IN THE NAME OF ALLAH

THE BENEFICENT, THE MERCIFUL

Muslims Knowledge

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A word of opening

In this book, which I managed to compile in a short time, the culture and science of Muslims are addressed. By writing these chapters, I have not intended to convey a "sense of vanity"; indeed, I wish to whisper a "true epic".

What we Muslims have granted the human society, whether it be science, knowledge, thought, experiment, culture, or ethics, is the core of entire entities acquired by human – from empirical sciences to ethics, jurisprudence and law to philosophy, literature to mechanics, pathology and discovery of new medicine to political systems, personal and union interaction customs to academic tradition, aviculture and ranching to water abstraction and irrigation principles, the rules of state governance to agriculture, etc.

So how comes that we Muslims are treated this way? There is no doubt that the West owes Islam, and there is no doubt that Islam is wronged by the West. In this preface, which I try to make it brief, I will hint at some notions:

Islamic culture and tradition is the most secure and impermeable fortress for guarding the nations' identity; it is more secure and stronger than those fortresses protected by guardians and soldiers. This is the fortress that has the following scribed on its lofty gate:

With God's help, the victory is close.

And on the other side is:

Do not be weak; neither sorrow while you are the upper ones, if you are believers.

This is Quran, "**the book of mercy, kindness, invitation, and humanity**", that states as such. This is what Quran has said.

The history of Islam, with all of its highs and lows, has shown in practice that enemies have always been hostile to Islam and Muslims, and have contributed to any disaster and mishaps suffered by Muslims – from wars during early Islam against the Holy Prophet and his message to the catastrophe of Martyrdom of Imam Hussein and similar events.

> Backed with science, faith, and virtue, Islam sufficed to force back the wrong thoughts and ideas; thus, they tried to take Islam's assets and make the plundered Muslim nations their servants.

The enemies put much effort to destruct these cherished towers, to permeate through this fortress by resorting to their agents, either insiders or outsiders. The first endeavor made for this purpose was weakening the bounds between Muslim communities and Islamic traditions. By loosening the tights between the ummah[1] and Islamic awareness, they intended to perish Islamic consciousness and Quranic commitment among people, and destroy the distinctive boundaries of belief and faith impermeability and religious defiance.

Apparently, weakening anything is realized but by weakening its bases and supports. If one tends to destroy a dam, they need to destroy its bases one after another.

"Culture" is the backbone of tradition. Thus, they strove to degrade **"Islamic culture"**, picture it as unimportant, remove it from programs, and make people forget it – make them neglect the overall Islam's knowledge, Islam's scholars, Islam's books, Islam's scientific materials, Islam's poetry, Islam's art, Islam's ethics, Islam's customs and manners, Islam's cherished values, Islam's philosophy, Islam's policy, Islam's jurisprudence and jurisconsult, remain silent about all these, and represent them as outdated, etc.

In order to gain the utmost success in hostility towards Islam and Muslims and isolating Quran and its ordinances, they were not satisfied with what they had already done. Indeed, they interfered in Muslims' behavior, their conduct, family issues, relations, clothing, etc., through using the same well-thought ways under demagogical names of "modernism" and "civilization", and took from them their powerful weapon of Islamic tradition by any means they could. As you see and we see, they took every one of these strong fortresses of traditions from Muslim nations – to the benefit of their materialistic and colonialist purposes – and kept the young, girls and boys, uninformed of those inputs of Islamic culture. As you see and we see, they fostered in them such religious and cultural alienation, and substituted such fear in their minds and such squashed thinking for intellectual solidification and rational strength. As you see and we see, they destroyed such strong and lofty tower of belief and faith down to the ruins of disbelief. And, as you see and we see, they offended national and Islamic symbols and beliefs to transform the Islamic identity of individuals.

This led to ignorance of much of the **"Islam's legacy"**, particularly

with respect to the young and most of the university professors and good-hearted people and book readers and educated and intellectuals in academic fields other than Islam. Those happened to the extent that people thought of all human's achievements as the product of the western Renaissance and the recent four decades, and thought that other ethnic groups – particularly Muslims – had had no contribution to the science, knowledge, civilization and evolution.

When the culture leaves, **"tradition"** leaves as well, and when the tradition leaves, the **"consciousness"** and its underlying **"ethics"** depart too. It is then the stable tower is collapsed, and when it crushes down, any incursion, plunder, attack, and camisado would be likely.

Alas, so many of our shallow thinking intellectuals and over-trustful unsophisticated learned people, both in Iran and in other Islamic nations, conceived deceitful representations as the trusted representations, and were deceived by the falsifications, and lost their cultural and intellectual independence, and rode horses in the land of weariness and **"self-surrender"** and idealistic menace and mental defeat.

It is never enough to talk of this issue and no matter how much we contribute against this deadly negligence and this frightening and oppressing nightmare, it is still inadequate.

According to what was briefly mentioned, obviously it is now one of the most significant responsibilities to introduce to all people (particularly the young people) Islam in its entirety and with all its assets as it really is – both the content of the authentic Islam and what is inherited to people around the world in the form of Islamic culture and civilization.

I believe that the youth in Islamic nations – particularly those in Iran – should study and learn these issues during their education and as mandatory courses, and such issues should be included in their textbooks and curriculum, so that they can rescue their digested souls and regain a tremendous epic – the epic of Islam – and by that rescue their societies at the first place, and then save the humanity. So I hope that they read about such issues, particularly in this booklet, and obtain a good understanding of the overall material – provided as a sample – on any issue and in any chapter.

One of the hostile efforts of Islam enemies was to tear apart, dismember the Islamic nations, and destroy the power of Islamic

empire. In order to prosper with this respect, it was inadequate to just disjoin the nations in terms of policies and territorial boundaries, because cultural unity and Quranic language could fairly thwart such political and boundary detachment. The Islamic nations were similar in terms of the dominant culture; so what should be done? This is the question that the enemies used to ask themselves; the question for which they found out a proper answer and took the initiative accordingly. What was the answer then? It is obvious: **"cultural disintegration"**.

How is cultural disintegration realized? And in what way one can detach and separate a large ummah that has one god, one book, one prophet, and one Qibla, such that they entered into wars with them and forced them to face each other with their own men, assets, and resources, and made them commit fratricide and revenge?

To fulfill such significant task, special measures should be taken and the underlying conditions should be established. So, after geographical, boundary, and political disintegration, they tried cultural disjoin using several trickery and cunning and deception. Through establishing various colonialist political factions under the title of religion, through reviving old disputes, through oppressing logical procedures of dispute settlements and providing impractical solutions, promoting disbelief and pessimism, through employing fake treacherous persons and assigning them demagogic titles, through dispatching various misleading groups, etc., through establishing demagogic institutes under the name of hospitals, high schools, colleges, etc., they did what they desired.

Another way, among others, was **"weakening Islamic languages"**, particularly Arabic, and promoting other languages among Muslims. This policy was followed to the extent that the language of religion was called the foreigner language and our simple-minded or deluded lexicographers were deceived by the enemy or fell into this abyss of artifice. This is far from the spirit of Islam, and the national awareness, and Islamic awareness, and is a result of conspiracy of a group of orientalists and other imperialist agents.

We are Iranian and we are proud of our real figures, particularly we are proud of the sweet language of Farsi, Dari Farsi, Farsi of Sa'di, Hafiz, Beyhaqi, etc.; the fostered agony-safe language of Islam and Islamic culture – not an artificial or any other customized language. Together with the proud of being Iranian and our language and real national traditions, we are Muslims and we are honored that we

are Muslims and orient towards Qibla, and we are gratified that, in a chaotic world of nihility and complicatedness and aberrance, we are Shiah of Muhammad and his dynasty and we are proud that "Quran" is our book.

The language of Quran is not unfamiliar for us. I condemn those indifferent intellectuals or those who are against the national beliefs, those who garnish such scenes. And it is not only me who condemn those people, any well-informed Iranian would condemn them as well. Our nationality is merged with Islamic culture. Its manifestation, indeed, is the manifestation of Islamic culture. I hope the mentioned people are not among the concerned intellectual class of our society. However, if so, they should know that they are condemned against the nation and against the Islamic consciousness of the nation. Advocating nationality, Iran, and being Iranian and yet being against Islam and Islamic representations is the mere intention of the enemy and the want of outsiders.

In any event, a **real intellectual** is the one who, besides being concerned about human worldly affairs, keeps themselves highly responsible for the reality of their nation, historical consciousness of their society, belief truth, and the resistance boundaries of national rights, and throws away self-centeredness, individualism, and self-admiration and who does not prefer their own personal desires over those of the nation, and who does not misuse their entitlement once they have in a certain post or position, and who is always concerned with the nation and is aware of the nation's interests, and one who sees upon themselves the meticulous consciousness of the nation.

Yet another method that the outsiders have used to oppress Islam's powers is encouraging Muslim communities to consider and follow old traditions and **"abandoned mentalities"** and establish **"false proud"** of those traditions, so that each of the Egyptians, Iranians, Syrians, Iraqis, Indians, etc., think of their history prior to Islam, and so that those histories be revived in their spirit and leave the lively Islam with no room.

Here, too, they were indeed disloyal. Because they enhanced and promote those parts of the traditions which were not directly in line with the interests of Islamic nations; indeed, those parts backed up their agents.

They pursued two goals in doing this – which was accompanied by the so-mentioned betrayal: first, weakening the influence of Islamic

lessons and resistance-teaching bases and uninformed surrender to Islam, and second, crushing the foundations of the society and diminishing current lively teachings and finally making the society invadable.

The latter method was the most treacherous and deceitful affair by outsiders and their agents in Islamic nations during the last century and such affair is constantly present. They achieved two goals in one try: **the first one was weakening the Islamic bounds of the Islamic nations and the second one was to get the eastern and Islamic talents busy with such affairs.**

In an era in which they are progressing with their whole strength towards innovation, modernism, invention, and extension, they make eastern nations, particularly Islamic nations, preoccupied with their far past so that they would not be able to give enough thought to new issues and aspects of advancement, and instead of fostering figures, **entirely attempt to revive past imitations and instead of creating new works and understanding new issues, become preoccupied with the far past obsolete deeds.** Specially those traditions that are not associated with the heart of the society and the nation's identity; those which used to be heavy and breathtaking burdens on the back and shoulder of people.

Therefore, what I mentioned as the contribution of Arabs to Islamic culture (except for their contribution to promotion of Islam and devotions and martyrdom for this aim) is to proscribe this wrongdoing; i.e. the notion of ethnocentrism in Islam. Islam does not assume any difference among the white and the black, the yellow and the red, Semite and Arian, etc. Since fourteen century ago, Islam has extinguished such superstitious systems and arrangements. **The call of Islam is a universal and humanistic call, and is not regional or geographical; thus, it is an eternal and everlasting call, and not one limited to a century or a specific period.** As soon as the outsiders (strangers) found out that the call of Islam is one universal call and has the potential for globalization, they realized that Islam would stop them if they do not stop Islam. And found out that a world created by Islam is a world with profuse justice, faith, commitment, awareness, devotion, monotheism, and piety which would not fall into the trap of imperialists and would not do them well. They desire a world with an abundance of sin, negligence, surrendering, decadence, and humbleness so that they could rule over people. Those in possession of power and regimes seek for

dominance, and Islam negates dominance. Those in possession of power and regimes promote slavery, either in its traditional sense or in its modern sense. Islam promises liberty and grants freedom and liberation – Do not serve others, indeed God has created you a free man – Thus, they fought against Islam in various ways.

- I have included in the chapters of this book some content from other authors, some valuable and beneficial subjects; and I have cited the entire references, however, I was not satisfied as there were other references and similar books with profound materials, all of which informative. Thus, I have included a bibliography part at the end of each chapter and introduced 150 works with this respect so that the readers and scholars could themselves refer to those books and papers.
- The dictation of some of the references are sometimes varied which is due to the accordance with the dictation of the source of the citation.
- All the chapters were written in brief. Although there should be several books on the content of each chapter, some chapters still seem to be missing, such as a chapter on the fundamental interpretation and cognition of Quran and subjects about Quranic instructions; and a chapter on Muslims' medicine – an extended medical science which the human world has always enjoyed and benefited from; and a chapter on pharmacology and pharmaceutics and medical discoveries of Muslims; and a chapter on the science of Hadith (tradition), Derayeh (comprehension), and the Muslim precision with this regard; and a chapter on historiography of Muslims; and a chapter on critique and criticism in Islam.
- It was a reminder presented in this preface: "and salute to those who serve righteousness for the sake of righteousness, and there is no motion and power but unless it is from God.

Mohammadreza Hakimi

In the Name of God

Foreword

Of outstanding aspects of the book "Muslims Knowledge", of which some selection is presented here, is that it is a prodigious work written by a scholarly author who relies on nothing but authentic sources; an intellectual sociologist and a social theoretician who is well aware of the pains suffered by the society and new generations. Publication of such works can cure inferiority complex of Muslims and revive the spirit of self-reliance and awareness in them, without entrapping them in self-admiration or false proud or groundless historical reports.

In this book, the culture and knowledge of Muslims are addressed. It is stated that the scientific, cultural, and ethical core of everything in the global world has its roots in Islam. To the author of this book, introducing Islam in all of its aspects is one of the significant duties of Muslims. Investigating the importance of Quran, promoting science and knowledge, orienting the concern of Muslims towards science and culture, extending the knowledge of Muslims to the entire world, penetration of Muslims knowledge into even small counties, division of sciences into various subjects, development of an educational system, etc., all are presented in this book.

Throughout twelve chapters, various materials on numerous aspects of Muslims culture and extensive related information are provided. The chapters are:

- Chapter 1: A New Deliberation
- Chapter 2: From Turkistan to Spain
- Chapter 3: Authenticity of Culture
- Chapter 4: Acquiring Muslims' Knowledge
- Chapter 5: Confessions
- Chapter 6: Innovations
- Chapter 7:Islamic Literature
- Chapter 8: Islamic Poetry and Art
- Chapter 9: Intellectual Knowledge
- Chapter 10: Islamic Jurisprudence, Rights and Law
- Chapter 11: Practical Wisdom, Ethics
- Chapter 12: Scientific Arrangement

Some of the information provided in the book "Muslims Knowledge" can be expressed as whether or not the readers, particularly young Muslims, know that in a thousand years ago:

1. The public library of Rey kept almost 10,000 volumes of books.
2. Or that Basra's library provided those studying in the library with salary and subvention.
3. Or that there used to be over 100 bookshops in Baghdad.
4. Or that upon the invasion of Moguls, Baghadad hosted about 40 public libraries.
5. Or that the number of books in possession of figures such as "Saheb ibn Abbad", the Shia scholar and minister, was equal to all the books of European libraries.
6. Or that no one had the courage to keep huge amounts of property unless they contributed to literature and art using their properties.
7. Or that it was Muslims who realized the principles of drawing over an spherical surface.
8. Or that it was Muslims who, by merging algebra and geometrics, developed the principles of analytic geometry, which was later declared by Descartes.
9. Or that it was Muslims who discovered the equation of motion in the 10th century.
10. Or that it was Muslims who initiated algebra, trigonometry, position and application of the sign of zero, and also expanding mathematics and world's map.

The invaluable book of knowledge of Muslims, authored by Professor Mohammad Hakimi, is translated to explain a deep, and indeed, tangible and comprehensible subject: "investigating the contribution of Muslims to discovery and expansion of science and different branches of sciences." The role of Muslims in east in discovering and developing science has been much more than what has been introduced in western world propagandas, and thus such deep and rooted scientific movement has been ignored.

Therefore, in order to convey the main points of the book, from chapter four to the end of the book is translated without any omission or addition, so that the readers are presented with a rather abridged version of the book.

Bahaman Akbari
Head of the Center for Organizing Translation and Publication of Islamic Instructions and Humanities

Acquiring Muslims' Knowledge

1. Acquiring Muslims' Knowledge

After Islamic culture had spread out for a few centuries, sciences in Islam found great depth and richness, and the composition of books and compilation of techniques and issues were well in flourish. Thus, people from other lands and also followers of other religions and schools of thought became aware of this scientific richness due to the travels they made to Islamic cities and their contact with Muslims.

Islam's most prominent contender at that time – and now, for that matter – was Christianity, a Christianity entangled in the rigid systems of the Vatican, pontiffs who considered themselves God's successors on Earth, buying and selling Heaven and Hell, banning free-mindedness, deprivation of humane and populist governments, captivity in the claws of scrutiny (whether religious, political, or scientific), the burning of dissidents, the prosecution of the knowing, the slaughter of the wise and disapprovers of superstitions. What such a Christianity feared most of all was the liberty and free-mindedness Islam enjoyed; it would crumble before the glory and magnificence of the Quranic lessons, logical theology, jurisprudence, moral ethics and Islamic ways. This is why Christianity decided to understand the reasons underlying the greatness of Islam, acquire all of its advantages, strengths and wisdom, and in return contaminate it by means of any deception needed, spreading into Islam all the superstitions, corruption, evil and sins Christians were riddled with.

The most important and valuable thing they decided to get from Muslims was their knowledge and their scholars' scientific mindset. In the present book, which I have based upon brief conversations, there is no room for an extensive report on the issue; I will suffice to say that the circumstances mentioned above led Christian political and religious leaders to take several drastic measures in order to prevent the infiltration of Islam among Christians and making them become Muslims. Among such actions were petty allegations against Islam, contemptuous talk of the Holy Prophet's life on priests' behalf based upon Israelite documents (facts contorted by the Jews and then put inside books of *hadith*) aiming to arouse confusion among Muslims and weaken the foundations of Islam's divine epics, as we will see in Chapter 6.

This was only one action taken against Islam by Christians and church leaders; another, also mentioned above, was taking Islamic culture and its contents and giving it a Christian look. To do so, they began with

religious philosophy (scholastic theology) and then moved on to other branches of philosophy. Spain, Syria and Iraq were suitable bridges for this goal. By establishing relationships between Christian and Islamic thinkers and scholars in these three countries, Christianity could achieve its goal, which was in general no other than animosity toward Islam. All in all, their intentions were to get hold of Islamic culture, undermine the political foundations of Islam, and also spread immorality, corruption, dipsomania and womanizing among Muslim youth in an effort to weaken the fiery progress Islam was making and prevent the truths in the Quran from threatening the hollow illusions they had based their power upon.

Thus, they set about infiltrating *caliphate* administrations, in particular in the guise of physicians, soothsayers, librarians, interpreters, etc. Those in power are always concerned about their future and their health, so it was easy to get close to them as physicians or soothsayers. This is how Christian agents and advisors found way into Islamic caliphates, and from there into libraries and observatories. First, they would do Muslims a service, such as translating a book from other languages into Arabic, in return for wages. After a while, however, they were told to teach each other Arabic, A group of Christians from other countries would travel to Islamic countries as researchers and seekers of knowledge and find access to Islamic knowledge. As Muhammad Ali Foroughi says, "European seekers of knowledge found a source of science and philosophy in Islamic countries. Thus, they traveled there, and began learning Arabic and then acquiring our ancestors' sophisticated knowledge." [1]

Indeed, learning the Arabic language was one of the first actions taken by the Christians over a millennium ago. [2] Having learned Arabic through great persistence and effort, they established schools of Eastern studies. Scholars of Eastern studies themselves wrote dozens of books in various languages on Arabic grammar. [3] Thus, they had achieved the key to accessing and learning Islamic culture. Then, by visiting Islamic lands both near and distant, and spending time in the libraries of their mosques and schools, they developed their bibliography of Islamic culture. They subsequently began writing dozens of books on Islamic manuscripts (in Arabic, Persian, Turkish, etc.) as well as making lists and introductions on

1.Muhammad Ali Foroughi, The Development of Philosophy in Europe; we will quote from Foroughi in more detail in the next chapter.

2. ***Al-Mustashreghun***, Vol. 1

3. Ibid, Vol. 3.

these books in various languages. [4]Their next step was writing books on Islamic knowledge and translating Muslims' texts.

2. The Vastness of the Advantages Taken from Islamic Culture

I will now list subjects on which scholars involved in Eastern studies translated Islamic text(s) or wrote book(s) based on Islamic source books:

- logic and methodology,
- scholastics and ideology,
- nations and sects,
- philosophy and theology,
- mysticism and speculative theology
- discussions on existence, philosophical tales,
- philosophical criticism,
- time in Islamic philosophy,
- political Islamic philosophy,
- religious politics,
- Islamic utopias (Farabi's utopia, Ibn Bajje's utopia, etc.)
- the science of the heavens,
- astronomy,
- celestial bodies and their movements,
- marine sciences and sea voyages,
- mineralogy,
- geology,
- optics,
- psychology, socio-psychology, psychotherapy,
- sociology,
- aesthetics,
- numismatics,
- atmospherology,
- the science of the atmosphere
- discussing "particles" and their science,
- the philosophy of history,
- physics and its different branches,
- the science of machinery,
- chemistry and chemical tools (Razi and Jaber's chemistry),
- making astrolabes (and other precision tools)
- astrology and horoscopes,

4. Ibid, Vol. 3.

- arithmetic and geometry,
- algebra and calculation,
- trigonometry,
- architecture,
- debating skills,
- politics and leadership skills,
- educational methods,
- various moral skills (and writing moral novels)
- compiling encyclopedias,
- statistics and the classification of sciences,
- travel journalism,
- writing biographies,
- anatomy and clinical medicine,
- pathology,
- ophthalmology,
- hygiene and health care,
- pharmacology and pharmaceuticals
- surgery,
- physiology,
- botany,
- zoology and training animals,
- agriculture,
- irrigation,
- industries,
- office administration,
- the principles of business,
- law, jurisprudence, the fundamentals of jurisprudence, the basics of law,
- political law,
- criminal law,
- civil law,
- history, general history, social history, political history, the history of science and classes
- geography, human geography, sociogeography, and land mapping
- the supernatural and Hermeticism,
- poetry, styles of poetry, criticism of poetry, and literary criticism
- writing stories and prose,

- the science of rhetoric and the criteria of criticism,
- bibliography and listing,
- philology and grammatical tenses,
- syntax, semantics, rhythm and rhyme,
- the science of lecturing,
- linguistics, and many others…[5]

This was but a brief list of Islamic sciences and knowledge transferred from us to the Christian world in Europe, America and other places.

To this list we should also add translations of the Quran, which they get a great variety of knowledge from, along with translation of *hadith* from the Holy Prophet (PBUH), Imam Ali ibn Abutalib (SA) and others.

I have yet not mentioned any of the other things taken from Islamic lands – manuscripts, antiques, scientific tools, etc., with which they have equipped and enriched their laboratories and libraries, and also the great deal of experimented science and highly important secrets they have learned from these manuscripts.

3. Islam and the Renaissance Movement

> In order to explain how modern sciences developed, we must consider the background their development had; we must take a look at a very long, mysterious and dark area of preparation that led to such a development, and eventually realize what contributions the cultures of classic times and previous civilizations, and also Islam, Iran, India and China made to the construction of modern sciences. First of all, we should know how it all came to be: what brought about the rise of modern sciences in 16th –century Italy? What made science suddenly flourish in England, France and the Netherlands in the 17th century? … The astounding flourish of Islamic culture during its short lifetime, while being a means to transfer ancient culture, also served as a stimulant for scientific development. [6]

As we know, Renaissance is referred to as the period of development in Europe; a transition from Medieval times to the new. But first, we must take a look at the years before the Renaissance.

5. I have used various books to compile this list, including Najib Al-aghighi's ***Al-mustashreghun***
6. ***Science in History***, pp. 189-190.

Medieval Times

The Medieval Times (476-1452), almost a millennium, are regarded in the history of Europe – especially Western Europe – as the period between the old and new centuries. An exact beginning and end cannot be determined for the Medieval Times, because the initial and final stages of this period occurred gradually. Some see the year 476 – when the western Roman Empire fell – as the beginning of medieval years. Also, Medieval Times also continued into part of the Renaissance period, and some have cited 1450 or 1500 as the end of the Medieval Times.

Thus, we can consider this period to have lasted for about 950 years, which coincides with 100 years before Hijra to 850 years after Hijra in Islamic history.

We can now see what state Europe and Christianity were in and what conditions the Islamic world had during the medieval period. What great philosophers, thinkers, scientists, inventors, literary figures, writers, physicians, etc., we had trained and presented to the realm of humanity and science – indeed, these distinguished figures now have centuries of the history of science named after them by historians compiling the development of science.

Some have named the Medieval Times the Dark Age. During this period, it was Islamic culture that gave the Christian world scientific and mental help and paved the way for future movements. Modern movements in science and thought arose – as stated by scholars – from Islamic culture rather than classic (Greek or other ancient) cultures. As these scholars admit:

> "Although people naturally thought it was obvious that the Renaissance movement was the direct continuation of classic culture and that modern thinkers started exactly from where there ancient predecessors had left off, the idea – and even the imagination of – modern thinkers beginning their way from the climax of classic culture is totally false. The real path this trend took was completely different and highly significant. Civilizations who had taken hold of classic culture heritage had to put in a great deal of effort to keep that heritage from turning their thoughts into decadent. As we have already seen in the previous chapter, the classic culture had greatly degraded, even in the East, but could still achieve a great treasure of knowledge and arts if it were able to find its way into the Greeks' interests and tendencies toward study. Syrians, Muslims and

> subsequently the medieval school of thought and also Renaissance humanists had no choice but to explore this treasure step by step to acquire the main works of Greek knowledge… Exploring the works of predecessors was more an effect rather than a cause, arising from 12th-century medieval science and 15th-century Renaissance knowledge…[7] When the Roman Empire met its demise, doors were opened to cultural exchange… soon, a positive factor joined these negative, liberal factors – the emergence of a global religion [Islam]…[8]

Thus were the origins and fundamentals from which the Renaissance arose. Even the culture that emerged during the Renaissance was highly influenced by Islam, and based on, in fact, Islamic input. "Medieval civilization," has been said, "was influenced by Islamic, eastern medieval and (southeastern) Byzantine civilizations."

As John Bernal states:

> "It is difficult to assess how much Islamic scientists have added to human knowledge.
>
> ***Al-manazir***, by Ibn Heysam (965-1039), was the first major study of its kind, and founded medieval optics. Although Ibn Heysam's optics developed later on, it underwent no fundamental change up to the 17th century." [9]

As we see, until the 17th century – two centuries into Medieval Times – the optics presented by an Arab Muslim rules the world of Renaissance science. Furthermore, he also founded medieval optics, which apparently was quite significant and was seen, particularly during its second half, as the basis of modern science and development.

There are a great many cases of such evidence for the impact Muslims had on modern scientific movements. In future chapters, we will discuss examples of these, such as the impact Muslims' algebra and geometry had on the development of Descartes' analytical geometry, the influence Al-battani's astrology had on Europe, the influence Khajeh Nasiruddin Tousi's plane geometry had on the emergence of 18th-century spatial geometry, the effect of Abd al-Rahman al-Sufi's studies and the discovery of nebulas in subsequent explorations, the influence of the planetary theory presented by Ibn Al-shatir, the 8th-century astronomer from Damascus,

7. Apparently, medieval and Renaissance sciences arise – in fact, are adapted – from Islam.
8. ***Science in History***, pp. 204-205.
9. Ibid, pp. 209, 212, 214.

on Copernicus' astronomy[10], the impact of Muslims' trigonometry on modern Western sciences, the influence Kharazmi's algebra had on teaching Westerners mathematics, the effect Islamic literature had upon Western literature – in particular Germany and France – and many others.

Thus, it is those researchers and scholars who have openly revealed the truth who are right, particularly about the Islamic origins of Renaissance and other scientific, social, industrial and intellectual movements. And indeed, there are many of such scholars. Here, I will present but a few examples:

1. "And little did [Muslims] know that the roots of Western Renaissance were in fact the work of their own ancestors, and that the basis of European institutions was what Europeans had learned by watching Muslims' chaste, clean, Islamic-based lifestyle during the Crusades…"[11]
2. "During the 12th and 13th centuries, Islamic philosophy had become so dominant over Western culture that a backlash was only natural; the backlash was what occurred in the 15th century and was called Renaissance, inclination toward being Greek-oriented in order to escape being Islam-oriented…"[12]
3. "Throughout the history of mankind, there are two distinctive, prominent movements incomparable to all others – the first is the great Islamic movement, and the other is Renaissance, both of which are rooted in Islam…"[13]
4. "Nowadays, everyone admits the significant impact they [Muslims] have had upon the history of human civilization…"[14]
5. "The fruits of Islamic science (after the Mongolian invasion) was not destroyed, but used by people other than those who had produced it (i.e., Muslims). The Islamic science system was transferred as a whole into an extremely vaster scale than Greek science. Europe's religious feudalists appropriated all of Islamic scientists' experiences, theories and methods directly…"[15]

10. Dr. Seyyed Hassan Nasr, ***Science and Civilization in Islam***, translated by Ahmad Aram, Tehran, Andisheh Publication, 1971, p. 176.
11. Ahmad Aram, the Introduction to ***The Performance Record of Islam***, pp. 11.
12. Dr. Abdul-hussein Zarrinkoob, ***The Performance Record of Islam***, pp. 17-18.
13. Dr. Muhammad Reza Shafee Kadkani, ***The Islamic Scientific Movement*** (an article published in ***Name-ye Astan-e Ghods***, Vol. 5, No. 134 (May 1961), pp. 24-29, and No. 6 (June 1961), pp. 17-24.
14 Ignati Yulianovic Krachowski, ***Tarikh Ul-adab Ul-jughrafi Al-arabi***, Vol. 1, p. 3, translated into Arabic by Salah-uddin Uthman Hashem, Daruthaghaffa, Egypt.
15. John Bernal, ***Science in History,*** pp. 217-218.

It is thus clear how much Islam has contributed – directly or indirectly – to modern culture, science, inventions and industries and also the future of the history of mankind. Nevertheless, comprehensive research has yet to be done on this issue, particularly the contribution Muslims have made to supernatural sciences (experimental aspects in particular) and inventions; even those in the West aware of the issue remain silent and do not admit anything. The scarcely few who do admit the truth do not say everything. In any case, the next chapter deals with examples of confessions providing further evidence proving the profound impact Islam has had on Renaissance and modern science, may we better realize how greatly indebted the human society and science are to we Muslims' scholars, philosophers, astronomers, experimenters, astrologers, physicians, writers and researchers; indeed, may our own youth better know what great heritage they have had and what legends they have lost, and rise up to elevate Islamic greatness once again.

Confessions

Confessions

There are some scholars who, due to their higher knowledge and awareness of Islamic science, civilization, literature and culture, have managed to be as realistic and truthful as possible, avoid being partial and reveal what is true. In this chapter, I will quote from some of them.

These quotations have been gathered from several different books. After each excerpt, I have cited the reference for readers' further study.

I have categorized quotations into two groups:

- Part One: Talks by Foreign Scholars
- Part Two: Talks by Islamic Scholars

Part One

1. Voltaire

In an era of wilderness and ignorance following the fall of the Roman Empire, Christians learned everything from astronomy, chemistry, and medicine to math and others fields from Muslims; from the very early years after Hijra, they had to turn to Muslims to gain popular sciences and knowledge.

Islam owes its existence to the conquests and fairness of its founder, whereas Christians imposed their religion upon others by force of swords and brutality… Dear Lord! If only all nations in Europe had followed the methods used by Turks and Muslims.

Muhammad's religion was undoubtedly superior to Christianity. In his religion, a Jew (Jesus) was never seen as God, a Jewish woman (Mary) was never called the mother of God, and other Jews were never subjected to hatred and grudges. Muhammad's religion never fell into the Christians' insane blasphemy – regarding God as three gods and not seeing three gods as one – and God was never crushed under their teeth [the Holy Touch]… indeed, faith in the One God was the single principle Muhammad's religion was based upon.

Muhammad's religion is a reasonable, serious, chaste and humanitarian one. It is reasonable, for it never was contaminated by insane blasphemy; it never considered accomplices for God, and never based its principles upon contradictory, illogical mysteries. It is serious because it prohibits gambling and lustful frivolities as decrees five sessions of prayer daily instead. It is chaste because it cut down the unlimited number of wives Asian rulers slept with down to just four. And it is humanitarian, because it sees paying *zakat* and helping one's fellow men as even more essential than the Hajj pilgrimage. These are all signs of the truth of Islam; add to all of this the superiority of coexistence. [1]

2. Bertrand Russell

Muhammad's religion was a simple mono-deity that had not been complicated by scholastic dilemmas such as "trinity" and "reincarnation." [2] The prophet of Islam did not claim to be God, and

1. Dr. Javad Hadidi, ***Islam as Seen by Voltaire***, Toos Publication, Tehran, pp 87, 193, 244-245.

his followers did not believe him to be so, either… the faithful were required to make as many conquests for Islam as they could, but were prohibited from harming Christians, Jews or Zoroastrians, for these nations are seen in the Quran as "peoples of the book" who all follow the preachings of one holy book… Islam's unique culture arose in Syria, but flourished across the two extreme borders of Syria – Iran and Spain. Around 830 AD, Muhammad ibn Musa Kharazmi – a translator of Sanskrit astronomy and mathematics books – published a book which was translated into Latin in the twelfth century by the name of ***Algoritmi de Numero Indorum***. The West learned what we know as "Arabic" and should in fact be known as "Indian" from this book. The same writer wrote another book on algebra, which was used as a textbook in the West until the sixteenth century… Two Muslim philosophers – an Iranian and a Spaniard – are particularly noteworthy: Avicenna and Ibn Rushd. The former is more well-known among Muslims, whereas the latter is more prominent with Christians. Avicenna (980-1037 AD) spent his life in places one would think came out of a book of poetry. [3] He was born in Bukhara, and moved to Khiva and then to Khorasan when he was twenty-four. He taught medicine and philosophy in Isfahan for a while, and the settled in Rey. Although he is better known in the field of medicine rather than philosophy, he did not add much to Unani medicine. His books were used as medical guidelines from the twelfth through the nineteenth centuries… Ibn Rushd is more prominent in Christian philosophy than Islamic philosophy. He is but a dead-end in Islamic philosophy, whereas in Christian philosophy he is regarded as a start. His books were translated in the thirteenth century by Michael Scott, which is quite remarkable, since Ibn Rushd wrote his works in the second half of the twelfth century… Arabic philosophy is not of much importance as an innovative, original concept. Figures like Avicenna and Ibn Rushd are basically explainers… writers who wrote about mathematics and chemistry in Arabic showed novelty and freshness… Islamic civilizations, although quite admirable in art and also in technical aspects, provided no

2. Trinity – the belief in three gods: the father, the son and the holy spirit – is the well-known principle of Christianity. Trinity and duality (belief in two sources for the universe) both oppose monotheism.

3. In many Muslim and Eastern countries, some people – villagers in particular – think what they hear about European and Western cities, coasts and civilizations "jumped out of a book of poetry." On the other hand, there were days when we lived in cities which seemed to twentieth-century people like only possible to exist in poetry books. Indeed, as God has said, "We alternate days between people."

> new, independent thoughts in theoretical fields. The importance of this civilization, which was by no means insignificant, was that it provided a transition from old to new European civilization. Despite lacking the mental power necessary to innovativeness, Muslims and Byzantines kept the home fires burning when it came to the life of civilizations – education, books, and free time for research and study. Both of these nations – the Muslims and the Byzantines – were effective in stimulating the West out of barbarianism. [4]

Note 1

Russell's knowledge of Islam is extremely low, much lower than expected at least. As he himself admits, he is only familiar with Omar Khayyam. [5] Nevertheless, he sees Islam as the religion of "frank monotheism," attributes Islamic conquests to religion, calls Islamic culture "distinguished," warns others not to undermine the significance of Islamic civilization, regards Muslims as guardians of education and books, providers of a transition of science and culture

to Europe, keepers of the civilization machine and stimulants to the West. Russell believes that it was the Muslims who taught Europeans Arabic (or Indian) numerals, founded Christian philosophy, made innovations in mathematics and chemistry, and did admirable work in art and technical basics. Yet, he errs dramatically in a fundamental point: he sees Muslims as lacking innovation and novelty in theoretical fields. Would someone knowledgeable in the works of Islamic scientists express such a view? Are the scientific and theoretical innovations made by scholastic and speculative scholars of Islamic sects small and negligible? Are works like ***Shafa***, ***Hekmat-ul Ishragh*** and all the other books, achievements and philosophical discussions merely a repetition of Greek knowledge? Has any other culture or civilization so far provided the human race with such works in intellectual fields?

Note 2

The other point that should be made here is that Russell believes that Muslims have made no innovations in theoretical sciences, and that they have only shown some ability and novelty in fields like mathematics, chemistry, art and technical issues. Assuming this to be true – although

4. Bertrand Russell, ***A History of Western Philosophy***, translated by Najaf Daryabandari, 3rd printing, Jeeby Publication, Tehran, 1972, pp. 213-224.
5. Ibid, p. 218.

Muslims' innovations have not been limited to mathematics, chemistry, art and technical issues – this indicates that Muslims, blessed by the lessons they had learned from the Quran, *hadith* and preachings from other distinguished Islamic figures, saw themselves as vastly enriched spiritually, so they pursued practical matters of life instead. It was the results of these efforts and innovations that were used by people during the Renaissance and also other scientific, technical and industrial revolutions. [6]

If only thinkers like Russell, frustrated by Christianity, the church and its superstitions and corruptions, would acquire correct knowledge of Islam and make an accurate study of it. Had these thinkers known the Quran through studying accurate and dependable translations of it, learned about *hadith* and ways of the prophet, studied the ***Nahj-ul-balagha***, realized the unique knowledge included in ***Sahifeyye Sajjadieh***, and become familiar with the profound preachings of Imams Muhammad Bagher, Ja'far Sadigh, Ali ibn Musa al-Reza and other Imams, great truths would have been revealed to them, truths that would not leave their scientific, human and moral conscience to remain silent in confirming or spreading them; some of the fairer Western thinkers and researchers (like Voltaire, the well-known French philosopher) have indeed admitted this and expressed epic words of awareness of the greatness and dignity of Islam and the elevated teachings of the Quran. [7]

3. George Sarton

> The emergence and eruptive development of Islam was undoubtedly the most remarkable incident of all. Hijra – the true indication of Islam's origin – occurred in 622 AD. The prophet passed away ten years later [in 632]… Before that [Islam], other conquerors had also made conquests as great, but their empires met demise even before they themselves had died. The most interesting point about – the first of – Islamic conquests is that they were certain and unquestionable. It was the first time, however, that a religion – a highly elevated one, at that – had become the powering force behind an empire being established. Worldly leaders come and

6. Also see the next chapter on Muslims' innovations.

7. Were all of the talks and statements made by various thinkers – Western and non-Western – on the greatness of Islam, the Quran, the Holy Prophet, Imam Ali ibn Abitalib, ***Nahj-ul-balagha***, Ashura, the Holy Imams and the richness of Islamic knowledge, civilization and culture to be compiled and collected, it would make a multi-volume encyclopedia.

> go, but religions prevail… Muhammad's religion, Islam, is the third and final branch of major monotheist religions… Islam's incredible start is such an obvious matter that, despite its high significance (to thinkers, just to name one), even the shortest report would suffice. Abul-ghassem Muhammad, of the Quraish tribe, was born around 570 [AD] in Mecca. He received God's message in 610 AD, and began to preach Islam three years later… The turning point in his life came in September 622, when he and his followers left his hometown and moved to Yathrib (Medina)… The significance of this event was soon apparent; not long after the Prophet had passed away (in 632 AD), his immigration to Medina was selected as the start of a new history, the origin of Islamic history… The fact that the new starting point of an era was fixated just 17 years after its occurrence would suffice to justify the explosive flourish of Islam – in the case of Christianity, it took five to ten centuries [a thousand years, in fact] for the starting point of history to be established… From the eighth to the twelfth century [AD – four centuries], European culture was completely overshadowed by Islamic culture… During the second half of the seventh and the first half of the eight centuries [AD], the stagnation of thoughts that was quite considerable – at least in Europe and the Near East – was followed by an era of renewed activity. This was by and large owed absolutely to the Muslims' pioneering… It is thus quite deserving to give this era, the indicator of Islamic science arising, an Arabic name. Although naming this era after Jaber ibn Hayyan is but a far-reaching claim, let it be so. A careful study of Jaber's works – whether in Arabic or European languages – is one of the most vital and promising aspects of one's research… With a small exception – which we will note at the end of this discussion – all of the activity done on mathematics during this era [Jaber ibn Hayyan's era, the second half of the eighth century AD] was by Muslims… [8]

These were merely excerpts from George Sarton's great work, ***Introduction to the History of Science***, Vol. 1 (Homer to Omar Khayyam), which includes a great deal of material on Islam, Muslims, and the greatness of Islamic culture, science and civilization. Due to his fairness and realistic point of view, Sarton has demonstrated how great Islam and Islamic education is

8. George Sarton, ***Introduction to the History of Science***, Vol. 1 (Homer to Omar Khayyam), pp. 524, 530, 574, 600. 602, 628, 674, 714, 721-722, 844.

by naming seven eras of science after Muslim scientists:

1. The Jaber ibn Hayyan Era:
   (the second half of the eighth century AD, the years 134-184 Hijra)
2. The Kharazmi Era:
   (the first half of the ninth century AD, the years 185-236 Hijra)
   This era was named after Abu-abdullah Muhammad ibn Mousa Kharazmi (born *circa* 232 Hijra), the renowned mathematician, astronomer, and geographical scholar, who wrote ***Ketab ul-Jabr val-Muqabila*** (A Book on Algebra and Calculus), and was one of the founders of algebra seen as separate from geometry. [9]
3. The Razi Era:
   (the second half of the ninth century AD, the years 237-288 Hijra)
4. The Masoudi Era:
   (the first half of the tenth century AD, the years 289-339 Hijra)
5. The Abu al-Wafa Era
   (the second half of the tenth century AD, the years 340-391 Hijra)
   This era pertains to Abu al-Wafa Buzjani, Muhammad ibn Muhammad (born 388 Hijra), one of Iran's greatest mathematicians and astronomers. He made a great contribution to the development of trigonometry, and has discovered prominent theorems in spherical trigonometry. [10]
6. The Biruni Era
   (the first half of the eleventh century AD, the years 392-442 Hijra)
7. The Omar Khayyam Era
   (the second half of the eleventh century AD, the years 443-494Hijra)

Such grateful, realistic recognition is undoubtedly to be appreciated, and here we show our appreciation, in particular to those researchers who have avoided falling into the realm of religion and politics and also have not taken the advantage to enforce their own mysterious grudges. However, we must not leave it unsaid that scholars of Eastern studies do make grave mistakes about Islam and issues related to the East, particularly in the case of issues beyond their expertise but they still comment on, or issues that are comprehendible only in the realm of Eastern and/or Islamic culture, or issues about which they have made incorrect reference to or have not had access to. There are many such cases in Sarton's work; a few examples are his comments on:

9. Ibid, p. 654.
10. ***The Farsi Encyclopedia***, Vol. 1, p. 28.

- Abaziyya (pp.559 and 564)
- Ash'ari (p. 715)

4. Will Durant

As implied in *hadith*, the Prophet encourages people to pursue knowledge, and held such a pursuit at high respect. He differed from other religious figures, for he said, "God will provide a way to Heaven for he who walks on a path to gain knowledge," and "If the ink used by the wise were to be compared to martyrs' blood, the ink used by the wise would be heavier in value." The contact established between Arabs and Greek culture in Damascus strongly motivated a sense of competition against the Greek, and it was not long before scientists and poets found a highly elevated status in Islamic territories. Children's education began as soon as they learned to speak; they were taught the *shahadatain*. The children of some slaves took all 6-year-old boys (except for the children of wealthy families, who had private tutors) and some girls to an elementary school located often in mosques or sometimes outdoors, like near a water spring. Education at such schools was usually either free or for such a low tuition that anyone could afford… all pupils aimed to memorize the whole Quran, and if they succeeded in doing so, they received the title of *Hafez* (the memorizer), which was a distinguished status. The Muslims saw one trained in archery and swimming as a "complete man"… In 794 AD (178 Hijra), Fazl-ibn Yahya, a minister in Haroun ul-Rashid's court, began the first paper workshop in Islam, an industry later spread by Muslims to Spain and then to Italy and France… As Yaghoubi writes, there were over a hundred book shops in Baghdad during his era (791 AD/278 Hijra), where books were not only sold but also copied… Most mosques had libraries, and most towns had public libraries which had numerous books and were open to any seekers of knowledge. In 950 AD (339 Hijra), there was a public library founded by a charity worker in Mosel which offered not only books but also paper. The public library in Rey had so many books that the list filled ten volumes. The library in Basra gave away money and gifts to those who studied there. Yaghout, the well-known historian, spent three years in libraries in Marv and Kharazm gathering information for his book, ***al-Mu'jam ul-Buldan***.

When the Mongolian invasion brought about the destruction of Baghdad, there were 36 public libraries, to say nothing of the countless private libraries… Some of the wealthier people, like Sahib ibn Abbad, had as many books as European libraries… In the thousands of mosques all across the Islamic territory, ranging from Cordoba to Samarkand, the number of scholars was no fewer than the number of pillars in the mosques, and their knowledge and eloquence echoed everywhere. Roads were teeming with numerous scholars of history, geography and theology traveling in pursuit of science… No one dared to be wealthy unless he donated from his wealth to the progress of literature and art… Until 850 AD (236 Hijra), the most prominent works on mathematics, astronomy and medicine were in Arabic. It was through translation into Arabic that Ptolemy's ***Almagest*** found its name. Also, Books v, vi and vii of Apollonius of Perga's ***Conics***, Hiravi Iskandari's ***al-Hiyal***, and ***al-Khasais ul-Aliyya wal-Ghazat Filoon*** prevailed thanks to their being translated into Arabic… Alas, we have meager information of the three centuries (750 – 1050 AD, 133- 442 Hijra) during which Islamic thoughts bloomed, for thousands of copies of Arabic books on sciences, literature and philosophy are still hidden somewhere in libraries throughout the Islamic world. Istanbul's mosques alone have thirty libraries whose manuscripts have been rarely made public; moreover, there are also large collections of books in Cairo, Damascus, Mosel, Baghdad and Delhi for which not even a list of books has been compiled. In Escorial, near Madrid, there is a large library whose manuscripts on sciences, literature, religion and philosophy have not been counted yet. The information we have on the impacts of Islamic thoughts during these three centuries is in fact based upon the consequences and remains of Islamic works alongside the results of their taste and talent. Furthermore, what we have included in these few pages is but a drop of an ocean of Islamic heritage. If scholars were to discover this forgotten heritage, the tenth century of Islamic history would most likely be one of the most golden in the history of human intellect… [11]

Note:

Will Durant has dedicated one volume (of the Persian translation) of his work to Islam, and although his favoritism toward non-Islam is quite

11,***The History of Civilization***, Islamic Civilization, pp. 138-142, 148, 176-177.

evident in his writing it is indeed the stark truth and obvious reality about the historical heritage and capital provided by the Muslims and Islam that has led him to write this part of his book. Throughout his book, he glorifies the epics made by the greatness Islam and points out the reasons and signs that prove this. He eventually admits too, that he has not been sufficient in his description, and has had to be content to, as we have seen in his quotation, but a drop of an ocean. At the end of the above mentioned volume of his book, he adds:

> "In fact, an ordinary reader would be astounded by this long talk on Islamic civilization, whereas a researcher would be regretful of how pointlessly brief it was…"[12]

And, speaking of the destruction of the Islamic civilization, Durant ends by saying:

> "No civilization throughout history has been devastated by the Mongolian invasion as much as Islam has… the Mongolians began their attack upon Islamic realms (in the year 1219 AD/616 Hijra)… Marv was conquered through betrayal, and the city library – an honor of Islam – was burned down… The beautiful city of Rey, with its 300 mosques and workshops of famous Iranian tile work, was destroyed, and – according to a Muslim historian – all of its inhabitants were killed… Hulagu Khan and his troops entered Baghdad (1258 AD/656 Hijra) and began a 40-day slaughter; some historians have stated that the Mongols killed 800,000 people in the city. Thousands of scholars, poets and seekers of knowledge died, librarians and treasures that had taken centuries to compile were destructed in just a week, and hundreds of thousands of books were burned… the Mongols' siege… took 40 years. They had not come to conquer and stay; their goal was to kill, loot and take everything back with them to Mongolia. When the waves of the bloody invasion had receded, all that was left was a devastated economy, ruined wells, burned schools and libraries and government too impoverished and at odds with each other to be able to run the country… [13]

Thus was the immense damage afflicted upon Islam and its great civilization – and, in turn, humanity – by barbarians. Eventually, however, Muslims themselves deflected their evil, and saved spirituality, mankind and also other nations and religions from oblivion:

12. Ibid, p. 322.
13. Ibid, p. 317, 314-316, and 317.

"Having returned to Mongolia, Hulagu and his other commanders set off to conquer Damascus. At Ain Jalut, he confronted the Egyptian army led by Mamluk generals Qutuz[14] and Baibars[15] (1260AD/659 Hijra). The joyful news spread all across Islamic lands and also in Europe, which brought happiness to all religions; the spell had broken, and fear was over. The Mongolians were defeated at Ain Jalut. Then, in 1303 AD (703 Hijra), a conclusive battle broke out near Damascus, in which the Mongolians lost, and Mamluk Damascus and perhaps Christian Europe was free of danger. [16]

5. Hanna al-Fakhoury

Islam put an end to the influence of sorcerers and soothsayers in healing patients; although most physicians did not belong to the Muslim society, Islam showed admiration for them: "Science is two parts: the science of religions and the science of medicine"… Muslims began to learn medicine, and found such mastery in it that by the seventeenth century they were teaching it to Europeans. Muslim physicians dealt not only with medicine but also other fields like geometry, astronomy, chemistry, philosophy and music. This is why some theories on mathematics, natural sciences and logic have also been included in medicine.

Although the books written by Hippocrates and Unani were the main sources of knowledge for those training in medicine, Muslim physicians were not content with them, and also referred to the works of other Greek, Syrian, Iranian and Indian physicians, comparing ideas, including their own personal experiments and experiences; they had found such mastery that the encyclopedias they wrote – and contained medical knowledge the Arabs, the Greek, the Indians, the Iranians and the Nabathians – were later on translated into Western languages and taught in prominent scientific centers in Europe.

The most well-known of such encyclopedias was Avicenna's ***The Canon of Medicine*** and Razi's ***Havi***. The latter is better known to Westerners. For cases of surgery and treating fractures, Muslim physicians trusted Abulghasem Khalaf ibn Abbas's ***Al-Ta'rif leman Ajaze an el-Tasrif***.

14. Known as "al-Malik ul-Muzaffar."
15. Known as "al-Malik ul-Zahir."
16. Ibid, p. 316.

Islamic medical scholars also made great contributions to chemistry and pharmacology. As we have already seen, the first books translated into Arabic during the rule of Fatemi were on chemistry, and the first to pursue this science was Khalid ibn Yazid known as Hakim Al-e Marvan. The most prominent figure who made chemistry basically his own, however, was Jaber ibn Hayyan. Bertello regards Jaber in chemistry as high as Aristotle in logic in his book, ***Alchemistry and Chemistry in Medieval Islam***. [17]

A close disciple of Imam Jafar Sadigh (AS), Jaber is famous for discovering sulfuric acid (known as *zeit-uzzaj*, "Oil of Vitriol"), nitric acid, *tizab* (aqua regia, a mixture of nitric and chloric acids), sodium hydroxide, mercuric iodide, antimony, and many other substances.

Besides other branches of sciences, Muslims also showed great interest in botany… a great deal of research was also done by them in zoology… The fundamentals of the theory of evolution presented by Darwin can be found in Jahez's book… Furthermore, Damiri (in the eighth century Hijra) wrote ***Hayat ul-Hayvan ul-Kobra***, in which he listed and described over 900 kinds of animals. Islamic thinkers were also quite interested in mathematics and its branches such as arithmetic, geometry, as well as astronomy and music.

Muslims also put effort into the study of the properties of numbers, and gained knowledge in progressions in arithmetic and the rules of addition. They also discovered rules for calculating square roots, squares for consecutive numbers and cubes, and also presented proofs for these rules.

Muhammad ibn Mousa Kharazmi was a native of Kharazm. He settled in Baghdad and came to great fame during the rule of Ma'moun. He had been summoned to Baghdad by Ma'moun to write ***Kitab ul-Vasaya fil-Jabr val Mughabilah***. It was Kharazmi who first used the term "algebra," which was adopted and used ever since by Westerners. He outstood all of the scholars contemporary to him in all fields of science, in particular in astronomy and mathematics. Kharazmi considered algebra as separate from arithmetic, and set

17. Jaber ibn Hayyan founded the first Islamic school of thought in chemistry. His school brought about an upheaval in the discovery of chemical principles; following the scientific revolution in Europe, it was through the fundamentals found by Jaber that chemistry made progress. Thus, they had to translate more of Jaber's books, such as his ***al-Istetmam***, which was translated in the West in 1662. (Sheikh Abdullah Na'me Lobnani's ***Phalasifat-ul Shi'a (The Shiite Philosophers)***, Maktab ul-Hayat Publication, Beirut, p. 209.

rules for it. He used his own innovative geometrical methods to solve second-degree equations. In the field of arithmetic, Kharazmi wrote a completely unprecedented book which Adelard of Bath translated into Latin entitled ***Algoritmi***, the name arithmetic was called by until a few centuries later in Europe, and the word "logarithm" was also derived later on…

Another sign of their superiority in this science [astronomy] is the use of some Arabic astronomical terms common in the medieval era and even still today. Words like Aldabaran, Altaref, Caph, Arnab, Vega, Deneb and many others were added to European astronomical terminology by Muslim astronomers.

The Muslims learned geography from Ptolemy's book, ***Almagest*** – which was also where they started their research on astronomy from -- and found great interest and proficiency in it, making great contributions to the science through their own observations and travels. Idrisi discovered the origins of the Nile, whereas Biruni presented valuable insights on geography.

It was through Arab and Islamic translators and scholars which Christians of Rome gained familiarity with Greek thinkers. It is well known that Alexandrian philosophers intended to create an agreement between Plato, Aristotle and Stoicism; so did Muslim philosophers, who also made this though infiltrate into medieval Christian thinking… Farabi's theory on wisdom has a deep impact upon Islamic philosophy… and medieval Christian philosophy.

What we have said so far clearly shows the superiority of Muslims in spreading science and knowledge. If all of the books written by Muslims in various fields of science – which we have merely named without going into detail on their subjects – were to be gathered, it would be obvious that what Islamic scientists have achieved for humanity well overweighs others' share despite their historical and material advantage, even the Greek. Unfortunately, however, little attention has been paid to the scientific work done by Muslims; much of it has been destroyed, and a great deal also lies undiscovered in libraries from the East to the West. Had these books not been translated into European languages and been set as the foundations of research by scientific pioneers in Europe, which has been continued by others ever since, this global movement in knowledge would be centuries behind in progress.

Western scientists acquired their knowledge from their predecessors, who were students of Islamic schools of thought. However, they raised the pupil to great fame without any showing any recognition for the teacher. Had it not been for Oriental researchers like Sarton, Meyerhof, Cajuri, Smith and others, names of geniuses such as Biruni, ibn Heitham, Kharazmi, Ibn Bitar, Jaber ibn Hayyan, Razi and the like would be unknown to us now, or arouse no excitement or joy in us by hearing them. Although other nations do take pride in their native scientists – and they very well deserve to do so – they have never produced, during their whole history, anyone deserving as much appreciation, glorification or distribution of works as much as the above mentioned scholars did.[18]

6. Anne Fremantle

The speed of correspondence and connection during the medieval era seems incredible: twenty years after an Italian, Saint Francis founded the sect of the Franciscans, and also twenty years after a Spaniard, Saint Dominic, established the Dominicans, both sects set their bases in Paris and dominated the teachings in the city. Most of the texts they interpreted – Plato's work, and even Aristotle's before him – were available only through the translations made from the original Greek texts into Arabic, and then from Arabic into Latin. These translated works found their way to Western Europe through the conquests Muslims made as well as the Arabs and the Spaniards themselves. The Greek language soon faded out, and in the era of Augustine, even the educated would read Latin translation of Greek books… When Europe rediscovered Aristotle, he had been dead for 1500 years already, although his work was so well revered that he seemed to be still alive. Such a rediscovery, which shifted Aristotle's influence back westward from the east, was brought about directly by Muslims' conquests. It should be noted that during the whole while [Christian] scholars were busy pondering on the universe in monasteries, and philosophers were teaching God's blessings and man's will and power of choice at schools and academies, the Christian world was engaged in a war of life and death against the Muslims. The war began from marginal parts of the Christian world,

18. Hanna al-Fakhouri and Khalil al-Bahr, The History of Philosophy in the Islamic World, translated by Absul Muhammad Ayati, 1st Print, Zaman Publications, Tehran (1976), pp. 429 ,346 ,337 ,368-256, and also pp. ,533 705 ,596.

such as Armenia and Spain, but later on spread to central lands like Sicily, northern Spain, and even to the gates of Paris and Vienna. All that Christian troops, whether individually or in groups, could do beyond Arabian borders during these centuries was to stop the Islamic wave from spreading anymore; indeed, the medieval world had been divided into two parts: the relatively vaster part – which belonged to the Muslims – and the smaller half which belong to the Christians… The Arabs [Muslims] began translating Aristotle's works early in the Abbasids era. Around the Charlemagne era in the West (800 AD), and certainly up to three hundred years after that, Cairo and Baghdad had overshadowed all European cities in science and development, even Rome and Constantinople. In fact, these two cities (Cairo and Baghdad) competed as the greatest centers of science and philosophy in the world, and Cordoba followed as a close third. [19]

7. Francois Joseph Picavet

Any comparison made between the books studied by Western Christians and those studied by the Muslims, the latter showed more innovation and novelty, for the Muslims had the advantage of having a more systematic and orderly amount of knowledge. In the thirteenth century [AD], Muslims were the Christians' teachers, helping them found Catholic philosophy and Catholic scholastic sciences both by translating predecessors' work and by presenting their own new thoughts. [20]

8. John Herman Randall

In this expanding geographical world, medieval men turned to the knowledge kept in the Muslims' libraries and universities. Even early into the medieval era, when the West was just beginning to awake, the center of Islamic culture shifted by hardcore reformers from the eastern *caliphate* toward southern Spain, which was under Moroccan control. Knowledge and awareness of Aristotle's greatest work first began in Spain. Nevertheless, the Muslims gained knowledge of something else that Aristotle, with all his genius, had not achieved – the science of mathematics and mechanics. The

19. Anne Fremantle, ***Age of Faith***, translated by Ahmad Karimi, Amir Kabir Publication, Tehran, 1966, pp. 126-127, 130.

20. Sheikh Mustapha Abdulrazzagh, ***Tamhid Letarikh ul-Falsafat ul-Islamiyya***, Second Print, Cairo, 2000, p. 26.

greatness of the Muslims lay, apparently, in their ability to acquire the best mental and intellectual heritage left from peoples they came into contact with; they showed no innovation or originality in their own work otherwise. [21]

The Muslims took the Greek knowledge of mathematics and medicine humiliated by the Romans and discarded by the Christians and, through patient work, turned it into a science practical and compatible – something the Greek themselves had found unpleasant. It was the Muslims who gained knowledge of the essential ordinal numbers (also called Arabic numbers) and the way of thinking algebra and calculus is based upon from India. Without such a way of thinking, new developments based upon Greek theories would not have been possible.

In the tenth century AD, Muslims in Spain had established a civilization in which sciences were not vague beliefs but rather knowledge entwined with industries and practical daily lifestyles. All in all, Muslims in the medieval era represented the scientific way of thinking and industrial way of life we see in Germany today. Unlike the Greek, the Muslims did not dislike doing tests patiently in labs; in mathematics and mechanics, and all other sciences for that matter, they seem to have seen science as in direct service of man's life, rather than consider it as an end on its own (unrelated to life).

The Muslims inherited from Europeans what we would like to call the Francis Bacon-style of thinking – expanding the borders of human territory across nature. [22]

9. John Bernal

A fresh breeze of science began to blow, which found elegant composition in thanks to the light of Islam. This was how science and technology found its way to medieval Europe. Scientific development during the medieval era, although slow at first, brought about great achievements and innovations, and eventually led to the emerging of new sciences… In the domain of astronomy, Ptolemy's ***Almagest*** was translated from Arabic into Latin by Gerard of Cremona. Studies made on this book, along with the table prepared following King

21. Randall is wrong here; even he has used *apparently* to show his doubt. See the next chapter for more detail.

22. John Herman Randall, Colombia University professor, ***The Making of the Modern Mind***, Massachusetts, 1954.

> Alfonso's command in the thirteenth century based on observations made by Muslims, made it possible for Hellenistic astronomy to prevail in the Christian world… When it came to observing stars, the only field where accurate observations, calculations and predictions were a necessity, the Muslims' influence lasted longer than in other domains of science. The tables compiled during the Ilkhani era at the Maragheh observatory (1260 AD/658 Hijra) and also the Ulugh Beg tables (1394-1449 AD/796-853 Hijra) were considered as the best astronomical tables up to Renaissance times… Peur Back and his pupil Regiomontanus, who lived in Nuremberg and Albrecht Durer became his assistant later on, made fundamental revisions to Alphonsine tables. Although these tables still used Ptolemy's system, their calculations were much simpler thanks to their use of Levi ben Gerson's trigonometry, which was in nature a relapse to Islamic mathematics and stepping beyond medieval European mathematics…

Note

Having come to the end of our study of the confessions made by non-Islamic researchers, it would be helpful to make a few points.

The First Point

Despite the fact that a great many of Western scholars have written much about the significance of Islamic science and the greatness of our culture and literature – as we have seen examples of this – there are still numerous people who, in their articles, consider Islam as having made no contribution at all to the history of science, thought, culture, philosophy, education, moral ethics, art, etc. I do not suppose they are totally unaware of Islam; it is more likely that they engage in a form of "conspiracy of silence" when it comes to Islam, thus enforcing their animosity as well as degrading and nullifying their own work. How can a scholar write a book on astronomy and its developments and mention no names of Islamic scientists and scholars on celestial bodies? How is it possible to write a book about the history of developmental philosophy and not include content on the value of the developmental bases of Islam? What merit could such research have?

The Second Point

Some other writers – both foreign and non-foreign – do mention Islam and Muslims, but do so inaccurately, minimizing it to extreme brevity. Such an approach disagrees with the nature of scientific research and knowledge, and only leads to the spreading of ignorance among the public. An example of this is Pierre Rousseau's ***The History of Science***, which regards Islamic science and Muslims' knowledge as insignificant, and dates the beginning of Muslims' mental evolution back to the era of Mansour Abbasi (*caliphate* 136-158)[23]; an inaccurate perception caused by lack of knowledge.

What encouraged Muslims to pursue science and made seeking knowledge seem like a necessity to them was the Quran and the teachings of the Holy Prophet, which we have already seen in previous chapters. During the *caliphate* of Mansour Abbasi, the world of Islam was a world of science, giving opinions, writing, schools and libraries. Why would a peoples educated by the Quran and instructed by their prophet to "seek science as a necessity" need to wait 150 years for atrocious rulers to come and invite them to pursue science? Such remarks and their like are, whatever the content, wrong. The right thing is what John Bernal and scholars like him have said: "Islam was a religion of science and literacy from the very beginning…" The late Foroughi's opinion on this matter is not without negligence.[24]

Rousseau begins by stating that, "the flame of knowledge fell into the hands of the Arabs [Muslims];" we expect such historians to make no mistakes and tell it as it was. They should dedicate at least a few chapters to Islamic science.

I should not leave it unsaid that Pierre Rousseau has, however, noted the significance of the work of a few Islamic scholars: Forghani, Battani, Abu al-Wafa, Batrouji, Zarghali, and ibn Heitham:

> "It was about this time when the greatest physicist of the Arab world, Hassan ibn Heitham (695-1039 AD), better known as al-Hassan, lived…"

He adds:

> "For seven centuries, Europe was sentenced to put up with the burden of ignorance. One sign of the ignorance during this tragic era is when the wise Arab rulers (the *caliphs*) encouraged scientific

23. Pierre Rousseau, ***The History of Science***, translated by Hassan Safari, Fifth Print, Amir Kabir Publication, Tehran, 1970, pp. 142-147.
24. Muhammad Ali Foroughi, ***The History of Philosophy in Europe***, Vol. 1, p. 100.

research, Lothair, the Charlemagne's grandson, ordered silver shapes of his ancestors to be broken so that his soldiers could be paid… What is the point in reforming? Why is saving done at all? Such appalling words were what [Christian] clergymen and priests preached for people. Sorcerers, magi, fortune-tellers and soothsayers… [25]

Part Two

10. Zaka ul-Molk Furoughi

In the fourth and fifth centuries, Islamic philosophers and scholars enlightened the world of science with their research; even in the next century, despite the outbreak of corruption and conspiracy, which made the society quite unsuitable for scientific endeavor, our seekers of knowledge did not give up, and produced great works in every known field of study. As a result, during the ninth, tenth, eleventh and twelfth centuries, when the darkness of ignorance had engulfed Europe, Islamic nations – from Turkey to Africa and Spain – were each a university in their own right, in which highly-rated scholars were keeping the flame of knowledge and literature burning.

A detailed explanation of the efforts Muslims put into scientific research and the results they achieved would prove voluminous. In a nutshell, the Muslims learned the science and philosophy founded and developed by the Greek, did a great deal of study, ramification and operation on it, and added their own books and supplementary material in fields such as mathematics, calculus, trigonometry, geography, astronomy, medicine, and chemistry thanks to the new studies, discoveries and innovations they themselves had made. It would be inappropriate to go into a detailed explanation of these scholars' work here, for if we do not give a deservedly full study of their work, it would be unfair, and if we do, on the other hand, such a discussion would be extremely lengthy, which is not the purpose here; our aim in this book is to study the approach Europeans had to science and philosophy, so we will postpone a study of Islamic science and knowledge to another book. Furthermore, as we go through the timeline of Europeans' progress in science and

25. Pierre Rousseau, ***The History of Science***, pp. 145-147.

mysticism, we will also mention other scholars of Islamic nations.

The Introduction to the European Scientific Movement

As we have already seen, after the demise of the Roman Empire by barbarians, began a few centuries of what European historians called "medieval times," in which science and philosophy was totally out of question, and ignorance was at such a high that even religious leaders lacked education; indeed, the wise Charles the Great (the Charlemagne Emperor) who ruled almost all of Europe, had to muster but a few scholars from all over his realm to gain knowledge from. Although of advanced age, he learned to read and write, and taught his children and family members personally. Even though the Charlemagne also built several schools, his efforts led to no quick fix; Europe was still not calm and safe enough, and people were not ready to go up the levels of civilization. In a word, in all of the ninth century AD, the only scientist worth mentioning was Scot Erigine; from the tenth century, the Frenchman Gerbert, who eventually became the pope, and was called le Pope Sylvestre, was notable. He was one of the first to gain knowledge from the Muslims; he went to Spain (then known as Andalusia, an Islamic land), studied in Arabic under the scholars there, became quite proficient in mathematics, astrology and astronomy, and upon returning to France, he began passing on the knowledge he had learned in Spain. From then on, European seekers of science saw Islamic nations as sources of science and philosophy; they traveled there and learned Arabic as well as the knowledge of Muslim scholars and philosophers. As the Muslims had found the key to the sources of science in translating Greek books[26], the Europeans also saw translating Arabic books as the key to knowledge; during the eleventh and twelfth centuries AD, most efforts were devoted to translating books. Since European languages were still not developed enough for scientific and philosophical material, translations were done into Latin, which was also the language of scientific writing. Therefore, scholars and literary figures had no choice but to learn Latin; however, those who sought to master science and philosophy also learned Arabic, which was their path toward the source of knowledge.

26. Such an interpretation about Muslims is inaccurate, for they found the key to science and knowledge in the Quran and the *sunnah* first, so it may be correct just for the case of knowledge gained from the translation of books, not in the absolute sense.

Many of the medieval written translations from Arabic into Latin are still available; some of the Greek books that we know were translated from Arabic are Euclid's' ***Elements***, Apollonius' ***Conics***, Theodose's work along with some of Aristotle, Unani and others' books. From the originally Arabic books that were translated into Latin during the medieval era, Musa Kharazmi's book on arithmetic and Muhammad ibn Musa ben Shaker's ***Masahat ul-Ashkal*** (***"The Area of Shapes"***), books by Abu Mash'ar Balkhi, Muhammad bin Jaber Bathani, Forghani's work on astrology and Abd al-Rahman al-Sufi Isfahani's ***Suvar***, Yaghoub Kandi's work on perspectives along with his ***Wind and Rain*** in mathematics and astronomy, as well as Idrisi's ***Nuzhat ul-Mushtagh*** and Abulfada's ***Taghvim ul-Buldan*** in geography**,** ***Kamel ul-Saana'ah*** and other books written by Ali ibn Abbas Majousi, who was Azududdowlah Deylami's physician, and Ibn Tarigh and Ibn Beitar's work along with Havi's book on medicine, Muhammad Zacharia Razi's ***Tebb-e Mansouri***, Avicenna's ***Canon***, Abulghasem Zahravi's ***al-Taryagh*** and also his book on surgery, al of Ibn Rushd Andalusi's works along with books written by Farabi and Avicenna in philosophy, Ghazali's ***al-Maghasid***, and also many other, are noteworthy. Most of these books were printed many more times after the invention of print; Avicenna's ***Shafa***, for instance, was printed over thirty times during those years. The translation and printing of Arabic books continued up to the fourteenth and fifteenth centuries, not to mention the translations made and being made from Persian, Arabic and other Oriental languages by Europeans during their recent scientific movements, which bring them benefits apart from those of the medieval era. In any case, as of the eleventh century AD, scientific research became popular in Europe, and academies were in high demand…[27]

11. Ahmad Aram

When the Western world accepted the monotheist religion of Christianity along with its distortions, newly-added idols that had replaced ancient Roman and Greek ones, Muslims – true worshipers of the One God – obtained any form of knowledge – from Greek and Roman to Indian, Chinese and Iranian and others -- in an effort to fulfill their religious duty of seeking knowledge as well as unveil

27. Muhammad Ali Foroughi, ***The History of Philosophy in Europe***, Vol. 1, p. 100-104.

the mysteries of the universe, make the world a better place and provide the grounds for man to be God's successor upon the earth as best as they could.

The Imams, the *caliphs*, and other Muslim governors held meetings of scientific discussion and debate in which scholars and scientists of various religions would freely discuss issues and exchange ideas… The variety of work done by different scientists in various fields – philosophical, theoretical and practical – is not something that the history of science will be able to neglect. However, during the last few centuries, due to the deceptions and misleading that occurred in our country, the necessity of scientific endeavor was forgotten; superficial matters so strongly replaced true religion that occasionally studying and pursuing science was seen as blasphemous. People whose ancestors once went after science wherever it was and put efforts into editing, purifying and perfecting it, people whose ancestors gave chemistry (from the Persian word "kimia") and physics (from "the science of nature") their names, now considered studying physics and chemistry as "bad religion," and academies where they were taught as houses of ill repute.

The reaction to such a superficial kind of study was that those gained familiarity with science through other channels, and were at times ignorant of the backgrounds of the knowledge native to their own land, and also were unaware of the fact that the roots of Western Renaissance lay in their own ancestors and European organizations arose out of what had been learned from the chaste life Muslims led in the Crusades, totally called a religion as pure and perfect as Islam to be in opposition with science, and apparently turned against it. Recently, some Islamic countries underwent the same situation Westerners had experienced during the medieval era – when scientists were tortured because their statements were in contradiction with the holy book, and the progress of science was thus inhibited. Indeed, some soothsayers were so right about predicting that studying geography, French and logarithms leads to suspicion and pessimism, for many of such educated people fled away from religion, and such a pretentious, false religion should really be fled away from. But this is a temporary state, and man always goes back to what his nature tell him to – all of these educated people will return to the right path once again, as it

has indeed begun to happen: old schools have started to preach the right religion, and new schools have begun to rediscover the accurate form of religion. Then, they can join forces and fulfill the mission they have on this earth. Unfortunately, we are living in a time in which our youth have fallen astray from the valuable origins of science and knowledge they possess; they seldom consider the fact that if there is, for instance, Fermat's principle, there is also Ibn Heytham's principle in Oriental and Islamic sciences, or if Newton presented binomials, it developed out of the work of Khayyam and other Islamic scholars. [28]

12. Abbas Mahmoud al-Aghad

In the book ***al-Hizarat il-Urubiat Syasiate wa Ijtimaiyya wa Thaghafiyya*** (***The Political, Social and Cultural Civilization of Europe***), scholars of philosophy James and Stephen Tuson, Franklin Charles Baum, and von Nostrand have stated, "All of the scientific heritage of Greece was translated, almost within two centuries, into the Arabic language. Baghdad, Cairo, Kairouan and Cordoba became centers of brilliant scientific research and study. This Greek-Islamic culture gradually found its way to Western Europe in the eleventh century. This was not, however, as many imagine, through the Crusades; rather, it infiltrated Italy via Sicily (following which Christian Spain transformed into Muhammadan Spain), and then France. Wise Christians competed to get to Castile and Lagarde in order to learn Arabic and also Islamic sciences. Strangely enough, most of them were English: Adelard of Bath[29], Daniel Morley, Roger Hereford and Alexander Nakdam. Adelard of bath's book on natural sciences was the first scientific writing in Western Europe during the medieval era. Some Christian seekers of science settled in Spain for years, translating Islamic scientific books into Latin. Gerardo da Cremona[30] (died 1187 AD, at the age of 73) alone translated 71 different books. So did Plato Tivoli. Thus, early in the thirteenth century AD (the seventh century Hijra), Europe had acquired all

28. From the preface to ***The Work of Islam***.

29. Adelard of Bath, the 12th-century English scholastic philosopher, mathematician and scientist, was one of the first translators of Arabic books into Latin… His greatest achievement was translating many Arabic books into Latin, including Muhammad bin Musa Kharazmi's book on algebra and astronomy… ***The Persian Encyclopedia***, Vol. 1, p. 74.

30. Known in Latin as Gerardus Cremonensis,
was an Italian translator of Arabic scientific works.

Greek and Islamic science. From then on, teaching science at their newly-established universities found speed… Even before the middle of the thirteenth century, all of this knowledge was compiled in a great book called ***Merat ul-Tabi'a (The Mirror of Nature)*** by the Dominican friar Vincent of Beauvais. Based on the knowledge acquired from books written by Muslims, this books covered all fields if human knowledge – medicine, anatomy, zoology, botany, geology, celestial bodies, geography, mineralogy, the science of phenomena, etc.

The main impact of these encyclopedias upon Europe was not, in fact, in the quantity of data and information included in them or how much of it has been acquired from other by Muslims or vice versa. The main point is that Europeans were handed the torch of science by the Muslims, and used its light to save themselves out of the dark, and take it to where they are today: the discovery of the newest of sciences.

Had Muslims not picked up this torch and carried it east and west, how could Europeans have revive it and give it stronger flame? Indeed, it was thanks to the Muslims' efforts that they could do so; within three centuries, their progress reached an extent that man had not achieved throughout all previous centuries. [31]

13. Dr. Abdulhussein Zarrinkoub

If a researcher has an accurate knowledge of Islam, he will have no fear or hesitation to find Islam as a religion that fits man's condition, a true remedy for man, even better than what is imagined in French culture – "a culture tailor-made for all of man's stature." Such a conclusion is possible only if the West frees itself of its ancient prejudices and if the East cures itself of the horrible disease of being obsessed by the West. The world owes Islam and the Muslims enough to show that, despite some claims, Islam has never inhibited the flow of human culture, but has actually helped it improve. Although it is inappropriate to be too prejudiced and exaggerate about what Islam has given the world, who can, nonetheless, deny the fact that Islam, whatever it has been and is, shows one more step of human evolution, a step no less than other steps.

If the world of Islam today does not correctly recognize its own

31. Abbas Mahmoud al-Aghad, ***Asar al-Arab fil-Hizarat il-Urubiyya***, 2nd Print, Dar ul-Ma'arif, Egypt, pp. 46-47.

value and dignity, it is to some extent due to the fact that it has fallen behind its spirituality. Islam's accomplishments throughout its brilliant history during the centuries has been a record of human culture, a comprehensive culture that Von Grunebaum sees as a culture as valuable as all of mankind, as they have claimed for French culture. Such an influence started around 800 AD, when as Oswald Schpengler, the contemporary German historian and philosopher says, "the Arabic civilization passed through Oriental cities of the world toward Western lands like the sunlight."

The astounding progress of the Islamic civilization has been regarded as a kind of miracle – the Islamic miracle – like the Greek culture. Indeed, in his book on the history of mathematics, the Italian researcher Gino Loria, has been right to call Muslims' accomplishments in mathematics "il miracolo Arabo" (the Islamic miracle) as an analogy to the Greek miracle. In fact, the reason for the Islamic miracle being regarded as a miracle like the Greek miracle is its remarkable speed, which could not be interpreted by any ordinary logic. Some Muslims have attributed the rise of Islam and its culture to divine will – as Ibn ul-Nafis has in his story of "Fazil ibn Natigh," as an analogy to Hayy ibn Yaghzan, indicating that such a great civilization was so higher than the facilities and conditions of its time that it could only have been possible through divine intervention.

There is a great deal of evidence on the impact of Islamic culture upon progresses in sciences like mathematics, medicine and chemistry. Even as early as the thirteenth century AD, translations of Islamic books and interpretations on them were being studied with great interest and enthusiasm at academies in Oxford. Michael Scott translated some of Avicenna, Ibn Rushd and Ibn al-Bathrouji's works into Latin. Robert Grosse Teste was busy translating books by Islamic philosophers. Roger Bacon, the wizard of science and philosophy in Europe, was also in touch with Islamic philosophy and knowledge. William of Ockham was influenced by Ash'ari and Ghazali in his work confirming divine vision and inward revelation and criticizing cause and causality. Guime de Vernis studied Ibn Jabroul's works and responded to Avicenna and Ibn Rushd. Roger Bacon stated that philosophy had to be learned from Arabic books, and his contemporary philosopher, John. F. Salisbury repeatedly

claimed that he owed a great deal to Islamic philosophers. The University of Paris, led by Guillaume d' Auxerre and Philippe de Greve, spent years studying works of Islamic philosophers. During the twelfth and thirteenth centuries AD, Islamic culture had become so dominant over Western culture that a reaction was only natural. The backlash was what was seen as Renaissance in the fifteenth century: tending toward Greek orientation as an escape from Islamic orientation. It was the same backlash that even made the open-minded of the next generations and eras feel frustrated about Islam and begin to invade and fight it. Subsequently, Leibnitz, when discussing fatalism in his famous work ***Theodicee***, criticized Islam of being a fatalistic religion, and disapproved of what he called *fatum muhammetanum*. Bacon and Voltaire[32] took the false superstitions most of Europe had about Islam too seriously, all of which shows people's reaction to the influence of Islamic culture. Nevertheless, the voice of justice – albeit frail and occasional – was raised by some supporters of the truth. Goethe, for example, wrote the play ***Muhammad*** as a response to Voltaire's drama to show his interest and enthusiasm about Islam. And Carlyle, admitting to the Europeans' animosity toward Islam and the man he himself calls "the champion of prophets," believes such ideas as shameful to us. In fact, the medieval blasphemous adventures are to some extent an effort to shrug off the burden of appreciation for one's teachers; in any case, if we were to accumulate what Europe owes Muslims during the medieval era and after that when it comes to mathematics, medicine and chemistry, it would be an undoubtedly great amount. In philosophy and mysticism, however, the impact of Islam is by no means insignificant…[33]

14. Dr. Muhammad Reza Shafee Kadkani

When Islam arose from the Arabian Peninsula and expanded through the East, it soon developed into a lifesaving movement led by the Quran and the Holy Prophet's wise teachings which provided the grounds for the rise of geniuses and a great civilization to be founded. The best definition for civilization is when the society provides all of the suitable conditions needed to develop all human

32. Later on, Voltaire realized to some extent how wrong he had been, and came to certain knowledge of Islam, and began to defend and praiseIslam in his later works. See Islam as Seen by Voltaire.
33. ***The Work of Islam***, pp. 15-19.

beings' potentials completely. And as history witnesses, Islam has truly created such an atmosphere… Not long after the spread of Islam, great geniuses were trained by Muslims in various fields and sciences. As Gustave Le Bon says, "The Muslims pursued sciences, techniques and industries with the same zeal and interest they had in spreading their religion…" [34] Many scientific, literary, military, political and industrial geniuses, along with numerous explorers, mystics and hermits that the present era, with all of its progress, cannot produce any more, developed under this holy movement. In general, the sciences Muslims endeavored in and showed their mental genius in developing can be categorized into two groups:

1. Sciences originating directly from the Quran and innovated by the Muslims
2. Sciences which existed previously but were developed and evolved by Muslims as instructed by the Quran

The first group consists of sciences such as reading the Quran, Arabic semantics, Arabic syntax, jurisprudence, interpretation, lecturing, expression, etc, which arose from studies made on the Quran and led to the development of the Arabic language and literature as well as improving Arab social and political order.

The second group include sciences that Muslims gained by studying books in libraries covered by dust throughout the centuries. Pierre Rousseau and another scientists, Pierre Duhem, have said that, "Even if the Muslims had contented themselves to save a part of the treasure of the ancient world from destruction, we would have been quite grateful to them; however, they also added a great deal to this treasure." [35] Muslims' interest in science helped save many Greek books from being lost forever… And as we know, it was these translations that paved the way for Europeans to begin research again. If it were not or the Muslims, the West would never have been able to understand the results of Greek, Indian and Chinese thoughts and endeavors, and would thus never have been the dawn of the modern civilization.

When Muslims realized what endeavors had been made in mental civilization, they set out to develop sciences that were able to be practically used in their lives – or as the learned scholar Muhammad

34. ***The History of the Civilization of Islam and the West***, p. 572.
35. ***The History of Science***, p. 118.

Taghi Shariati has put it, "they did what their religious duties obliged them to do." Religion was not something at the side of life, but life itself was based on religion; religion was directly in the context of life. The Muslims used arithmetic to divide inherited property, used geometry to find the direction they should pray and ways to go to Hajj, used astronomy and the science of celestial bodies in order to help them prove the beginning of Ramadan, celebrations, and record prayer times accurately. The Muslims' purpose in acquiring various sciences was undoubtedly to develop their religion… in the case of the science of arithmetic, the basis of the work was already laid out for the Muslims. Indian arithmetic was already advanced up to the identification of decimal fractions, even though their numbers were incomplete and nonhomogeneous. Pierre Rousseau states that, "The Indians knew the number zero," but the researcher Dr. Omar Farroukh, believes, "The first appearance of the number zero was in a post-Islam Indian drawing; two years before that, zero had been used in an Arabic book." [36] There is no doubt that all of the world, got Indian numbers and even the zero from Islam, and then expanded numerals… [37]

15. Dr. Ali Sami al-Nashar (from Egypt)

It was commonly believed by European and Oriental researchers that Aristotle's philosophy was completely accepted by Muslims after it was translated into Arabic. Islamic schools of thought, with different sects and ideologies, regarded this logic as a valid, unquestionable scientific method. They saw its definitions and limits as fixed, its regulations and theorems absolute and its logical analogies as certain, automatic conclusions leading to knowledge.

This where the theory was born that Aristotle's logic was the clearest example of the attraction of the Greek culture, which Muslims were fascinated by, and ruled Muslims' wisdom until quite recently. Researchers solved the problem of "methodology" in Islam using this theory; in other words, the methodology in Islam is Aristotelian, both in general an in detail.

Having conducted a deep study into Aristotle's logic, I found myself in doubt over it; it was the scientific method of Greece used in mental

36. Dr. Omar Farroukh quoting George Sarton in ***Abghariyya al-Arab fil Ilm wal Falsafa***, Beirut, 1389 Hijra, p. 45.

37. ***The Islamic Scientific Movement***, the mentioned article.

and especially in philosophical issues. The bond between logic and Greek intellectual sciences were very strong; their discussions and issues were intertwined. The same logic was the most accurate interpretation of the Greek spirit and thought in knowledge of the universe and reasoning in philosophical schools of thought about the universe. Islam, however, discarded Greek intellectual sciences, and began an intense struggle against them. The spirit and thought of Islam originated from Islam's own basic elements, which disagreed with Greek elements. An opposing atmosphere, an opposing peoples with a modern culture and civilization. Islamic spirit and thoughts were poles apart from those of the Greek when it came to knowledge of the universe, natural or supernatural. Therefore, it was necessary for it to have its own methodology – a methodology that originated from Islam's own scientific culture, indicated the fundamental role of Islamic culture and reflected Islam's unique essence, and stood against Greek methodology.

Then I began to research Islamic scientific methods and our heritage on the issue. Of course, in order to discover and express Islamic genius in the creation of a method, I did not refer to the books written by those called "Islamic philosophers," for they are circles and fluctuations separate from the general current of Islamic thoughts. Instead, I turned to books written by legal scholars, fundamentalists, speculative theologians and other Muslim thinkers who are true representatives of Islamic thought and knowledge. Thus, when studying old Islamic books, in some sections, at times, in some books, although lacking in analysis and suitable organization, I rediscovered the Islamic scientific method – a truly science-based method.

I am now confident that this research will present a great discovery to Europeans – a discovery about the "empirical method is the world of Islam," and in the most complete form. Furthermore, dozens of others discussions and studies will also reveal the fact that Muslims were superior to Europeans in these issues, researches and discussions…

Therefore, what I am presenting in this book is the history of a mental movement in the world of Islam, the movement that also led to the development of the Muslims' scientific method…[38]

38. ***Manahij ul-Bahth enda Mafikri il-Islam***.

Innovations

1. Muslims' Innovations

The previous chapter included a great many points. Despite its lengthiness, it was but a small bit of the huge amount of literature on the issue. Although our discussion turned out to be lengthy, it was but a small bit of the great deal of debates that have been made on this issue. The thoughtful, alert reader, familiar with fields of science and their ramifications, can easily realize how Muslims' knowledge spread out across all territories of human knowledge, and assisted man from one side of the world to another. For a long time, priests would strongly advise Christian people against attention toward Islam, and still do. Furthermore, they do this by means of the pettiest form of deception and betrayal – the accusations they have made against Islam and the Holy Prophet have been the worst of their kind in the history of humanity. Such allegations, arising out of the "ignorance and prejudices of the priests," makes great thinkers like Voltaire see them as deserving to be called "stupid."

> "Christian missionaries always remained silent about the conquests, achievements and scientific and spiritual progress made by Islam and its followers, for praise for their competitor's advantages would leave them vulnerable, and throw a weapon out to their enemies to use against them. Thus, Bossuet, the archbishop of Paris, neglects to mention Muhammad and his followers in his history of the world. Angered by the discovery of these truths, suddenly calls all Christian priests "stupid": "Madame la Marquise du Châtelet and I were frustrated and disgusted by the stupid prejudices of the Christians and the worthless historians who had turned the truth upside down and made many malicious accusations against Muhammad." Voltaire's aggressive struggles later on (against Christianity and in favor of Islam) was by and large due to the nonsense stated by historians before him, for discovering a truth that had been deliberately covered up brings about a superiority and courage in one against those who have spread such wrongful information I the society. It was truly thus in Voltaire's case...[1]

This is how they behaved. This is the behavior faces calling themselves "Father" and considered themselves as followers of Christ showed toward

1. ***Islam as Seen by Voltaire***, 3rd Print, pp. 87-88. You can also refer to this book for more details on the atrocities afflicted upon Islam by priests followed by the disclosure of the truth and the upheaval in the thoughts of Christian thinkers (such as Voltaire himself) and the attention they then paid to Islam.

God's religion and its followers. It was such allegations and accusations that brought Voltaire, the eighteenth-century philosopher, to cry out:

> "There is no priest that should not drop his head in shame before a dignified Muslim." [2]

And it was these allegations and accusations that swept their writing and made Voltaire claim in agony and anger:

> "Every book written about Muslims by Christians should be burnt in flames."[3]

Indeed, it was such. The truth, however, would never be obscured for long; finally, there came some who would discover the truth and claim:

> "Reports made by tourists… contradicted the previous judgments [made in Christian domains] on Muhammad and his followers. Muslims that were considered subjects of hatred were now symbols of superiority, perfection, chastity, and justice… After tourists, it was scientists and the open-minded thinkers' turn to do more research on Islam, read the Quran and access Islamic reference books. They too were astounded by discovering the truth which was in disagreement with the stories they had been told, so they set out to enlighten people's minds on the issue.
>
> One of them was Pierre Bayle who, after explaining the anti-Islamic stories Christians had spread, said, "I do not plan to waste my time denying childish tales; there are, however, a great many learned and insightful men who consider those who have spread these stories as mere liars."
>
> Three years after the publication of Bayle's ***Historical and Critical Dictionary***, another researcher, Reyland, wrote the book ***The Faith of Muhammad's Followers*** in Latin; it was translated into German first, then into Dutch, and into French in 1731 AD. Its author, who was English, also knew Arabic and Latin. He also is bewildered by the writings of Christian priests about the Muslims: "My brother and I were shocked by reading the nonsense Christians said about Muhammad…" Thus, the two brothers set out to discover the truth about Islam… After a great deal of effort, they find out that, "Muslims are not only no less than others, but also have such genius that few other nations have shown…" It is only their enemies who introduce their religion as the most degraded; no other religion has

2. Ibid, p. 195, quoted from "Voltaire's Works," Vol. 26, p. 292.
3. Ibid, p. 204, from "Voltaire's Works," Vol. 26, p. 376.

> been under such atrocity… Our efforts toward giving the Muslims a bad name have been in vain; indeed, they have advantages and superiorities that we should envy." [4]

We must admit, however, that the efforts made by Islam's enemies were not all in vain. Christianity's mercenaries, who "have made great contributions in the recent centuries toward establishing exploitation all over the world," did what they wanted to do, harmed human spirituality and opposed a bunch of nonsense and misinformation as the religion of Christ. In order to keep their own political and spiritual exploitation advantages, they spread out this nonsense at the expense of accusing great truths. They kept the world away from Islam, the Quran and the ***Nahj-ul-balaghah***. Thus, the knowledge of Islam was left out of many vast horizons, and only a few scientists and alert-minded scholars kept on studying it.

Furthermore, there are many who, influenced by such a background of evil and deception, continue pushing biases and grudges, and do not tell the truth. Nevertheless, there are many who lack the insight, understanding, and tools to have knowledge of Islam and Oriental issues, but still have realized and made others realize too many of the truths about Islam and the importance of Islamic science. The claim occasionally made in scientific circles, however, about Islam lacking innovation is not entirely correct. Herman Randal also noted this; of course, he was being negligent, for if so, his own words about the innovative role Muslims had in mathematics and mechanics would prove to be wrong.

The truth is that Muslims – as the nature of evolution and development decrees – both gave and received, both adapted from others and made innovations, too. If we were to quote Western scholars on this as evidence, a great many volumes would be needed. As Will Durant has said:

> "It is only in golden eras of history that a society can create so many prominent figures in politics, education, literature, vocabulary, geography, history, mathematics, astronomy, chemistry, philosophy and the like in such a short period of time, during the four centuries of Islam from Haroun ul-Rashid up to Ibn Rushd. Some of this brilliant activity was inspired by Greek heritage, but by and large, particularly in politics, poetry and art, it was valuable innovations." [5]

Since we are dealing with the Muslims' knowledge in this book, we

4. Ibid, pp. 30-33.
5. ***The History of Civilization***, Islamic Civilization.

should also discuss the scientific innovations Muslims made, for in this field also, the truths have not been presented appropriately, as Russell confirmed in the previous chapter.

Islamic scientists themselves have been aware of the extent of their innovations and research, and have at times admitted this. In this chapter, we will now point out headlines of some innovations Muslims have made, things they have adopted from other scientists' studies, and the impact they have made upon the progress of science and civilization across the world.

1. *The Classification of Sciences*

Islamic scientists have made immense contributions to the classification of scientists and determining the degree and sequence of each. One of the most prominent examples of this is Abunasr Farabi's work in ***Ihsa' ul-Oloum***. This book has been said to have been Western thinkers' guide to classifying sciences, and Gundissalinus' ***De Divisione Philosophiae*** (Of Divisions of Philosophy), was an adaptation of ***Ihsa' ul-Oloum***.

2. *The Science of Geodesy and Surveying*

This is the law using which objects on the earth can be surveyed. I have not encountered an explanation on it, and what I am saying here comes fro the conclusions I have made I my own mind. [6]

It was the Muslims who discovered the principles of planning designs on the surface of spheres… [7] The truth is that Biruni is often regarded as the founder of geodesy due to his extensive and detailed research and studies on measuring geological characteristics of the surface of the earth. [8]

3. *An Explanation of Arabic-Indian Numerals*

Aburayhan Biruni… one of the greatest scientists man has ever seen… even centuries after his era, his thoughts are still fresh, young and closer to our times than his own contemporaries. One of Biruni's researches is his treatise of Arabic-Indian numerals (which was the best of its kind during the medieval era); the total number

6. Allameh Dehkhoda's ***Dictionary***, Vol. 1, p. 466.
7. ***The History of Philosophy in the Islamic World***, p. 364.
8. ***Science and Civilization in Islam***, p. 88.

of wheat grains that can be placed in squares of a chess board to form a geometric progression… [9]

4. An Introduction to Spatial Geometry

The Greek had studied geometry in full; still, Muslims made innovations to geometry, to the extent that Khajeh Nasiruddin Tousi's fifth principle in plane geometry led to thefounding of spatial geometry in the 18th century… [10]

5. Analytical Geometry

It was the Muslims who created the principles of Descartes' analytical geometry by combining algebra and geometry.

The most significant innovations these mathematicians made were setting the basics for analytical geometry, for they were the first to use geometry to solve some problems in algebra and algebra to solve some geometric problems. Islamic mathematicians were the best of their kind when it came to geometry; Western scholars, who were not yet familiar with Euclidean works at that time, learned geometry from the Muslims. [11]

6. The Beginning of Algebra

During Ma'moun's era, Kharazmi created algebra. His book, ***al-Jabr wal Mughabilah***, was regarded as a reference book by Western and Eastern scholars. Apparently, he devised the method we use today in order to solve second-degree equations. As Cajouri has said, "Solving second-degree equations by means of conics was one of the most significant methods used by Islamic mathematicians." [12]

No medieval mathematician had the impact he [Kharazmi] had upon mathematical thinking. His book was the first book entitled "Algebra and Calculus." The writer can be considered as the first person to see algebra as a science distinct from geometry (the word "algebra" in English originated from the name of his book). This book (which he himself saw as "brief") was a reference book and the base for all scientific research in Europe until François Viète (1540-1603 AD) founded scientific research in this field in

9. ***The Persian Encyclopedia***, Vol. 1, p. 30.
10. ***Abghariat ul-Arab***, p. 48, ***The Islamic Scientific Movement***, the above-mentioned article.
11. Ibid.
12. ***The History of Philosophy in the Islamic World***, p. 361.

the West. Johannes Hispalensis (who translated many books from 1135 to 1153 AD) translated the book into Latin, and Gerardo da Cremona (1114-11187 AD) made another translation. So did Robert of Chester (1145 AD), whose translation can be regarded as the beginning of algebra as a science in Europe. The English version of his book was published by Fredrick Rosen in London in 1831… the word "algorithm," which means "the technique of calculation using numbers or other special symbols" originated from the fact that the Latin translation of Kharazmi's book was entitled "Algorithmi," a misspelling of Kharazmi's name… [13]

7. The Velocity Equation

The Muslims realized the moon's orbits differ year by year. Abulwafaye Buzjani (998 AD/388 Hijra) discovered one of the equations needed to determine the locations of lunar orbits, which was called the velocity equation. Buzjani also presented the 3rd lunar inequality in regard to lunar equations, which is mistakenly associated by some to Tycho Brahe (1601 AD/1010 Hijra), who was born six hundred years after Buzjani. [14]

8. The Science of Trigonometry

The book ***al-Shikl ul-Ghatta'*** by Khajeh Nasiruddin Tousi is unique in its kind. The Westerners translated into Latin, French and English, and used it as their reference for information on plane and spherical trigonometry for many centuries. Khajeh was the first to use the six states of the spherical right triangle, and he included them in this book. Anyone can realize by reading this book that such contents can only be found in the newest books on trigonometry. [15]

9. Expanding Mathematics

The story of Muslims' contributions to the expansion and development of mathematics is by no means over. [16] In Mahmoud's era, while the Muslims were translating books by Ptolemy, Euclid's and the ***Sindhind***, the only well-known mathematician in Europe was

13. ***The Persian Encyclopedia***, Vol. 1, p. 920.
14. ***Abghariat ul-Arab***, p. 84.
15. ***Falasafat ul-Shi'a***, pages 489 and 501, and also the Persian translation, pages 509 and 522.
16. This refers to the contents of the book ***The Work of Islam*** (pp. 60-61) concerning mathematics originated by Muslims.

Alcuin, who was the Charlemagne court tutor and scholar whose books on mathematics were limited to the elementary principles… During the whole medieval era, mathematics owed its progress to the genius of Muslim mathematicians. Even early into the fifteenth century AD, when the Muslims were tackling the most complex of geometrical problems, solving third-degree algebraic equation through conics and making valuable progress in trigonometry, mathematical research in Europe was confined to calendars and using an abacus – that would suffice everyday affairs. In geometry, the Muslims followed up the work done by Greek mathematicians, and translated and interpreted Euclidean principles. They also created trigonometry. Even the translation of Euclidean works was significant in its own time, for it was a task the Romans had not gone into and when the Europeans translated Euclid's work in the fifteenth century, almost three centuries had passed since Hajjaj ibn Yousef – a mathematician of the Haroun ul-Rashid era – had done so before…

One noteworthy contribution Muslims made to the expansion of mathematics was the discovery of the sequence of decimal functions and the methods of approximation presented by Ghiyasuddin Jamshid Kashani. In geometry, some problems that had remained unsolved for ancient scientists were solved by Ibn Heytham, Abusahl Kouhi and others. Checking the correctness of calculations, using the casting-out-nines method and the "two-error" method all pertain to the Muslims… [17]

10. The Situation and Usage of the Symbol "Zero"

In his ***Mafateeh ul-Oloum***, Muhammad ibn Ahmad (Kharazmi) said that if there is no number to be put, a small circle should be inserted to make the columns equal. The Muslims called this circle "sifr," which means "empty," and led to the English word "cipher," too. [18]

11. Geometrical Optics

Ibn al-Heytham (known as Alhazen in Latin was undoubtedly the greatest researcher in the field of optics from Ptolemy to Vitello. He did important research on movement and discovered inertia in

17. ***The Work of Islam***, pp. 61-62 and 65.
18. ***The History of Civilization***, Islamic Civilization.

the case of celestial bodies; his most significant work, however, was his work on optics, which transformed the field into a whole new science.

Although Ibn Heytham used the works of Euclid's, Ptolemy, Aristotle and Apollonius' ***Conics***, he caused a great revolution in optics and turned it into a highly organized and specific science. He combined complete mathematical discussions with physical imaginations and accurate experiences. Like Euclid's, he was both a theoretical and empirical physician. Ibn Heytham did experiments in order to discover the characteristics of the straight movement of light, the characteristics of shadows, applications of lenses, the qualities of a dark room, and was the first person to put these cases and many other fundamental optical phenomena in an analytical, mathematical framework. He even had a sharpening tool with which he prepared his own lenses and convex and concave mirrors which he used in his experiments. [19]

He studied the refraction of light when it passes through transparent materials such as air and water; he was also so close to inventing the magnifying glass that three hundred years later, Roger Bacon, W. Elo and other European scholars used his research to do so. [20]

12. Minimum Time (Centuries before Newton)

His [Ibn Heytham's] contribution to the refraction of light is greater. Centuries before Newton, he juxtaposed the rectangle of velocities on the plane refracting light, and believed in the principle of least time.

To measure the angle of refraction, he made accurate experiments by placing a beaker in water. He preferred to use the hypotenuse; in other words, he had probably discovered Snell's law about small angles. Ibn Heytham also did research on the refraction of light in glass cylinders and spheres and intended to measure the degree of magnification in convex-plane lenses. [21]

13. Islamic Technology and Mechanical Instruments ("Elm ul-Heyal")

Unlike cities in the Roman Empire, Islamic cities did not isolate themselves from the rest of the Oriental world. Islam was where

19. ***Science and Civilization in Islam***, pp. 121-122.
20. ***The History of Civilization***, Islamic Civilization, p. 229.
21. ***Science and Civilization in Islam***, pp. 122-123.

Asian and European knowledge met. Therefore, completely new inventions were made which were otherwise impossible or inaccessible for Greek or Roman technologies… these innovations, in turn, provided the grounds for further developments, which led to the [preliminary] bases of the West revving up toward the great scientific and technical revolution in the seventeenth and eighteenth centuries. [22]

Muslims achieved another thing that Aristotle, with all of his genius, had failed in – the science of mathematics and mechanics. [23] Musa bin Shaker's sons were the authors of the book ***al-Hiyal***, a major reference on (the construction and knowledge of mechanical) "machines," written many years before the recent evolution of this field and the rise of so many of today's tools and contraptions… [24]

14. Geography and Human Geography

The research done my Muslims in the field of geography is significant from several points of view: descriptions of road and paths, longitudes and latitudes for various lands, explanations on locations and ports and a special interest in human geography. This is why Muslims' work on human geography is quite educating, and we see that their research in geography is much vaster than that of the Greek.

Traveling and moving was of high importance for the Muslims; therefore, five centuries before Marco Polo's excursion to China, a Muslim traveler, Sulaiman Tajir, visited there. His descriptions and observations are still available in Abuzeid Seirafi's work. The interesting point about Muslims' enthusiasm toward geography is their fervid interest in learning the strange descriptions – they even went after amazing stories told by sailors. Furthermore, we must have in mind that the Muslims' geographical information was not confined to their own territories; by sea, they went up to China, India, Korea and even Japan, and also by land, they explored China and other parts of central Asia. [25] One of Abureyhan Biruni's researches

22. ***Science in History*****,** p. 208.
23. John Herman Randall, Colombia University professor, ***The Making of the Modern Mind***, Massachusetts, 1954.
24. ***Asar al-Arab fil Hizarat ul-Urubiyat***, p. 44.
25. ***The Work of Islam***, p. 72 and onward, and also ***Muhammad, the Last of the Prophets***, published by Husseiniyeh Irshad, in cooperation with Intishar Co., Tehran, 1969 AD, Vol. 2, p. 99 and onward.

was determining latitudes and longitudes for different lands… [26] In the book ***Taghveem ul-Buldan*** (by Imaduddin Abulfadaye Hamavi), we can find dozens of accurate items on latitudes and longitudes of various places. [27]

Muslims also showed great interest in human geography, and did a great deal of research on it. Biruni's ***Research on Mal il-Hind*** is a complete example of Muslims' research on human geography and folklore.

Through merchants, tourists, Hajj pilgrims, and then by the help of scientists and scholars of geography, Muslims acquired knowledge of the world and thus began compiling geographical information. The information they acquired sometimes came from locations as distant as Sicily. [28]

To be amazed by geographical information in the eleventh century, we do not need to search in Europe – which was then swarming in barbarianism – but rather in Muslims' research. [29]

15. The Map of the World

His [referring to Abu Abdullah Idrisi Marakeshi, the writer of ***Nuzhat ul-Mushtagh fi Ikhtiragh ul-Afagh***, who died in 560 Hijra] maps were the Europeans' reference for many years. [30]

… He made a globe of the world out of silver, and wrote a book on geography, ***Nuzhat ul-Mushtagh fi Ikhtiragh ul-Afagh***, which was the most comprehensive treatise on world geography during the medieval era. [31]

16. Special Gravity

Muslims' research in natural sciences was also vast and rich. Although it was Archimedes who discovered the laws about special gravity, the Muslims went into more detail in them and determined the special gravity for many solid and liquid substances. The results

26. ***The Persian Encyclopedia***, Vol. 1, p. 30.
27. Ibn Faghih ***A Translation of al-Buldan***, published by the Iran Culture Foundation, Tehran, 1970, Preface, p. 11.
28. ***The Work of Islam***, p. 72 and onward.
29. ***The Larousse Encyclopedia***, quoted from Farid Vajdi's encyclopedia, and also ***A Translation of al-Buldan***, Preface, p. 11.
30. Dr. Noqoula Ziadah, ***al-Jughrafiyatah wal Rajulat ind al-Arab***, published by Dar ul-Kitab al-Arabi, Beirut, 1962, p. 15.
31. ***The Persian Encyclopedia***, p. 73.

obtained by the Muslims are very close to what modern science has found today. [32]Furthermore, Abureyhan began to study special gravity and found accurate special gravities for 18 precious gems and metals. [33]

17. The Sun's Highest Point

Zarghali, the first great Spanish astronomer, showed the reason for the movement of the sun's highest point compared to fixed bodies, one of his greatest discoveries. [34]

18. Grounds for the Contradiction of Ptolemy's Astronomy

After Zarghali, Andalusia's astronomy turned anti-Ptolemaic; criticisms toward the theory of deferents and epicycles began pouring. In the twelfth century AD (sixth century Hijra), Jaber ibn Aflah – known in the West as Geber and often mistaken for Jaber ibn Hayyan – began to find flaws in Ptolemy's planetary systems. Two philosophers, Ibn Bajah and Ibn Tufail (better known as Abubacer in the West) also began to criticize Ptolemy. Ibn Tufail is said to be founder of a theory which his pupil – Albatruji (known as Alpatragius in Latin) interpreted and completed in the thirteenth century AD (sixth century Hijra). His theory includes a calculated system of spiraled planets orbiting the same circle, also known as "the spiral movement theory." Al-Batruji's criticisms on Ptolemy's systems, along with those of other astronomers before him, when in the hands of Renaissance astronomers, provided the grounds for defying ancient Ptolemaic astronomy… In the East too, many books showed disapproval of Ptolemy's systems… Nasiruddin Tousi, the head of the Maraghah observatory, strongly disagreed with Ptolemy's ideas, and expressed his dissent on the way Ptolemy believed planets to move in his book ***al-Tazakurat ul-Nasiriyah fil Hai'at***…[35]

19. Tousi's Couple

Tousi developed a new planetary system, which his pupil, Ghutbeddin Shirazi, completed. Unlike Ptolemy's system, the Earth was placed in the center of the universe, so it was more compatible

32. ***The History of Philosophy in the Islamic World***, p. 366.
33. ***The Persian Encyclopedia***, p. 175.
34. ***Science and Civilization in Islam***, pp. 175.
35. Ibid, pp. 175-176.

with the spherical nature of the skies in comparison to Ptolemy's system. In order to explain the apparent movement of planets, Tousi considered two spheres, one orbiting inside another. This is why A. S. Kennedy, the historian of Islamic mathematics, named this plan "Tousi's Couple," for it depicts the total movement of two carriers. Tousi intended to calculate the details of his plan for all planets, but he apparently did not have the chance to do so. His pupil, Ghudbeddin, conceived another form of this plan for Mercury. Also, Ibn al-Shater, the fourteenth century AD (eighth century Hijra) astronomer presented a plan based on Tousi's for the movements of the moon in his book, ***Nahayat ul-Su'oul fe Tasheeh ul-Osoul***. Based on Tousi's plan, Ibn al-Shater's presentation ignored the epicycle outside the center and conceived a second epicycle into solar and lunar systems.

The satellite theory presented by Copernicus two centuries later is identical to Ibn al-Shater's theory; apparently, Copernicus knew about recent developments in Islamic astronomy thanks to Bosnetti's translations. The basics of everything that seemed novel in Copernicus' plans can be found in the works presented by Tousi and his pupils.[36]

For more detail on the discarding of Ptolemaic astronomy and implications on the astounding magnificence of the dimensions of the universe, and a correct interpretation of "seven skies," and knowledge of "the world of the skies," see ***al-Hey'at wal Islam*** (Astronomy and Islam), written by the late scholar and philosopher Seyyed Hebatuddin Sharestani Iraghi and also its Persian translation. This book contains valuable information, in particular a compilation of quotations from the Imams (AS) which include insightful truths on the vast dimensions of the sensory universe and the astonishing development and movement of the components of the universe.

20. Flocculus

The Muslims were the first to study flocculus. Ibn Rushd, in fact, was the first person to observe and write about them.

21. The Nature of Celestial Bodies

Among various subjects in astronomy, Muslim astronomers were

36. Ibid, pp. 176-175.

more interested in discussions concerning the nature of celestial bodies, the movement, distance and size of planets, for which they used calculations derived from the mathematical projects they were working on. [37]

22. Atmospheric Phenomena

The third domain on optics in which Ibn Heytham made important discoveries was atmospheric phenomena. He measured the extent of atmospheric refraction by measuring the distance of a star from the pole when it rose from the horizon and the same distance when it reached the northern node. Ibn Heytham also studied the phenomena about twilight and the apparent changes in the size of the moon and the sub on the horizon, and answered questions about it in great detail. He proved that when the sun is 19 degrees lower than the horizon, the twilight is over. He also paid much attention to rainbows; although he had not applied light refraction to rainbows, his explanations are far better than Ptolemy's according to reflections… Ghudbeddin Shirazi… was the first to describe rainbows qualitatively. As he had stated, refraction and reflection are both part of the process of the formation of rainbows. [38]

Ibn Heytham's writings were well known in the West, particularly his ***Kitab fil Manazir***, which influenced all researchers in the field. The Latin translation of this book – ***Opticae Thesaurus*** (The Treasure of Optics) was published in the sixteenth century (tenth century AD), and its influences can be seen on Copernicus' research on optics. [39]

23. Time, Place and Matter

Many of the so-called "modern" thoughts on time, place and the nature of matter and other basics of physics during the medieval era were the work of scholastic scholars familiar with Islamic peripateticist philosophy rather than philosophers dependent upon their Greek predecessors. There are interesting theories on natural sciences to be found in the works of scholastic scientists such as Abulbarakat Baghdadi, Fakhruddin Razi and Muhammad Baghelani, who can be regarded as the "naturalist philosopher" of the Sunnite Ash'ari scholastic school. Scholastic scholars fell astray from the peripateticist path and set distinct ideologies for

37. Ibid, pp. 123-124.
38. Ibid, p. 123-124.
39. Ibid, pp. 123-124.

themselves. Although as a scholastic scientist and theologian they were concerned with issues pertaining to faith, they would not confine themselves to preliminary peripateticist philosophy; thus, they were the latest critics of Aristotelian physics, and disapproved of a major part of this physics in favor of a different perception of time, place and causality. [40]

24. The Discovery of Nebulas

Nebulas are cloud-like spots in the sky, which consist of a group of stars that seem like a cloud-like stain in the distance. Through a telescope, however, the stars can be distinguished. The most prominent nebulas are the Big Magellanic Cloud and the Small Megallanic Cloud near the South Pole, and Mar'at ul-Musalsalat and other nebulas near the cancer constellation. [41]

The nebula Mar'at ul-Musalsalat, first discovered in the fourth century Hijra by Abdal-rahman Sufi, was later found to be a huge nebular galaxy outside the one our solar system is located in. [42]

25. The Roundness and the Rotation of the Earth

It was the Muslims who first… realized that the Earth was round and revolved around its own axis. [43] Islamic geographic scholars proved that the Earth was round. As Ibn Khordad (who died in 885 AD/271 Hijra) wrote, "The Earth is round and inside the heavens, like the yoke of an egg inside the egg shell…" [44]

26. Islamic Zij (Astronomical Tables)

"A *zij* is a table recording the quantity of the movement of planets." Also, it is regarded as "the general term for astronomical numeric tables."

Besides the modifications Muslims made to Ptolemaic planetary systems, compiling a list of stars is another one of Islam's accomplishments in the domain of astronomy…

During the era of Islam, numerous (over a hundred, in fact) *zijes* were

40. Ibid, p. 120.
41. ***A Translation of Suvar al-Kavakib by Khajeh Nasiruddin Tousi***, with interpretations by Seyyed Mu'ezzud-din Mahdavi, p. 352
42. Ibid.
43. ***The History of Philosophy in the Islamic World***, p. 364-365.
44. ***The History of Philosophy in the Islamic World***, p. 364-365.

compiled and written, such as:

- The Fazari *zij*, by Muhammad Fazari [45]
- The Battani *zij*, by Abu Abdullah Muhammad Battani [46]
- The Sanjari *zij*, by Abdurrahman Khazeni
- The Malekshahi *zij*, in part by Omar Khayyam
- The Ilkhani *zij*, by Khajeh Nasiruddin Tousi (at the Maraghah Observatory)
- The Khaghani *zij*, by Ghiasuddin Jamshid Kashani
- The Kabir Hakemi *zij*, by Abulhassan Ali and Ibn Younis Mesri, prepared in 4 volumes during the Fatemi *Caliphate*
- The Samarghand (Ulugh Beik) *zij*, a group of Islamic scientists, such as Mu'inuddin Kashani, Ghazizadeh Rumi, etc.
- The Zarghali *zij*, associated with Abu Ishagh Zarghali Andalusi
- The Muhammadshahi *zij*, prepared in 1131 Hijra in Shah Jahan Abad, India

Other well-known *zijes* are:

- The Alphonsine *zij*
- The Copernicus *zij*
- Kepler's *zij*

27. Battani's Corrections

Abu Abdullah Battani is one of the greatest astronomers of all time. Known as the Arab Ptolemy, Battani presented new theories in astronomy, did novel, valuable research in algebra, astronomy and trigonometry and is well-known for his observations on stars. "No one of his contemporary or prior peers equaled him in correcting stellar observations, and his successors could not do so, either."

Battani determined the movement of the southern node according to the Earth and made modifications to the extent of the two Cancer and Capricorn equinoxes. Furthermore, he is one of the scientists who determined the location of many stars and also made corrections to some of the moon and planets' movements.

28. Changing the Equation of Time

[Battani][47] disagreed with Ptolemy – who saw the solar climax as fixed – and proved that the solar climax is a function of the

45. ***Science and Civilization in Islam***, p. 172.
46. Nalino published this table along with a great deal of detail and additions in three volumes (Milan, 1899-1907).
47. Compare with item 15.

precession of the equinox. Thus, he concluded that the equation of time changes slowly as times pass on. [48]

29. Purifying the Science of Astronomy

Another valuable achievement by Muslims is purifying the science of astronomy of all of the nonsense and superstitions soothsayers and fortune-tellers had added… [49]

30. Scientific Experiences in Astronomy: The Spirit of Experimenting

These astronomers would not accept anything unless it proved true through scientific tests and experiments; they merely followed scientific methods in their research. [50]This is how the knowledge of celestial bodies became a science of inductive reasoning for Muslims, whereas it was previously merely theoretical. [51] The notable point is that Islamic scholars engaged in astronomy gained important experiences and conducted great experiments, and eventually made significant discoveries.

One reason for their superiority in this field is the Arabic astronomical terms that were commonly used during the medieval era and still are nowadays.

Muslims had perfected their spirit of research and in-depth study, and indeed had great interest in observation, experimenting and conducting tests, as we see in figures such as Masoudi, Biruni, Mughaddasi and others. Such studies and researches can be frequently seen in the work done by the precise historian and traveler Masoudi; although his ***al-Ghazaya wa Tajarub*** is not available, his other works, such as ***al-Tanbeeh wal Ishraf*** and ***Muravvij-uzzahab*** clearly show how he worked. His and Biruni's work in particular indicate how much attention was paid to issues in human geography, and the detail provided on various professions, qualities and characteristics of cities and villages.

48. ***A Translation of Suvar al-Kavakib by Khajeh Nasiruddin Tousi***, with interpretations by Seyyed Mu'ezzud-din Mahdavi, p. 364 -365.
49. ***A Translation of Suvar al-Kavakib by Khajeh Nasiruddin Tousi***, with interpretations by Seyyed Mu'ezzud-din Mahdavi, p. 364 -365.
50. ***The History of Civilization***, Islamic Civilization, p. 150.
51. ***The History of Philosophy in the Islamic World***, p. 364. Also see ***The Work of Islam***.

31. Precision Tools

In order to achieve these goals, Muslims constructed several observatories. They also built precise tools for observing stars. The most well-known of these precision tools is the astrolabe, which was born out of Muslims' efforts and accuracy. [52]Muslim astronomers had an expensive apparatus which was not limited to the work astrolabes did and Greek ringed planets; instead, it was a thirty-foot contraption used for comparing angles and an eight-foot sextant. The astrolabe, to which Muslims had made many modifications, found its way to Europe in the eleventh century, and was used there by sailors up to the seventeenth century…

32. Determining Lengths and Coordinates for Longitudes and the Circumference of the Earth

Muslims were the first to determine the length one degree of a longitude scientifically. [53]

Ma'moun appointed a group of astronomers to observe celestial bodies, record their findings, study Ptolemaic astronomy and do research upon solar flocculus. Having certified that the Earth was round, they determined geographical coordinates by observing the location of the sun at one time from Tudmar to the plain of Senjar. The result was 56 and 2 thirds of a mile, only half a mile off of the measurements we have today. Thus, they determined the circumference of the Earth has approximately20,000 miles. [54]

33. The Impact of Islamic Observatories

Had the astronomical observations done in Islamic culture failed, Renaissance astronomers would not have been able to acquire the results of 900 years of research and make the important discoveries that led to the formation of modern sciences, or would have done so many years later. [55]

34. The Philosophy of History

Ibn Khaldoun was the first writer in the world to do research on the "philosophy of history." He discovered the real field of history

52. ***The History of Philosophy in the Islamic World***, p. 364.
53. ***The History of Philosophy in the Islamic World***, p. 364.
54. ***The History of Civilization***, Islamic Civilization, p. 150.
55. ***Science in History***, p. 212.

and its nature. He is a philosopher in calibers like Auguste Compte, Thomas Bekel and Herbert Spencer… Ibn Khaldoun's theories on the organized society put him among the best of the scholars of the philosophy of history. [56]

35. Political Economics and Labor

This great historian from Maqrib[57] discovered the fundamentals of theories on social justice and socio-economics five centuries before Considrant, Marx and Barlow did. His thoughts and ideas on the role of labor, possession and wages make him the pioneer of scientists in this field of economy. [58]

36. The Bases of Scholastic Philosophy (Christian Scholastics)

In the thirteenth century, Muslims were Christians' educators, and helped them establish Catholic philosophy and scholastics both through the books translate from their predecessors and through the thoughts they had presented themselves. [59] Ibn Rushd is even more significant in Christian philosophy than he is in Islamic philosophy… he is seen as the start and origin of Christian philosophy. [60]

The Muslims' superiority over us is in that they helped us acquire knowledge of many Greek philosophers. Indeed, Islamic philosophers had a major role in the Christian philosophical movement. We must not forget that he [Ibn Rushd] is the presenter of the "free thought" method. [61]

In Chapter 9, we will further discuss how scholastic philosophy was adapted from Islamic philosophy.

37. Contradicting the Greek

The value of Khajeh's ideas and his defiance of Greek theories lie in the fact that his theory is a free, independent one that has caused upheaval in the rules of Greek philosophy – rules which were up to Khajeh's era seen as unmovable and unquestionable.

Khajeh Nasiruddin Tousi totally abolished the theory that had

56. Muhammad Parvin Gunabadi, ***A Translation of Ibn Khaldoun's Mughaddamah***, Second Print, Vol. 1, pp. 34-35.
57. Maqrib here refers to the world of Islam.
58. Ibid, Vol. 1, Preface.
59. See the section on George Picavet in the previous chapter.
60. See the section on Bertrand Russell in the previous chapter.
61. ***The History of Philosophy in the Islamic World***, p. 704.

formed the basis of Greek superstitious legends and even a group of Muslim philosophers had learned from the; with the defiance of the Greek theory, the myth about the ten intellects and its sidelines – that the skies are alive, have wisdom and sense – were ruined. The bases of ancient astronomy, from Copernicus and Galileo up to a few centuries later were turned upside down. The strange thing is that the Khajeh did this by using the criteria of the very rule he had contradicted.

38. The School of the Philosophy of Existence

The Muslims were also innovative in presenting new schools of philosophy. We will now discuss two examples of such:

a) Mullasadra's philosophical school of existence: Although the fundamentals and preliminaries of this philosophical school of thought can be found in ancient works (from Greeks and Alexandrians to Hindus and Muslims), Mullasadra's exclusive perception of existence in a single school of thought was unprecedented – founding a philosophical thought based upon knowledge of existence was quite rare in occurrence, unity, depth and correlation philosophically. Thus, it was seen as one of Muslims' innovations.
b) Mirdamad's time-universe: This important intellectual phenomenon is another quality of Islamic philosophy. The knowledge of this prominent philosophical institution concerning the science of time and time plans is a task that shows how extraordinarily valuable Muslims' intellect was.

39. Scientific Psychology

The application of this new method – scientific psychology – was not confined to material scholars of religion; philosophers who firmly believe in the existential truth of the spirit (i.e., the soul) and see its originality as exclusive to it, follow this very method nowadays, and agree that in psychology, research and discussion on the spirit and its powers – out of the reach of experiments and observations – must be avoided, for such research is applicable to philosophy with a scientific method at that. In other words, in scientific psychology, an incomprehensible spiritual quality is not associated with an incomprehensible, supposed power; rather, the consecutive

occurrence of qualities that are comprehensible to man are studied in order to find out which are the causes and which are the effects. The application of such a scientific method made psychology made great progress in a short period of time, so that no scientist today can grasp all of its branches and specializations even if he spends his whole life studying it.

Nevertheless, it is interesting that despite Avicenna's dedication to compliance to basic philosophical theories and principles, he also followed the scientific method, which is apparent in his work. Due to his specific attention toward the relation between the spirit and the body and their mutual interactions, he uses observation and experience commonly in his psychological research – starting from the tangible and gradually progressing toward the intellectual and intangible. Some methods that do not include observation and experience – such as psycho-physiological methods and psychoanalysis – that have just recently become common are not quite dissimilar to Avicenna's methods, and as we will see in the present book, used by him at times. [62]

I must add here that Avicenna saw experience and empirical issues as significant even in spiritual matters. He also did experiments on discovering the "soul," reiterating the use of experiments in practical studies on the spirit. In his ***Isharat***, he has explained this in detail in his discussion of "the imagining man's flight." Thus, "comprehensible spiritual qualities" and "incomprehensible supposed powers" cannot be associated. There must apparently be easier ways to discover and know the functional powers of spiritual faculties. Avicenna's experimental suggestions are of high significance in gaining knowledge of the soul.

40. Natural History

Although the science of natural history prior to the eighteenth century consisted of simple subjects, the Muslims' writings were the best references in this field of science, both for Europeans and non-Europeans, because Muslims had compiled all of the scattered knowledge from the past on zoology and botany, added extra information of their own, and developed them into scientific fields. They had also added content from Indians, Caledonians, the Greeks

62. Dr. Ali Akbar Siasi, ***Avicenna's Psychology and Comparing It with Modern Psychology***, Tehran University Publication, 1955, Preface.

and Nabathians. Furthermore, observations and trial and error all across Islamic lands and even beyond them had helped them acquire many areas of knowledge inaccessible to them. [63]

41. Jaber's Chemistry and the Classification of Chemical Substances

Apparently, Jaber was a Shiite hailing from Kufa, from a tribe called Azd. His father, Hayyan, was an herbalist in Kufa. It is said that his father was executed for being a Shiite in the Umavi era. Jaber himself… is said to have been in contact with Imam Jafar Sadegh (AS) and used the Imam's information.[64] Some have cast doubt on the fact that Jaber ever existed in history… there is no doubt about his existence… As far as available books trusted to be his are concerned, it was jabber who saw chemistry as an empirical science… he is the father of medieval alchemy and modern chemistry. Although there is doubt in some of the books associated with him, it is accurate that he did compound and find the many chemical substances he is credited for… [65]

Razi's books were translated into foreign languages, as were Jaber ibn Hayyan's. From these books, Europeans learned to categorize chemical substances into mineral and organic, along with the classification of mineral substances into the most exact forms known in the medieval era.

42. From Methods of Distillation and Calcination to Evaporation and Sublimation

It was they who found methods for distillation, evaporation, sublimation, crystallization, molting, and calcination. Muslims also discovered alcohol, alkaline, mercury oxide, borax, sal ammoniac, tartaric acid and its antidote; some of the Arabic names for these substances are still I use. [66]

In fact, it was with the introduction of chemical substances such as soda, white vitriol (potash alum), green vitriol (iron sulfate), saltpeter, and other kinds of salt which were used locally and then as exports for the first time in chemical industries in Islamic lands as

63. ***Athar al-Arab***, pp. 44-45, and also ***Science and Civilization in Islam***, Natural History. Page 98 and onward.
64. He has clearly stated this frequently in his books.
65. ***The Work of Islam***, p. 69.
66. ***The History of Philosophy in the Islamic World***, p. 359.

well as being used in weaving industries across the world that a step was taken toward the development of modern chemistry. [67]

43. Descriptive Pathology

Muslim physicians made valuable contributions to medicine and its related fields. They were the first to conduct an exact study of gastric diseases for the first time in history. Razi presented the first detailed descriptions of pox and typhoid fever. Likewise, Avicenna was the first to describe nose inflammations and explain the difference between peritoneum inflammations, lung inflammations and liver injuries.

Abubakr Muhammad ibn Zakariaye Razi is a famous Islamic physician whose books were translated into Latin; he had so much dominance in medicine that up to the seventeenth century, his books were the prominent textbooks in medicine all across Europe.

44. Pharmacology and Pharmaceuticals

In the field of pharmaceuticals, Muslims were pioneers; any pharmacy nowadays is witness to their genius. Muslims gained mastery in the knowledge of drugs – whether mineral, organic or animal-based – and were the first to write books on pharmaceuticals. [68] Ibn Abitar has introduced 1400 kinds of medicinal herbs in his books, 400 of which were unknown to the Greeks. [69]

45. Developing Medical Sciences

The employment of Christians in medical positions in Islamic territories increased, and new physicians emerged from Christians in Oriental lands. And this came at a time when Western churches saw practicing medicine as taboo; as the church said, diseases were God's fate afflicted by God, so God's will was not to be separated from whom it had been willed upon. Thus, due to such reasoning, the science of medicine was left abandoned and illegal in an era of Christianity known as "the age of faith," until the beginning of the twelfth century and the Islamic civilization in Andalusia. During the reign of Muqtadir Abbasi, 900 physicians were called for examinations in Baghdad, and this is not counting physicians who

67. ***Science in History***, p. 215.
68. Ibid, p. 359.
69. ***al-Mustashreghun***, Vol. 1, p. 92.

and Venice became major trading centers for such items. Oriental artifacts and their decorations infiltrated into Western painting. Its novelty and oddity attracted Western styles of painting, and gradually made them imitate Oriental styles, too…

48. Esoteric Sciences

Muslims also did a great deal of research on esotericism. The Westerners put a lot of effort into acquiring books on these sciences, as they did for books in other fields. Even today, some of them are experts in some parts of this field. Those familiar with Muslims' esoteric sciences – particularly the "empirical-natural" parts, admit that many inventions made in the West – in their crude, original forms – were adapted from Muslims' esotericism.

49. Scientific Ethics

Ibn Rushd, the great philosopher, saw that correct scientific theories were sometimes found with Muslims and sometimes with others. Let us quote him: "Obviously, it is our duty to get help from the theories of our predecessors in order to get to the truth, whether they were from our religion or not. Just like when slaughtering an animal, it does not matter if the slaughtering knife's owner is a Muslim or not' what matters is that the conditions needed for the slaughter be present. We are thus able to use the theories and ideas of those who lived before us." Now compare the words of this educated philosopher with those of some Western philosophers who spoke of him a short while afterward. Some called him "damned." Others said, "Ibn Rushd is a mad dog barking against Christianity." You may now compare a Muslim philosopher speaking about his peers albeit from a different religion with Christian philosophers speaking about him. [74]

50. Literature

The significance of Islamic heritage was confined neither to science and industry nor philosophy and mysticism. Islamic literature also enjoyed the same variety and freshness that brought Islamic science and philosophy world acclaim… It is natural for this variety-filled literature to influence the world around it. Thus, it is no surprise that

74. ***Abghariyat al-Arab …***, p. 37.

had already passed the examinations. [70]

46. Establishing Hospitals

Islam was the global pioneer of constructing good hospitals and providing their equipment. [71] The hospital Nuruddin established in the year 556 Hijra (1160 AD) cured all patients for free for three centuries, and provided medicines free of charge. As historians have stated, the stove at this hospital was burning non-stop for 267 years. On his trip to Baghdad in 580 Hijra, Ibn Jubair (died in 1184 AD) was astounded at the sight of the palace-like city hospital built along the shore which gave sick people free food and medicine. Furthermore, King Calavon built the Mansouri Hospital in Cairo in 684 Hijra (1285 AD), which was the largest hospital during the medieval era. [72] He built four buildings in four corners of an enclosed area, in the middle of which were terraces, pools and streams and fountains to provide cooling. There were different wards for different patients recovering, along with pharmacies, laboratories, clinics, kitchens, baths a library, a mosque for prayers and a study hall. There was always beautiful scenery for mental patients to watch. Rich and poor, men and women, enslaved or free, were all treated free of charge. Those who were discharged also received a sum of money so that they would not fall into hardships for their living. Patients suffering from insomnia were told stories by professional storytellers, and sometimes were given historical books to read. There were mental asylums for the insane in all major Islamic cities. [73]

47. Painting

During the crusades, there was more contact between Muslims from the East and Westerners; thus, many artifacts with delicate industry made by Muslims found their way to the West, and Geneva, Pisa

70. ***Abghariyat al-Arab …***, p. 45.

71. For further information on Islamic hospitals, see ***Tarikh ul-Bimaristanat fil Islam*** (The History of Hospitals in Islam) by Dr. Isa Beck (Damascus). This book introduces around 80 hospitals in Islamic cities and countries in the past, including the Ahmad ibn Tuloun Hospital, which was built in 259 Hijra. According to ***Sireyeh Ibn Hisham***, the first hospital established in the Islamic era is said to have been a makeshift one set up on the Holy Prophet's orders inside tents in the war of Badr.

72. In ***Sub-hul*** Asha, Vol. 3, p. 369, Ghalghashandi has said, "Calavon's (rest in peace) hospital was one of a kind in the world." Also, Ibn Batutah, the famous traveler, said, "The Malik Mansour Calavon Hospital is beyond description. It's daily expenses is said to be 20000 dinars." (***Rihlato Ibn Batutah***, Paris, Vol. 1, p. 71)

73. ***The History of Civilization***, Islamic Civilization, p. 301.

> its impact upon European literature is spoken of… Islamic literature left a definite impact upon literature in Europe… [75]

In the next chapters, we will discuss the significance of Islamic poetry, story writing and other forms of Islamic culture upon other peoples, along with Islamic scientific systems being used as models for others.

75. ***The Work of Islam,*** pp. 166-173.

Islamic Literature

1. Islamic Literature

By Islamic literature, we refer to a variety of rich, vast, cultural fields of knowledge along with a great number of weighty books and texts. It would be appropriate, therefore, to provide an outlook of what is regarded as "Islamic literature," so that readers who are not closely familiar with such fields and texts can perceive an albeit brief picture of the issue.

In the previous chapters, we have discussed the impact of the Holy Quran on the development of Islamic sciences. One series of such sciences is literature and literary sciences. Besides its richness in philosophy, guidance, law, moral ethics, history, education, true knowledge, mysteries about nature, etc., the Quran is also of high literary value, which, many years ago, led to the emergence of several fields of science aiming to acquire knowledge of the Quran; also, it fascinated literary figures and those of literary talent, making them study the concepts in the Quran with greater care. The latter point made Quran the mentor of all literary creations and talents across the world. It has always inspired those with potentials in writing, poetry, lecturing, expressing intentions, and authoring. Thus, the Holy Quran not only founded literary sciences, but also revived the literary spirit with a higher insight and force within various aspects, both in Arabic and other Islamic languages – as we will see in our study of the impact of the Quran upon Iranian literature at the end of this chapter.

Thus, Islamic literature is considered as both specific literary sciences and general domains of literature. We will now list each in detail.

2. Literary Sciences

In Islamic culture, literary sciences are fields which first arose as introductions to other sciences and areas of knowledge but found independence and gained depth and expanse, with a great numbers of books being written on them.

These sciences are:

1. Lexicography
2. Philology
3. Literary eloquence and metaphors
4. The art of expression
5. Composition
6. Criticizing poetry
7. Rhetoric
8. Calligraphy

9. Rhythm
10. Rhyme
11. The history of literature
12. The science of the criticism of poetry
13. The science of oration
14. The science of calligraphy
15. The science of history (the history of literature)

Some of the sciences mentioned above also fall into branches, such as the etymology (fegh-ul-lughah), the branches of lexicon and the philosophy of words in lexicography, the science of forms and styles of poetry in the science of the criticism of poetry, and also the science of poetic metaphors in the science of the criticism of poetry.

3. Literary Fields

By "literary fields" – or literature in general – we mean fields of science that are not regarded as basic literary fields (such as semantics, syntax, etc) and do not include specific subjects and issues, but are still seen as branches of literature. These fields of science can be classified as:

1. Quranic Literature

As we have said, literary sciences – in the specific sense we discussed – have developed in the light of the Holy Quran. It is well-known that Imam Ali (AS) instructed Abu al-Asad Du'eli on how to found the science of philology so that people could use it to read the Quran correctly. Not only is philology closely and obviously related with the Quran, but all fields of Islamic science can be shown to be Quran-oriented; however, some fields can be regarded as specifically Quranic in nature, such as:

- Quranic theology
- Quranic moral ethics
- Quranic jurisprudence (*Ayat ul-Ahkam*, "verses depicting laws and regulations")
- Quranic psychology
- Quranic history
- The philosophy of history in the Quran
- Quranic politics and *Imamat* (leadership and governing)
- Quranic natural sciences
- Resurrection in the Quran

These fields of science, if adapted from the Quran (and *sunnah* and *hadith* as illustrators and interpreters of the Quran) and free of additions from translated sciences, are special in fundamentals, subjects, issues and aims; thus, followers of Quranic schools of knowledge have always endeavored to acquire, learn and present these sciences as pure of other man-made techniques. They attempt to keep their scientific spirit realized by the Quran, and nothing else.

Now that we have accepted that special literary sciences have emerged from the Quran, what do we mean by "Quranic literature"?

By "Quranic literature," I am here referring to sciences consisting of a vast range of literary issues and subjects established and compiled aiming to gain knowledge of different aspects of God's words through Islamic thinkers and scientists. There are over 30 of such sciences, and some Islamic sources such as ***Kashf ul-Zunoon*** have listed them. Some of them are:

- *Mufradat ul-Quran* (knowledge of the vocabulary in the Quran)
- *Mutashabihat ul-Quran* (knowledge of similar words in the Quran)
- *Daf-e' Mata'en ul-Quran* (responses to criticisms made by dissidents)
- *Qarib ul-Quran* (knowledge of uncommon words in the Quran)
- *Badaye' ul-Quran* (knowledge of metaphors and hidden meanings in the Quran)
- *I'rab ul-Quran* (Quranic philology)
- *Kitabat ul-Quran*[1] (knowledge of Quranic calligraphy and writing style)
- *I'jaz ul-Quran* (knowledge of the miraculous nature of the Quran)
- *Al-Tajvid wa Qira'at ul-Quran* (knowledge of correctly reading the Quran)
- *Wughuf ul-Quran* (knowledge of the ends of sentences and making pauses when reading the Quran)

Thus, a series of "Quranic literature" is formed. These sciences are also rich in subjects and issues pertaining to lexicon, grammar, rhetoric and other literary forms.

There are two other noteworthy kinds of literature related to the Holy Quran:

1. ***Elm ul-Adab-e Kitabat ul-Mushaf***, ***Kashf ul-Zunoon***.

- Interpretational literature
- Translational literature

The former concerns interpretations of the Quran, which despite having scientific and literary content, also lead to a distinct field called "interpretational and commentary literature," including a special aspect of literature such as commentaries like Sheikh Tousi's ***Tebyan***, Zamakhshari's ***Kashaf***, besides the general literary aspects included in other interpretations.

The latter, literature concerning translation, covers the specific qualities included in translations made of the Quran – special styles of translation, forms of expression, choice of words, ways of interpretation, etc. A first version of ***Meibodi's Kashf ul-Asrar*** (written early in the sixth century Hijra) can be named as an example.

It is interesting to mention that a rhythmic translation of the Quran has also been made in Persian[2], as there is an interpretation of the Quran composed of poetry in Persian. [3]

There are also other Quran-related works that can be added to the domain of Quranic literature, such as dictionaries based on (the words and also indices on) the Quran, guides to the verses, histories of the Quran, studies on various versions of the Quran, lists of topics discussed in the Quran, Quranic calligraphy, lists of books based upon the Quran, various commentaries, different translations of the Quran and also the number of languages it has been translated into.

2. Hadith Literature

Hadith literature consists of fields of study concerning the lexical and literary subjects dependent upon the comprehension and knowledge of the Holy Prophet's – and other Islamic figures' – words. There are many fields related to the knowledge of *hadith*. Some of them are literary and include literature-based research, such as:

- *figh ul-hadith* (the jurisprudential knowledge of the concepts included in *hadith*)
- *gharib ul-hadith* (the knowledge of uncommon words in *hadith*)
- *mustalah ul-hadith* (the knowledge of the idioms and expressions included in *hadith*)

2. ***A Rhythmic Translation of Two Parts of the Holy Quran – a Bridge between Syllabic and Prosodic Persian Poetry in the First Two Centuries Hijra***, by Dr. Ahmad Ali Rajaee, published by the Iran Culture Foundation, 1976.

3. Safi'alishah Isfahani's commentary.

- *asma' rijal ul-hadith* (the knowledge of the names of narrators of *hadith*)
- *sharh ul-hadith* (the knowledge of narrating, reporting and explaining *hadith*)

Selections of *hadith*, topical compilations of *hadith* and lexical lists also fall into this category; to name a few examples:

- ***Majma' ul-Bahrein***[4], by Sheikh Fakhruddi Tureihi
- ***Safunat ul-Bahar***, by Sheikh Abbas Ghomi
- ***Al-Mu'jam ul-Fehres***, by seven Orientalists
- ***Miftah ul-Vasa'il***, by Dr. Seyyed Javad Mustafavi Khurasani
- ***Miftah ul-Kotob ul-Arba'a***, by Seyyed Mahmoud Musavi Dehsorkhi

Translation of Hadith: The translations made on *hadith*, particularly the beautiful old Persian versions, make up a vast domain of this kind of literature – whether in the form of contexts of books or texts, or independently, such as ***A Treatise on Shahab ul-Akhbar Ghuzaee***.

We must note once again that there has been a great deal of scientific and literary research done on *hadith* – whether from the Holy Prophet or other holy Islamic figures – that calls for an independent discussion.

3. Nahj-ul-balaghah Literature

The collection of works done on the ***Nahj-ul-balaghah*** also forms a special kind of literature. ***Nahj-ul-balaghah*** literature can b categorized into the following topics:

1. Knowledge of the various treatises on the ***Nahj-ul-balaghah***
2. Notes on the ***Nahj-ul-balaghah***
3. Deductions on the ***Nahj-ul-balaghah***
4. The narrators and memorizers of the ***Nahj-ul-balaghah***
5. References and documents pertaining to the ***Nahj-ul-balaghah***
6. Indices on the topics covered on the ***Nahj-ul-balaghah***
7. Lexical indices of the ***Nahj-ul-balaghah***
8. A study of various versions of the ***Nahj-ul-balaghah***
9. Translations of the ***Nahj-ul-balaghah***
10. Short quotations from the ***Nahj-ul-balaghah***
11. Translations of short quotations from the ***Nahj-ul-balaghah***, prose and poetry, in Persian and in other languages

4. This book is mostly an explanation of ***Gharib ul-Hadith***, studying the words and terms used in the Quran and *hadith* which became well-known later on.

12. Selections of the ***Nahj-ul-balaghah***
13. The impact of the ***Nahj-ul-balaghah*** upon Islamic theology
14. The impact of the ***Nahj-ul-balaghah*** upon Islamic politics
15. The impact of the ***Nahj-ul-balaghah*** upon Islamic education and developmental sciences
16. The impact of the ***Nahj-ul-balaghah*** upon Islamic preachers
17. The impact of the ***Nahj-ul-balaghah*** upon Islamic writers
18. Ideologies and natural sciences in the ***Nahj-ul-balaghah***[5]
19. Books and treatises on the ***Nahj-ul-balaghah***[6]
20. Biographies of compilers of the ***Nahj-ul-balaghah***

All of the topics mentioned above, their related discussions, along with research on the work of interpreters, knowledge of their styles and methods (literary, scholastic, historical, etc.), knowledge of the styles of translation and criticism of distorted versions, etc. are examples of the literary issues that form a kind of literature we have entitled the literature of the ***Nahj-ul-balaghah***.

4. Scientific Literature

Islamic sciences – whether theoretical and intellectual or practical, natural or mathematical – include a series of literary subjects and studies such as rhetoric in scholastics and logic, lexicography in astronomy, medicine, pharmaceuticals, zoology, botany, geography, etc.

Research on the collection of terms used in these fields and the books written related to them forms a special kind of literature – particularly when the concerned field itself includes plenty of literary items, such as Islamic geography, which abounds in stories and idioms related to various cities and villages.

Thus, we see that sciences also have a special literary domain. Our next discussion – scientific poetry – fits exactly into such a field.

5. This topic is of high importance in the ***Nahj-ul-balaghah***. In general, the ***Nahj-ul-balaghah*** contains a great deal of undiscovered knowledge in the fields mentioned above and also political sciences which still needs to be studied.

6. Or concerning parts of it, such as Malik Ashtar's Treaty or Dr. Tofigh al-Fiki Baghdadi's ***al-Ra'ee wal Ra'iyyah, al-Mathal ul-A'la lil-Hokm al-Dimighrati fil Islam*** about this subject.

5. Scientific Poetry

Turning scientific material into poetry done by scientists who had a talent for poetry or literary scholars who were familiar with the scientific material concerned is another form of work done in Islamic literary fields. These works were in the form of elegies, *qet'eh* or *arjuzeh*, and covered subjects such as semantics, syntax, philology, meaning, history, geography, jurisprudence, speculative theology, medicine, astronomy, interpreting dreams, marine sciences, the science of names, religious necessities, lecturing, expression, calligraphy, regulations and commands, geomancy, numerical symbolism, logic, recitations of the Quran, *tajvid*, scholastics, philosophy, interpretation, etc.

It is obvious that creating poetry out of science is a very delicate task, and if done well, the result is both enlightening and easy to remember. There are many examples of scientific poetry and a complete list of them – all of the manuscripts prints, or parts of other book—would itself fill a large book. Here we will content to a few examples of the most prominent ones:

- Avicenna's elegy ***Einiyyah*** (on psychology)
- The elegy ***Shatebiyyah*** on Quranic recitation and readings
- Sohrevardi's elegy ***Haiyyah*** on mysticism and illuminist spiritual journeys
- Ibn Farez's elegy ***Taiyyah*** on mystical phases
- Abu Muhammad Murtaza Hahrzuri's elegy on Sufis' terminology
- Ibn Hajib's elegy on female gender
- Ibn Helli's *arjuzeh* on scholastics and ideologies about Imams an governing.
- Syuti's *arjuzeh* ***Alfiyyah*** on philology
- Syuti's *arjuzeh* ***Oghoud ul-Juman*** on lecturing, expressing and concepts
- Zeiduddin Araghi's *arjuzeh* ***Alfiyyah*** on *hadith* terminology
- Allameh Bahr ul-Oloum's *arjuzeh* on the knowledge of Islamic figures
- Sabzevari's *arjuzeh* on logic, theology, natural sciences and moral ethics
- Sheikh Muhammad Hussein Isfahani (Company's) *arjuzeh* ***Ghayat ul-Hakim***on philosophy.
- Allameh Semnani's ***Sabikat ul-Zahab*** on the fundamentals of

jurisprudence

I must also mention elegies written on metaphors and techniques used in speech and also Islamic beliefs (truths, descriptions, miracles and praise for the Holy Prophets and the importance of the Holy Quran), which has been recognized and appreciated by great Islamic literary figures. Such elegies are quite significant in the literary culture of Islamic sciences due to the techniques and innovations they include. There is also a series of books written as treatises and explanations on these elegies, which have in their own turn developed a new style of comparative criticism, delicacy and richness. Some examples are:

- ***Al-Natail ul-Ilahiyyah***, a treatise by Safyuddin Helli
- ***Taraz il-hullah***, a treatise by Ibn Jaber Andulusi
- ***Khazanat ul-Adab***, a treatise by Ibn Hujjat Humavi
- ***Sharhe Fat-hul Mubin***, a treatise by A'esheh Ba'uni
- ***Anwar ul-Rabi'***, a treatise by Seyyed Alikhan Madani Shirazi

In my detailed research on elegies of this kind, I have gone into a full discussion and scientific definition of elegies containing metaphorical and rhetorical techniques in speech, and have introduced 50 poets of such a style and their works. [7]

6. Other forms of literary production

Islamic books of various subjects include methods which, if studied carefully, can reveal many valuable points. These methods and their related subjects can be fit into the category of "the literature of writing and composition." For instance, writing travel journals is Islam is itself a field with its own culture and literary style which can be a field of study in order to discover various forms of travel journals, their styles and their correlations with other forms of science or literary fields. Furthermore, other fields of writing in Islam, such as various forms of treatises and explanations, critiques, etc., also fall into the category of "the literature of writing and composition," such as:

- The literature (styles and methods) of writing travel journals (which we have just discussed)
- The literature of article writing
- The literature of writing explanations and treatises
- The literature of writing additions and appendices to books

7. ***Literature and Commitment in Islam***, pp. 129-150 and 151-231.

- The literature of criticism

The literature of writing explanations and treatises – the methodological study of Islamic figures and scholars' treatises throughout the history of Islam – is of particular vastness among the groups mentioned above.

4. The Quran and Iranian Literature

As we have already mentioned, the Quran's literary style, the beauty and rhythm of its words, the elegance and eloquence of its expression, variety in style, originality along with the Quran's other advantages in regard to scholastic and interpretational points of view makes it leave an indescribable effect on the spirits of anyone who hears it; it has always been thus, and will always be so to Judgment Day. Such astounding enthusiasm had its highest effect upon the souls of artistic and literary figures, and engulfed their whole life. We must mention that the Quran and its recitations influenced even the most ordinary of people; there are a great many Muslims who, despite lacking education, know some verses of the Quran by heart and write them on walls and building entrances and use them in their speech and on special occasions.

This is applicable to not only all Muslims but also anyone who is familiar with and has to do with the Quran. Among them, however, the aware and the knowledgeable are readier to accept the impact of the Quran in their hearts. Thus, all Islamic writers – from story writers to philosophers and scholastic scholars – have been influenced by the Quran, and have made use of its verses and contexts in their work. Muslims – whether scientists or not – have always read and known some of its verses by heart, as they still do. And knowing verses that have style and rhythm has a certain effect upon those who intend to create art, particularly when the verse known by heart also conveys a mission, which influences the work in interpretation, content and intent.

This is why the Quran was the source of the spirit of eloquence and the element of style and expression in Islamic societies; the Muslims did not need to learn any other school of thought to acquire ways to express themselves. As their science and culture expanded, they saw no need to go after other examples or patterns to interpret their own style and intent. Thus, indeed:

> "The Muslims showed no interest in translating Greek poetry and drama; this was not because Greek poetry and drama was mixed with Greek ideas and myths that could not be of interest in Islam, but because the

> purpose of learning them was to improve styles of expression, which the Muslims – thanks to the Quran – did not need to. [8]

Thus, as one or a few verses from the Quran can be seen in any building, mosque, or even house in Islamic lands, the Quran is also a part of any writing, book of poetry written in – any field of knowledge – by Muslims, whether it be in the form of quotations from the Quran, or adaptations, translations, interpretations, concepts, etc., whether meant to educate or to learn.

And the same also went for Iran; having accepted Islam, Iranians became so intimate with the Quran that they filled all of their work – in various forms – with it. In order to enhance their closeness with the Quran and facilitate understanding it, they even adopted some Arabic words and, having changed their original meanings and/or pronunciation, used them as part of their own language. Thus, they developed the rich Farsi Dari, and gave their works of literature extraordinary richness thanks to their knowledge of the Quran's instructions. It should be interpreted that the Quran influenced Iranian books; rather, the foundations of we Iranians' knowledge after Islam was based upon the Quran – which was natural. Our poetry – in all genres – also made great use of the Quran and Islamic knowledge; as Dr. Seyyed Jafar Shaheedi says:

> "We see the influence of the Quran not only in Persian works of mystic, epic or praising forms of poetry, but also in its legends and romantic tales. Classics like Fakhruddin Gorgani's ***Veys and Ramin***, Bahramshahi's ***Kalilah and Demneh*** and Nizami Ganjavi's poetry show such an influence. These impacts found such strength later on that the translator of the Letter of Tansar – a letter written in Pahlavi language centuries before Islam – used Quranic verses and words from the Holy Prophet when translating the letter.

Thus we see that if a religious book is also a literary work, it can succeed literarily in this way, too. All across Iranian Islamic culture (Iranian culture is, in fact, Islamic culture), and our millennium-old heritage of Iranian poetry and prose, reflections of the light of the Quran can be seen in various forms and colors.

> In regard to content, language, time, and place, Islamic literature presents a remarkably rare variety… Although its most prominent masterpieces are in Persian and in Arabic, it has also presented valuable works in Urdu and Turkish. Other languages such as

8. ***The Work of Islam***, p. 42.

> Barbarian, Swahili, Somali, Albanian, Uzbek, Kurdish, Baluchi, Pashtu, Sindh, Guajarati, Bengali, and Tamil have also created considerable works of literature due to their influence by Islam. Among them, however, it was only Arabic and Persian who had a great impact on the world; it was only with the demise of the Abbasids and the fall of the Teimourids that Arabic and Persian literature turned stagnant and deviant, which led to the promotion of Turkish literature by the Ottoman court and Urdu literature by the Mongolian court. The Arabic language, with its huge backing from the Quran, became a source of inspiration for Persian literature… [9]

An excellent example of the heightened elevation of the Persian language is the translations made from the Quran during the fourth through seventh centuries Hijra. What beautiful words and original Persian interpretations have been used in these interpretations of the Quran which do not exist in Persian prose or poetry any more but have prevailed thanks to the blessing of the Quran. Hence, the importance of compiling a comprehensive Persian dictionary based upon these interpretations made on Islamic texts. Examples of such works are:

- ***A Translation of Tabari's Interpretation***, corrections made by Habib Yaghmaee
- ***An Interpretation of Meybodi's Kashf ul-Asrar*** (the first version), corrected by Ali Asghar Hekmat et al
- ***Abulfath Razi's Interpretation***, corrected by Abulhassan Sha'rani
- ***(Sourabadi's) Stories of the Quran***, by Dr. Yahya Mahdavi
- ***A Pure Interpretation of the Quran***, corrected by Dr. Ali Ravaghi
- ***An Interpretation of the Quran (the Cambridge Version)***, corrected by Dr. Jalal Matini
- ***Najmuddin Nasfi's Interpretation***, corrected by Dr. Azizullah Juveini

Furthermore, writers, poets and literary figures were trained in Islamic culture that had a lasting influence upon Persian literature. The impact made by Arabic poetry can be seen all across Persian poetry. If one knows both Arabic and Persian as well as metaphors, innuendos, similes and alliterations, by taking a look at works of poetry in both languages, such impacts can be seen in works such as ***Aghd ul-Farid***, Mubarrad's ***al-Kamel***, ***al-Mustatraf*** and other works when compared with Persian poetry. This also goes for Persian prose. As Dr. Zarrinkoub has said:

9. ***The Work of Islam***, pp. 166-167.

"Badee'uzaaman and Hariri developed writing the *maghameh* (narrations full of literary metaphors) in the Persian language, which influenced Hamidi's ***Maghamat*** and also the ***Golestan***. " All of these, and the like, show the direct and astonishing effect of *hadith* from the Holy Prophet and Imam Ali and other Imams (AS) upon the whole heritage of Persian literature. It would be inappropriate to cite examples, for Persian works are Islamic works; only one other Islamic language, Farsi Dari, shows such an influence.

Also, we must not forget the influence of books such as Jahez's ***al-Mahasin wal-Azdad*** (255 Hijra), Ibrahim Beihaghi's ***al-Mahasin wal-Musavi*** (320 Hijra), Zamakhshari's ***Atwagh ul-Zahab*** (538 Hijra), and many others.

5. Moral Ethics in the *Shahnameh*

It is appropriate here to pay homage to the ***Shahnameh*** and the spirit governing it. In fact, it is not surprising that Islam and Islamic knowledge had such an impact upon Iranian culture and sense that both were redefined. Islam set foot in Iran as a divine religion. Iranian people gradually turned to Islam; their inclination toward Islamic monotheism, mosques, Quranic lessons and supreme Islamic knowledge marginalized Zoroastrian temples. During the first three or four centuries after the introduction of Islam in Iran, there was no force imposing Islam upon people; it was the attraction in the instructions, science, justice and social equality in Islam itself that brought people toward it.

The alert and sensitive classes of the society were attracted to such knowledge and systems more quickly. By reading the oldest of Persian works of poetry, you will see the influence of Islam and Islamic orientation in them.

Roodaki (Abu Abdullah Jafar ibn Muhammad, died in 329 Hijra), known as "Iran's first great poet," was a Shiite Muslim – as the poet Ma'roufi has said:

From Roodaki, the king of poets, I heard
not to follow anyone in this world but the Fatemians[10]

Daghighi (Abu Mansour Muhammad), the great fourth-century poet, who was mistakenly thought to be Zoroastrian, has clear influences of Islamic mysticism in his poetry. Some researchers also believe that some

10. ***Selected Works of Ancient Persian Poets (from Hanzalah Badgheisi to Daghighi except for Roodaki)***, Gilbert Lazar, The Iran and France Institute, 1962, Vol. 2 (Poems), p. 136.

poems with Zoroastrian praise pertain to him. Daghighi's poems mention Islamic concepts and praise the Holy Prophet, as well as Imam Ali ibn Abitalib, the Ashura event, the atrocities of Abusofian's clan, and Fatemeye Zahra (AS). [11]

Daghighi's work also points to the Ghadir event:

The Amir (Commander) engulfs the day of Ghadir triumphantly
with the corner of his eye, like Kyoos (Anushirvan's brother and conqueror)[12]

As we see, the oldest – as far as we know of – Persian poem to speak of the Ghadir event pertains to Daghighi, who is believed to have died around 370 Hijra.

We also see homage paid to Imam Ali (AS) in ancient poets Shahid Balkhi [13] and also Muyassari's[14] poetry. Such concepts are abundant in old-age poets' work. For example, Muhammad ibn Mukhallad has such praised Yaghoub Leis:

You are the miracle of the Prophet of Mecca
in your deeds, behavior and ear[15]

Or the following verse by Muhammad ibn Vaseef, which has been derived from two verses from the Quran:

Indeed, you Amir, cried out, "Who is worthy of the Kingdom?"
O lesser armies who defeated (with God's will) over greater ones[16]

Adapting from Quranic verses and *hadith* into poetry has been common ever since the earliest of Persian eras of poetry. Such concepts and knowledge set into the hearts and souls of Persian poets and thus appeared in their work. One example is Muyassari, the ancient Persian poet, who begins his couplet poem with Quranic monotheism – a monotheism purely Islamic, rather than rising from pre-Islam scattered beliefs in Iran which sometimes fell into worship of fire and multiple gods.

In the name of God who created all of which is on earth,
Who is compassionate and knowing of all things,
the God who set up the seven skies,
the God of this earth and all of time[17]

which refers to the Quran (2:29) : "It is He who created for you all of that

11. Ibid, pages 141, 152, 155, and 171.
12. Ibid, p. 157.
13. Ibid, pages 36, 181.
14. Ibid, pages 36, 181.
15. Ibid, p. 17.
16. Ibid, p. 13.
17. Ibid, p. 178.

which is on the earth. Then He directed Himself to the heaven, [His being above all creation], and made them seven heavens, and He is Knowing of all things."

Then, in subsequent verses, he defies goes on to defy God's negative attributes – such as simulation, depict God's positive attributes and disagree with Ash'ari's visibility viewpoint.

Muyassari, the ancient Iranian poet, having spoken of an eloquent, accurate monotheism – Quranic monotheism – proceeds to praise the Holy Prophet and His Progeny:

Hundreds of His blessings be upon Muhammad
And then upon His great disciples
His kindest and best of blessings upon Ali,
And upon his wife, that most chaste of daughters,
And then upon Hassan and Hussein,
And their offspring, one by one of them[18]

Muyassari also translates words and *hadith* in his poetry; as he has translated Imam Ali's famous saying, *"Each person's value is as much as he has done good"*:

Ali also says this in Arabic,
that people's value is as much as they have done[19]

In the following verses, he has turned another *hadith* into poetry:

The Prophet has given news of these two,
Death and old age, none of which can be cured[20]

On this poet, it has been said:

> "During the years 367-370 Hijra, a physician called Muyassari wrote ***Daneshnameh***, a book of poetry on medicine, a unique copy of which exists in the National Library of Paris… This couplet poetry, consisting of five thousand verses and written even before Ferdowsi's ***Shahnameh***, is the oldest of its kind in Persian poetry, and is now with us in full…" [21]

At the end of his book, Muyassari thus expresses his praise for the Holy Prophet:

Muhammad was the last of the prophets,
He was the light of both the earth and the skies.[22]

18. Ibid, p. 181.
19. Ibid, p. 183.
20. Ibid, p. 192.
21. Ibid, p. 6.
22. Ibid, p. 191.

Indeed, thus was the Iranians' belief, including its open-minded thinkers, ever since the earliest of times.

All of the work done by our poets and thinkers arises out of Islamic culture. Are the works done by Sanaee, Attar, and Rumi not as such? Is the ***Shahnameh*** itself not riddled with Islamic concepts? ***Shahnameh*** starts by expressing Islamic monotheism and defying Ash'ari visibility, which shows Ferdowsi's belief in pure, accurate Shiism:

With your eyes, you cannot see
The Creator; do not wear your eyes out

He then goes on to describe the Holy Prophet and Imam Ali ibn Abitaleb, and also quotes contexts from a few famous *hadith*: the *Madinat ul-Elm* (The City of Science), the *Safinat* (The Ship) and, "Ali's frustration is an indication of division and lack of faith." Ferdowsi points out the Ghadir event and other Shiite elements using terms such as *valayat* ("guardianship, authority") and *vasayat* (administratorship). The moral ethics used and the educational deductions made on the events all over the ***Shahnameh*** all follow the Holy Quran. The context of many of the sayings by the Holy Prophet, as well as moral advice from Imam Ali and many other Islamic leaders have been translated and included within verses and stories in the ***Shahnameh***.

Many years ago, when I was at more leisure to study the ***Shahnameh*** due to my familiarity with *hadith* contexts, I encountered clear examples of many of what we have discussed. I did not have the chance to categorize and cite the verses and the Islamic material myself, so I suggested it to a friend of mine, a PhD holder in Persian literature, that it would be a highly valuable Islamic cultural task if he were to extract the many translated Quranic verses and *hadith* included in the ***Shahnameh***, and match them with their original form; my friend failed to do so, apparently.

When writing these pages, I consulted my educated friend and poet, Mr. Ne'mat Azarm Khurasani, who is highly knowledgeable on the ***Shahnameh*** on these matters, and I was well aware that I was obviously speaking to an authority on the issue. He also has done careful research on this aspect of the ***Shahnameh***, taking many notes and gathering a great deal of evidence. I pray that he might compile them into a separate book one day, for this issue deserves such independent attention. Now that we are discussing moral ethics in the ***Shahnameh***, I will quote from some of his notes:

"As one of Asia's ancient centers of culture, and due to its specific

geographical situation, Iran has, since the oldest of times, been exposed to trades and exchanges in thoughts, cultures, opposing various legal systems and different historical conditions from a variety of peoples and nations.

The great ancient Iran was adjacent to China and India on the east and Eastern Rome and other well-known major civilizations on the west.

The Silk and Spice Road connected, via Iran, the Far East to the West; naturally, along with commercial merchandise, cultural achievements were also traded, which inevitably led to impacts.

Thus, due to the special geographical location of the land, the Iranian civilization has not been an enclosed, isolated one lacking in contact with others. Its location, along with Iran's own ancient civilization, gave Iranians the chance to have contact with other cultures, analyze their mental achievements, assess them based on Iranian cultural criteria, absorb some of them into its own culture and also present other cultures with some aspects of Iranian culture in return.

Apart from geographical characteristics, which have had natural, gradual effects upon a country like Iran, the numerous military campaigns and the consecutive losses and recoveries of parts of the country's borders to and from powerful neighboring countries provided another reason. During these changes, apart from the official establishment of cultures, legal systems were enforced along with military force; the reign of Alexander and his successors was one of the longest eras of military control over Iran before Islam, which led to the dominance of European culture and legal systems. As the history of Iran shows, none of the defeats our society has conceded – concerning the opposing of the dominant culture upon our national culture – has been comparable to our defeat against Alexander, which led to the long-lasting reign of him and his successors. Throughout the history of Iran, no army as strong and as organized as Alexander's have been able to dominate over Iran for several generations. Moreover, among all of the peoples and cultures that have invaded our land, none have had the stature in culture and civilization comparable to that which was brought along with Alexander on his conquest to Iran. However, as the history of Iranian culture depicts, despite all of the absorbance of alien culture,

this overall dominance has failed to leave a fundamental impact upon Iranian culture and lead to basic changes in the foundations of our people's ideas and ideology.

Our aim in this brief discussion is merely to clarify a vagueness that has remained, intentionally it seems, during the last fifty years of research concerning one of the most important turning points in the history of Iran: many theoretical attempts have been made to show that Islam's acceptance in Iran was due to the military victory of Arabs over Iran; i.e., if it took even less than the time Alexander's successors to establish control following the fall of Ctesiphon for the majority of the people of Iran to turn to Islam, it was due to the enforcement of military power, burning books and ruthless massacres! And if the Iranians, aided by their ancient culture, succeeded in a mere couple of centuries in distinguishing Islam from Arab and Umavi establishments and find the original essence of Islam among the remains of ignorant Arab eras and fight against the atrocious Arab *caliphate* in defense of Shiites, all of this lies in Hussein ibn Ali's marriage to Yazdgerd III's daughter and Iranians' belief in the true and pure holiness of this family…

Apart from the falsehood of the book burning and the marriage between Hussein ibn Ali and Yazdgerd III's daughter, none of these historians provides an official explanation for why people who became so fascinated with an Arab clan due to the marriage of one of their Arab men with their former king's daughter that they were willing to give so many lives to revive the Alavi government but were not ready to support the princess' daughter? These historians seem to have forgotten the fact that while Iranians, having turned to Islam, formed a great resistance in Khurasan against non-Islamic Umavi Arab rulers, and deployed a huge army toward the central Arab *caliphate* aiming to overthrow it – which they did – Yazdgerd III's sons, the last of the Sassanids, had fled to China, safeguarding their monarchy and planning their return to the throne. The historians do not explain why the Sassanids' king's sons were forgotten for many generations in China, even though Marv is much closer to China than to Baghdad, and a grandson would inherit much less than a son?

The history of Iran and Iranian culture show that during the country's long history and its contact with various cultures, no culture has

been embraced so strongly as Islamic culture has.
During the very first centuries of Islam's introduction in Iran, not only was Islamic culture digested and its legal system accepted, but also Avicennas, Birunis and Ferdowsis were born and developed.
Apart from the rise of such great Islamic scientists from various fields as of the third century of Islamic Iran, which had an important role in the enrichment of Islamic culture and science, Islamic culture – as a culture fully established and accepted – clearly showed from the very start its effect upon poetry, prose and other literary fields in Farsi Dari, i.e. the oldest of remaining literary works of the third and fourth century Hijra.
It is no accident that Ferdowsi, with all of his passion for Iran, and the thirty years of the prime of his career he spent writing the great, unique book ***Shahnameh***, is a Shiite Iranian Muslim.
No researcher – Iranian or foreign – has been able to deny the fact that he was a Shiite Muslim; however, the important point about Ferdowsi and the ***Shahnameh*** is something else, which is quite apparent in the long beginning sermon at the start of the book, which clearly depicts his monotheist, Islamic Shiite viewpoints:

In the name of the Lord of both wisdom and mind,
To nothing sublimer can thought be applied,
The Lord of whatever is named or assigned
A place, the Sustainer of all and the Guide,
The Lord of Saturn and the turning sky,
Who causeth Venus, Sun, and Moon to shine,
Who is above conception, name, or sign,
The Artist of the heaven's jewelry!
Him thou canst see not though thy sight thou strain,
For thought itself will struggle to attain
To One above all name and place in vain,
Since mind and wisdom fail to penetrate
Beyond our elements, but operate
On matters that the senses render plain.
None then can praise God as He is. Observe
Thy duty: 'tis to gird thyself to serve.
He weigheth mind and wisdom; should He be
Encompassed by a thought that He hath weighed?
Can He be praised by such machinery

As this, with mind or soul or reason's aid?
Confess His being but affirm no more,
Adore Him and all other ways ignore,
Observing His commands. Thy source of might
Is knowledge: thus old hearts grow young again,
But things above the Veil surpass in height
All words: God's essence is beyond our ken.

As all credited versions of the ***Shahnameh*** show, the book begins with the verses mentioned above; immediately after, though, even before speaking of the creation of the universe and praising the Holy Prophet and Imam Ali, there is a chapter devoted to "the praise of wisdom," the same wisdom the Holy Quran has also put much emphasis on and invited people to follow:

Speak, sage! the praise of wisdom and rejoice
The hearts of those that hearken to thy voice,
As God's best gift to thee extol the worth
Of wisdom, which will comfort thee and guide,
And lead thee by the hand in heaven and earth.
Both joy and grief, and gain and loss, betide
Therefrom, and when it is eclipsed the sane
Know not of happiness one moment more.
Thus saith the wise and virtuous man of lore
Lest sages search his words for fruit in vain:-
"What man soever spurneth wisdom's rede
Will by so doing make his own heart bleed;
The prudent speak of him as one possessed,
And 'he is not of us' his kin protest."
In both worlds wisdom recommendeth thee
When gyves are on the ankles of the mad;
It is the mind's eye; if thou dost not see
Therewith thy journey through this world is sad.
It was the first created thing, and still
Presideth o'er the mind and faculty
Of praise - praise offered by tongue, ear, and eye,
All causes it may be of good or ill.
To praise both mind and wisdom who would dare?
And if I venture, who would hear me through?

Moreover, the more significant point about Ferdowsi's work in the

Shahnameh is the fact that although he was dealing with ancient Iranian mythology which mainly originate from Zoroastrian culture and stories, the general ethics dominant over the ***Shahnameh*** are Islamic rather than Zoroastrian; in other words, Ferdowsi's criterion for assessing the good and bad of his heroes and worldly affairs come from Islamic culture standards.

The whole story the ***Shahnameh*** compasses is the story of fifty kings from Kyoomars to Yazdgerd III; however, this is the façade. In the beginning of each story, Ferdowsi often presents a sermon in which, apart from reporting some personal descriptions of characters, he ponders on the affairs of the world, assessing good and bad, man's deeds and providing the best paths of action. In all of such sermons, Ferdowsi follows an Islamic moral ethics ideology. The most important protagonist he has created in the ***Shahnameh*** is Rustam, the ideal Iranian whom Iranians must set as their model. Thus, apart from his immense physical acumen, Rustam must be exemplary in qualities of behavior and spirit too if he is to safeguard Iran and contend with foreign and domestic enemies. Thus, the Rustam depicted in the ***Shahnameh*** is not just a superman in physical strength, but also in good moral qualities. To realize that the moral ethics governing the ***Shahnameh*** are Islamic rather than Zoroastrian, studying the character of Rustam – Ferdowsi's favorite character – would suffice. Such a careful study would show that Rustam's characteristics are the superior qualities depicted in Islamic moral ethics.

6. The Impact of Islamic Literature throughout the World

In Chapters 5 and 6, we saw to some extent the significance of the Muslims' science, and we saw that scholars and scientists admit that it was thanks to Islamic thinkers that humanity was able to come out of the dark centuries of medieval times and begin the European scientific movement, which arose out of trips to Islamic countries, learning Arabic and Islamic culture, acquiring Muslims' knowledge, culture and books and manuscripts and translating them into Western and Latin languages.

We also saw how candidly they admitted that Muslims were so superior in knowledge and science that the whole world, Christians included, learned from them.

In this chapter, we have become familiar with the significance of Islamic

and Quranic literature, as well as their various branches, aspects, richness and depth.

Now, having cogitated about each of the issues mentioned above, we realize that apart from other sciences, Islamic culture has also had a very significant and valuable impact upon Western literature. Indeed, those who have been familiar with Islamic culture and knowledge since centuries ago, have taken immense benefit from Islam and Muslims, and have in fact acquired the basic elements of what they currently have from the vast culture of Islam – not only in philosophy, mathematics, sciences and industry, but also in poetry, the arts, story writing, commentaries, grammar, literary criticism, genres and techniques of speech.

> "The literary influence of Islam upon Europe can be seen in Professor Guippe's words in the literary section of ***Islamic Heritage***: 'We must realize that the East – Islam, in fact – opened a new road for Europeans, which helped them achieve the status they now have in literature; French poets were influenced by Arabic-style poetry." [23]

Indeed, when we find that the knowledge, intellectual and empirical sciences of a peoples has influenced another and been in fact their educator, the impact of its literature becomes even more definite. As we have seen in previous chapters, there has been some research on this, and several books have been written on this matter, such as ***Rihlat ul-Adab al-Arabi ilal Uruba***, by Muhammad al-Shubashi. Reviews on this book say:

> "This book speaks of a quite old issue – the impact of Arab literature upon the literary movement of Europe. The discussions are based, however, on a novel approach – the author does not confine himself to indicating Arabic references for many European literary works along with a series of limited comments; instead, he presents an extensive discussion on the extent of impact Arab literature has had upon each aspect of European literature. He first studies European literature prior to contact with Arab literature, then proceeds to post-Islam European literature, thus tracking the changes occurring in European literature and pointing out the new characteristics and novel literary meanings and frameworks. He then shows how such qualities, concepts and frameworks are purely Arabic. The author provides evidence for his discussion through giving examples of both kinds of literature.

23. ***The Scientific Movement in Europe***, the above-mentioned article.

Other researchers have also paid attention to the significance of this discussion, and have said:

> "The impact Islam has had on European mathematics, chemistry, medicine and philosophy is quite natural; what may seem unexpected is the influence Islamic culture has had on European literature, which is by no means anything insignificant. Although critics generally regard late-medieval Romantic literature as exclusive to Europe, the more they study it, the more they detect an Oriental root in it. Indeed, some of the tales about King Arthur has Oriental roots. Two other well-known stories, Floire et Blancheflor and Aucassin et Nicolette also originate from Islamic roots. In the latter example, the protagonist's name is in fact "al-Ghasem," and his lover – which seems at first to be a maid of unknown origins – is actually a Muslim princess from Tunisia. [24]

Indeed, this issue is quite vast, and to show how Islamic literature has, in its various branches, had a constructive and inspiring effect upon Western literature and how many famous writers around the world have been influenced by writings of Muslims when creating their work, numerous volumes of books will have to be filled. In ***The Work of Islam*** (pages 166 through 173), valuable information has been presented on this issue. Furthermore, the references I have included at the end of this book also indicate other works; we will discuss other issues on this until the end of this chapter as well.

7. The Translation of Islamic Works of Literature

To further illustrate the literary influence of Islamic culture upon European and American literature and culture, it would be appropriate to mention a few of the texts translated from Islamic books on philology and other fields by Orientalists and other scholars.

I must first mention a three-volume book, ***al-Mustashrighoon***, written by the learned Arab researcher and writer Najib Alhaghighi. As we have already seen in the references we have made to this book, the author has gone out of his way in creating a fine piece of work on Orientalists, listing about1700 Orientalists and around 4000 of their works, from books authored and translated to articles, corrections and prefaces. To be aware of all of the work done by Orientalists upon the domains of Islamic culture, this book is a must. It is by studying this book that we realize the

24. ***The Work of Islam***, Preface, p. 21.

extent of benefit the West has received from Islam, and how much of their knowledge originates from Islam – as we have already seen in Chapter 4.

The 4000 volumes of work mentioned above cover a wide variety of fields from science, philosophy and literature and poetry to industries, law, moral ethics and other issues concerning cultural and civilization. Many of these books are translations of Muslims' books, and some of these have been taught by Westerners as textbooks for years – and in some cases for centuries. Many others are books Westerners wrote having studied Muslims' books. It is interesting that the process of translating and writing books based upon Islamic sciences in the West has continued up to nowadays. There are many books of our heritage unknown to both our youth and our scholars which have been translated and studied – in the current era – by Westerners. Is it not annoying how exploiters such succeed in cutting us off from our heritage? Is it not harmful? Will it not destroy our character? Is it not dangerous?

In any case, in this chapter I shall mention some Islamic literary books Westerners have translated in order to study, make use of, enrich their culture and benefit from Muslims' knowledge and innovations in their concerned fields. What I am including in this book is a drop from a vast ocean. These examples have been categorized into two groups: texts on philology and the like – literary sciences – and books regarded as works of literature.

a) Literary Sciences

- A translation of ***Kitab ul-Tasrif*** [25] into Latin, along with the original text, by Zimondis (Florence, 1610)
- A translation of ***al-Ajar wa Miyyah*** [26] into Latin, by Reverend Ubishini (published in 1631)
- A translation of ***al-Ajar wa Miyyah*** into French, by L. J. Bresnier (1846)
- A translation of Ibn Mu'atee Zavavi's ***Alfiyyah*** [27] into Dutch, along with the original text and appendices, by Karl Wilhelm

25. This book, by Izzuddin Abu Alma'ali Abdul wahab Zanjani, has been published as part of ***Jami' ul-Mughaddamat***, and is a textbook taught to students of theology.

26. ***Al-Ajar was Miyyah fi Ghava'id ul-Arabiyyah*** is a well-known book on philology on which many commentaries have been written. Muhammad ibn Davoud Sanhaji (died 73 Hijra) wrote this book. (***Mu'jam ul-Matboo'at***, Vol. 1, Column 25-26).

27. This book, originally named ***Al-durrat ul-Alfiyyah fi Ilm ul-Arabiyyah***, by Zinuddin Abu al-Hassan Yahya (564-628 Hijra), the renowned scholar of Arabic syntax and philology, consists of 1000 verses and is regarded as the oldest book of poetry concerning philology.

Zettersteen (Leipzig, 1895)

- A translation of Ibn Malik's ***Alfiyyah***[28] into French, along with the original text and appendices, by L. Pinto (Constantinople, 1887)
- A translation of ***Alfiyyah*** into French, along with its commentaries and notes, by A. Goguyet (Beirut, 1888)
- A translation of ***Sharh-e Ghatr***[29] into French, along with the original text, by Goguyet (Leiden, 1877)
- A translation of Sibuye's ***Sharh ul-Kitab*** into French, along with an introduction and notes, in 1000 pages (2 volumes), by H. Derenbourg (Paris 1881-1889)
- A translation of Ibn Hajib's ***al-Kafiyyah*** (on philology) into English, by J.J.S. Perowne (Cambridge, 1832-1852)
- A translation of ***Mulhat ul-A'rab***[30] into French, along with explanations and appendices, by L. Pinto (Paris, 1904)
- A translation of ***Sharh-e Ibn Aghil*** into German, along with the original text (Leipzig, 1852)[31]
- A translation of ***al-Khazrajiyyah***[32] into French, along with the original text, by Rene Basset (Algeria, 1902)

b) Works of Literature

- A selected translation of Ibn Ghutayba's ***Adab ul-Katib*** into German, along with the original text and appendices, by W. O. Sproull (Leipzig, 1877)
- A selected translation of ***Ighd ul-Farid***, the famous literary work by Ibn Abd Rabbeh Andalusi, into French, by Tournel (Paris, 1836)
- A translation of Zamakhshari's ***Navabigh ul-Kalem*** into French, along with the original text, by Barbier de Meynard (1871)
- A translation of Zamakhshari's ***Atwagh ul-Zahab*** into French, along with the original text, by Barbier de Meynard (1867)

28. Ibn Malik's ***al-Fiyyah***, which has also been translated into German and Italian.
29. ***Ghatr al-Nada wa Bal al-Sada*** on philology, along with its appendices, by the famous philological scholar Ibn Hisham Ansari (died in 761 AD), who also authored the renowned textbook ***Mughni ul-Labib***.
30. A book of poetry concerning philology written by Abu Muhammad Ghasem Hariri Basri (born in 516), who wrote the renowned ***Maghamat*** and ***Durrat ul-Ghavvas fi Oham ul-Khavas***. Pinto has also published the Arabic text of ***Mulhat ul-A'rab*** along with its explanations and appendices in Paris (1885-1889). (***Mu'jam ul-Matbu'at***, Vol. 1, Column 750.)
31. ***The Persian Encyclopedia***, Vol. 1, p. 214.
32. By Ali al-Khazraji, and about philology.

- A translation of ***Atwagh ul-Zahab*** into German, along with the original text, by Hammer Purgstall (Vienna, 1805)
- A selected translation of Meidani's ***Majma' ul-Amsal***, into French, by Quatrermere (1837)
- A translation of Abu Madin Farsi's ***Tufat ul-Urib*** into Latin, along with the original text, by Frants Fon Dombey (Vienna, 1805)
- A translation of Ghazi Tanoukhi's ***Nushwar ul-Muhazirah*** into English, by D. S. Margoliouth
- A translation of ***al-Amsal ul-Adabiyyah***[33] into French, by Gercin de Tassy (Paris, 1821)
- A translation of ***A Selection of Arab Idioms*** into English, along with the original text and commentaries, by J. L. Burckhardt (London, 1830)

These are but a few examples of a great deal of such items, not to speak of the books written on philology, and also those translated from Arabic literature (whether plays, short stories, novels, or modern poetry, etc.), which we will discuss in Chapter 12, and not to mention books on moral ethics literature, such as ***A Hundred Quotations from Imam Ali***, ***Salaman o' Absal***, or lists books on bibliography, like ***Kashf ul-Zunoon*** (in Latin) and dozens of other examples of these translations.

Furthermore, all of this is without mentioning the translation made from the Holy Quran and the books written on the significance and the impact of the Quran, such as ***The Quran and Pushkin***, ***Selk al-Bayan fil Managhib al-Quran***, etc.

As I have already pointed out, even a brief study of Najib Alaghighi's book will reveal the extent to which the West and Christianity have benefited from Islam.

We must have in mind, however, that Islamic Persian literature too has had a vast impact all over the world. Can the influence made by poets such as Sanaee, Rumi, Khayyam, Attar, Sadi, Hafez and Nizami upon the thoughts, culture and scholars of the West be ignored? This is a very extensive issue for there is a great deal of evidence and documentation, and which calls for an independent, vast discussion. [34]

33. By Izzuddin al-Mughaddasi, entitled ***al-Savadih wal Azhar***.

34. For example, Dr. Mujtaba Minooee's ***Fifteen Lectures (on Several European Literary Figures),*** Tehran University Publication, 1968, and Dr. Javad Hadidi, ***Iran in French Literature***, Mashhad University Publication, 1969.

8. Islamic Story Writing

As we know, a group of literary figures, writers, and even philosophers and scholars of moral ethics in Islamic culture have written stories – literary stories, philosophical stories, historical stories, ethical stories, etc. Furthermore, Islamic literary figures have also translated other stories and, by making additions and modifications, turned it into an even richer and more appealing story.

> One example is the great story of ***A Thousand and One Nights***, which was translated into French by Antoine Galland during the years 1712 through 1714. This translation made it famous throughout the West, leaving an influence upon European literature. It was then translated into English (William Lean, 1840; Sir. R. Burton, 1885), German, French (1899) and Russian. The Arabic text was published in Breslau (1835-1843), Calcutta (1839-1842) and Egypt (1351 Hijra).[35]
>
> Francesco Gabrieli, the well-known Orientalist, wrote a book entitled ***The Impact of the Story "A Thousand and One Nights" upon European Culture***.[36] When Krimski translated it into Russian, Maxim Gorky wrote a forward on the first volume, speaking of how charming the stories were. [37]

Another category of such literary works in Islam is the *maghamat* written by renowned literary figures, the most famous of which are those done by Badee'uzzaman Hamedani (died 398 Hijra) and Abu Muhammad Ghasem ibn Ali Hariri Basri (died 516 Hijra).

Both of the works mentioned above have been repeatedly translated into other languages and published, sometimes with the Arabic text and sometimes with it. The Arabic text has also been published independently. Some of these translations are:

- A translation of Badee's ***Maghamat***, into Latin by J. Scheidus (Otheng, 1572)
- The same book into German, by O. Rescher (Luneburg, 1913)
- The same book into French, by Grangeret de la Grange (Paris, 1828)
- The same book into English, along with the original text, by W.J. Prendergast (Madras 1913, London 1918)
- A translation of Hariri's ***Maghamat***, into English by Leonardo

35. ***The Persian Encyclopedia***, Vol. 1, p. 211.
36. ***Al-Mustashreghoon***, Vol. 1, p. 395.
37. Ibid, Vol. 3, p. 922.

Chappelow (Cambridge, 1767)
- The same book into French, J.J.A Caussin de Perceval (1819)
- The same book into French, by L.M. Devic (1870)

Several other translations of this book, including German translations, also exist. Moreover, considering the translation of books such as Ibn Ghutaibah's ***Adab ul-Kateb*** – of which we have previously spoken of – we see how they have benefited from Islamic writing styles.

It is obvious that a comprehensive study of these issues calls for a great amount of time and space. There are many literary, historical and also story books that have led to great works of Western literature and theater.[38]

We will content to mention that Najib Alhaghighi, the Arab researcher and scholar, has devoted two or three chapters of his book – which we have already discussed – to the impact of the East upon on the literature of France, England, and other countries. In these chapters, he also mentions Islamic references in Western literature, naming great writers and poets who have each, in a way, been influenced by Islam. For further information, see the first volume of his book, pp. 168-171, the second volume, pp. 463-464 and the third volume, page 691.

Furthermore, the book ***Iran in French Literature*** also depicts some of the influences made by Muslims' writings, stories, and works upon the above-mentioned French literature, along with evidence and comparisons – such as the influence of Saadi's ***Gulestan*** in La Fontaine, along with the impact of ***A Thousand and One Nights*** upon Antoine Galland[39], and upon Petis de Lacroix, the author of ***A Thousand and One Days***, published in 1710-1712; also, the influence of ***al-Faraj ba'd al-Shiddat*** on the above-mentioned author, the French translation of Mulla Hussein Va'ez Kashefi's ***Anwar-e Suheili***, and other works. In this book, the impact Islamic literature has had upon the poets and writers mentioned above as well as writers and thinkers such as Didreau, Voltaire, Rousseau and Montesquieu has been discussed.

Besides the literary and technical influence Islamic literature and writing has had upon these thinkers, the spirit of Islamic culture has also fascinated them to such an extent that they speak in such praise:

> "How lucky people living in Iran, the land of Islam, are, for crimes of the kinds that occur in Christian countries – burning people in flames – do not happen there. The truth of the religion of Islam, the

38. We will soon deal with the importance and philosophical-educational impact of ***Hayy ibn Yaghzan*** and its translation.

39. ***Iran in French Literature***, p. 96.

religion brought upon the Holy Prophet by angels, is itself the best defense for this. Islam has never needed to turn to fatalism in order to defend itself. [40]

9. The Divine Comedy and Its Islamic Origins

The Divine Comedy is a famous book written by Dante (1265-1321 AD).

> The first major – and perhaps the greatest of all – Italian poets, Dante Alighieri, who wrote ***The Divine Comedy***, was born in Florence… He is regarded as not only the greatest literary figure in Italy, but as one of the greatest in the world. It was Dante who established the qualities of Italian poetry. His poetry is like music; his thoughts are elevated, his imagination powerful and his description of details is quite efficient.[41]

What is ***The Divine Comedy***? It has been said of this book that:

> "***The Divine Comedy*** is one of the great masterpieces of man-made poetry; perhaps very few works of poetry written by man can compare to it. Originally written in Italian and named ***Commedia***, the word "divine" was added in the later centuries to depict both its supernatural and afterworld aspect, and its unique magnificence.
>
> Dante began writing this great work of poetry in 1307. The book consists of three elegies—the first was written in 1310, the second in 1314, and the third between the years 1315 and 1321. The three elegies form a hundred pieces (*cantos*); the first piece is an introduction, and each of the elegies consists of 33 pieces. The reason the book has been entitled "Comedy" is the fact that the first elegy, Hell, has a theme of fear and horror, whereas the second, Purgatory, is mild and the third – Heaven – is pleasant and charming, thus a process of gradual change from sadness to happiness. The topic of this book, on the other hand, is Dante's imaginary excursion to the three platforms of the afterlife – Hell, Purgatory and Heaven. On the night of Good Friday… when Dante is 35, midway into his life, he finds himself alone in a dark wood. He spends that night in anxiety, until at dawn he sees a hill with the sun shining upon it. When he headed for that hill, a she-wolf, a lion and a leopard force him to retreat back into the dark wood. Virgil, the great Roman poet appears to guide him. Three ladies –

40. ***Iran in French Literature***, p. 96.
41. ***The Persian Encyclopedia***, Vol. 1, pp. 949-950.

> Mary, St. Lucia and Beatrice Portinari, who was Dante's beloved and source of inspiration – had sent Virgil to aid him. Virgil guides Dante through the depths of Hell to the Mountain of Purgatory. On the top of this mountain, Virgil is replaced by Beatrice, who takes Dante to Heaven, through the nine skies to the highest level… as we have already mentioned, ***The Divine Comedy*** is a rare piece of man-made work of art remarkably acclaimed all over the world and translated into most major languages (the Persian translation was published in Tehran in 1956 AD), along with the many interpretations and commentaries written about it.

This is ***The Divine Comedy***, which deserves, from prominent critics' point of view, all of the appreciation it can get. "Just a glance at the number of times it has been printed, interpreted and translated into major other European languages shows how magnificent and globally acclaimed this book is."

After our brief discussion of this book, let us now see what contribution we Muslims have made this great work of art. As the preface to the Farsi translation explains:

> "Islamic *hadith* and other narrations also show numerous implications on such an excursion to the afterworld. As the Italian scientist and former ambassador in Iran, Professor Ciroli's research on Iran indicates, the Latin version of the story of the Holy Prophet's *me'raj* was available in Dante's time, and he was probably aware of this event (the Quran (17:1) also refers to the *me'raj*, a Night Journey taken by the Holy Prophet)… ***La Escatologin Musalmana en la Divine Comedia***, published in Madrid in 1919 AD, the contemporary researcher Professor M. Asin Palacios' important research – acclaimed as the most controversial work on Dante throughout the last thirty years – contains a comprehensive list of events and incidences similar to ***The Divine Comedy*** in Islamic *hadith*, literature and narrations, from living people going to the afterworld, phases of hell and the various plants found there, and anything else Dante may have been inspired. This book well depicts how Islamic sciences and culture has contributed to the creation of great European mental and literary achievements after the medieval era." [42]

The preface mentioned above also speaks of the impact Hakim Sanaee's

42. ***The Divine Comedy***, Vol. 1 (Hell), Preface, pp. 44-45.

Seyr ul-Ibad ilal Ma'ad has had upon Dante.

The late scholar, Mujtaba Minooee (who died in 1976) has also pointed out ***The Divine Comedy*** and its prominence and impact upon the development of aesthetic religious arts and techniques in Europe, as well as its influence on the rise of modern literature and the Renaissance movement:

> "It was thanks to this book (***The Divine Comedy***) that religious aesthetic arts and techniques developed in Europe, modern European literature was born, and the era Europeans called Renaissance began. It has had a profound impact on literature throughout the last 600 years, and its impact has not only not decreased, but actually increased. It is said that Dante had gainer all the knowledge of his time, and had studied and learned all of the work in his era on philosophy, theology, science, history, literature and aesthetic techniques; he was a true master of all sciences, as Avicenna was in the East. As an Italian historian and philologist has stated, Dante was a complete poet and philosopher, and had an incomparable style in expression and rhetoric. Although he lived in an era which had other great men like Roger Bacon, Albert the Great, Aquinas, Petrarch and several others, he was clearly the superior. [43]

Minooee then mentions the significance of the influence Islam had upon Dante and how Dante has achieved in acquiring the most meaningful and spiritual ideas and perfections from Islam; he points out that there is no surprise in Dante's being influenced by Islam – in fact, it would be surprising if he had not been:

> … indeed, the fact that Dante has engulfed all of Rome and Greece's heritage, as well as Christian and Judaic mysticism and theology, and has combined these with the most precious and meaningful ideas and perfections of Islam, building up a spectacular mansion which unifies all knowledge and experience of the East and the West is one of the reasons for Dante's greatness and supreme talent. This is no surprise; on the contrary, it would be surprising if mystics like Eckhart, Dante, and Thomas Aquinas had not been influenced by Islamic mysticism.

The Egyptian scholar Mahmoud Aghad also says:

> "Recent books and references emphasize the impact Muslims had upon Europe, which dates back to an era prior to what has

43. ***Fifteen Lectures***, pp. 45-49.

been spoken of during the last one or two periods. These new documents are now evidence that can help us clear up a few facts, and change suppositions into certainty. Forty years ago, Professor M. Asin Palacios, the renowned Spanish Orientalist, admitted that Dante Alighieri was inspired by Islamic books in ***The Divine Comedy*** in his descriptions of Hell, Purgatory and Heaven and also the *me'raj* and Resurrection. He also points out that Abu al-A'laye Mu'arry, had created such descriptions prior to Dante in his work ***Risalat ul-Ghufran***. Professor Palacios merely formed his theories based upon the similarities existing between Islamic books and ***The Divine Comedy***. Recent studies have proved, however, that such descriptions in story telling found its way into Latin and Italian books from books originating from Islamic culture that were common among people in Italy of Dante's time. Dr. Muhammad Avaz Muhammad has discovered this missing link (between ***The Divine Comedy*** and Islamic works) in ancient Latin, French and Italian translations. In a speech made at the Tokyo Scientific Association, he said, "This translation was made – as expected – in the Alphonsine court, a king who regarded himself as the king of the Muslims and the Christians equally. Around 1264 AD, Ibrahim al-Faghin, a Jewish physician, translated the story of the *me'raj* into Castilian. This translation was lost, but Buena Fontura (1274-1221) translated the same Spanish text into Latin and French. Copies of this translation have been found in Oxford, Paris and the Vatican, which were done simultaneously by Cerulli and Munoz in Italy and Spain, apart from the older translation – 1264, one year before Dante was born. Enrico Cerulli has presented several reasons why these translations were common and available to writers. He also speaks of a poem which is much lower in richness and style than Dante, but the poet, Dante's contemporary, directly speaks of the Holy Prophet Muhammad and the story of the *me'raj*.

Apart from the references mentioned above, readers can also refer to the following books:

1. ***Ghissat ul-Me'raj wal Asl ul-Arabi al-Asbani Lelcomeediyyal Ilahiyya***, by Enrico Cerulli, Vatican (1949)
2. ***Zu'un Jadidun alal-Asl al-Islamiyya Lelcomeediyyal Ilahiyya***, an article by Louis Del Lavida

3. ***Al-Ayat ul-Islamiyya fil Comeediyal Ilahiyya***, by Asin Palacios, in the magazine ***Al-Andalus***, No. 14, 1949. [44]

10. *Hayy Ibn Yaghzan* and Its Impact on Western Thoughts, Arts and Literature

Here, by Hayy Ibn Yaghzan ("Alive, son of Awake), we refer to the renowned Islamic philosopher, Ibn Tufail Andalusi's story:

> *Hayy Ibn Yaghzan is the title of a book and the name of the protagonist of a series of philosophical stories written by some Islamic philosophers in order to depict a philosophy or mysticism. The delicate story of Hayy Ibn Yaghzan was written by Ibn Tufail Andalusi (born 581 Hijra) is quite Robinson Crusoe-like, but with philosophical implications and concepts.* [45]

We have already mentioned a few points about story writing in the Islamic era, including writing philosophical stories. We will now discuss what we should know in order to better comprehend such stories.

a) The Wise Devising Solutions

There is an astounding enthusiasm for educating and creating awareness in others in the works of the wise and the learned. Since the earliest times, these wise men have endeavored to teach others what they have learned from their trials in material life as well as divine experiences, record their moral advice, eternalize useful tests concerning life and educate others on the phases of awareness and gaining it.

To this aim, they have gone out of their way, from engraving on stones to putting words inside animals' mouths or any other means. They have turned instructions into short, easy-to-remember sentences and devised various methods to make them stick in people's minds.

One of these tactics is providing examples – pouring one's intention into a mold that all can read, hear and be inspired by. The Quran too, has used this method frequently, and the philosophy behind it has been explained also...[46] Furthermore, there are many examples of this in the works of Islamic scholars and philosophers, both in Arabic and Persian...

Another method used by the wise in order to create awareness in man was creating stories and tales. Human beings enjoy stories, which lies

44. ***Al-Mustashreghoon***, Vol. 1, pages 391 and 394.
45. ***The Persian Encyclopedia***, Vol. 1, p. 875.
46. 13:17, 14:25 and many others.

in their interest in discovering the unknown. A story begins with a brief or vague description of someone or something, and then proceeds with the story of it. This poses unknowns for the reader or the listener, raising questions that man tends to answer.

Thus, if the writer is skilled in planning these unknowns, posing questions and then explaining them, it will be possible to take the reader as far as the writer wishes. Some scholars and philosophers, who have been endowed with the ability to write eloquently and the talent for creativity, have quenched this desire for awareness by writing philosophical stories. In fact, by writing a philosophical story, they have tried to present a human being's story from the first moments of his life in this world, a human being who quickly realizes the importance of knowledge and awareness. In such stories, the reader is continually interested in what happens to the protagonist and where he eventually ends up in. The reader sees him pass through each phase of the path, finally reaching the ultimate phase of knowledge and awareness; thus, the reader is also encouraged to pursue such a path. And if the reader is wise, he will learn the path toward awareness and knowledge, discovering the secret underlying the story (if there is one), and sets off on his spiritual journey. He gradually begins to want this; and when this desire rises, he himself rises too, and begins his journey. And when the journey has begun, and the right path has been taken, he will eventually reach his destination.

b) Philosophical Tales in Islam

There are several philosophical stories penned by Muslims. In these stories, philosophers and great men have pointed out issues and put secrets, including the secrets of knowing oneself, finding the way toward perfection and how to go through such a path. Some of these issues have been presented as secrets lying in these stories. A few examples are:

1. ***Hayy ibn Yaghzan***, by Avicenna
2. ***Hayy ibn Yaghzan***, by Ibn Tufail
3. ***al-Ghurbat ul-Gharbiyyah (Hayy ibn Yaghzan)***[47]***,*** by Sohrevardi
4. ***The Red Wisdom***[48], by Sohrevardi
5. ***Salaman-u Absal***[49], by Avicenna

47. The Persian translation of this story has also been published as an appendix to ***The Wakeful Living***.
48. ***A Collection of Sheikh Ishragh's Works***, Vol. 3 (Persian Works), pages 209 and 239. Some of Sheikh Ishragh's other books are also of similar issues.
49. Khajeh Nasiruddin Tousi has included the text of this story in ***Sharh-e Isharat*** (published in Egypt, Part 2, pp. 103-104), and "it seems that the Sheikh's ***Salaman-u Absal***, which in some parts reminds us of ***Yousif and***

6. ***Salaman-u Absal***[50], by Hanif ibn Ishagh
7. ***Resalat ul-Tair***, by Avicenna
8. ***Resalat ul-Tair***, by Muhammad Ghazali [51]
9. ***Resalat ul-Tair***, by Ahmad Ghazali
10. ***Beluhar and Budasaf***,[52] translated into Persian by Allameh Majlesi
11. ***Fazil ibn Nategh***,[53] by Ibn u;-Nafis Dameshghi

As for works written in poetry:

- ***Mantegh ul-Tair***, by Fariduddin Attar Neishabouri
- ***Salaman-u Absal***,[54] by Abdurrahman Jami

c) Expressing Thoughts in Literary and Artistic Words

Apart from its spiritual and conceptual richness, Ibn Tufail's work also excels in its story-telling technique. As the scholar Farough Sa'd has also stated[55], the question comes up whether it is correct to convey thoughts in literary forms or artistic styles (such as plays, poems, novels, paintings, screenplays, etc). Is literary language capable of reflecting thoughts and philosophy? The point is that if the creator of the work is knowledgeable in both the intellectual issue and philosophy concerned and diction and artistic ability, such a reflection of thoughts will be not only feasible but also successful and fruitful.

We have already mentioned how the wise made use of any way they

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Zulaikha, is somehow the product of his own philosophical thoughts and imagination."

50. Khajeh Nasiruddin regards this story as a fake, not a translation of the Greek version by Hunain – ibid.

51. "The Story of Birds," is a collection compiled by Nasrullah Pourjavadi, including Ahmad Ghazali's ***Risalat ul-Tair*** (in Persian) and also Muhammad Ghazali's ***Risalat ul-Tair*** (in Arabic). In the preface to these two books, there is an explanation on both of them, along with Avicenna's ***Risalat ul-Tair*** and their impact upon Attar Neishabouri's ***Mantegh ul-Tair***.

52. ***Belahar and Budasaf*** is a book on religion, philosophy and moral ethics, which concerns the guidance of Budasaf, the Indian prince, by the mystic hermit Belahar… an Arabic version of this book exists in Ibn Babuyeh Sheikh Sadugh's ***Kamaluddin wa Tamam ul-Ni'mah (The Perfection of Religion and the Whole of Blessing)*** and in Allameh Majlesi's ***Ein ul-Hayat*** (in Persian) and also in his ***Buhar ul-Anwar***, Vol. 17. (***The Persian Encyclopedia***, Vol. 1, pp. 445-446)

53. ***The Work of Islam***, Preface, p. 17.

54. The origin of Jami's ***Salaman-u Absal*** is regarded to be Hunain ibn Ishagh's story, which was translated from Greek. The other (two versions of ***Salaman-u Absal***) are older versions narrated from Greek into Arabic by Hunain ibn Ishagh, from apparently hermetical philosophy books. It is the latter version that was turned into poetry along with sophist explanations on Rumi's ***Mathnavi***. In Hunain and Jami's version, Salaman is a young man obsessed by the love of a woman called Absal, whom Hermanus, the Greek king destroys to free Salaman from this inappropriate relationship. In the version pertained to Avicenna, Salaman and Absal are two brothers; Salaman's wife falls in love with Absal, and since Absal does not submit to her, she poisons him. Jami's ***Salaman-u Absal*** has also been translated into English and French, and is renowned for its symbolic metaphors. (***The Persian Encyclopedia***, Vol. 1, p. 1314).

55. In his well-accomplished preface on ***Hayy ibn Yaghzan***.

could to distribute thoughts and awareness. Farough Sa'd also points out Plato's use of Greek myths and legends in order to convey his thoughts, as well as Chinese philosophers such as Lao Tse in his explanations of Tao philosophy, and Indian philosophers in Upanishads. He then proceeds to the artistic and literary significance of the poem ***Einiyyah*** by Avicenna:

> "There is no doubt that the basic elements upon which European philosophical stories from the beginning of the eighteenth century ever since – i.e., from Voltaire, Rousseau, and even Camus and Sartre are based upon, are all somehow related to the fundamental components of the plot of Hayy ibn Yaghzan."

He then goes into a discussion on this – using artistic language and frameworks to express philosophical thoughts – and quotes from Simone de Beauvoir's article on literature and philosophy in ***The Criticism of Popular Philosophy***.

Thus, we can conclude from this brief discussion that the selection of form and framework, if done skillfully, along with a well-conceived plain in the writer's mind, can not only reflect the richest of ideas but also prove to be the best way of doing so.

d) Translation of Hayy Ibn Yaghzan

This philosophical-educational story has not gone so unknown. Many have found it out and translated it into their own languages. Farough Sa'd has listed some of the translations made on this story along with the translators and the time and place of the publication:

1. Into Hebrew, by Musa Narbuni, 1349 AD
2. Into Latin, by Edward Pocac (1671)
3. Into Dutch, pertained to Spinoza (1632-1677)
4. Into English, by George Keith (1674)
5. Into English, by George Achwell (1686)
6. Into English, by Simon Ockley (1708)
7. Into English, by P. Bromle (1904)
8. Into German, by J.G. Pritus (1783)
9. Into German, by J.G. Eickhorn
10. Into Spanish, by P. Pons (1900)
11. Into Spanish, by A.G. Palencia (1937)
12. Into French, by Leon Gauthier (1936 and other times)
13. Into Russian, by J. Kuzmine (1920)
14. Into Bolognas, by Josef Bielawski (1963)

e) The Literary Value of the Story of Hayy Ibn Yaghzan

The story of Hayy ibn Yaghzan is regarded as a work of perfection in narration techniques and abundant in creativity and innovation. In his book ***Story Telling and Narration Techniques in Hayy ibn Yaghzan***, Farough Sa'd explains in seven items how technically significant Ibn Tufail's work is. He says:

> "The most important element in a story is undoubtedly what impresses the reader. This could be the plot, one or several of the characters or protagonists in the story, or the environment in which the story is developed. In ***Hayy ibn Yaghzan***, the main character and protagonist is Hayy himself. With the entrance of the second character – Absal – the reader thinks he is the main character; when Absal meets Hayy, however, Hayy's character is revived and takes charge of the plot again… the fact that Ibn Tufail sets Hayy as the main character of the story does not mean that he has neglected the other issues and parts of the story; in fact, we see the events in the plot linked like a chain: the story of the infant abandoned in a box at sea, the story of the infant found by the faun, the story of the infant after the faun's death, investigating the reason for that death, the conclusions made by the child's mental efforts, his meeting with Absal, his story following Absal's arrival upon the island… the narration of all of these events are organized and correlated, keeping the reader expectant and finally giving him what he expects… The story is well-written and the relationships between the characters and the events are sturdy and well-conceived. Ibn Tufail tells the story by presenting beautiful, attractive pictures, which are correlated and can immerse the reader deep into the story."[56]

Other scholars have also pointed out the technical significance of the story:

> "Ibn Tufail's book is of high importance, both in the story and in the concepts and meanings included in the story."[57]

And, Badee'uzzaman Forouzanfar has said:

> "This book is one of a kind among philosophical books, innovative and groundbreaking."[58]

56. Farough Sa'ad's Research on ***Hayy ibn Yaghzan***, pp. 28-30.
57. ***The Persian Encyclopedia,*** **Vol. 1, p. 875.**
58. Badee'uzzaman Forouzanfar, ***The Wakeful Living: A Translation of Hayy ibn Yaghzan***, The Foundation for Book Translation and Publication, Tehran, 1955, Preface, p. 14.

f) A Summary of the Story

The main purpose in writing the story of Hayy ibn Yaghzan and other similar stories is to aid and guide thoughtful human beings who tend to reach the truth of knowledge. The first phase in such a path is to remove all obstacles, which can be categorized into five groups:

The Phases of Intellectual Progress:

a) The body phase: The human soul is placed in his body when he is in his mother's womb, after which he is born. Thus, he is trapped in his physical, body surroundings ever since his birth. Any demise or fall human offspring experience – following their parents – starts from this very dependence upon their physical beings. The entrapment within the body cage stays with human beings up to their very death unless they free themselves from this cage, through knowledge and endeavor throughout their life, and pass on toward a death out of their own will.

   In other words, man must find the truth about himself, and put it to use toward the goal he has been created to achieve, for the truth about man is the truth about his soul, which is God's breath and a divine blessing. Once the soul has been discovered and one is free of the physical cage of his body, he can set about his true mission – gaining the knowledge of the truth, which can restore him back to what he really should be. As said in interpretation of Avicenna's ***Hayy ibn Yaghzan***:

   "Knowing is necessary, for God Almighty has created people out of two gems: the body and the spirit, which is called the *nafs* in Arabic, which is the real truth about people, rather than the flesh and skin. It is the spirit that receives all knowledge and causes all occurrences. And God created the spirit in such a way that, if nothing prevents it, the spirit will always pursue knowledge and the discovery of God and the angels, their location, their correlation with each other and with God, and also the knowledge of the supernatural world." [59]

b) The environment phase: The environment, one's thoughts, traditions, customs, dependences, amusements, knowledge, and anything around him may inhibit realizing the truth, unless man

59. From ***Avicenne et le Receit*** Vissionaire, Henry Carbon's commentary on Avicenna's ***Hayy ibn Yaghzan***, which has been published along with the Arabic text and a detailed preface in French. The translator is not known, although Carbon believes him to be a contemporary of Avicenna's.

is able to bring his cognitive character out of the control of the powerful world around him, and achieve an independent, immense power of cognition.

c) The mental imagination and perception phase: These affairs also create a great wall insulating man from an accurate cognition of the truth; through great effort, man should free his cognitive spirit from this influence.
d) Intellectual perceptions: General science an becoming to submersed in them may inhibit the cognition of the pure, real truth. *Science is truly the greatest veil*. Unless the human spirit can separate himself from such affairs, he will not achieve knowledge of the true song of his existence.
e) The presence of the spirit: Another highly significant inhibitor is the presence of the spirit to its own benefit. The spirit cannot discover the truth unless it steps beyond itself. As Hafez says, "You are the veil covering yourself…"

The basics of religion show exactly how man can successfully pass these five obstacles. If one has correct faith in the truthful knowledge, is compliant with the basic principles of his religion and is aware of how he should worship intellectually and how to conduct his heart, he will achieve the task of passing these obstacles.

As Imam Abu al-Hassan Ali ibn Musa al-Reza (AS) says to Ahmad ibn Abinasr Bazanti at the end of his famous quotation on the day of Ghadir, "… I swear to God that if people deservingly knew the greatness of this day, angels would greet them ten times a day." This shows the importance of the impact of true knowledge and the realization of the self in intuitively grasping the truths about the universe and the heavens.

In a word, Islamic philosophers have also devised ways to pass these phases and achieve freedom from the physical surroundings and superficial affairs – indeed, such a feat necessitates "will," followed by "knowing," and eventually "ability." Without the will to do something, man will not pursue anything and will not go out of his way to seek any achievements. Thus, man must first want to do so. Then, he must learn how to. Stories like Hayy ibn Yaghzan have been written to shine a light upon such a path.

As we have already mentioned, the basic plot of the story is the progress and development of a human being raised in a jungle, far away from any noisy human environment, and free of all mental or physical

oppositions, engagements or limitations, as he decides to set out on the path to perfection through seeking knowledge and careful observation, in which he succeeds. The story is intentionally thus, so that any truth-seeking human can put himself in the protagonist's shoes and, becoming an infant, progress step by step and… achieve an "evolving soul" and "changing intellect"…. This is why Simon Ockley has written a book, ***Tatavvor ul-Aghl il-Insani fi Hayy ibn Yaghzan (The Changes of Human Intellect in Hayy ibn Yaghzan)*** on the story of Hayy ibn Yaghzan. [60] We must have in mind, however, that it is not only the intellect, but also the human soul, sense and whole self that undergoes evolution in the story, passing through the phase of understanding obstacles on toward the phase of overcoming obstacles… Having passed through the phase of "the existence of everything and the absence of the truth," he achieves the phase of "the absence of everything and the presence of the truth."

In a nutshell, Farough Sa'd, in his introduction, has summarized the beautiful story of Hayy ibn Yaghzan into seven phases. I will now present a brief translation of these. The quotation marks indicate that I am quoting from Badee'uzzaman Forouzanfar's translation.

- The first phase: In this phase, Hayy is an infant abandoned upon a shore or an island. A faun whose offspring has been taken by an eagle hears Hayy's crying, and nurses him.
  "The faun which had undertaken his care reached a vast pasture abundant in blessings, made the faun fat and well capable of nursing him. The faun spent all of its time with him, and never left him except to graze. The baby became so attached to the faun that it wept until the faun came to him, when he would throw himself into the faun's embrace…" [61]
  Hayy turns seven. He has learned how to imitate animals, cover himself and use a stick to protect himself and his food.
- The second phase: In this phase, the faun dies. Hayy cuts up its body aiming to find out the reason for its death, and discover the essence of life.
  "He realized that the nursing female was what the corpse had lost; this dead flesh could not be what had made it do all of those actions. He saw that the dead animal was something like a tool,

60. Simon Ockley, ***Tatavvor ul-Aghl il-Insani fi Hayy ibn Yaghzan***, 1708, along with the Arabic text and the English translation, in ***al-Mustashreghoon***, Vol. 2, p. 469.
61. The translation mentioned above, p. 51.

similar to the stick he used as a hunting weapon…" [62]
His faculties and talents, through reminders, emotions, comparisons, observations and distinctions, gradually emerge, as he learns how to use them; the dissection of the faun's body teaches him sensory and experimental knowledge…

- The third phase: In this phase, Hayy discovers fire; he learns how to find, control and use fire, which makes him familiar with instinctive warmth and animal spirits.
  "And one day, a fire broke out in a straw field, caused by the friction of the straws…" [63]
- The fourth phase: Here, Hayy sets out to explore other objects found in the universe. He realizes the unity and combinatory quality of the soul, and finds that substances are various and in different shapes. He categorizes objects into two groups: light and heavy. Through careful observation of the occurrence and transformations in objects, and their interactions upon each other, he tries to discover the reasons for events in the world of nature.
  "From then on, he went another path, and began to study objects in the world of creation and voidance[64], such as in various animals, minerals, rocks, soil, water and steam, snow and hail, smoke and due. He found them abundant in description, actions and agreeing and contradictory in their changes. Through careful observation, he found similar and different qualities in them. Their similarities unified them, and their differences were also numerous. Sometimes the qualities objects had made him see them as independent and separate, which magnified their immense number and multiplicity. He saw things existent as so scattered and dispersed that he fount them impossible to record and document, as in his own case… From then on, he would picture any kind of animal in his thoughts and study it deeply… he then thought of various plants and their diversity… then he proceeded to objects that ha do feeling and did not develop, such as rocks, soil, air and flames… He also observed other objects, and saw that the existence of each is a combination of the physical side and something other than the physical side, which may be one or more than one. Thus, he understood objects,

62. p. 61.
63. p. 63.
64. This refers to the emergence and degradation of things, such as water turning into steam, in which the steam is emerging and being created, whereas the water is becoming degraded and void.

which was the first spark of spirituality in him…[65]
At this time, Hayy was 28 years old.

- The fifth phase: In this phase, he finds interest in exploring space. He gazes at the sky and thinks about the stars and the heavens. He observes that stars are also objects and in orbit. Thus, he reaches vast knowledge and awareness on eternity and occurents, thus realizing the secret of the existence of objects, their forms, qualities, instincts and beauties.
  "Following this deep pondering, upon seeing any being of development, advantage, power, or perfection, or ant kind of superiority in general, he would think that all of these are blessings from the Free-willed Doer (How Great He Is). Thus, he would conclude that He Himself must be greater, more beautiful, more brilliant and vaster in perfection than any of them…" [66]
- The sixth phase: Hayy is now 35 years old. He deeply cogitates, and his profound pondering into himself shows him that the spirit is other than the body, and each is separate. The body is not significant; it is meant for gravity and fall. The spirit, on the other hand, is at all times in pursuit of the knowledge of God. In this phase, Hayy spends many days and nights thinking and pondering. Finally, it dawns upon him that true prosperity lies in true knowledge and true intuition, intuition of the truth. If man knows God, he will join eternity. Thus, Hayy realizes the true secret to eternity and prosperity.
  "Upon realizing that his true self was not this physical body which is understood through senses and is surrounded by skin, he lost interest in the physique. He started to contemplate instead the elegant essence by which the Great Being could be understood…"[67]
- The seventh phase: Hayy has now found the secret to prosperity and happiness. He knows that release from the traps of material aspects lies in continual attention toward God and observing His beauty and greatness. Thus, he attempts to achieve absolute perfection, a position in which he can be in constant attention, submersed in observation, forgetting everything but God, even himself. He therefore sets limitations for himself – he eats little, mostly plain food, and to reach more harmony with celestial bodies (the stars and the heavens), he starts circling around the island… When he

65. p. 69-77.
66. p.98.
67. p. 101.

sees that the stars are pure and clean, he pays attention to his own cleanliness. Then he tries to cut off all of his interest in things he is able to sense physically, and pay attention to God totally. In order to think about one single thing with all of his existence correctly, and free himself of mental and imaginary pictures, he dips into deep thought, carefully applying the rules of thought.

"He was lying there all the time, head dropped, eyes closed, inattentive toward all bodily faculties. His thoughts were focused upon God, without even a shadow of thinking of anything else or blasphemy. Whenever another thing crossed his mind, he would drive it away. For a long time, he spent his days and nights in such hermitic abstinence; he would neither eat nor move. During this difficult endeavor, sometimes his thoughts would be empty of everything but his own spirit, which when focused upon God, found something ever-present. Thus, he fell into a sea of sorrow, for he realized that seeing only himself would turn seeing the single, true God into a kind of blasphemous action. He still intended to be free from himself, and reach the position of purity in observing God – and finally, this great goal was achieved. The heavens, the earth, everything in them, all spiritual and physical facets and faculties, and all intellectual powers aware of God disappeared from his mind, and so did his own self. They all crumbled, became naught, and vanished. Nothing was left but God… *And who deserves this Kingdom but the Only, Powerful God?* Thus, God's words became understandable to him, and he heard it… He became immersed in such a situation, in which his eyes saw none and his ears heard none, and the thought of no one found way into his heart…" [68]

Thus, Hayy achieves total knowledge and perfect knowledge through his progression of thought, abstinence and pondering. Then Absal arrives on the island and meets Hayy… Hayy then leaves the island with Absal, and joins other people. Here he realizes the divine-social duties he has, which leads to the other events in the story of ***Hayy ibn Yaghzan***, which readers are recommended to read, whether Ibn Tufail's version or any of the good translations we have mentioned.

g) The Effect of Hayy Ibn Yaghzan on Western Literature

Having seen the translations of the story and the philosophical, religious

68. pp. 123-125.

and educational significance it bears, it is certain that such a story will find many readers, and that among the many who have read it in one of the 15 languages it has been translated into, there are undoubtedly plenty of literary figures, thinkers, scholars of moral ethics and experts on educational studies who are specifically interested in the story. This leads us to the impact the style and content of a story can have – after a while, it depicts itself in the work of many other writers, showing up in their symbols, perceptions and pictures.

Research has been done on the influence of ***Hayy ibn Yaghzan*** upon other writers, story writers in particular. Here are some books clearly showing inspirations from ***Hayy ibn Yaghzan***:

- ***Criticon*****,** by Balthasar Gracian
- ***New Atlantis***, by Francis Bacon
- ***Robinson Crusoe***, by Daniel Defoe
- ***The Jungle Book***, by Rudyard Kipling
- ***The Second Jungle Book***, by Rudyard Kipling

For further detail, see Farough Sa'd's preface on the story of ***Hayy ibn Yaghzan***, in which Sa'd also points out the influence the story had upon the Religious Society of Friends, a religious group founded by George Fox in England in the seventeenth century. Fox believed that man can directly, guided by the "inner light" given to him by the Holy Spirit, make contact independently with God. He formed the Religious Society of Friends, also known as the Quakers, because they shook with enthusiasm while praying. The Quakers avoided worship in formal churches, taking oaths and carrying weapons in war."[69]

On the English translation of ***Hayy Ibn Yaghzan*** by George Keith and its influence on the Religious Society of Friends, Madani Saleh, an Arab researcher, says:

> The book ***Hayy Ibn Yaghzan***, on George Keith's insistence and recommendation and on the Quakers' approval, became known as an instruction for piety and chastity. In his preface to the translation, he praises the book and its author so highly that it seems that the Religious Society of Friends has found its lost one in Ibn Tufail's book, for he showed – in George Keith's point if view – quite capably how distant the two forms of knowledge can be – knowledge one acquires through his heart and the knowledge one acquires merely by reading, listening and imitating others.

69. ***The Persian Encyclopedia***, Vol. 1, p. 262.

Robert Barclay, the great Quakers scholar, also speaks of ***Hayy Ibn Yaghzan*** with great praise, for he believes it to be a practical, empirical example of the power of the "inner light." The Religious society of Friends could not tolerate the pressure of the church; maybe they avoided worship in the church due to the inappropriate mediations made by priests as well as their heaven-selling and sin-purchasing. Perhaps they avoided carrying weapons at war because they had a guilty conscience due to the crimes committed during the Crusades. Thus, they freed themselves and took shelter in the light of the intellect and informal worship, proceeding through their path with the light of ***Hayy Ibn Yaghzan***. Perhaps Barclay's banning of the book (later, in 1779) was in fear of the pure and enlightening instructions in it drawing people's attention toward Islam and the Quran.

h) The Effect of Hayy Ibn Yaghzan upon Western Thoughts and Philosophy

The previous sections show the vast impact this story has had upon Westerners' literature, story writing, imaginations, moral ethics and spiritual ways. It is unimaginable for such a story to enter a culture, be translated into other languages and inspire dozens of stories but have no influence upon thinkers, philosophers and scholars, particularly when the main theme of the story is cognition, guiding thoughts and providing a path for gaining philosophical knowledge and receiving intellectual knowledge of the universe.

Thus, we can assume that many of the philosophical principles presented in the West after the translation of ***Hayy ibn Yaghzan*** are somehow affected by the inspirations of the story. This is why some scholars have admitted that:

> "The text of the story of ***Hayy ibn Yaghzan*** was published and translated into several languages, which inspired medieval philosophers."[70]

i) The Effect of Hayy Ibn Yaghzan upon Western Cinema

It is nothing new for Oriental tales, experiences and issues to inspire Western scriptwriters and make well-known Western directors produce make movies based on them. This is not something new. There are abundant examples of Eastern events and issues creating some of the best of Western movies. In the case of ***Hayy Ibn Yaghzan***, however, special

70. ***al-Mustashreghoon***, Vol. 1, p. 92.

discussions have been raised and its impact on some famous movies has been revealed.

The scholar Farough Sa'd has shown that the philosophical tale of Ibn Tufail has inspired Rudyard Kipling's ***The Jungle Book*** and ***The Second Jungle Book***, which was made into a cartoon. Although the writer has not been able to depict the hero of his story like Ibn Tufail's protagonist, Kipling's writing has influenced the Walt Disney picture enough to show inspirations by ***Hayy Ibn Yaghzan***.

Having presented other discussions, pictures and evidence, Farough Sa'd goes on to depict the role and influence of Ibn Tufail's tale upon the Tarzan movies. In his extensive, documented discussion, he shows how this story has inspired Edgar Rice Burroughs, who had – until 1972 – penned over 47 stories, and 43 movies had been based upon his books. Sa'd also points out other writers who have chosen Tarzan as the titles of their scripts or characters in their stories.

In the rest of his discussion, Sa'd points out issues in the comparative history of art and comparative literature, which he follows with dozens of stories which have been influenced in some way by Ibn Tufail's story. Readers are referred to Farough Sa'd's preface on ***Hayy Ibn Yaghzan*** for further information.

Islamic Poetry and Art

1. Islamic Poetry and Art

These are the two issues we will discuss briefly in this chapter. Alert and informed Muslims are aware of the widespread reverence for Islamic poetry, art and civilization, whereas others misjudge it and make false claims about it. When facing a religion which obligation is an important part of, how can we evaluate the phenomena in its domain with indifference? How can we consider these phenomena having eliminated an inherent element from it? On the other hand, how can we not consider with depth the cases in which Islam has regarded responsible art with reverence and excluded all irresponsible? Such an action would only deem excluding irresponsibility as crime and thus seeking revenge against "responsible Islam." Those who – ignorantly or not – claim Islam as against poetry have fallen into such a dangerous abyss. What Islam discards is the lack of responsibility, whether in worship or in writing a book of jurisprudence.

2. Poetry in Islam

Islam arose in a land rich in poetry and poets. The Arab peoples were avid poets, had a great sense of language and saw poetry as of high significance. Poets who lived in the Arabian Peninsula at the time of the rising of Islam were of high stature among their people.

The deserts of Hijaz with their sand waves, desert spirits, breezes traveling on stones, vast abysses, palm groves, nights, moonlight, mirages, horses, stars, desert birds, wars, legends, young tribal romances, beautiful girls, So'dis and Salmas, plains, had all turned these people into skilled poets whose poems are still sung in various languages today.

The rise of Islam not only did not dry this delicate talent, but actually developed it, purified it, and gave it orientation and responsibility. Arab poets and literary figures were fascinated with the Quran. As the famous Arab literary scholar Muhammad Kurd Ali has said:

> The Quran aroused the talent for writing and poetry in the Arabs; it also had a great impact on poets' work. Thus, Islamic poetry was much more delicate than that of the pre-Islam era.[1]

A roaring avalanche of Islamic poetry arose in the form of the hundreds of rich books of poems written by Muslim poets. Dozens of these were translated into Western languages, and became highly popular; they impressed readers all over the world with their creativity and innovativeness.

1. Muhammad Kurd Ali, ***Amra ul-Bayan***, Third Print, Dar ul-Amana, Beirut, 2001, p. 5.

In the educational system of Islam, all actions are categorized into two classes: they are either unstable and mortal or eternal and lasting. The first group involves any non-divine, irresponsible, individual, whimsical action carried out due to passing desires, whereas acts carried out in the second group are divine, committed and done out of man's pure nature, God's commands and commitment. It is the latter actions that have been praised and promised eternal reward. So is any poem that contains such elements and any poet composing such poetry. The Holy Prophet gave his coat to the poet whose poetry abounded in praise for greatness, spreading commitment and epics, and if his poetry praised the Prophet, it was due to such merits. This is to be appreciated. Other leading religious figures had similar behaviors toward poets – they listened to poetry and appreciated it. While performing the rituals of Hajj, Imam Jafar Sadegh (AS) listened to Kumeit ibn Zeid Asadi's committed political poetry and summoned all of the people gathered in the Arafat desert to come and do so. De'bel was able to compose and spread around the most dangerous political poetry of his time in support for Imam Ali ibn Musa al-Reza (AS). There are many other examples.

Thus, poetry flourished in Islamic territories, and some of the greatest poets in history were developed by Islam, and many great works of poetry were born. Literary scholars began to compile the works of various poets, write commentaries on their poetry, create selection of their work along with biographies of their composers, meticulously gathering point for point.

Does the Persian language not include dozens of books of poetry rising out of the best kind – Islamic and religious poetry – such as the works of Sanaee, Naser Khusro, Mowlavi, and others? Is Persian religious-requiem poetry – in its highest quality – not regarded as the most prominent of its kind? Is it not such a spirit that makes our people chant and read poetry at religious occasions and seek advice and preaching through poetry? How much of the concepts and contexts of our greatest poets originate from Islam? How much poetry is used at religious gatherings and ceremonies? Even nowadays, who spread around works by Hafez, Sa'di, Sanaee and Mowlavi and other poets among the people and into their hearts in the most appropriate way – religious preachers or others? Is it not interesting that even in our times, when Ahmad Shoghi Bek, the renowned Egyptian poet, composes his elegy ***Nahj ul-Burdat***, Sheikh Salim Beshri Shabarkheiti, the Grand Mufti of Egypt writes a commentary

on it, or when Mehrdad Avesta, the great contemporary poet, presents Ayatollah Hussein Tabatabaee Borujerdi with an elegy, the great clergy rewards him personally?

I will not go into much detail here; God willing, I shall discuss this in ***The Backgrounds of Political Arab Poetry***. Thus, I will proceed to the main focus of this chapter – a look at the richness if Islamic poetry and its impact upon other peoples.

3. The Richness of Islamic Poetry

A look at the poetry written by Muslim poets quickly reveals how rich and elevated Islamic poetry is. When it comes to semantics, insight, imagination, interpretation, feeling, variety, innovation and other technical issues, Islamic poetry is completely rich. Few emotions, perceptions or interpretations can be found that Islamic poetry does not contain. Considering factors such as the surroundings, time and others that all influence the creation of a work of art, we can regard the poetry created by Muslims as of high standard. Whenever Islamic poets have entered a domain, they have enriched it with their work. We do not mean, however, that Islamic poetry has any emotion found in all of Indian, French, or Chinese poetry; rather, we mean that Islamic poetry – whether in Arabic, Persian or any other language – contains, in its own domain, the richest of the concepts in poetry, profoundly abundant with its own special emotions and perceptions. This can be seen wit but a glimpse at the renowned works of Muslim poets. Another piece of evidence is the fact that many books of poetry written by Muslims have been translated into other languages and have even inspired great literary figures around the world.

4. The Translation of Islamic Poetry into Western Languages

As of many years ago, when being acquainted with the books and work produced by Muslims, the West also became familiar with Islamic poetry. After studying, adapting from and being inspired by the poetry of Muslim poets, Westerners began to translate quite a few of their works. Here I will point to but a few of these translations:

- A translation of Ka'ab bin Zuhair's elegy ***Bant Su'ad*** in praise of the Holy Prophet, into English, along with the original text, by Sir James William Redhouse (1881)
- A translation of Busiri's elegy ***Burdah*** in praise of the Holy Prophet,

into French, by Baron S. de Sacy (1806)

- A translation of the elegy ***Burdah***, along with the original text, into English, by Sir James William Redhouse (1881)
- A translation of 360 elegies by Farzdagh into French, along with the text, by R. Boucher (1843-1886)
- A translation of Avicenna's elegy ***Ainiyyah*** into French, by Baron Carra de Vaux (1899)
- A translation of Tughraee's elegy ***Lamiyyat ul-Ajam*** into Latin, along with the text and commentaries, by Reverend E. Pococke (Oxford, 1661)
- A translation of the elegy ***Lamiyyat ul-Ajam*** into English, by Leonardo Chappelow (Cambridge, 1758)
- A translation of Shanfari's elegy ***Lamiyyat ul-Arab*** into English, published numerous times
- A translation of Abu al-Faraj's ***al-Aghani***, Vol. 1, into Latin, by J.G.L. Kosegarten (1840-3)
- A translation of Ibn Farez's elegy ***Ta'iyyah*** in 746 verses into French, by Carra de Vaux (1907)
- A translation of selected works by Ibn Farez into French, by de la Grange (Paris, 1822)
- A translation of Mufazzal Zabbi's ***al-Mufazzaliat*** into English, along with the original text and commentaries by Ibn al-Anbari, by Sir Charles J. Lyall (Beirut, 1908)
- A translation of al-Bahazir's ***Divan (Book of Poetry)*** into English, along with the original text and detailed appendices in two volumes, by Edward Henry Palmer (Cambridge, 1876-7)
- A translation of Va'va' Dameshghi's ***Divan (Book of Poetry)*** into Russian, along with the original text and a 100-page preface by Ignati Ivlianovoch Krachovski (1913)
- A translation of Bant Sa'd's ***Ghasidah (Elegy)*** into French
- A translation of Kumeit Asadi's ***Hashemiyyat*** into German
- A translation of Abufiraz Hamdani's elegy ***Shafiyah*** into German
- A translation of Abu Tamam's ***Himasah*** into Latin
- A translation of Abu Tamam's ***Himasah*** into German
- A translation of Ubeidullah ibn Gheis ul-Raghiyyat's ***Divan (Book of Poetry)*** into German
- A selection of Mu'arri's poetry into German
- A translation of Ibn Farez's ***Ta'iyyah*** into German poetry

We must add that pre-Islam literary works (whether prose or poetry) is also part of the heritage of Islamic culture, for Islamic scholars and literary figures preserved them, wrote explanations on them, used them in their books on semantics and syntax and even in their interpretation of the Quran, and quoted them as evidence. This is how these works were preserved, rewritten and transferred by Islamic literary figures. Many of them have also been translated into Western languages, such as:

- A translation of Amru al-Gheis's ***Divan (Book of Poetry)*** into French, along with the original text and an introduction, by Baron de Slane (Paris, 1837)
- A translation of Nabighah Thubiani's ***Divan (Book of Poetry)*** into French, along with a commentary by Abu al-Hajjaj Yusif Shantamarri (al-A'lam), by Durenburg (Paris, 1869)
- A translation of Amer ibn ul-Tufail's ***Divan (Book of Poetry)*** into English, along with the original text and ibn al-Anbari's commentary, by James Lyall (1913)
- A translation of Ubeid ibn al-Arz's ***Divan (Book of Poetry)*** into English, along with the original text, by James Lyall (1913)
- A translation of Amru ibn Ghamai'ate Va'eli's ***Divan (Book of Poetry)*** into English, by James Lyall (1919)
- A translation of ***Mu'allaghat Sab'*** into German
- A translation of ***Mu'allaghat Sab'*** into French
- A translation of ***Mu'allaghat Sab'*** into English poetry
- A translation of Amru al-Gheis's ***Mu'allaghah*** into Latin
- A translation of Amru al-Gheis's ***Mu'allaghah*** into German
- A translation of Amru al-Gheis's ***Mu'allaghah*** into Russian
- A translation of Harith ibn Hellezeh's ***Mu'allaghah*** into Latin
- A translation of Amru ibn Kulsoom's ***Mu'allaghah*** into German
- A translation of Amru ibn Kulsoom's ***Mu'allaghah*** into Latin
- A translation of Tarfat ibn Abd's ***Mu'allaghah*** into German poetry
- A translation of Urvat ibn ul-Vard's ***Divan (Book of Poetry)*** into German
- A translation of Urid ibn ul-Samat's ***Divan (Book of Poetry)*** into Czechoslovakian
- A translation of Ous ibn Hajar's ***Ash'ar (Poetry)*** into German[2]

Are you not surprised that the literary works mentioned here and in

2. For the names of translators and also the place and date of translation of all of these works, see ***al-Mustashreghoon***.

the previous pages have been translated into European languages but not into Persian? Those who attempted to reduce the flourish of Arabic literary works and the Arabic language among us recognized these works and translated them into their own languages. It is astounding that some so-called open-minded thinkers, scholars, poets, writers and nationalists still pour fat into this fire! And how would our innocent youth know what there is behind it? Sometimes the people doing this are not aware what they are doing themselves. However, the negative consequences of many actions are not due to knowing or not knowing; if you throw a fire somewhere, it will burn it down, whether you know it or not, whether you want it to burn down or not.

5. Islamic Poetry Infiltrating the West

The West's acquaintance with Islamic poetry dates back to around 1200 years ago, as of the beginning of the Abbassid era (in the mid-second century Hijra), long before their books of poetry were directly translated. It was from then on when Christians were employed in Muslims' administrative positions, found their way into Islamic libraries, became acquainted with Muslim literary figures, scholars, poets and scholastic scientists, and worked for the Muslims as translators. It was during this era when they became familiar with Islamic culture, including Islamic poetry. Some of these Christians or Jews were either of Arab origin or knew Arabic, so they could read Islamic Arabic poetry. Later on, when Eastern studies became more prominent and Western priests and other groups began to learn Arabic, they gained more familiarity with Islamic poetry through texts on philology and other literary works, all of which led to their literary spirit and creativity being inspired continually.

All of the above-mentioned made Muslims' poetry leave a widespread effect upon Christian culture. Researchers have also pointed out, however, special cases of Islamic poetry directly influence Western poems:

> Not only did the form of poetry the Arabs called "zajal" spread in Europe in the form of Trobadors, but these unknown composers also made use of Arabic contexts, as correctly stated by a Spanish researcher. One example is the concept of love in Trobadors, which was comparable to what Arabs called "al-hubb ul-uzra," which in fact pertained to Platonic love. [3]

Considering the acquaintance Westerners had with Islamic books and the

3. ***The Work of Islam***, Preface, p. 21.

Arabic language since years ago, and having in mind the many translations made from Islamic texts – some of which were full of poetry – we can see how profound the influence of Islamic poetry has been. Furthermore, in his book, Najib al-Aghighi has listed a group of prominent Western poets – particularly French and English – who have been inspired and influenced by Islamic Arabic or Persian poetry and have in turned influence others.[4]

6. Islamic Art

A great deal of research has been done on this issue, and experts and researchers have given plentiful explanations on the nature and role of Islamic art. Those – all over the world – who have written books or articles on the history of Islamic civilization, architecture in Islam, "religious aesthetic techniques" and the significance of Islamic arts and its various branches and consequences, have spoken highly of it, producing great works on the issue. These researchers have listed the various forms of Islamic art, and written about the influence it has had upon other peoples, Europeans in particular. For example, readers are referred to:

- ***The History of Islamic Art***[5]
- ***A Guide to Islamic Industries***[6]
- ***Islamic Heritage***, the article on "Paintings in Islamic Nations and Their Influence upon European Art"

Moreover, in his book ***The Work of Islam***, the scholar Dr. Abdulhussein Zarrinkob has discussed this in a 10-page but very concise study. He begins thus:

> "Who claims that Islam is a religion incompatible with art? On the contrary; the two meet, and in the mosque at that…
> These magnificent constructs, gifts to God, apart from being divine and sacred nature, are seen from a historian's point of view as deserving to be a gallery of Islamic art. The unknown artists who had dedicated everything they had to serving God by constructing these mosques were kept on going by the same fire in their hearts that also burnt inside the hearts of Renaissance masters. Therefore, they too went out of their way to realize the best picture they had

4. ***Al-Mustashreghoon***, Vol. 1, pp. 101 and on. Also, see the influence Andalusi's ***Muvashahat*** had on other poets in ibid, Vol. 2, p. 619.
5. By Christine Price, translated by Masoud Rajabnia, published by the Foundation for the Translation and Publication of Books, Tehran, 1969.
6. By M.S. Diamond, translated by Dr. Abdullah Faryar, published by the Foundation for the Translation and Publication of Books, Tehran, 1957.

in mind of beauty in these holy illustrations. The truth is that the Muslim masons of that era attempted to make use of any form of beauty deserving of God's greatness and omnipotence in their surroundings in their illustrations in mosques.

In the construction of many mosques, various arts have mixed with each other: architecture attempt to create balance between parts, the paintings decorate the tiles, calligraphy provides beauty to the writings and the tablets, and poetry presents sermons, preaching and historical substance. Music, in turn, represented itself in the sound of the *mu'azin* (one calling people to prayer), the *ghari* (one reciting the Quran) and the preacher. Even handicrafts came to aid in the completion and beautification of these divine complexes. Exquisitely-made carpets, high-quality curtains, huge, brilliant cressets, tapestries, engravings and carvings have all done their part in adding to the aesthetics of mosques. Thus, a variety of forms of Islamic culture and arts have made such a contribution to the construction of mosques throughout the centuries that a mere study of a mosque can present a clear picture of Islamic history and civilization to an observant historian. Throughout the generations and centuries, Islamic art has known no better home and showcase than the mosque, and the general participation of various Islamic peoples and ethnic groups in the completion and decoration of mosques, while preserving their own national or local qualities, has led to a sort of cosmopolitanism in Islamic architecture, which is of course in complete harmony with the moderate, tolerant culture of Islam, and is in any case one of the spiritual points of pride and joy among Muslims. Apart from mosques, however, many other constructs and monuments have remained as a result of Islamic civilization. The interesting point is in the unified spirit Muslims have breathed into these glorious buildings despite the fact that as time passed, construction materials, styles and facilities changed, and Islamic buildings were also poles apart in time and in location.

He than proceeds to point out other examples of the Islamic art of architecture:

"It is the combination of these elements that gives Islamic constructions in Damascus, Egypt, India, Andalusia, Iraq and Iran total elegance and mystical beauty. It is this very harmony and balance that has given the Alhambra in Granada, Spain, its lasting

elegance and magnificence throughout the centuries, to the extent that, as Victor Hugu would put it, "it seems to have been covered with gold and songs by fairies." Another example is the Taj Mahal in Agra, India, which is so exquisite in beauty and harmony that a historian can still say, "If time were intelligent, it would destroy everything but the Taj Mahal and use it as a token in praise for the dignified human soul," in awe for the marble dream built in memory of a Muslim Indian queen.

In Spain, the style of architecture common in Iran and Damascus became known as the Moroccan style. Later on, Christian conquerors turned parts of the mosques in Andalusia into churches. The Alcazar castle (Alcazar originates from the Arabic word *al-ghasr*, meaning "the castle") In Seville, built by Abu Yusif Yaghoub, was of interest to and also used by Charl V and Isabella. The Alhambra, a beautiful, ancient complex of gardens, castles, yards, pools, high terraces In Granada, Spain, is an example of the fervid decoration and beautification some Muslims used; the result is well-known: when Charl V saw the lost beauty of Alhambra from a balcony, he said thoughtfully, "Poor he who lost all of this." Furthermore, this style of architecture preserved its originality in India that some historians have stated their surprise of finding such a construction in India and not in Iran or Andalusia. However, we will not be surprised if we remember that all of these are part of Islamic lands, neither Iran nor India – hence, Islamic unity. The Delhi *minaret*, 250 feet high, is still standing strong after seven centuries, which depicts the greatness Islam had found in Indian lands – even despite the occasional violence and atrocity by Qutb-ud-din Aibak.

Like Islamic culture, Islamic art also had variety both in content and technique; even painting, sculpture and music, although regarded with reluctance if not with respect, found the opportunity to flourish and develop in an atmosphere of Islamic moderation and tolerance.

7. Painting

In our chapter on innovations, we discussed Muslims' paintings. We will now go into further detail:

During the Crusades, there was more contact between Muslims in the East and Westerners; therefore, many objects including delicate Islamic crafts came to the west, and Geneva, Pisa and Venice became

important trade centers for such artifacts. Imports of Eastern-made artifacts and objects, with their own special decorations and illustrations, influenced Western painting; the novelty and oddness found in Eastern paintings attracted European schools of painting, and made them an object of imitation. People wearing turbans and Eastern-looking faces appeared in late fourteenth-century Italian paintings. The illustrations seen on Persian carpets and clothing common in that era were of particular interest among those copying and imitating such works. There were also pictures of animals like leopards, monkeys and parrots. The details in the backgrounds – trees, flowers and leaves – also depict influences and imitations of Eastern models. What Western works of art imitated the most, however, was Arabic letters, which can be the best example for the direct impact Islamic arts had upon Westerners. [7]

8. Academic Music

At the end of this chapter, we must say that Muslim scholars were not neglectful of completing their cultural domains, either. Thus, they did research in all theoretical and practical fields of science.

Looking at the variety in the works of some Islamic thinkers, we wonder at how enthusiastically they sought knowledge and how powerful their intellect was. Of course, since being a comprehensive scholar was seen as a necessity for all scholars, they endeavored to achieve mastery in all fields. The important point, apart from the principle of such scientific spirit, is that they neglected no field of knowledge, and proceeded in anything they pursued until they mastered all of the theoretical and experimental territories of their time.

Thus, it should be no surprise to find among Yaghoub Kendi's works books on music, combinations of spices, ebb and flows of seas, and other fields. Islamic scholars would never leave their domain of research empty of a scientific problem. Academic music was also, therefore, seen as a branch of philosophical mathematics; it came to the attention of a thinker like Abunasr Farabi, whose work, along with some other Muslim scholars of music, like Safiuddin Urmavi, helped present scholars of this field from other lands many fundamental basics.

7. ***The Heritage of Islam***, page 73 and onward, the article mentioned above.

Intellectual Knowledge

1. Intellectual Knowledge

In Chapter 3, we pointed out the number of fields of science that had ramified in Islamic culture. Islamic references indicate around 300 different fields of science studied by Muslims at the end of the twelfth century Hijra. The reason for citing the adverb of time is that since then, other branches and developments have arisen in domains of Islamic thought and culture, which call for an independent research. Here, we will discuss the sciences common in Islamic culture until the end of the twelfth century Hijra.

These sciences have been categorized from various points of view. One famous categorization is classifying them into practical and intellectual sciences. Among Muslims, intellectual sciences are both considerable in quality and depth and in quantity and abundant richness. The Muslims even studied natural and literary sciences with such intellect, reason and logic that their detailed research and accurate profoundness brought about great praise in historians of science:

> When studying works on Islamic sciences, one indeed wonders at how intellectually they approach modern fields of logic. [1]

Theology, philosophy and speculative theology are among intellectual fields of Islamic sciences. In this chapter, we will discuss them, along with political philosophy, the philosophy of history, mystical philosophy and the influence of Islamic intellectualism upon Christian and European culture as well as modern Western philosophy.

2. Quranic Theology

"Theology" refers to the absolute of issues, knowledge and sciences related to knowing God and making the existence of God, eternity, and the universe as a means for man's intellect to get near to God. What Islam teaches us about theology based upon the instructions provided in the Quran is regarded as Quranic theology:

- Paying attention to God
- Knowing God
- The knowledge of God
- Other attributes of God
- The knowledge of the "self"
- The knowledge of the human nature
- Innate monotheism

1. ***Science in History***, p. 209.

- The knowledge of objects and their being an indication of God
- The knowledge of macrocosm and microcosm, horizons and one's own soul
- The emergence of innate knowledge and mysticism
- The knowledge of the truth about man
- The knowledge of the independence of the soul
- The difference between science and the spirit
- The distinction between the spirit and thought
- The difference between the spirit, the soul, the heart and deeds
- The knowledge of the truth about the heart
- The knowledge of the quality of creation
- The philosophy of material, physical life
- The truth about spiritual life
- Fate and destiny
- Fatalism and choice
- The truth of prosperity and atrocity
- The truth about guidance and degradation
- The truth about praying and knowledge of its nature
- The spiritual power of the soul
- Intellectual reminders and invitations
- External reminders and invitations
- The truth about prophethood
- The truth about prophets
- Revelations and God's words
- The Quran and Quranic sciences
- Acquiring wisdom and ability through prophets' instructions
- Progressing toward perfection through prophets' instructions
- The relationship between prophets and the human nature
- The eternity of the Quran in guidance and instruction
- The miraculous nature of the Quran and its inclusion of true knowledge
- The truth of science in the Quran
- *Imamat* and political philosophy
- The necessity for infallible Imams
- The justification for Imams in presence and absence
- The organization of an Islamic society
- The Quran's instructions on the society and Imams
- The Quran's social justice

- The truth about the universe and its occurrence
- Changes in the universe
- The possibility of the world being destroyed and another order arising
- The afterworld and the reincarnation of objects
- The return of spirits
- Purgatory
- Man and the different worlds
- Resurrection
- Man and the truths
- Man on an eternal scale
- Man in eternity

The above-mentioned items I have presented as a list of the content of Quranic theology were derived from the greatest Islamic scholar of Khorasan throughout the last 30 years, Sheikh Mujtaba Khurasani's (1318 -1386 Hijra) ***Bayan al-Furghan***. When regarded as based upon human nature, intellect, and in accordance with the instructions provided in the Quran and the *sunnah*, such knowledge will be Quranic knowledge, and its theologival paer will thus be Quranic theology, which is in contrast to Islamic philosophy, Islamic speculative theology and Islamic mysticism from this point of view. Another major point of difference is that the latter three originate from ancient human knowledge, whereas Quranic knowledge is purely what the Quran instructs us, along with the interpretations made on it by the true commentators of the Quran – the Holy Prophet and the Imams (AS).

Such knowledge, coming from the Quran and *sunnah* and nothing else, are the richest, purest, most original and the most monotheist kind of divine knowledge in history. As a matter of fact, the knowledge of existence from a monotheist and prophet's viewpoint is, in its true form, the Quranic knowledge of existence, which we mentioned above. Therefore, by 'Quranic theology' and 'Quranic knowledge', we refer to all of the awareness and knowledge on these issues through these ways. When we are concerned with 'Islamic knowledge', 'theology', 'Islamic theology' or 'Muslims' theology', however, it will be more general, for it will also include Islamic mysticism and speculative theology then.

3. Various Schools of Thought in Islamic Philosophy

There are several philosophical schools of thought in Islam. In general,

"Islamic philosophy" refers to the ideological systems developed in Islamic culture; these schools of thought have adopted much from Greek elements of thinking as well as other pre-Islamic systems of thought, but has yet been enriched and developed in the domain of Islamic teachings and the Quran. Yaghoub Kendi (born around 260 Hijra) and Abunasr Farabi (born 339 Hijra) are regarded to be founders of this school of thought.

As some great scholars have also reiterated[2], there must be no doubt on the existence of Islamic philosophy; the crude claim some Orientalists have made saying that Islamic philosophy is the same as Greek philosophy is to be discarded. In contrast Islamic philosophy is Islamic philosophy; it is, at most, inspired by Greek and some other schools of thought, but ultimately developed and deepened by Islamic knowledge and thinking.

Those who support the "separation school of thought" do not deny Islamic philosophy and mysticism either; they deny the fact that these ways of thinking are compatible with Quranic knowledge, believing that Islamic philosophers have introduced some incompatible knowledge as compatible – not deliberately or by force, but because they saw philosophical knowledge in these cases as compatible with Quranic knowledge, although it was not so. Separatist philosophers believe it wrong to claim that Islamic schools of thought in philosophy, scholastics and speculative theology are totally identical to what the Quran presents, Plato, Aristotle and Plotinus's words along with other thinkers' ideas are the same was the Quran's revelations, and that the truths stated in the Quran are in complete agreement with mysticism, scholastics and speculative theology. Islamic philosophy, mysticism and speculative theology, although based upon the Quran and *sunnah*, are not entirely compatible with them. God willing, I will deal with this important issue (which is of high importance these days, and needs to be taken care of wisely, without trying to undermine the work done by any great Islamic thinkers) in ***Sheikh Mujtaba Ghazvini and the Separation School of Thought***.

As we see, denying Islamic philosophy is neither correct nor logical. Thus, as this book tends to focus upon Muslims' knowledge and areas of thought and intellectual work done by Islamic thinkers, we will now take

2. Examples are the Egyptian Sheikh Mustapha Adulrazagh in ***Tamheedun Litarikh ul-Falsafat ul-Islamiyyah***, Dr. Ibrahim Madkour in ***Fil Falsafat il-Islamiyyah, Munhaj wa Tatbeeghah***, Hana al-Fakhouri and Khalil Aljar in ***Tarikh ul-Falsafat ul-Arabiyyah (***translated into Persian as ***The History of Philosophy in the Islamic World)***, Dr. Seyyed Hassan Nasr in ***Islamic Knowledge in the Contemporary World*** and Dr. Reza Davari in ***Farabi, the Founder of Islamic Philosophy***

a brief look at three prominent schools of thought in Islamic philosophy.

There are over 30 schools of intellectual thought in Islam. Here, however, we will content to three of the most important ones:

1. ***The Peripateticist School:*** In this school of Islamic philosophy, having done extensive study and research upon logic and methodology, one enters philosophical issues, dealing in depth with the rate knowledge of the truth according to man's intellectual talent and human tolerance. Some of the issues concerned with in the Peripateticist school are:
   - The quality of the occurrence and realization of objects
   - Affirmation and its voidance
   - The proof for materiality
   - The lack of separation between materiality and appearance
   - The impossibility of potential materiality occurring
   - The impossibility of vacuum
   - The truth of the universe
   - The moving destination
   - The basic regulations concerning objects
   - The regulations concerning tendency
   - Elementary objects
   - The qualities of elements
   - Earthly spirits
   - Heavenly spirits
   - The nature and essence of the spirit
   - The origin of movement in man
   - The "I" complement
   - The power of cognition
   - Two powers within the human spirit
   - The divine power
   - The various forms of wisdom (material, potential, active and acquired)
   - The lack of movement in the spirit
   - Abstraction and Intellection for everything
   - The motivator of the soul
   - Instinctive movement
   - Optional movement
   - The voluntary quality of the rotational movement

- The general aim and the partial aim
- The relationship between general aims and general knowledge
- The relationship between general knowledge and the abstract soul
- Existence and its causes
- Divine science and the existence of beings in it
- The Self-Existent (God) and His Qualities
- Creation and Innovation
- The precedence of void over the occurrence of existence
- Possibility in creation
- The conditions for the effectiveness of the cause
- The existence of the effector and the effect
- The concept of creations arising out of necessity
- The prestige of creation
- The truth about time
- The origin of movement in celestial bodies
- Denying causality in objects
- The truth about abstraction
- The innate use of the soul from the body to its own benefit
- The distinct differences between mental and bodily powers
- The prevention against naturalizing intellectual powers in the body
- The possibility of the soul prevailing without the body
- The quality of achieving intellectual faces in the mind
- Knowledge of the Self-Existence in its own innateness
- All objects ending up with the Self-Existent
- The knowledge of grace
- The necessity of finding the best and the most good
- Grace and its concept in creation
- The necessity of not finding evil and multiple evils
- The existence of a prophet and the necessity of knowing him
- The necessity of identifying one's Imam
- The philosophy behind worships and prayers
- The truth of spiritual prosperity
- Resurrection and eternity

This was a brief list of the items discussed in Peripateticist Islamic philosophy, in natural sciences and theology, based upon the text

of Avicenna's ***al-Isharat wal Tanbihat***,[3] its summary by Fakhr-e razi (***Lubab ul-Isharat***[4]) and Khajeh Nasir Tousi's ***Sharh-e Isharat***. The great book ***Shafa*** provides an extensive study of these subjects as well as many others, including various branches of philosophy and their related discussions, such as Islamic political philosophy, utopias, the head of the utopia (the Imam), the importance of the Imam being appointed by the Prophet, the philosophy of moral ethics and issues on practical wisdom and philosophy, each of which falls into many categories and chapters. ***Ara'u Ahl ul-Madinat il-Fazilah (The Views of the Residents of Utopia)*** also presents this political philosophy, and the principle of *imamat* and its significance in providing prosperity for the society has been discussed from a philosophical point of view.

2. ***The Illumination (al-Ishragh) School:*** In the illumination school of philosophy, many issues are also dealt with having gone through Peripateticist logic. In both schools, attention toward logic and clarifying fallacies in particular is of high importance. Many who engage in intellectual subjects without having the basics of logic and methodology fail to distinguish correct thoughts from wrong ones; lacking knowledge of techniques of fallacies and their nature, they fall into inaccurate acceptances and denials, and do not know that many philosophical and intellectual issues of various schools fail to prove themselves when tried upon the fundamentals of logic, and show themselves as incompetent. If one is to take on philosophical and intellectual domains, awareness of methodology, mental basics and the rules of deduction is necessary. Having this significance in mind, Islamic thinkers of Peripateticist and Illumination schools have always included the methodology and logic they have used at the beginning of their philosophical works.
   Having established the foundations of Illumination logic – or, as Sheikh Ishragh put it, *zavabit ul-fekr* ("the rules of thought"), the criteria for the correct distinction of accurate from inaccurate deduction), the discussion on philosophical; Illumination issues begins. Some of them are:
   ○

3. Published by Tehran University, 1960, and compiled by Mahmoud Shahabi.
4. Ibid.

- The Knowledge of the Light of Lights
- The fundamentals of existence
- The knowledge of angels and lights
- The quality of actions carried out by the Light of Lights and angels
- The originality of lights and angels
- The sequence of existence
- The knowledge of objects and their combinations, states and powers
- The qualities of the soul
- The denial and defiance of metempsychosis
- Proving resurrection
- The impact of celestials upon the universe
- The truth about prophethood and its proof
- The knowledge of the total leader (The "Hakim" or "Imam")
- The progress of the spirit toward perfection in the phases of knowledge and Illumination
- The qualities of the self and the spirit
- Evil and cruelty
- Perfection and prosperity

The works of Sheikh Shahbuddin Sohrevardi, such as ***Hikmat ul-Ishragh***, ***al-Talwihat***, ***al-Mashari' wal-Mutarihat***, ***Hayakul ul-Noor*** and many others, include detailed discussions on issues in Illumination philosophy.

3. ***Transdescent Theosophy (Muta'aliah):*** The next school of thought is Mullasadra's existentialist philosophy – a school of philosophy based upon knowledge of the truth of existence and its qualities and levels and interpreting all phenomena according to knowledge of existence and its levels, and the "originality" and "unity of existence" (philosophical unity), which we mentioned briefly in Chapter 6. Issues on this school of philosophy can be found in the works of its founder, Sadruddin Muhammad Shirazi (died in 1050 Hijra) better known as Mullasadra and Sadr ul-Muti'alehin – briefly in ***al-Mabda' wal-Ma'ad***, ***al-Shawahid ul-Robubiyyah***, ***al-Masha'ir ul-Ilahiyyah***, etc., and extensively in ***Asfar ul-Arba'a (The Four Journeys)***.

   The great book ***Asfar ul-Arba'a*** consists of four sections (i.e., four

"journeys," four "intellectual movements"), each concerning a part of the fundamentals of this school of thought:

- The first journey: general affairs, the knowledge of the nature of existence and its consequences
- The second journey: natural sciences
- The third journey: theological sciences, knowledge of the origin of the universe and His attributes and perfections (divine philosophy)
- The fourth journey: the knowledge of the self, from its conceiving up to the ultimate phase of the journey of the human soul – Resurrection

Sadr ul-Muti'alehin has called his philosophy "transdescent theosophy," a philosophy in which he has endeavored to present theological sciences in a form of philosophical, theoretical discussion, and deal with intuitive, exploratory truths using instructional expressions and jargon. Some believe Mirdamad, the renowned philosopher (who was Mullasadra's mentor and greatly revered by him) as the founder of this method of discussion and philosophy and Sadr ul-Muti'alehin to be the one who explained and clarified it. In any case, this school of philosophy has been inspired by Peripateticist, Illumination, Plotinus-Alexandrian (new Platonic), Stoicist, and many other ancient sects of philosophy and mysticism. Thus, it can be seen as a "mystical philosophy," and also a "philosophical mysticism." The presence of mystical and Sufist elements in this school of philosophy makes it draw itself away from Mirdamad's mental and intellectual methods. Thus, we must say that it may have acquired its elementary basics of knowledge and cognition from Mirdamad's philosophy, to which Mullasadra added other modifications of views and Sufist fundamentals.[5] All in all, ***Asfar*** is still the most comprehensive book on the philosophy of the mysticism of existence, as ***Shafa*** is still regarded as the most prominent reference on Peripateticist philosophy – they differ in the fact that ***Asfar*** does not include a section on logic and methodology. Whatever comments made upon the originality and/or adaptations about this school of philosophy, there no question on the fact that Sadr ul-Muti'alehin has presented a school of philosophy that is

5. I must note that despite all of the respect he had for mystical and Sufist views, this great thinker had no interest in Sufists themselves, and regarded them as equal to the ignorant idolatrous non-believers before Islam; he also wrote his book ***Kasr-o Asnam al-Jahiliyyah*** in defiance and condemning of them.

organized, unified and complete. Furthermore, there are two other important points concerning this school of philosophy: first, the significance of its discussions in philosophical knowledge, intellect, wisdom and theological pondering; secondly, its expansion of philosophical thinking in Islam – after Sheikh Ishragh and Khajej Nasiruddin Tousi, it was Sadr ul-Muti'alihin Shirazi and his mentor, Mir Muhammad Bagher Mirdamad Huseini Astarabadi who continued the way.

I must note that Mullasadra's school of philosophy has put a great deal of effort into prove the compatibility and equivalence between religion and philosophy, and showing that the contents of this school of thought are in agreement with the knowledge in the Quran and *sunnah*. His endeavors were persistent; Sadr ul-Muti'alehin himself wrote several books on religious fundamentals (commentaries on the Quran and ***Osoul-e Kafi*** as well as ***Asrar ul-Ayat***) aiming to establish compatibility between Quranic principles and his philosophy. His continual efforts were unsuccessful however, as were those of other philosophers before him. Therefore, we mention his philosophical school as an example of a powerful intellectual system inside the domain of Islamic culture, which can be worthy of attention especially to young thinkers and educated ones who are in awe of unaware Islamic intellectual movements and become fascinated by schools of thought which do not possess even a thousandth of the depth and totality of Islamic schools of thought.

4. Islamic Speculative Theology

Dialecticians (or speculative theologians) are another group of great Islamic thinkers, the scholars of the science of beliefs. Speculative theology is a science that guarantees knowledge by reasoning and the philosophy of religious fundamentals. There are three major groups of dialecticians: Shi'ite, Mu'tazelites (separatists) and Ash'arites.

There are a wide variety of issues and intellectual fields dealt with in books on speculative knowledge:

- Issues on existence and voidance
- Mental and external existence
- The mutual necessity of existence and thingness

- Necessity, possibility and denial
- The various forms of necessity and possibility
- Eternity and contingency
- The Necessary Being (The Self-Existent)
- Innate existence and caused existence
- Nature and its related issues
- The personhood of nature
- Unity and multiplicity
- The regulations about causes and causality
- Various forms of causes
- Substances and avoidances
- Defying materiality
- The nature of place, time and substance
- The prevention of vacuum
- The truth oh direction
- Celestial bodies
- Expanded elements
- Combinations
- Limits of objects
- Similarities of objects
- Abstract substances
- The difference between the speaking soul and the temperament
- The abstraction of the soul
- Various forms of feelings
- Inner powers
- The truth of cognition and knowledge
- Necessity in science
- Joy and grief
- Will and reluctance
- Proving the creator
- The attributes of the creator
- Intellectual advantages and disadvantages
- The truth of fate and destiny
- The truth of guidance and degradation
- The nature of religious duty
- Prophethood
- The prophet's chastity and infallibility
- Prophethood

- The prophet's chastity
- The way to recognize a prophet's chastity
- The prophethood of the Holy Prophet of Islam
- *Imamat*
- The necessity of appointing an *imam*
- Ali ibn Abitalib, the unquestionable successor
- The other Imams' *imamat*
- Physical resurrection
- The possibility of another universe being created
- The possibility of the destruction of the universe
- The truth about rewards and punishments
- Absolution
- Asking for forgiveness
- Intercession
- Graves, paths and criteria…

The list above was excerpted from Khajeh Nasiruddin Tousi's ***Tajrid ul-Aghaed***, the renowned Shiite book on speculative theology. It is clear that many a significant subject has been dealt with in the domain of dialectics. Due to their disagreement with philosophers, they have expressed novel, important views in many subjects, some of which were mentioned in Chapter 6.

5. Islamic Mysticism

By Islamic mysticism, what we mean here is theoretical mysticism based upon scientific fundamentals. In this branch of mental science too, Islamic thinkers and scholars have done a great deal of valuable work, which can be yet another witness to the high value of intellect in Islamic culture. By comparing this form of mysticism with others, we can see the depth of Islamic thought, as well as the power of their scientific method and intellectual acumen. This branch of Islamic sciences includes detailed studies of each of the following items:

- Dividing sciences into superficial and internal
- The causes of disagreements and disputes among peoples
- The knowledge of the limitation of mental progress and the unlimited quality of spiritual progress
- The science of mysticism
- The basic qualities of science and practice

- The knowledge of *maghamat* (positions)[6]
- Needs and requests and their various forms
- The prevention of contradiction between an object and its effects
- The prevention of total similarity between an object and its effects (the prevention of repetition in existence)
- The knowledge of the various aspects of the heart
- The knowledge of emergence
- The prevention of knowledge of an object of contradictory aspects
- The ratio of effects
- The knowledge of the absolute existence
- Unity and Oneness
- The First Sent
- The existence of the universe
- The origin on multiplicities
- God's qualities from the aspect of existence and from the aspect of possession
- Innate will
- Divine affection and created affection
- The contiguity of existence to natures and latent realities
- The five divine existences
- The truth about names and qualities
- Essential names of God, Names designating attributes of God and names designating acts of God
- The lack of limitation in levels of perfection
- The level of combination and existence
- Primary and Secondary Truths
- Eye-witnessed existence and its determination
- The phases of general existence
- The phases and levels of combination and unification
- The world of similitudes
- The total object, the stars and the angels
- The rise of worlds and births
- Cases of appearance of original truths and divine names

6. These consist of ten positions: innovations, chapters, transactions, ethics, fundamentals, areas, qualities, truths, governing and ultimate cases. Each position itself consists of ten phases, which ads up to a hundred phases. Islamic mysticism carefully discusses the theoretical and practical knowledge of these 100 phases, for instance Mulla Abdulrazagh Kashi (died in 730 or 735 Hijra)'s ***Shar-he Manazil ul-Sa'erin***

- The regulations concerning time
- The proof for affection among the Truth (God) and creatures
- The regulations and secrets concerning affectionate attention toward God
- The secret about praying
- Knowledge of the veiled direction and exploratory direction in objects and occurrences
- The categorizations of sciences and knowledge
- Cognition of objects through total cognition and partial cognition
- The differences between appearances and cases of appearance
- The veil of the heart and its various forms
- Various kinds of knowledge of the Truth (God)
- Intuitive knowledge and Belief-based knowledge
- Science close to action
- The secrets about obligation and punishment
- The wholeness of the Quran and Muhammad's religion in guidance and the need for no other path or ideology
- The level of human perfection
- The perfect man and his qualities
- The spiritual journey and its phases and levels
- Knowledge of the cause for creating man
- The supreme kinds of beings from a mystical point of view
- The large world (the universe) and the small world (man)…

This was but a part of the issues discussed by Muslim thinkers and mystics along with great scientific detail in Islamic theoretical mysticism, culture, and civilization. The list above has been excerpted from the book ***Misbah ul-Ons***. [7]

6. Political Philosophy

Political philosophy is, of course, a part of philosophy; however, due to its high importance, we will devote a separate section to it.

Since Islam is in itself a whole, complete, and comprehensive religion, and has established its own social foundation and system, Islamic scholars have always endeavored to compile and present this system in an organized form. Therefore, several different political systems (pragmatic

7. ***Misbah ul-Ons bayn ul-Ma'ghool wal Mashhoud***, by Ibn al-Fanari, Shamsuddin Muhammad (died in 834 Hijra). This book is a commentary on Abu al-Ma'ali Sadruddin Muhammad Ghunavi's (died in 672 Hijra) ***Miftah Ghayb al-Jam wal Wujoud***

political philosophies) can be found in the domain of Islamic political philosophy, which we shall now discuss.

a) Philosophical Political Philosophy

Founded by philosophers, this system also adopts from ancient sects, the Quran and the *sunnah*. The founders of this philosophy and the books they wrote on it are:

- ***Ara' Ahl ul-Madinat ul-Fazilah***, by Farabi
- ***Al-Siyasat ul-Madinat***, by Farabi
- ***Al-Tanbih ala Subulal-Sa'dat***, by Farabi
- ***Siayat Shafa***, by Avicenna
- ***Tadbir ul-Mutivvahid***, by Ibn Bajjah

b) Dialectic Political Philosophy

This philosophy was presented by dialecticians, for Islamic scholars of dialectics – whether Shiite, Sunnite, Mu'tazila, Asha'irah or others – have all done detailed research and discussions on politics and *imamat* in their dialectic books, explaining their views on political systems. Some of these books are:

- ***Al-Shafi fil-Imamat***, by Seyyed Murtaza Alamulhoda
- ***Tajrid ul-Aghaed***, by Khajeh Nasir Tousi
- ***Al-Tamhid***, by Ghazi Abubakr Baghilani
- ***Al-Irshad***, by Imam al-Haramein Juveini
- ***Al-Mughanni***, by Ghazi Abdul Jabbar Hamedani

Dialectic political philosophy in Islam can be categorized, in fact, into the following branches:

- The Imamiyyah Shiite political philosophy
- The Zeidiyyah Shiite political philosophy
- The Ismailiyyah Shiite political philosophy
- The Mu'tazilah political philosophy
- The Asha'irah political philosophy
- The Marja'ah political philosophy
- The Khavarij political philosophy (which itself falls into numerous branches, eras and ideologies)

The Marja'ah are not much apart from other general Sunnite sects (such as Mu'tazilah and Asha'irah), but due to their specific political theory – which is pro-Machiavellian – we have included them in a separate category. Moreover, the Khavarij involves various sects with

diverse ideologies in various eras of Islamic history; sometimes even Shiites who rose up against atrocity were called "Khavarij" (those who have "moved out"), hence the details in the parentheses.
The books ***al-Ahkam ul-Sultaniyyah*** also concern Islamic political philosophy.

c) Jurisprudential Political Philosophy

This is the philosophy Islamic jurisprudential scholars have suggested in regard to politics and governing in their books on jurisprudence. This philosophy is not, however, entirely compatible with the dialectic political philosophy mentioned above.
There is a great deal of research and writing on this kind of philosophy too, both by Shiite and Sunnite scholars of jurisprudence. Mirza Muhammad Hussein Naeeni should be noted as one of the contemporary Shiite scholars of jurisprudence whose theories on this philosophy are reflected in his book, ***Tanbih ul-Ummah***. The book ***Vilayat-e Faghih*** is another example of work done on jurisprudential political philosophy.

d) Social Political Philosophy

Another branch of Islamic political philosophy is the "socio-political" philosophy, which also enjoys a great deal of work and research, which have been included in Islamic books and articles mostly, rather than in an independent book.
Some of the more recent figures in this branch of political philosophy are:

- Rafa'ah Rafe' al-Tahtavi
- Seyyed Jamaluddin Asadabadi
- Seyyed Abdurrahman Kavakebi
- Sheikh Muhammad Abduh
- Seyyed Amir Ali Hindi
- Seyyed Abdullah Nadim Mesri
- Muhammad Ighbal Lahouri
- Sheikh Muhammad Khiyabani
- Seyyed Abdul Hussein Sharafuddini Lubnani
- Sheikh Muhammad Hussein Kashif ul-Ghataye Najafi

Their thoughts have been reflected in books such as:

- ***Takhlis ul-Ebriz***
- ***Urvat ul-Vothgha***
- ***Tabaye' ul-Istibdad***
- ***Tafsir al-Minar***
- ***Ruh ul-Islam***
- ***Al-Tankit wa al-Takbit***
- ***Ighbal's Book of Poetry***
- ***Street Sermons***[8]
- ***Al-Fusoul ul-Muhimmah fi Ta'lif ul-Ummah***
- ***Al-Mathal ul-Ulia fi al-Islam La fi Bihamdun***

7. The Political Philosophy of Shi'ism

Now that we are discussing political philosophy in Islam and its various braches and schools of thought, it would be suitable to note that the philosophy is *imamat* is the original, pure political philosophy of the Quran. The philosophy that believes the leader to be an infallible Imam and nothing else, and believes that a Quran-based society led by anyone other than an Imam (or the Imam's definite successor) will be non-Quranic, is the pure political philosophy originating from the Quran and *sunnah*, and is not mixed with any other culture or thought. Shiite thinkers and scholars have always tried to spread such a philosophy, and have tried – as best they could – to revive it both in their words and in their deeds. [9]

In such a philosophy, exploiting reigns such as the Umavis, Abbasids, Ghaznavids, Salghughians, Mongolians and other rules alike – even nowadays – can never be regarded as Islamic.

8. Chastity: The Fundamental Basis

In Shiite political philosophy, the fundamental, essential element is the chastity of the leader. Furthermore, chastity cannot be proven unless the Prophet Himself states so or an infallible Imam does. This is a divine tradition that has existed both in Islam and in other prophets' religions. As the Quran clearly states, previous prophets of God had successors, who were introduced by the prophet personally and on God's command. Islam is also thus. The leader, as stated by the Quran and also as wisdom and

8. From the newspaper ***Tajaddod*** published in Tabriz, and the book ***Sheikh Muhammad Khiyabani's Uprising***, by Seyyed Ali Azari.

9. I have provided further explanations on this in ***The Hymn of Movements***, ***The Epic of Ghadir***, and ***The Imam in the Actual Society***.

human nature agrees, cannot be anything but an infallible.

> *And the sinful and wrongdoers cannot be God's caliphs and successors to the Prophet.* (2:29)

Chastity is self-explanatory: it consists of justice, knowledge, awareness, commitment, responsibility, devotion, sacrifice, and divinity. There are two highly important points concerning chastity:

a) The fact that only an infallible leader can preside over man's fate shows importance for man's legal rights. Man is the highest of creatures, and it his right not be led by just anyone.
b) There must be a definite guarantee of rights being provided in the leader's spirit (i.e., chastity), so that there will be no need for any other provisions – which sometimes exist and sometyimes do not – in fact, it is the conscience of the leader which is the statute of guidance for the society to be led toward prosperity. This is the best kind of leadership system ever known to man.

9. The Society of the "Superiors"

With the social establishment described above (an infallible or the like set as the leader), the greatest of human societies can be realized, for with the leader being infallible (or acting based upon what would satisfy an infallible, which we will consider equal to an infallible), everything will be provided for prosperities to appear and potentials and talents to be activated, and all inhibitions will be removed from such a path. This is the basis for individual and social prosperity, in which man can make all of his potentials and talents flourish toward good intentions.

The Quran has also invited man to form the society of the *a'lown* ("superiors" – referring to superiority in awareness, good will and merit:

> *And if you are faithful (in mind and in deeds), you will be the superiors.* (3:139)

Such a society is only feasible under the Quran and an infallible leader's guidance, for if the society is to maintain such a quality, correct faith and good deeds must prevail in all people.

Hence, in his famous sermon in Neishabour, Imam Reza (AS) calls the Imam the pillar and keeper of monotheist guidance, and the necessity for the society of "There is no God but the One God" to truly materialize.

Books such as the ***Nahj ul-Balaghah*** and ***Sahife-ye Sajjadiyyah*** have presented other essential social institutions in Shiite political philosophy. If a society is established based upon the instructions in the ***Nahj ul-***

Balaghah and ***Sahife-ye Sajjadiyyah***, it will be, in fact, the very society the Quran sees as "superior," a "eutopia for superior human beings."

10. The Influence of Islamic Intellectual Knowledge on Other Religions and Sects

So far, we have realized to some extent how vast the range of Islamic thoughts has been We have seen the variety of aspects their knowledge and analyses have covered and what weighty truths have been left for us thanks to their books and other works. Indeed, a glance at Muslims' books on Qoranic knowledge and intellectual knowledge and also major philosophical, scholastic and mystical texts, well depicts a knowledge of the universe and the cosmos with an insight, accuracy and profoundness achieved by Muslims that cannot be found in other philosophical schools – whether ancient or modern – and the boundaries of intellectual and mental endeavors and applications in Islam are incomparable to other similar schools of thought. Moreover, the act of thought in the realm of Islamic culture, along with the principles indicating and used for its foundations, is seldom seen in similar cultures. Hence, we must admit that many intellectual institutions and mental schools of thought arising – after the Islamic era – among other peoples have originated from Islamic knowledge and books – whether those translated or others that heve served as reference books and text books for Western thinkers and students of their scientific and philosophical schools of thought for years and even centuries.

Thus, considering the Quranic theology and various aspects of intellectual knowledge developed by the Muslims, we can see what an impact the spreading of such knowledge and sciences could have had upon the thoughts of other talented peoples, infiltrating and enriching them. We will now discuss such an impact.

Islamic intellectual knowledge fount its way into other domains of culture in several different ways:

a) Other scholars and thinks referring to Muslims' books and, having studied them, raising discussions on them.
b) Quoting from these books and their contents – whether verbatim or indirectly, whether along with the bibliography or not, whether with citing references or not, whether raising the topic as it was raised in Islamic culture or not.
c) Translating some texts on philosophy, dialectics, mysticism and

other domains of Islamic knowledge into various languages.

d) Jewish and Christian scholars, struggling with the problem of making religion and philosophy compatible themselves, turned to Islamic thinkers who had already gone through that path, such as Avicenna, Farabi and Ibn Rushd, for help.

It is obvious that each religion presents its own specific ideology; so does each philosophical (intellectual or Illuminationist) or mystical (intuitive) school of thought. Then, followers of such ideologies think of reaching compatibility and assessment.

11. Scholastic Philosophy

Christian religious philosophy[10], founded in the medieval years, is known as scholastic philosophy – "schola" was the Latin term for school, and this kind of philosophy was always taught and discussed at schools in churches. Thus, it became known as "scholastic" philosophy. [11]

Islamic philosophers, such as Kendi, Farabi and Avicenna, made great efforts in order to achieve compatibility between religion and philosophy. Thus, this mental movement in Islam found depth, richness and perfection, turning into a school of thought in its own right and leading to the writing of books such as Farabi's ***Ara'u Ahl ul-Madinat ul-Fazilat***, Avicenna's ***Ilahiat Isharat*** and Ibn Rushd's ***Fasl ul-Maghal***. Thus, Jewish and Christian thinkers were able to take good advantage of their efforts and form their own religious philosophy using Muslims' thoughts. This is why Christian philosophy is said to have originated from Christian philosophy. We will now mention a few examples of this for some Muslim philosophers.

12. The Pioneers of Scholastic Philosophy

a) Yaghoub ibn Ishagh Kendi

This philosopher has influenced philosophical schools of thought and domains from several aspects. First, the major works he himself translated; second, he coined and established many philosophical terms, and third, he put a lot of effort into achieving compatibility between religious knowledge and philosophical fundamentals. Moreover, his knowledge of other fields of science helped him become a truly comprehensive scholar. Hence, the title

10. Also called the Christian dialectic science.

11. ***The History of Philosophy in Europe***, Vol. 1, p. 105.

"philosopher-scientist" indeed becomes him.

He founded the Illumination school of Islamic philosophy, and was revered with such high respect in the West during the medieval and Renaissance era that he was regarded as a pillar in the field of astronomy. Cardano called him one of the great twelve intellectual figures of all humanity… [12]

b) *Abu Nasr Farabi*

Also known in Latin as Alfarabius, Farabi's views had a highly significant impact upon European thoughts, for his books were translated into Latin, and most of them were published in Paris as early as 1638. The inspiration Farabi made upon medieval philosophical works is quite apparent in the French Dominican priest Vincent, known as de Beauvais, who has used some of Farabi's philosophy in his works. Furthermore, Farabi influenced Albertus Magnus – Albert the Great – who would only refer to Farabi's books when discussing Aristotle's philosophy; nevertheless, he failed to study the philosophy presented by the head of all Greek philosophers as well as Farabi had. Gerardo de Cremona, Dominicus Gundissalinus – the archbishop of Segovia and many others were also influenced by Farabi. In France, his inspirations were more frequently seen, especially in the efforts done by the Chartre church in the twelfth century aiming to create compatibility between Aristotle and Plato's works – they had chosen the same method Farabi had three hundred years before, when he had attempted to compile and compare Plato's and Aristotle's works in his book ***al-Jam'o bayna Ray'ya al-Hakimayn***. [13]

c) *Abu al-Walid Ibn Rushd*

One of the greatest thinkers in the Islamic world, Ibn Rushd outstood all of the others in his depth and vastness of thoughts; his freat interest in the intellect and wisdom make us name him "the intellectual philosopher" of the world of Islam. [14]

Ibn Rushd is known as "al-Sharih" (the Explainer), a title given to him by Dante in ***The Divine Comedy***. He truly deserves to be

12. ***Science and Civilization in Islam***, p. 27.
13. ***Falasafat ul-Shi'a***, pp. 516-517.
14. ***The History of Philosophy in the Islamic World***, p. 704.

> called this, for it was his relentless efforts and awareness that cleared Aristotle's philosophy from the Platonic elements that Alexandrian interpreters had comtaminated it with. [15]

Ibn Rushd's being an Explainer is limited to this aspect, however – his scientific, accurate work interpreting Aristotle's thoughts and preventing them being mixed with others'. And this is where Dante has praised him: "he who has written the great explanation." Studying his texts on philosophy, nonetheless, show him as a philosopher rather than only an explainer, a fact which the writers of ***The History of Philosophy in the Islamic World***, as well as Ernest Renan, have confirmed. [16]

> Ibn Rushd wrote many books; the original Arabic texts of many have been lost, but their Hebrew and Latin translations are available. It is due to these translations that Ibn Rushd has had such an influence upon Jewish and Christian philosophy. [17]
>
> Following his death, his fame in the East faded out, but he left a great impact upon the west as of the early twelfth century up to the recent times… We should note that Thomas Aquinas selected Ibn Rushd's method in discussion, and accepted many of his theories, although he also found faults in his works. [18]

And this is Thomas Aquinas (1225-1274 AD), the Italian, Christian saint and philosopher, the greatest figure in scholastic philosophy, whose school of thought was set as the official Catholic school of thought by Pope Leo XIII. [19]Hence, Bertrand Tussell's words, who said:

> "Ibn Rushd is more important in Christian philosophy than in Islamic philosophy… he is the origin and beginning of Christian philosophy…" [20]

d) Avicenna

Avicenna is famous for the impact he had on science, medicine, philosophy, anatomy, pharmaceuticals, mathematics, story writing, philosophical poetry and many others. His influence upon other

15. Ibid, p. 653.
16. Ibid, p. 654.
17. ***The Persian Encyclopedia***, Vol. 1, p. 19.
18. ***The History of Philosophy in the Islamic World***, p. 705.
19. ***The Persian Encyclopedia***, Vol. 1, p. 690.
20. ***The History of Philosophy in the Islamic World***, p. 223.

cultures is also unquestionable. The translation of his works into other languages, as well as the books and researches done about Avicenna and his philosophy, all made this great Islamic thinker become a beacon of intellect and wisdom for the West.

> "***Shafa*** and ***Canon*** by Avicenna are the highest of perfection that medieval thoughts had achieved… his impact was very vast, from Eastern lands up to Andalusia; he even influenved Ibn Rushd and Ibn Meimun, and reached as far as Christian Latin philosophy and scholastic philosophy. His thoughts can be astonishingly abundantly found in the philosophy of Albertus Magnus (Saint Albert the Great) and Thomas Aquinas. Furthermore, Roger Bacon calls him "the greatest master in philosophy after Aristotle." Aquinas speaks of Avicenna with the reverence he has for figures like Plato, and as is characteristic of him, he is not playing with words…" [21]

13. The Philosophy of History

Going through the story of the rise and fall of various peoples, the Holy Quran has depicted the philosophy of history in a very profound, empirical and insightful way. Also, the *sunnah* as well as many *hadith* (such as some sermons of the ***Nahj-ul-balaghah***) provides many truths about the philosophy and the interpretation of history. Many other Islamic books also show such contents.

Thus, the philosophy of history and the development of various peoples and civilizations in Islamic culture can be categorized into two parts:

- The philosophy of history in the Quranic system
- The philosophy of history in the philosophical system

On the former school of thought, also depicted in *sunnah* and *hadith*, few independent studies have been done; indeed, this is one of the fields which calls for more knowledge, analysis and presentation in order to distinguish non-comprehensive, non-compatible philosophies of history from the true, and reveal the illusions which have become common. By means of God's words, the true tradition of history and stories of peoples need to be revealed so that the philosophy of history can be presented in its accurate form.[22]

As for the second school of thought, Ibn Khaldoun's work in Islamic

21. ***The History of Civilization***, Islamic Civilization, p. 175.

22. Perhaps researches done on the Holy Quran during the last 15 years include a treatise on this issue.

culture is a famous example, which has had unquestionable effect on Western thoughts and culture.

Ibn Khaldoun

The publication of the French translation of ***Mughaddamah*** had a profound impact on the scientists and thinkers who became aware of it. Western scholars were astounded by this great Arab thinker's genius, for they realized that he had outdone many European researchers in his valuable views and theories. Subsequently, scholars on economics, history and sociology began to study Ibn Khaldoun's ideas and theories and bring them to the attention of others, for European scientists, who had just set about their study of his work, found it highly modern. They also realized that many of the fixed facts about the history of science needed to be changed based upon the clear truths presented in ***Mughaddamah***; for instance, before studying ***Mughaddamah***, they thought Vico[23] was the first to do research on the philosophy of history, whereas they found out that that it was Ibn Khaldoun who had, over three centuries prior to Vico, spoken of the philosophy o history in his ***Mughaddamah***. Also, they considered Auguste Comte to have founded sociology and established its fundamentals scientifically, where as the publication of the ***Mughaddamah*** they understood that Ibn Khaldoun had founded this branch of science more than four centuries before Comte. Moreover, it was revealed that in the fourteenth century AD (the eighth century Hijra), Ibn Khaldoun had included in his book many of the ideas and basics economists and sociologists such as Jean Baptist Say, Karl Marx and Bacon had presented in the nineteenth century. [24]

Ibn Khaldoun felt it highly necessary to start up a new science himself… Thus, he spent two years… thinking about the issues and subjects of a new science which was later called *elm ul-umran*.[25]

No one can deny the fact that Ibn Khaldoun has discovered unchartered waters in science and societies, even surpassing Machiavelli, Montesquieu and Vico in founding a new science called

23. Clioranni Battiste Vico (1667-1744 AD), from Napoli, whom Europeans knew as "the founder of the philosophy of history," and later "the founder of sociology."

24. ***A Translation of Ibn Khaldoun's Mughaddamah***, Vol. 1, pp. 34-35.

25. Mohsen Mahdi, ***A Translation of Ibn Khaldoun's Mughaddamah***, translated by Majid Masoudi, Book Translation and Publication Agency, p. 64.

"historical criticism." He is to be credited with the honor of founding the theory of fatalism in the society, which he established centuries before supporters of positivism and psychologists did.

The influence mentioned above for Islamic philosophy upon the culture of Christian philosophy is not confined to divine philosophy; it can also be seen in various forms in the philosophy of moral ethics, too. We will discuss this issue in Chapter 11. Political philosophy also shows major influences from Islam; the translation of Farabi's political books, the political contents in ***Shafa***, Ibn Bajah's work on political philosophy and the like can even illustrate how profound this influence has been. Westerners have made references to other Islamic books on politics and governing too, by publishing them or writing interpretations on them, all of which shows the impact Islamic political sciences, philosophical sciences and social management fundamentals had upon various aspects of Western social management, governing and administration.

14. The Philosophical, Spiritual Journey

Walking and passing the path of educating, purifying and developing one's soul is referred to as *sulouk*, a spiritual journey. Such a journey necessitates several preliminaries and the knowledge of a few customs and rituals, including the following:

1. The path and knowledge of it,
2. the one passing through the path, and knowledge of him,
3. the destination and knowledge of it, and
4. the guide and knowledge of him.

Thus, the passenger on this path, apart from knowing the path and the destination, needs to have knowledge of both himself and his guide.

There are various forms of spiritual journeys in Islamic culture: religious, mystical, sophistic, intellectual, and hermitic. The intellectual spiritual journey is any philosophical one, a spiritual journey in which the passenger logically takes philosophical steps toward completion. This is how his path toward perfection is passed. In order to keep him on track all the way and safeguard him from even the shadow of negligence or ignorance, philosophers first return man to his infancy stage using the steps of wisdom intellect, and then make him set off on his spiritual journey.

a) Ibn Tufail

This kind of spiritual journey is mostly depicted in philosophical-educational tales and stories, for it is only possible by placing the passenger

on a direct, evolutional path which he himself would go through. One of the stories which have been thus written is ***Hayy ibn Yaghzan***, by the well-known Spanish philosopher Abubakr ibn Tufail. We have already discussed this book and the impacts it has had upon Western culture, literature and art in the previous chapter.

b) Sohrevardi

We named a few philosophical-educational stories written with this purpose in the last chapter. One of them was Sohrevardi's ***al-Ghorbat ul-Gharbiya***. Although Sohrevardi is not known as the pioneer of this form of stories, this is one of the most famous examples of them.

15. Modern Philosophy

Now we can well appreciate the greatness of Islamic heritage, and we see why, when presented to other thinkers in all of its depth and immensity, it is passed on generation by generation and century by century, building thoughts and philosophies and quenching thirsts for knowledge.

We have already discussed the impact of Islamic philosophers like Avicenna and Ibn Rushd on scholastic philosophers such as Thomas Aquinas, who founded the philosophical school of thought which Pope Leo XIII officially named Catholicism. Also known as Thomism, Thomas Aquinas's philosophy is influenced and inspired by Islamic philosophy, and is regarded as "the most prominent of scholastic philosophies."

> New twentieth-century Thomists, which developed both inside and outside religious circles by philosophers such as *Jacques Maritain and Mortimer Adler*, applied Thomas Aquinas's principles to economic, social and political issues of the era. [26]

Thus, we see the impact of Islamic philosophers and the influence of their thoughts upon modern Western philosophies:

> The impact Avicenna, Ibn Rushd, Ibn Bajah and Ghazali had on the emergence of what is known as Western – or modern – philosophy cannot be neglected. The statue of Condillac brings to mind a situation from Hayy ibn Yaghzan. In ***Shafa*** and also in ***Isharat***, the Sheikh considers a human being suddenly created as a whole but suspended in vacuum and veiled from seeing anything outside, a concept well-known to Oriental seekers of knowledge. As the Sheikh says, such a being would never doubt the comprehension and proof of his own existence, which by no means guarantees the premise

26. ***The Persian Encyclopedia***, Vol. 1, p. 691.

of comprehending his own body. Such an expression, along with the details the Sheikh provides on the issue in his books, reminds us of Descartes, who said, "Even if any other perception I have is false, what I know of my own existence is not." Hence, the famous saying, "I think, so I am," the foundation of Descartes' thinking – also included in Augustine and Campanella's writing – was preceded by the Sheikh. Even if Descartes and Condillac had not been directly influenced by Avicenna and Ibn Bajah, the correlation between their philosophies and quotation from Avicenna show the significance and depth of the works of Islamic philosophers. Furthermore, the fact that the Sheikh and Ibn Rushd's books were translated into Latin and Hebrew undoubtedly had an impact upon the sharp minds of European thinkers, even after the demise of scholastics.[27]

27. The Work of Islam, Preface, p. 20-19

Islamic Jurisprudence, Rights and Law

1. Islamic Jurisprudence, Rights and Law

As a whole, Islamic knowledge and instructions can be categorized into three groups:

1. Beliefs
2. Moral ethics
3. Laws

In his ***Ihsa'ul Oloom***, Abunasr Farabi has divided religious knowledge into two parts: beliefs and actions. In other words, part of religious knowledge is theoretical and based on beliefs – such as beliefs related to the existence of God, God's qualities, resurrection and the qualities of the afterworld, prophethood, prophets and the like – whereas other sciences are practical and pertain to actions carried out by man, such as regulations, legislations, transactions and other human behaviors.

On the above-mentioned great philosopher's categorization, we must first say that not all religions besides Islam have such an organized system of comprehensive beliefs and laws. Furthermore, by dividing *shari'a* into two parts, we must concede that "more ethics" be regarded as "actions", which is in accordance with contexts of religious instructions and sayings from Islamic figures. More ethics are, I any case, actions of the heart. Commonly, however, religious knowledge is categorized, as we have already seen, into three sections.

We should now mention that each of these three categories, having undergone research and discussion, has resulted in a great many fields and books. In this chapter, we intend to take a glance at Islamic laws (the science of jurisprudence) and its chapters and discussions.

Islamic laws and regulations consist of all instructions provided by the religion of Islam concerning worship, transactions, punishments and policies. In jurisprudence, such issues are dealt with in detail, along with their religious reasons and the sacrilege and necessity of deeds are explained to those concerned. This science is regarded as Islamic jurisprudence, Islamic law or Islamic legislation. However, "jurisprudence" is more commonly used currently than "law" and "legislation," and Islamic regulations, laws and punishments are considered as part of the domain of "jurisprudence."

I should mention here that brevity will be of more concern in the three final chapters of this book in order to avoid getting into excessive detail; otherwise, these three chapters (in particular the present chapter dealing with jurisprudence, laws and regulations) would become very vast. Thus, we will begin our discussion, albeit briefly.

2. Types of Legislation

Legislation and the issuance of laws (*tashri'*) fall into various categories. The two most prominent kinds of legislation are:

- Divine legislation
- Human legislation

Divine legislation refers to legislation sent by God through prophets bringing man God's religion which includes religious laws. Human legislation, on the other hand, one or several individuals make laws for a tribe, peoples, nation, society or a city. Obviously, in any case, the purpose is to provide laws, justice, order and protection, which can make a safe, God-seeking, healthy life free of anarchy possible. But alas, human legislation is not in fact trustworthy and has not proven fruitful; as the learned scholar Mahmoud Shahabi has said:

> "An individual (or several individuals consulting one another) set laws within their own mental capacity, and perhaps based on their personal biases and preferences, and enforce these laws across their realm with all the power they have. And once their personal preferences undergo change, they may again modify and alter the laws they have made." [1]

In divine legislation, in contrast, all of the possible consequences have been provided, and both kinds of perfection (initial and secondary, as we will discuss later on) will be fulfilled and guaranteed for the human society.

3. The Contents of Islamic Jurisprudence

The original substance of Islamic law – jurisprudence – consists of the fundamentals regulations and laws set during the Holy Prophet's mission – from his appointment to prophet until his decease – at various times and concerning the various aspects of life, which may come from the Quran directly or the sayings or deeds of the Holy Prophet (known as the *sunna*, or "traditions").

4. The Completion of Legislation during the Holy Prophet's Life

One of the mistakes made by many Orientalists and a group of their aficionados is that they regard Islamic jurisprudence to have been completed within a few centuries. This is because they do not distinguish the period of legislation from the period of the ramification and detailed issuance of laws. Orientalists fail to understand Islamic culture correctly – they get it the other way around, leading to their speaking of inappropriate, shaky Islamic issues.

1. Mahmoud Shahabi Khurasani, ***The Cycles of Jurisprudence***, Tehran University Publication, Second Print, 1961, Vol. 1, p. 21.

There are plenty of such examples of their getting tangled up in their books and articles on Islam. Shahabi has presented an extensive, document-based discussion on the fact that Islamic laws were set and completed in the time the Holy Prophet himself was alive. He says:

> "There is no need for further explanation for the fact that the basic regulations and laws for the divine religion of Islam were generally set and issued during the Holy Prophet's era himself; no law was set after the Prophet had passed away. Some of the legislations and regulations were, at that time, originally general, brief and unspecific; later on, their details and specifications were explained. This is why the Imams and the Prophet's progeny (AS) were frequently quoted to have asked their disciples to ask for documentation and origin from the Quran for anything they heard from them. In Abul Jarud's ***Ihtijaj Tabresi***, Imam Bagher is quoted to have said, "When I tell you about something, ask me about the origins of it from God's Book."

As we see, the general laws and regulations of Islam have been completely provided in the Quran and the *sunnah*; and "general" legislation is among the basic elements of setting laws. The law cannot always clarify details and determine minute cases. Furthermore, there are no cases of occurrence for some laws when they are set. Thus, they need to be set as general laws. Hence the major errors Orientalists have made; as an example, Petrashevsky, the Russian scholar has said:

> "Originally, the Quran was the sole basis for religious as well as legal instruction in Islamic societies; it was revealed during the great conquests Arabs made not long after (from 632 through 751 AD), however, that these laws would not suffice, so another resource – the *sunnah* – arose parallel to it… in the lands mentioned above, the Arabs faced issues and requirements for which the Quran had no answer…"

We see how thoughtlessly inaccurate about the reality of Islamic jurisprudence and its history these statements are, which is only due to the lack of correct information on such issues. In ***Islam's Explanations on Iran***, I have pointed out these errors (in the book mentioned, however, I have spoken of but some of the incorrect material and incompatible historical interpretations), incuding this very point: such statements from these writers arise from their being distant from understanding the collection of Islamic movements in various aspects. As we know, jurisprudence is the law, and the law is general. Therefore, all events and occurrences can and are be justified by what is included generally in the Quran. In setting general laws, hence, the

Quran has left nothing uncovered. Even the Quran and various *hadith* from the Imams and the Holy Prophet verify this. Throughout history, jurisprudential scholars have never issued any laws on their own; their only duty is to deduce and conclude laws. They recognize and identify the "topic" based in the events, phenomena and the case. This is the jurisprudential point that the writer mentioned above – who looks upon issues from a specific, customized, materialistic viewpoint of history – has neglected.

An Explanation

The quotation from Imam Muhammad Bagher (AS) underlines the fact that "Whatever we say, asks us for evidence to it from God's book." Other Imams have also stated this in various sayings. The other important secret lying in this subject is the fact that the true leader in Islam is he who has total knowledge of the Quran; he should have mastered the science of the Quran – theology, ethics, jurisprudence, politics, society, spiritual development, resurrection, mysteries of the universe, etc. – so that whatever he says is based upon the Quran.

Thus, the Imams have instructed people not to believe whatever a jurisprudent scholar, preacher, ruler, judge, interpreter, *caliph*, etc. claimed; instead, all judgments and statements are to be presented to the Quran, so that those who are Quran-originated will be distinguished from those that are not. Thus, the originality of leadership can be revived in a Quran-oriented society, in which an educational movement can be started based upon the Quran, and those who cut off the people and the community from this path – whoever they may be and however they may do this – will be disclosed, so that the society will be saved from their wrongdoing, and can continue on its path toward total prosperity and justice for all.

5. The Period of Legislation and the Period of Ramification and Detail

As we have already seen in the previous part, setting general laws is the nature of legislation. In the case of the religion of Islam, however, this becomes quite a critical issue, for Islam is an eternal religion whose laws have been set forever. Therefore, it is obvious that we will find two periods in the history of the compilation of Islamic jurisprudence: the period of legislation and the period of the ramification of laws and providing details for various cases in accordance with the law.

Jurisprudential legislations, as spoken of in the "techniques of the cycles

of jurisprudence," naturally consist of two phases: first, legislations are consecutively set, after the accumulation of which do they ramify and go into detail according to the deductions and reasoning made based upon the original ones. Therefore, the periods of jurisprudence in history are no more than two:

1. The period of legislation, when laws and rules are set
2. The period of ramification and detail, when individual cases are deducted and extracted

This is the primary categorization given for the periods and cycles of jurisprudence. Other possible categorizations for these periods are in fact secondary categorizations which are located inside each period of setting laws, not in their place. [2]

6. Initial Perfection and Secondary Perfection in the Society

For each object, two kinds of perfection can be perceived: initial, general perfection and secondary specific perfection. In brief, the purpose of legislation is to guide the human society toward perfection. And true perfection is, without doubt, transition from the initial phase of perfection to the secondary one. Thus, we must determine which legislation can guarantee both forms of perfection for mankind.

For further clarification of this point, let us now consider a summary of the scholar Mahmoud Shahabi's words:

> "Anything can have a sequence of levels of perfection parallel to each other, the first of which is known as 'initial perfection.' The next ones, even the hundredth in order, are regarded as "secondary perfection.'"[3]
>
> By the initial perfection of an object, we refer to the descriptive state which the object's sustenance depends on, such as the shape of a sword which can be regarded as its initial perfection.
>
> The secondary perfection of an object refers to the features and characteristics that emerge in the object following the initial perfection; in the case of the sword mentioned above, sharpness, smoothness and being decorated with jewelry can be examples of secondary perfection.
>
> The society, which is our main focus of attention, can also have two kinds of perfection:
>
> 1. Initial perfection
> 2. Secondary perfection

2. ***The Periods of Jurisprudence***, Vol. 1, p. 44.

3. Like wise secondary materials and intelligibles, which are philosophically regarded as of the non-first order.

Initial perfection in a community occurs when a group of human beings gather in participation and collaboration. This leads to a law which sets mutual responsibilities for each person, so that violations and invasions – which result in chaos and anarchy in the society – will be prevented and social order can be achieved.

Secondary perfection in a community is when appropriate elevation is achieved in any aspect of the society, whether general or specific. Thus, all people achieve development in all aspects as much as an individual can in a society; also, in aspects related to this world and the afterworld, all of the joys and truths they deserve and suit will be provided for them. In brief, the society and its members should be guided toward prosperity in all directions[4].

Providing the society and its members which such an elevation and prosperity is impossible without laws, instructions and legislations. An individual, or even a group, cannot set and execute such comprehensive laws even though they may collaborate and exchange ideas, for ordinary people do not know everything about good and evil and what is to their benefit and what is not. And even if an individual or a group were to be aware of every advantage, disadvantage, benefit and evil for each object or deed, they would not know their interactions, changes in directions and thee good or evil lying in such changes; they have no say in the causes and causalities and reasons and effects of affairs, as well as in the interactions among situations, times, places and fate and destinies. And even if they were to have complete knowledge of such occurrences and fates, they would still have no dominance over the spiritual world and its various aspects, and also over the changes in the spirit and its interactions with the physical being. These individuals would have no information of such domains because they are physical and non-divine beings…

It may now be obvious that setting laws that could fulfill the society's secondary perfection is not possible without awareness of all aspects, associations, interactions and relations in it. Moreover, among all laws set by man, there is no law whose legislator can claim that the law can guarantee to cover every aspect and ensure the prosperity of the society and every individual in it completely. Even if there were such a claim, it would logically and reasonably be regarded as nonsense and

4. These directions can be analyzed into six parts: individual, group, physical, spiritual, material world, and the afterworld. Thus, such a way of proof, which is specific to this writer, has been called in my other works as "the proof of directions." (Shahabi)

uttered by a fool.

It can be concluded from what we have said that… a perfect law is one that generates secondary perfection from God – who is in full command of all aspects of mankind, the society, souls the world and the afterworld – through one of His prophets sent to people bringing them God's true signs and revelations. In a word, if a law is to provide the grounds of the secondary perfection of a society, it must be a divine law. Islamic jurisprudence, presented upon man as a divine law, is such a law; all of its followers, even logic and reason, agree that it provides instructions on philosophy, purification of the soul and adjusting of the society (the three basic pillars of true civilization) in the most perfect form possible. Obeying such a law will guarantee man's true prosperity, i.e. individual and social, and also physical and mental perfection both in this life and the afterlife. [5]

7. The Law and Moral Ethics

The value of the laws is undoubtedly in its being practical and actually used. If the law is not put into action, or is neutralized through legal tricks and shrewdness, it will fail to leave its desired effect. Such a law will gradually become no law. It is also obvious that for am law to be obeyed, announcing the law and setting executive force would not suffice; instead, what makes a law effective, both individually and socially, both under observation and control and without that, is the existence of a moral force of commitment in individuals and the society that makes them obey the law. Hence, the significance of "religious law" over "civil law" is quite clear.

In fact, legislations in religion are one's "obligation," whereas in the law they are regarded as "regulations." And it is clear how different law-based regulations are from religion-based duties. Therefore, we see the vast difference that may be obtained from each of these in order to achieve prosperity for people and the society. This is why scholars and scientists have said in comparison of Islamic religious regulations and civil rights in America:

"In the United States, the law has limited contact with the execution of moral duties. In fact, an American, while being law-obedient, may also be corrupt and degraded. In Islamic laws, on the contrary, God and His Will are the source of all laws, a Will which has been revealed to His Prophet, Muhammad. Such a Divine Will regards all believers to be united as one society, whatever ethnic group or tribe they may be from,

5. ***The Periods of Jurisprudence***, p. 16-10.

near or far. In this case, it is religion that bonds the society correctly and healthily, not nationality and geographic specifications. Here, even the government itself also obeys the Quran… As believers see it, this world is like a passageway to another, better world. The Quran provides the rules for how people are to behave in regard to both themselves and also toward other people to make the spiritual journey from this world to the other safe and sound. It would be impossible to separate political or legal theories and ideas from the Prophet's teachings, for these are teachings that determine behavior and the way of life in personal, social, political and all various affairs. Such instructions are more like duties and obligations for man, rather than being rights. In other words, they are moral obligations that one is expected to carry out. No one on earth can exempt anyone from fulfilling these duties, and deviating from them will put man's own future and destiny into jeopardy. [6]

8. The Compilation of Jurisprudence

The compilation of jurisprudence began from the period of legislation, for Ali (AS) learned Islamic laws, rules and the secrets about verses of the Quran that include them from the Holy Prophet. Then, Ali's disciples began teaching and compiling correct Quran-based jurisprudence. One of such figures was Ali ibn Abirafe', one of Ali's closest disciples, Shiite jurisprudential expert and pioneer in compiling jurisprudential knowledge. He wrote a book on the various chapters of jurisprudence (regulations on ablutions, prayers, and other chapters) He learned jurisprudence from Imam Ali (AS) and compiled it in his book.

We are mostly concerned with Shiite jurisprudence here, which pertains to the Imams through our scholars, and then to Imam Ali and the Holy Prophet; it is undoubtedly a Muhammad an, Islamic jurisprudence arising out of God's orders, without being contaminated by other ideas, analogies, or persons all over the world. Thus, Shiite jurisprudence has its roots in the Quran, then *hadith* from the Holy Prophet, and then from the Imams, who in fact quoted from their fathers, up to Imam Ali, who was clearly mentored by the Holy Prophet, and developed by His revelations, instructions and divine preaching. As Sheikh Zeinuddin Shahid Thani quotes from Hisham ibn Salem and Hammad ibn Uthman and others at the end of his book, Sheikh Zeinuddin Shahid Thani, ***Munyat ul-Murid***, Imam Jafar Sadegh (AS) is reported to have said:

6. ***Law in Islam***, by Majid Khadouri and Herbert J. Liebesny, translated by Zeinulabedin Rahnama, published by Ighbal, Tehran, 1957, from the preface by Robert Houghton Jackson, former US District Attorney.

> What I say is the same as what my father said, and what he said is the same as what my grandfather said, and my grandfather's words are the same as Hassan's, and Hassan's words are the same as Amir al-Mu'menin's, and his words are the same as those of the Prophet of God's words, whose words were God's words.

This is why Shiism is, whether in belief in God or jurisprudence, Imams, their judgments, or politics, the same as Muhammad's Islam, without the slightest distortion. Other Islamic sects, however, are a mixture of Quranic teaching, *sunnah*, ideas and thoughts of other peoples, future followers and disciples, and considerations coming from judges' ideas when forming some basic fundamentals of scholastics, ideologies and judgments. [7]

Another point of significance with Shiite jurisprudence is that all Shiite Imams, using the Holy Prophet's judgments, have worked one unified, single school of thought, developing a sole current all the time. This is why this jurisprudence has its own exclusive depth and originality, and is free of all of the contradictory judgments, quotations and ideas resulting when judgments are made based upon analogies and personal perceptions.

It was in the era of the Imams Muhammad Bagher (AS) and Jafar Sadegh (AS) that Shiite jurisprudence achieved most of its development. A great academy was founded, and Imam Sadegh (AS) began to teach the fundamentals and basic of the religion in all its aspects including jurisprudence. He even got 400 of his pupils involved in writing and compiling material. This was the beginning of a great movement of writing books and compiling sciences in Islam, a truly "scientifically comprehensive" academy established.

9. The Denial of Analogy in Shiite Jurisprudence

Sunnite jurisprudential establishments have been formed and developed throughout the next two centuries, and since their founders were not continually connected to the Holy Prophet and divine revelations like the Imams were in Shiism, theirs is not a truly original jurisprudence. Such a lack of connection has led to, among other things, their including comparison in jurisprudential reasoning, and judging divine religion through comparisons. The reason is quite clear – whenever they failed to discover how God rules on a matter, they turned to comparison, using similar judgments and *fatwas* to settle issues[8]. Religious regulations and rules are, however, divine; the criteria

7. For more detail, see ***The Epic of Ghadir***, p. 131 and on.

8. This has led to such an extent that even inside Sunnite Islamic cultures, some have shown concern over the spread of comparison in religious matters; they have also begun to content it by founding an anti-comparative school of jurisprudence.

on which they are made are known only by God, the Holy Prophet and His Progeny. This is why comparisons in religion lead to contradictory ruling, which in turn undermines religion, and eventually may make people fall astray of God's ways. Now we see why Imam Jafar Sadigh (AS) strongly opposed making comparisons in making jurisprudential judgments and religious matters. As he told Abu Hanifa, "Fear God and avoid comparison." Indeed, it is true that "religion is faded, deteriorated and destroyed by comparison."

As Dr. Seyyed Javad Mustaphavi Khorasani, the distinguished researcher has written on this issue:

> "Having proven that comparison has no credibility as seen by logic[9], we will now give this discussion a religious look, and study it as seen by scholars of jurisprudence. As scholars of jurisprudence and Islamic fundamentals see it, analogies and comparisons call for an extensive discussion, and many books have been written – dependently and independently – for and against them. Those who see comparison as a proof and have shown it to be thus, regard it as a document equal to the Quran, *hadith* and *sunnah*, and use it to reach a detailed judgment whenever there is no clear statement or agreement for a regulation or decree. As we have already mentioned, some Sunnite scholars even prefer analogy and comparison to the Quran and *hadith*. [10] Before dealing with the methods of reasoning, let us look at a brief history of analogy and comparison:
>
> From the rise of Islam up to the *tabe'een* (followers) and before Abu Hanifa's era, Islamic literature shows no sign of "comparison" as a form of reasoning used for presumption and inference; there are but a few items containing the words "comparison" and "judgment" which we will deal with later on. [11] However, the supporters of analogy and comparison believe that, "analogy is an obvious logical action and the basis of reasoning; it is not confined to any period of time, and the wise always use the law of equal judgments in daily affairs." [12] As we will see later on, analogy and comparison in religious regulations is weaker than the logical analogies that are obviously true. In any case, Abu Hanifah

9. See the previous pages of this article in ***In Memory of Allameh Amini***, pp. 266-7.

10. These are typically people who have had insufficient knowledge of the Quran and *sunnah*, or did not bother to turn to those who did have such knowledge (the Imams (AS)); even though the Quran has instructed them to "ask those who remember God if you do not know something," they did not do so, and turned to analogies and comparisons instead so that they would not lose their stance as "jurisprudential scholars" and "wise judges."

11. This article has been mentioned in a footnote in the chapter dealing with tradition.

12. Abuzohreh's ***Osoul ul-Fegh***, p. 210.

(died 150 Hijra) was apparently the first to see analogy and comparison as a tool of perception [13] and had discussions on it with Imam Jafar Sadegh (AS), where the Imam listed for him cases of contradiction in analogy and comparison, and told him to avoid applying them. As Ibn Hazm Andalusi (died in 456 Hijra) has said, "Imam Sadegh (AS) told Abi Hanifah to have piety toward God and avoid comparisons…" [14]

In the Abbasids era, the three Imams (Malek, who died in 179 Hijra, Shafei, 204 and Ahmad Hanbal, 241) then elevated comparison as significant as the Quran and *sunnah*, thus developing discussion about it. They wrote many provisions and details for it and perceived many jurisprudential cases based on it – contradicting each other in most cases too, for their comprehensive concept of the purpose of analogy and comparison differed.

The backlash toward such inadvertent insistence on comparison was, for example, that Davoud ibn Ali Zaheri, originally a jurisprudential scholar of the Hanafi sect, strongly disapproved of it. Contenting himself only to what he got apparently from the Quran and the *sunnah*, he found many supporters in his time – and even up to a few centuries after that – and over 400 students and scholars attended his classes; [15]he even founded a fifth sect, "zaheriyyah."[16]

The Zaheriyyah believe that since *hadith* states that murder with a sword necessitates retaliating punishment, murder with a stone, stick or a metal bar cannot be compared to that. They also say that man's urine is unclean because it has been stated in *hadith*, whereas a pig's urine is clean because there is no *hadith* decreeing its uncleanliness, and comparisons are unacceptable. Based on this rule again, they say that a dog's saliva is unclean, but its urine is clean.

In Davoud's era, some of the Mu'tazila – in particular Ibrahim ibn Sayyar, better known as Nizam (who died in 221 Hijra), who was also Jahez's teacher – have defied and disapproved of analogies and comparisons. [17] Two centuries after Davoud, Ali ibn Hazm Andalusi (died 456 Hijra), the second most important figure in the Zaheriyyah, stepped up disagreements with analogies and comparisons with even greater vigor, and wrote a book entitled ***Ibtal ul-Ghias ("The Negation of Analogy")***,

13. Muzaffar's ***Osoul ul-Fegh***, Vol. 3, p. 181.
14. ***Ibtal ul-Ghias***, published in Damascus, 2000, p. 71.
15. ***Reyhanat ul-Adab***, Vol. 3, p. 41.
16. It has been called the "fifth" sect because it arose out of the other four sects.
17. ***Azzari'a ila Osoul ul-Shari'a***, Vol. 2, p. 674, ***Osoul ul-Fegh***, p. 214.

which triggered much discussion and debate among scholars. Those who supported analogies and comparisons used the book as evidence, and those who were against it wrote in disapproval. Ibn Hazm also disapproves of comparison and analogy in ***al-Ahkam*** (in 226 pages, pp. 929-1159, in the chapter called ***al-Tanaghuzuhum fil Ta'teel***), where he mentions contradictory analogies and comparisons such as,"Hanafi and Maleki see *i'tikaf* (spiritual retirement and seclusion) as equal to a stop in Arafa, in general meaning a stopover at a specific place. Since stopping at Arafa needs another concept – *ihram* – so does *i'tikaf* – which requires fasting. However, Shafei believes that since the stopover at Arafa does not require fasting, neither does the other." Ibn Hazm adds, "If we were to gather all of their analogies and comparisons, it would raise such laughter that we would need no other entertainment. Anyone is able to produce such nonsense." [18] Other, more recent books by Sunnite scholars have also disapproved of analogies and comparisons in worship and punishments. [19] Even Muhammad Abuzohreh, the contemporary scholar, sets limitations and conditions when discussing analogies and comparisons that we see quite near to totally defying it... [20]

10. Sects of Islamic Jurisprudence

There are two jurisprudential systems in Islam: the Shiite jurisprudential system and that of the Sunnite. The former is divided into two branches:

- Imami Shiite jurisprudence
- Zeidi Shiite jurisprudence

The Ismaili Shiite sect owes much of its significance, however, to some Islamili-oriented thinkers and philosophers like Naser Khusro, Abu Yaghub Sajzi, Hamiduddin Kermani, Abu Hatam Razi, and Mu'ayyid Shirazi[21] as well as some of their political and social endeavors and their organized campaigning in mid-Islamic eras (rather than recent ones); a systematically compiled jurisprudence for their sect, however, does not exist.

Sunnite jurisprudence ramifies into four well-known sects:

- Hanafi jurisprudence
- Shafei jurisprudence
- Maleki jurisprudence

18. ***Al-Ahkam fi Osoul ul-Ahkam***, Vol. 8, p. 1145.
19. Abuzohreh's ***Osoul ul-Fegh***, p. 323, and Ibn Rushd's ***Badayat ul-Mujtahed***, Vol. 1, p. 172.
20. ***In Memory of Allameh Amini***, p. 268-272.
21. ***The Persian Encyclopedia***, Vol. 1, p. 147.

- Hanbali jurisprudence

There are also other jurisprudential systems among the Sunnite which have few followers and are not officially recognized, such as the jurisprudences of Abubakr Owzai, Ibn Abishabih, Muhammad ibn Jarir Tabari and Davoud ibn Ali Zaheri Isfahani. The latter has, however, found some prominence, leading to the "Zahiriyya" sect, a basic fundamental of which is the denial of comparison.

11. Various Sections of Islamic Jurisprudence

The science of jurisprudence consists of many chapters and sections. In his ***Sharaye' ul-Islam***, Muhaghegh Helli, the renowned jurisprudential scholar, has categorized the sections of jurisprudence into these four groups:

- Prayers and worship
- Oghood (Bilateral contracts)22
- Igha'at (Unilateral legal actions)
- Sentences and policies

In the science of jurisprudence, each section is called a "book"; in prayers and worship, for instance, which consists of various books itself, we speak of "the book of prayers." The same goes for logic. In total, there are 48 books of jurisprudence included in the above-mentioned categories. Moreover, there are hundreds of problems and details concerning worship, transactions, legal and criminal issues. In fact, given the rules of deduction and the original sources of jurisprudence, it is impossible to find an issue that Islamic jurisprudence has left unattended, in particular thanks to *ijtihad* (deductive reasoning) which is common on Shiism.

I will now go through some of the main titles included in the books of jurisprudence – both in worship and transactions, contracts and unilateral dealings – for the further information of readers unfamiliar with jurisprudential texts and their contents:

- The laws of cleanliness
- Prayers
- *Zakat* (Alms)
- *Khums* (one-fifth of certain items which a person acquires as wealth, and which must be paid as an Islamic tax)

22. In *oghood*, the deal consists of two parties, such as marriage, purchases, contracts of bailment, etc; *igha'*, on the other hand, is a transaction that does not need two parties, such as rewards and confessions.

- Fasting
- *I'tikaf* (the Islamic practice of retreating in a mosque for a certain number of days)
- Hajj
- *Umrah* (a pilgrimage to Mecca that can be undertaken at any time of the year)
- *Jihad*
- Calling people to goodness and prohibiting evil (defense, the sacrilege of remaining silent in the face of atrocity, the sacrilege of association with the cruel)
- Business (purchase contracts, options and rights, the rules and laws of purchase and defects, usury, money loans, selling for profit, purchasing fruit, purchasing animals, short sales, etc.)
- Mortgages
- Bankruptcy
- *Hojr* (legal interdiction)
- Guarantees (drafts and bails)
- Agreements
- Corporation
- Co-partnership contracts
- *Muzare'eh* (lending the land on condition of receiving a fixed proportion of its produce; contract of cultivation)
- *Musaghat* (an agreement under which one delivers to the other his fruit trees on the condition that the other takes care of them, and both share the profit)
- Deposits
- Loans
- Rents and leases
- Rights of attorney
- Endowment and trust
- Charity and gifts
- Horseback riding and archery
- Wills
- Marriage
- Divorce and its various forms
- Delegation
- Conditional promise
- Offerings and oblations

- Fishing
- Slaughtering animals
- Laws considering food and drink
- Appropriation
- Pre-emption
- Reviving dead lands and cultivation of wastes
- Lost property
- Inheritance and its laws
- Judgment
- Giving witness
- Penalties and punishments
- Retaliation (Avenging for blood) and fines and blood money

12. The Science of the Fundamentals of Jurisprudence

Another branch of theoretical sciences which has been established and then expanded into a highly sophisticated state in Islamic culture is knowledge of the fundamentals of jurisprudence, which aims to gather the laws and rules needed for the deduction and reasoning of religious sentencing and providing details. Gaining an accurate knowledge of the origins and development of this science is significant if one is to learn how vast the realm of Islamic culture and science is. Apart from its preliminary sections, this science consists of two major parts: verbal fundamentals and intellectual fundamentals.

A great deal of valuable literature has been presented in the field of the fundamentals of jurisprudence, such as:

- ***Kital ul-Alfaz wa Mabahisoha***, by Hisham ibn Hekam
- ***Kitabe Ikhtilaf il-Hadith wa Masa'iloh***, by Younis ibn Abdurrahman
- ***Kitab ul-Khusoos wa al-Omoom***, by Abusahl Nobakhti
- ***Addarighat ila Osoolulshari'a***, by Seyyed Murtaza Alamulhoda
- ***Uddat ul-Osool***, by Sheikh Abujafar Tousi
- ***Al-Masadir***, by Sadiduddin Hemsi
- ***Tahzeeb ul-Osool***, by Allameh Helli
- ***Ma'arij ul-Osool***, by Muhaghegh Helli

The above-mentioned are but examples of the work done by Shiite pioneers in the fundamentals of jurisprudence. Sunnite scholars have also presented several works in this field, such as:

- ***Al-Mustasfa***, by Abuhamed Ghazali
- ***Mukhtasar ul-Osool***, by Ibn Hajib
- ***Sharh-e Mukhtasar*** (the book mentioned above), by Azaduddin Iji

- ***Kashf ul-Asrar***, by Ala'uddin Bukhari
- ***Tangheeh ul-Osool***, by Shahabuddin Ghurafi
- ***Al-Muvafighat***, by Abu Ishagh Shatebi
- ***Minhaj ul-Osool***, by Ghazi Beyzavi
- ***Ibtal ul-Ghyas***, by Ibn Huzm Andulusi

And to name some of the more recent works:

- ***Osool ul-Feghh***, by Sheikh Muhammad Abuzuhreh
- ***Osool ul-Feghh***, by Sheikh Muhammad Khezri Bak
- ***Alvajeez***, Hussein Ali Al-Azami

On this field's more recent Shiite scholars, Allameh Seyyed Hassan Kazemeyni writes:

> "Since exertion on detailed religious legislation is considered as obligatory for Shiites, and the doors for logical deduction are open to further research, and also since Shiism does not by any means approve of imitation in the fundamentals of beliefs or imitation of deceased scholars in detailed regulations, Shiite researchers put a great deal of effort into the science of the fundamentals of jurisprudence (which is the base of legal deduction), going out of their way to gather all the details passed on to them by their predecessors and writing a great many books..." [23]

Thus, this branch of science found great depth and order thanks to the endeavors made by later Shiite scholars, in particular as of the second half the twelfth century Hijra, when a great scholar, the late Agha Muhammad Baghir Vahid Behbehani (born in 1205 or 1208 Hijra) rose to make a great contribution in strengthening the status of this science. From then on, discussion and studies on the fundamentals of jurisprudence enjoyed great flourish, and renowned, distinguished scholars wrote detailed and comprehensive works in this field, such as:

- ***Zavabet ul-Osool***, by Seyyed Ibrahim Mousavi Ghazvini
- ***Anaveen ul-Osool***, by Mir Abdulfattah Maraghi Najafi
- ***Isharat ul-Osool***, Haj Muhammad Ibrahim Kalbasi (Karbasi)
- ***Fosool***, Sheikh Muhammad Hussein Isfahani
- ***Hidayat ul-Mustashredin***, Sheikh Muhammad Taghi Isfahani
- ***Baday ul-Afkar***, Haj Mirza Habibullah Rashti
- ***Ghavanin ul-Osool***, Mirza Abulghasem Ghomi
- ***Fara'ed ul-Osool***, Sheikh Murtaza Ansari
- ***Kifayat ul-Osool***, Akhund Mulla Muhammad Kazem Khorasani

23. ***Tasis ul-Shi'a***, p. 314.

- ***Nahat ul-Diraya***, Sheikh Muhammad Hussein Isfahani (Compani)
- ***Osool***, Mirza Muhammad Hussein Naeeni
- ***Maghala ul-Osool***, Agha Zia Araghi
- ***Osool ul-Feghh***, Sheikh Muhammad Reza Mizaffar
- ***Tahzib ul-Osool***, Imam Khumeini

Moreover, the distinguished scholar Sheikh Muhammad Saleh Mazandarani Semnani, who had a great talent for poetry and wrote impressive Arabic poetry, combined the basics of the fundamentals of jurisprudence in the form of a poem; he wrote ***Kifayat ul-Osool*** in the form of an *arjooza* (poem) – called ***Sabikat-ul Zahab*** – whivh consists of 1462 lines, 862 on rhetorical principles and 780 on intellectual principles.

13. The Main Items Discussed in the Fundamentals of Jurisprudence

Rhetorical Principles:

- The topic of science
- The distinctions among sciences
- The relations between rhetoric and their effects on meaning
- The usage of rhetoric and the presentation of typical or personal meanings
- Topical ranges in rhetoric
- Personal and combinatory rhetoric
- Verbal meaning
- Immediacy, its implication and other signs of real and virtual
- The five states of rhetoric: *tajavvuz* (finding rhetoric when usage occurs in a virtual meaning), commonality, specification, quotation and *ezmar* (using pronouns)
- Legislative truth
- Accuracy and Generality in rhetoric for prayers and dealings
- Using rhetoric in more than one meaning
- Derived rhetoric and their real and virtual types based on accordance with sources or ends in the three tenses
- The concept of derivation according to expansion and combination
- The imperative and its meanings
- The usage of imperatives in statements of request
- Various forms of necessity deriving from imperatives, etc
- Will and its various forms: the will for current actions, the will for

future actions, true and rhetoric will, divine and religious will, usage and serious will
- Components and the void of components
- The preliminary of necessity
- Various forms of preliminaries
- Various forms of necessities: absolute, conditional, self, non-self, main, causal, optional, determined, worship and dependent
- Prohibition and its statement
- Ordering something and prohibiting its opposite
- General and specific and their corresponding discussions
- The association of commands and prohibitions
- Order, various points and its permission or prohibition
- Concepts such as conditions, descriptions, etc
- Absolute and bound, brief and comprehensive
- The preliminary issues in philosophy

Intellectual Principles:
- Severance and its various forms and discussions
- Single sayings and its reliability and justifiability
- Suspicion and its reliability and justifiability
- The various forms of suspicion: personal suspicion, typical suspicion, specific suspicion, absolute suspicion, topical suspicion, methodical suspicion, descriptive suspicion, exploratory suspicion, partially topical suspicion, totally topical suspicion
- The principles of practice: principles and their various forms: practical and rhetorical principles, intellectual and legislative principles, decisive and indecisive principles …
- Evidence and its various forms: intellectual and legislative evidence, foundational and signatory evidence, decree and topical evidence
- The principle of innocence
- Caution
- *Takhayyor* (Giving choices)
- *Aghal va Aksar* (The most and the least) and its various forms
- *Istishab* (Decreeing former credit) and its corresponding discussions and the proving principle
- Balance, preference and their corresponding discussions

The items discussed in the fundamentals of jurisprudential sciences have been excerpted from ***Kifayat ul-Osool*** and ***Istilahat ul-Osool***.

14. Fundamentals Stated by the Imams

As we know, the holy Imams – particularly Imams Muhammad Baghir and Jafar Sadigh (AS), who lived in an era in which many great jurisprudential scholars were trained by them and jurisprudence was at the height of its ramification and development – have instructed us on the basic rules of the fundamentals of jurisprudence. The rules they taught were, as we have already said, developed and expanded into a very exact, comprehensive science. A number of Shiite scholars, however, did not see the science of the fundamentals of jurisprudence as deserving of such development and expansion; they believed that a science preliminary itself in nature need not such an amount of time and effort. Thus, they established another school of fundamentals, separating the basics taught by the Imams and removing the unnecessary technical details. This school of thoughts is known as *Osool ul-A'imma* (The Fundamentals taught by the Imams) or *Osool-e Al-e Rasoul* (The Fundamentals taught by the Prophet's Progeny). God-willing, in ***The Separation School of Thought***, I will discuss this issue further.

15. Comparative Jurisprudence

Another case of the scientific work done by Muslims in the field of jurisprudence and law is comparative jurisprudence, which compares the views, reasoning and judgments made by scholars of jurisprudence, and provides criticism and evaluations on jurisprudential issues. In Shiite Islamic culture, comparative jurisprudence consists of two fields:

a) A comparison of religious sects
b) A comparison of jurisprudential trends and methods

The former compares various Islamic jurisprudential sects (Hanafi, Shafei, Maleki, Hanbali, and sometimes other not well-known sects) with Jafari jurisprudence. The latter, on the other hand, makes a study of jurisprudential trends and attitudes, logically criticizing their views and judgments.

Sheikh Tousi

Sheikh Ul-taifah Abuhafar Muhammad ibn Hassan Tousi (born in 460 AD) was one of the founders of the first kind of comparative jurisprudence, which he has made a study of in his book ***Al-khilaf*** (or ***Khilaf Ul-fughaha***), comparing various sects.

Allameh Helli

Another great Shiite scholar who made great contributions to both the first (in his ***Tazkerat-ulfughaha***) and second (in his ***Mukhtalef-ushi'a***) kinds of comparative jurisprudence mentioned above is Allameh Hassan ibn Mutahhar Helli (born 726 AD).

16. The Value of Islamic Jurisprudence and the Scientific Merit of Its Literature

To realize the value of Islamic jurisprudence and law, many fields have to be studied; to name a few:

1. The history of law and legislation
2. Legislation in legal systems before Islam
3. Legislation in religious systems before Islam
4. Legislation systems contemporary to Islam
5. Legislation in modern legal systems
6. Various fields of jurisprudence and law in other religions
7. Various fields of jurisprudence and law in Islam
8. A comparison of jurisprudence and law in Islam and other laws and jurisprudences
9. A comparison of the quality of issues and fields included in jurisprudence and law in Islam and other laws and jurisprudences
10. A comparison of the quantity of issues and fields included in jurisprudence and law in Islam and other laws and jurisprudences
11. An evaluation of the foundations and fundamentals of jurisprudence in Islam and in other kinds
12. Depth and scientific basis in Islamic jurisprudential basics
13. Considering human rights in legislation
14. Guaranteeing and supervising the execution of legislations and laws

Knowledge of the above mentioned fields will assist us to better understand the value of Islamic jurisprudence and also its relation with other kinds of law and jurisprudence. We obviously cannot discuss each of these issues separately here; furthermore, it is knowledgeable researchers and dispassionate scholars who are fit for such a task.

The fact should suffice, however, that studying texts on Islamic jurisprudence, in particular Shiite jurisprudence – which is based upon independent reasoning, and the mere inclusion of intellect in reasoning shows how profound and rich such jurisprudence is – proves the extent of accuracy existent in every one of the fourteen fields mentioned above and the concrete foundation of legal

issues in them, wherein individual as well as social rights have been taken into consideration with the highest care.

Books on jurisprudence – from briefer works like Allameh Helli's ***Tabsareh*** to extensive, encyclopedic works like Sheikh Muhammad Hassan Najafi's ***Javaher-ul-kalam*** and also books on jurisprudential reasoning such as Muhaghegh Helli's ***Sharaye'***, Shahidain's ***Lum'eh*** and ***Shar-he Lum'eh***, Seyyed Ali Tabatabaee's ***Ryaz-il-masa'el***, and Sheikh Murtaza Ansari's ***Makasib*** – clearly show this. [24]

Western scholars have also written, quite in awe, a lot about the significance of Islamic jurisprudence and the necessity of referring to it, and of the factors inhibiting their understanding of it. They have reiterated the need to have Islamic texts translated and made available to the Westerners. We will now quote from a few of such scholars:

1. Great obstacles arose, which made people lose their interest in Islamic laws. As a tribute to Arabic culture [Islam], we sufficed to publish a few astounding reports about their laws. We were under the age-old belief that the Islamic world had made no contribution to the realm of human rights and knowledge… reconsidering such beliefs, however… shows that we must, for the same reasons mentioned above, discard such selfish beliefs stating that nothing can be learned from Islamic experiences… we can state that Islamic law is a literally excellent field for any American lawyer to research in… in fact, this legal system, which was once regarded as unpractical[25], has been able to make great achievements quite astoundingly… the reason for the increasing interest in Islamic jurisprudence is seen in the fact that the Washington Association of Attorneys spent a great deal of its first year organizing speeches to which texts on Islamic legislation made important contributions. The main point is that we have just begun to realize that fact that this religion, the youngest religion in the world, has created a jurisprudence that satisfies the sense for justice inside millions of people around the world, from the hot lands in Asia and Africa to America… this law can teach us a great deal about executing the law…[26]

24. Also, see Dr. Abduljavad Falatouri's article ***A Research on Shiite Sciences and Ideas***, published in ***In Memory of Allameh Amini***, 2nd Printing, Resalat Publication, Ghom, pp. 431-448.

25. The Western research has put it quite well: "regarded as," indicating that it is not in fact so. We will provide further explanation on this later.

26. Excerpted from the preface to Robert Houghton Jackson's ***Law in Islam***.

2. On a great summer night in 1949, a small number of us were guests of Mrs. Joseph Lindon Smith in Dublin, New Hampshire. Our discussion concerned what ways can be found to create a connection, a unity between Christian and Islamic nations across which a bridge of knowledge and familiarity can be built. A variety of opinions were expressed; Mrs. Smith, however, saw the best way in translating the fundamentals and basics of Islamic legislation into English. Having vast knowledge on the subject, and having done profound research on the Quran during her stay in Egypt, and thanks to her familiarity with the fundamentals of Islam, she knew well how significant the impact of such fundamentals is upon Islamic nations. By presenting the laws and legislations of this shari'a to Westerners, she added, they could better understand what Muslims have done. She believed that translating Arabic texts into English would make it easier for Western readers to access such works. Her elevated proposal was approved of, and there arose the idea of translating Islamic laws into English for the use of the people of the West. [27]

Two Explanations

1. Robert Houghton Jackson, former District Attorney of the United States, speaks of "in fact, this legal system, which was once regarded as unpractical," referring to a cunning, vast attempt made – successfully – in Islamic lands by exploiting Western countries since long ago aiming to make Islamic law seem unpractical through a variety of deceptions and, at times, even by means of force practiced by their agents. Their attempts have been so fruitful that it has even infiltrated Muslims and Islamic nations themselves – another achievement for the exploiting West, for many beliefs were turned upside down and in favor of their own evil scheming and inductions. For now, this brief point will suffice on this issue.

2. Concerning the unity between Christian and Muslim nations suggested by Mr. Camp Keiser and Mrs. Smith, we must say that such an attempt may be of attention for several reasons, and various measures are to be taken for it to materialize. Here we will discuss the reasons that may underlie this issue:

a) Such a proposal may itself be a scheme made by the West in order to allow special individuals and/or groups find their way among Muslims, and infiltrate the less-informed, simple Muslim class by the name of creating "introduction and unity," helping them undermine their faith in original truths

27. George Camp Keiser, ibid.

and beliefs based in the Quran, thus destroying Muslims' defenses against contamination by exploitation and wrongful civilizations and breaking up the greatness of the followers of Islam. Muslims indeed have bad memories of such introductions and associations, for example what occurred in old Spain and led to the "sun setting in Andalusia." Such schemes happened over and over, unfortunately; I have no doubt that no alert Muslim thinker would let the "moderate people" and the "guiding tradition" be trampled upon by such lowly plans and deprive humanity of reaching a true knowledge of Islam and spreading that knowledge.

b) On the other hand, such a proposal may serve as to make a bridge between these two peoples in order to achieve an understanding of the truth. In other words, it may aim to make Islam known to Christian nations, helping them understand the life-saving religious law and logic of Islam and the truth about the teachings of the Quran, thus neutralizing the allegations, animosities and lies spread throughout centuries – and still being spread – by priests and Christian missionaries attempting to damage Islam, the Prophet and Muslims. This may help reveal decadent truths, introduce the God-given, non-decadent religion of Islam to humanity, and allow people to reach true monotheism as presented in the Quran. In a word, it may help people in the West understand – truly and really – what Islam is, what kind of book the Quran is, what kind of knowledge Islam provides, and who exactly Muslims are.

Such an action would be highly humane and dignified. Indeed, those impartial Christian thinkers who have gained knowledge of Islam and the Quran have made great endeavors toward reaching such an ideal.

17.The Translation of Jurisprudential Literature into Western Languages

Several texts on Islamic jurisprudence – whether of Jafari, Maleki or other sects – have been translated into foreign languages. A few examples are:

- ***Tahrir Ul-ahkam***

(by Allameh Helli, translated into French, published in 1805)

- ***Sharaye' Ul-islam***

(by Muhaghegh Helli, translated into French and Russian, and also published in London)

- ***Al-mukhtasar Fel-fegh Ul-maleki***

(by Khalil ibn Ishagh, translated into French in 1956 and Italian in 1919)

- ***Mukhtasar u-fegh ul-islami Alal Mazhab Ulshafei***

(Translated into French in 1935-6)

- ***Al-mavareeth***

(by Sahih Al-bukhari, translated into French, with a preface and appendices, 1933)

- ***Al-jihad wa Ahkam Ul-maharibeen***

(excerpted from ***Ikhtilaf ul-Fughaha***, by Tabari, into English, with a preface and annotations, 1933)

- ***Al-khiraj***

(by Yahya bin Adam Al-ghurishi, translated into English, with a preface in French, published in London, 1896)

- ***Alssirajiyya Fi Ilm-ul-fara'iz Val-mavareeth Ul-islamiyya***

(by Sirajuddin Sajavandi, translated into French, published in 1792)

- ***Minhaj-uttalebin wa Umdat Ul-mofteen***

(by Muhyeddin Navavi Shafei, translated into French, along with the text, 1882-1884)

- ***Tuhfat ul-hokkam Fi Naks el-uhood wal-ahkam***

(jurisprudential poetry consisting of 1698 verses, by Ibn Asim Andulusi, translated into French, along with its text and appendices)

18. The Influence of Islamic Jurisprudence

To understand the influence of Islamic jurisprudence upon other peoples – Christians in particular – we must take several points into consideration:

1. the translation of jurisprudential texts, which we have already discussed a number of,

2. the translation of texts that are not regarded as jurisprudential, but are among the most prominent resources of jurisprudence, such as interpretations of the Quran, texts of *hadith* and their explanations; there are dozens of cases of such translations in Christian works of literature centuries ago – for the sake of brevity, however, I will not go into detail. Readers are referred to ***Al-mustashreghun*** for more information.

3. The great number of books and articles written by Christian researchers and scholars who had studied reference books on Islamic jurisprudence, which now presented this knowledge to other Christians in their own language. This is also a very frequently-occurred point, and I will now list jurisprudential topics that have been written of in books by Christians:

    - social views in classic Islamic law
    - Islamic legislation

- the history of jurisprudential research in Islam
- the classification of Islamic jurisprudence scholars
- punishments in Islamic jurisprudence
- settling discussions among jurisprudential scholars in Islam
- marriage in Islam
- setting bail in Islamic jurisprudence
- Islamic trial systems
- Islamic jurisprudence in Germany
- the rules of Islamic jurisprudence
- financial systems in Islamic jurisprudence

4. books on the fundamentals of jurisprudence that have been translated, and

5. content used in their books – whether along with reference notes or without – after studying various texts on Islamic jurisprudence.

> Considering the above mentioned along with other factors such as the taste Westerners have for appropriating, the long period of contact they had with Islamic reference books – over 2000 years – and the chance for disseminating knowledge and giving away books to Muslims for free, the selflessness of Muslim scholars in giving knowledge and teaching others, and their travels to every corner of Islamic lands, we can see how great the contribution of Islamic jurisprudential teachings has been beyond Islamic borders.