals of the past few centuries have contributed their ideas and efforts towards the development of the *Ummah*. Some of them such Abu Ala Al Maududi, Arslan, Syed Qutb, Ali Shariati, Muhamad Abduh, Ziauddin Sardar, Muhamad Iqbal, Abdus Salam (The Only Muslim Noble Price winner) Syed Hossen Nasr, Ismail Faruqi, Anwar Ibrahim, Kalim Siddiqui, Marmaduke Pickthall, Osman Bakar and many more. Their contributions should be lauded but much, much more needs to be done. We have to set aside our differences in *mazhabs*, *ahli Sunnah* or *Syiites* or others, political affiliations and stands. We have to work as a group in a symbiotic relationship, complementing and supporting each other towards our mutual objective of developing the *Ummah* and the realization of our hope of the repeat of the glorious days of Islamic Civilization. International Seminars, Conferences, Workshops and Discussions should be organized more than before, involving the *Ulamas*, intellectuals, scholars, activists, businessmen and government leaders to discuss the issues of the *Ummah* sincerely and formulate action

plans to be implemented by all involved. The advances in Information and Computer Technology (ICT), such as the internet, multi-media should be harnessed to the full to aid in the effort. In one such conference held in 1995 as reported by Sohail Inayatullah, who wrote an article in the Future Bulletin titled, "Futures Visions of Southeast Asia: Some Early Warning Signals,"

He wrote :

“ In a workshop with leading Islamic scholars, activists and technocrats, Muslims were called for a vision of the future with five key attributes.

- self-reliant ecological communities
- electronically linked khalifa, politically linked
- gender partnership – full participation of females
- an alternative non-capitalist economics that takes into account the environment and the poor
- the ummah as world community as guiding principle based on tolerance
- leadership that embodies both technical and moral knowledge

These points may or may not come about. The structures of oppression, the weight of history pulls us away from our desired futures. But our desires give us the urgency. The future can be a door into an alternative world. If we take this door, then the policy and implementation question comes back but framed as: how can we make the moral the rational, the easier path? If we don't, we should take heed from this warning:

Isn't it here that you take a half step wrong and wake up a thousand miles astray.

The words of Yang Chu, said, while weeping at the crossroads. From the Confucian *Hsun-tzu* . “²²⁷

The work is already cut out to us, every body have their responsibilities and role to carry out. A concerted and comprehensive effort with a symbiotic interaction, complementing and supporting each other in their roles and actions is needed. Sincerity and perseverance will be needed to wade through the trials and tribulations that will come as what had to be faced by the earlier *Ummahs* of the Prophet Mohamad SAW and of the previous Prophets. Everybody will have to strive to the utmost of his abilities and also make the Supplications for the betterment of the *Ummah*.

6.8 HYPOTHESIS

From the facts presented on Ibn Sina's life and his work, the other Muslim scholars, the religious or the sciences, causes of excellence and decline of the Islamic Civilization, all the facts point to the function of Islam as the factor for excellence. Then how about the present *Ummah*? They are still Muslims and their numbers are very much more than the *Ummah* during the height of Islamic Civilization. The factor which made all the difference is the factor that we had hypothesized, that is the factor of *Iman*. *Iman* made all the difference between right and wrong, between a good and honorable Muslim and the bad and mischievous Muslim. The *Iman* will show the sincerity and integrity of a person which is very important in the pursuit of excellence and the resultant glory of civilization, since it is more of a collective effort from various individuals, society and the state. Islam is the foundation while the pillars are the *Iman* from which the walls, the roofs, the ceilings and the other ancillaries (*Ehsan*) are built upon to complete the building. A massive building will require a strong and in depth foundation, large and strong pillars made from stout and good materials. Islam is the best and only foundation which can sustain the massive and magnificent Islamic Civilization developed from the strength and quality of the *Iman*. As with the building, if not used with care and without proper maintenance, the building will become dilapidated and may crumble. The Muslims did not take care of their *Iman* and maintenance was not done by the *Umaraks* (leaders) and the *Ulamas* at all levels. Thus the decay of the Islamic Civilization sets in, it become, dilapidated, unassuming and just something to be nostalgic of, and that is how Islam is seen today especially by the western scholars and sadly even by some Muslims, as a dilapidated massive monument which was once, sparkled with splendors and magnificence. Today, the

inhabitants of the world see Islam and Muslims as something ordinary without any merit and intrinsic worth and at times as detrimental and mischievous. All these happened because of the factor of *Iman*. *Iman* will make all the difference between excellence and mediocrity. The stronger the *Iman*, the better the achievement in the 'Eyes' of Allah SWT and the world. It is important to note that the height of Islamic Civilization was when the Muslims were ruled by Islamic laws.

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CHAPTER 7

CONCLUSION

The criteria important for the pursuit of excellence have been shown to exist in the excellence of Ibn Sina. The criteria have been the path of success in other civilizations and the present time. The extra criteria and that which we have hypothesized that is of the *Iman* which is the differentiating factor between the Muslims and the non-Muslims excellence. The Muslims excellence during the period of Islamic Civilizations was far beyond comparison with any other civilizations in the west or the east, a statement which have supported by various renowned scholars. The achievements and the number of excellent scientists produced during the span of Islamic Civilization far exceeded any period in any known civilizations. The contributions and influence of the Islamic Civilizations on the western civilizations were immense and dictated the path of the western civilizations which started off with the Renaissance in Europe.¹ So *Iman* is the extra criteria in the Muslims that made all the difference. So to be able to achieve the same level of excellence or maybe better, the *Iman* of the Muslims have to be enhanced. Every effort must be made to help in the enhancing of the *Iman* of the Muslims. The effort must be a concerted and wholesome effort made by every Muslim individual, organization, society and government. Each and every one must strive and play the role that has been ascertained for them. Without this concerted and resolute effort it would be difficult to achieve the objective of recapping the past excellence. The scientists and

man of knowledge produced and their achievement may be excellent but not excellent enough to be on the same level or outshine the Muslims at the height of Islamic Civilization.

From our discussions we have ascertain the excellence achieved during the Islamic Civilizations was when the *Daulah* was in existence. Islam was practiced in the wholesome sense. Islam as a '*Din*' or way of life, was entrenched in the lives of the Muslims during this period. We cannot deny the fact there may be Muslims who are disobedient especially among the ruling elite, aristocrats, bureaucrats and wealthy echelons but the society and the country on the whole adhered to the principles of Islam.² Allah SWT has promised, as proclaimed in the Al Quran, Surah Al A'raf (The Heights) verse 96. [AlQuran 07:096]³

وَلَوْ أَنَّ أَهْلَ الْقُرَىٰ ءَامَنُوا وَاتَّقَوْا لَفَتَحْنَا عَلَيْهِم بَرَكَاتٍ مِّنَ السَّمَاءِ وَالْأَرْضِ وَلَٰكِن

كَذَّبُوا فَأَخَذْنَاهُم بِمَا كَانُوا يَكْسِبُونَ ﴿٩٦﴾

96. If the people of the towns had but believed and feared Allah, we should indeed have opened out to them (All kinds of) blessings from heaven and earth; but they rejected (the Truth), and we brought them to Book for their misdeeds.⁴

All kind of blessings from heaven and earth have been translated with a very wide meaning by many *Ulama*. A society which is prosperous, peaceful, progressive with an

abundance of justice, kindness and knowledge. What some as described as a society of high repute ‘the *Madani* Society.’⁵

The previous excellence occurred during the period when there were *Khalifahs* and the *Daulah*, the Islamic State was in existence. Maybe to achieve the same level of excellence as at the height of Islamic Civilization, the *Daulah* and a *Khalifah* to rule over the united Muslim *Ummah* will have to be rebuilt. Kalim Siddiqui in his book *the Stages of Islamic Revolution* proposed the idea of a single Islamic nation with a *Khalifah* as the supreme leader or *Imam*.⁶

As earlier discussed on the topic of hypothesis, the massive building which have become dilapidated, decayed and unassuming was built on a very strong and lasting foundation. The building can be built again or repaired on the same foundation to become the massive and beautiful with all its magnificence and splendors. So Islam is the very strong and lasting foundation and the pillars of Iman can be built again or repaired to be strong and able to support the walls, roofs, ceilings and the other ancillaries of *Ehsan*. Thus Islamic Civilization with its excellence and magnificence can be developed again.

The work is already cut out to us, every body have their responsibilities and role to carry out. A concerted and comprehensive effort with a symbiotic interaction, complementing and supporting each other in their roles and actions is needed. Sincerity and perseverance will be needed to wade through the trials and tribulations that will come as what had to be faced by the earlier *Ummahs* of the Prophet Mohamad SAW and of the previous

Prophets. Everybody will have to strive to the utmost of his abilities and also make the Supplications for the betterment of the *Ummah*. For Islam is the highest religion and there is none higher⁷ and the true path is Islam and nothing else. Saidina Omar Al Khatab, the Second Khalifah of Islam had said :

“We are a race(group) which have been honored by Islam: if we leave Islam, we will be dishonored, just like the others “⁸

The west or the Europeans developed their civilization by abandoning their beliefs in Christianity in whole or partially. Islamic Civilization declined and decayed when Muslims neglected their beliefs and took the western ways.⁹

The Promise of Allah SWT and the Prophet Mohamad SAW is without doubt wholly and righteously true. Islam is the way of life and only with complying with Islam wholly, truly and sincerely can we achieve the highest level of achievement and civilization in this world and the Hereafter. ‘*Wallahu ‘Alam.*’ (Only Allah who has knowledge)

PROPOSALS/SUGGESTIONS FOR IMPLEMENTATION

From our dissertation we have accumulated various information and guidelines and have concluded on the effect of the factor of Iman. The information that we have gathered should not be just for academic discussions and remained on the shelves or in libraries. The Al Quran was revealed not for reading only, in order to obtain its blessings as practiced by most Muslims nowadays. It is the book of ‘*Hidayah*’ (guide) and so are the

Al Hadith and the writings of the *Ulamas* and scholars. We should make use of these information in our everyday life. We have to start somewhere and there are things that we can easily implement as part of the bigger agenda. We only need the political will and resoluteness to do what we are capable of doing without waiting for the grand master plan and consensus of actions. A renowned *Ulama* has said that if we cannot do all then we should not leave it altogether, we should do whatever part that we can do at present.. So we wish to take this opportunity to make some suggestions/proposals that can be further studied and implemented by the authorities or some groups which, we believe can improve the situation of the *Ummah*, particularly in the pursuit of knowledge. The proposal and suggestions are :

1. The setting up of multi-disciplinary institutions or curriculum for education.

The education of Muslim children should be grounded in the basics of religion and should be encouraged to become a *Hafiz* of the Al Quran. and his education should be multi-disciplinary, that is the subjects of religion, the sciences, economics etc. They should be counseled to choose subjects of their interest or which is suitable for them. The methods and guidelines given in the Al Quran and the Al Hadith should be used in these institutions. The food and environment in these institutions should be conducive for their education. Their meals should follow the guidelines provided in the Al Quran and Al Hadith. Honey, rhotab, dates, raisins, goat milk and other food prescribed should be included in their daily diet and avoided the food which is detrimental to their development. The objective is to develop *ulamas* who are also well versed in

other subjects and the scientists, engineers, managers who are also proficient in religion. The person who is knowledgeable and with a stout Iman will surely be sincere, dedicated and compassionate and these are qualities necessary for the development of a progressive and conscientious nation and *Ummah*.

2. Providing and infusing the public with knowledge and the habit of reading

The authorities with the assistance of the scholars and the support of the community leaders can play their role in imbuing the public towards this objective. The authorities can provide the facilities such as the public libraries, community centres where intellectual discussions and knowledge can be dispensed freely without much inhibitions. The authorities can use the media and its machineries in promoting this objective and providing the incentives. Brochures, bulletins, magazines and other reading material should be made available to the public. A wide range of topics which could be beneficial to the public should be covered, giving the facts and information in a brief and interesting presentation. Maybe such topics as the workings of how the spectacles that we use helps to improve our eyesight, the mirror that we used everyday to comb our hair and make up our face and other topics can be presented in them. The scholars can help in the preparation of these reading materials and in dispensing knowledge. The community leaders can help in organizing and persuading their communities to attend the discussions, presentations or talks and in the distribution of the reading material. A more knowledgeable and open society is the path taken by the earlier *Ummah* which brought them to the pinnacle

of Islamic Civilization and the same path can be taken by the present *Ummah* as a small start to the pursuit of excellence.

3. The International Islamic Fraternity collaboration in knowledge

The International Islamic Fraternity through the Organization of Islamic Conferences (OIC) can set up or sponsor a vehicle where the Muslims scholars, scientists etc can share their expertise and knowledge. They can communicate and exchange their ideas and advances in knowledge in various fields. They can share their concerns and aspirations towards the development of the *Ummah*.

SUGGESTIONS FOR FURTHER RESEARCH AND STUDY

There are many avenues of research that can be done to help in the development of the *Ummah*. The *Ummah* is weak in Iman and requires the confidence and conviction to adhere to the Islamic teachings. The *Ummah* maybe convinced with proof, if it is provided, that Islam has all the answers and is truly the One and Only righteous way of life or religion. So, the scholars, the ones who have been blessed with knowledge and consciousness should lead the way. We also have to do researches and studies which will provide the proof and substantiation to the *Ummah* to be confident and committed to their belief in Islam. The suggestion/proposals we had put forward earlier can be further studied. Researches and studies can be carried out on the effects and benefits of the various food which the Al Quran and Prophet Mohamad SAW had stated. As an example. clinical and statistical studies can be done on the effects and benefits of raisins in the development of the brain. The beneficial effects of rhotab or dates for the woman

bearing and giving birth. Statistical studies in the practice of certain *doas* (supplications) and their resultant effects even though the acceptance of the *doas* is the Realm of Allah SWT but Allah SWT had stated that the *doas* will be accepted. The results of the studies maybe an encouragement and the thrust needed for the *Ummah* to practice them.

The Prophet Ibrahim AS (Abraham) requested Allah SWT to show His power in resurrection. Prophet Ibrahim AS said his request is not because he did not believe the powers of Allah SWT but to increase his confidence.¹⁰ Hopefully the results of the researches and studies will be the encouragement, the thrust and confidence needed by the *Ummah* to believe and be committed to Islam.

Reference Chapter 7 : Conclusion

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