

MUSLIM CONTRIBUTIONS TO WORLD CIVILIZATION

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Preface

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The primary goal of this volume is to briefly introduce the readers with the intellectual history of Muslims and their contributions to civilization. The civilization was developed long before the 19th century. Since time immemorial, many peoples have woven the fabric of human society. It has been like an edifice to which every nation and ethnic group has made its own unique contribution. This book highlights the contributions Muslim scholars made in various fields of human endeavor including science, technology, philosophy, political and social sciences during the 8th-14th centuries of the first millennium. These breakthroughs constituted a firm foundation for progress in the Near East, North Africa, and Spain, eventually leading to the European Renaissance of the middle of the second millennium and beyond. The preservation of civilization necessitates better understanding, sharing, and recognizing our common human heritage.

Given the widespread contemporary negative stereotyping and media generated misunderstanding about Muslims and Islam, the topic ‘Muslim Contributions to Human Civilization’ is very vital, indeed. Mainstream Western history of the advancement of knowledge acknowledges the work done by Greek and Roman scholars until 300 AD and then jumps to 1500 AD- the European Renaissance. Very little is mentioned about social, political, or scientific developments during the

period from the seventh to the fifteenth century AD. Morowitz, a historian, described this phenomenon as ‘History’s Black Hole.’ “The impression (is) given that the Renaissance arose

phoenix-like from the ashes-smoldering for a millennium- of the classical age of Greece and Rome.”¹ This is a myth that gives a rather distorted view of history.

Adequate knowledge of Muslim contributions to civilization helps counteract the current image of Muslims in the West as anti-civilizational, violent, and barbaric. To understand the high culture of the Muslim ‘Golden Age’ is to understand that Muslims have played and have been playing such a positive role in human society.

During the height of the Islamic period of 700-1500 AD, there was a major development in arts and sciences. Due to the extent of the rapidly growing Muslim empire, Muslim scholars inherited the knowledge of nearly all the other major civilizations: ancient Egyptian, Babylonian Greek, Persian, and Indian. A massive translation effort into Arabic of these sources was pursued by Caliphs and men of science. Many important scientific and philosophical treatises were thus preserved from extinction.² Not only did the Muslim scholars learn and preserve the knowledge of antiquity, but also they made their own critical observations and original researches, adding a vast treasure of scientific knowledge in the fields of philosophy, astronomy, history, mathematics, chemistry, and medical sciences to name a few.

As Muslim intellectuals, it is our responsibility of researching and publishing their original work and disseminating the information about their contributions so the world will recognize and acknowledge their contribution to science, and civilization. Several nationally known scholars and authorities on this subject have contributed various aspects of Muslim scholars' contributions to human civilization covering a variety of subjects such as Muslim contributions to the political system, other social sciences, humanities, jurisprudence, medical sciences, and especially the impact of Islam on the West.

AbdulHamid AbuSulayman eloquently stresses that Islam and Christianity, the two greatest religions of the Abrahamic legacy, have made significant contributions to human civilization. At this juncture when the whole world is like a village, and understanding of the common origins of all faith communities, especially of the two larger ones, is absolutely necessary. In order for them to bring humanity back to its senses, it is imperative on their part to correct problems created by distorted and volatile history. A measure of desperately needed cross-cultural harmony can be accomplished through a better understanding of the contributions which numerous scholars and followers of these great religions have made throughout history. Their sincere dedication to the pristine spiritual, moral, and ethical values can certainly help them achieve the worthy goal of global peace with justice. Syed Ahsani's article outlines the Islamic political system with a case study of Mawardi's Paradigm. Following the Western domination of Muslim countries, Islamic thinkers have reacted to

it at three levels with regard to comparative political systems. First, the apologists have advocated the adoption of the Western model of democracy. Second, the Traditionalists on the other hand have argued that such adoption would lead to secularization, compromising the Islamic value system. And lastly, the moderates have taken the middle-of-the-road position benefiting from the Western learning as lost heritage of Islam, but at the same time observing the fundamentals of Islamic Shariah.

These divisions are not new: they existed in the Abbasid period when the Motazalites rationalists gave primacy to reason. The rise of Philosophy under Caliph Mamun inspired the fear among religious scholars that Revelation might be threatened by Reason, which gave rise to two kind of reaction: Ahle-Hadith or Traditionalists, who totally rejected reason, and Asha'rites who put limits on it to save Revelation from being rejected. Mawardi, a Muslim intellectual, criticized the established practice that Shariah (Islamic law) by itself is a sufficient yardstick for justice. His greatest contribution was the introduction of concept of political justice into the Shariah (Islamic law).

In his paper titled "Middle-eastern origins of modern sciences," Dilnawaz Siddiqui has traced the roots of an explosion of knowledge in the entire Muslim world from the late Ummawi era through the Abbaside period to the fifteenth century. He attributes this unprecedented phenomenon to the Divine injunctions for Muslim males and females to

study the books, i.e. the Quran, and the universe, each in light of the other. It is the Islamic duty for them to continually enhance their

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understanding of all of God's creation. The acute consciousness of their duty enabled them to strike a balance between reason and revelation. The Islamic principle of monogenesis inspired them not only to benefit from the collective wisdom of all times and climes but also to create a societal order characterized by open access to all levels of knowledge for all of humanity regardless of gender, race, ethnicity, religion, or national origin. This climate of social equality engendered and disseminated a spirit of universal brotherhood, leading to creative and innovative ways of learning including the scientific method of observation and thus to the evolution of various disciplines of knowledge. His paper deals with the Muslim contributions to humanities, mathematics, basic and applied natural and social sciences, which also gives in tabular form the time, name, and significant works of major Muslims scholars of the eight centuries covered.

Basheer Ahmed, in his article on "Contributions of Muslim physicians and scholars during the 7th-16th centuries, has outlined that the Muslim scholars held the turf of scientific development between the 8th and 14th centuries, and have thus exercised a profound influence over the history of humankind. Their works are of the highest quality, demonstrating the hallmarks of good science: experiment, observation, rationality, objectivity and professionalism. Their works demonstrate the absence of a conflict

between faith and science that dogged the Christian world until secularization freed their thinking from Church dogma. The scientific legacy they left behind laid the foundation for the progress in science and technology in Europe in the second millennium, which was languishing in the 'Dark Ages.' It is not an exaggeration to say that it was Europe's encounter with Muslim civilization that was the engine of the European Renaissance. Their works were used as text books in many European universities until 1600 A.D. The work of Muslim scholars in Arabic was translated into Latin and other European languages. Universities of Iraq, Syria, Egypt, Spain, Iran, Cordoba, Cairo etc. became the major teaching centers of the world where students flocked from all over Europe to study. Famous physicians, Al Razi (Rhazes) and Ibn Sina's (Avicenna) encyclopedic work on medicine was taught in European universities until the 16th century. As Briffault, a historian writes: "what we call science arose as a result of new methods of experiments, observation and measurements which were introduced into Europe by Muslims. Modern science is based on the most monumental contribution of the Islamic civilization." ²

Ahmed briefly described the work of several physicians in that era.

Louay Safi, an intellectual who has had an opportunity to experience both Muslim and Western culture, pointed out in his article, "Overcoming the Religious-Secular divide: Islam's contribution to civilization," that the future of human civilization is directly linked to our ability to learn from the historical experience of Islamic, and Western civilization. He writes, "Although Islamic and Western civilizations appear to be far removed from each other at the level of structure and organization, both seem to share a common commitment to the universal values of social justice, equality, common good,

social welfare, political participation, religious freedom, and a host of other common principles and values. Western civilization has perfected the structural elements of social life so as to allow a better integration of the above universal values into social organization. Western successes were, however, achieved by overcoming two major historical forces that are peculiar to the West: feudalism and organized religion. This fact has contributed to the erosion of the very moral basis in which Western Renaissance is rooted—Enlightened religiosity. The political order rooted in Islamic norms shares with the modern secularist order its desire to liberate the body politic from narrow religious and cultural interpretations. Unlike the secularist order, the Islamic political order, however, encourages the fostering of moral values in accordance with the overall scheme of moral autonomy.”

In his “Intellectual history of Euro-American jurisprudence: and the Islamic alternative,” Peter Wright compares and contrasts the contemporary legal systems prevailing in Europe, the Americas, and in the former European colonies with the principles of Islamic Shari’ah. He asserts that the Western legal systems have “evolved in specific historical contexts and cultural milieus. Nevertheless, they share certain common presumptions that are rarely articulated or exposed to critical scrutiny.” Wright’s paper might be a beginning of the process of articulating in a cogent manner these common presumptions behind the current European legal structures. It is an “attempt to constructively engage them through a comparative study of a rival legal system such as may be found in accepted principles of Islamic *Shari’ah*.”

Shareef has discussed the feasibility of the Islamic economic system in a modern economy. He outlines that the modern economic system has become complex and is getting more complex so as to make the issues intractable only because it denies one very important aspect of human life—the soul (spirit) and directs the whole system towards a fierce competition for gaining material possession and power as much as possible. The secular modern society creates many problems and it is absolutely ill equipped to deal with. The only thing it does is to enact more and more laws with stringent punishment for violation, but to no avail; the allure of material possession and power is much too great to keep the aspirants for material success from violating the law. The Islamic system is simple and straightforward for every body to understand, the spiritual guidance is persuasive enough to make them abide by the divine injunctions that are universally beneficial for the humanity, and the society is geared towards creating and maintaining the environment for both material and spiritual uplifting for every body in the society. If applied, this system can successfully eliminate the problems of the complex modern economy in straightforward and simple ways and can lead to economic development, rather than growth.

Hameed Bashir continues the subject of Islamic economic system in his chapter on “Islamic Financial Institution in the U.S., viability, and prospectus.” Islam is the first religion that introduced the interest-free lending system. The Islamic financial system based on participation and risk sharing offers a viable remedy for the world debt crisis. Under the Islamic modes of financing, the lender is expected to share part of the risk involved in investing. Accordingly, Islam financing encourages active participation and

asserts that money borrowed is not entitled to a reward. Thus the system of shared risk is expected to reduce the possibility of financial crises and be more fair and equitable.

Hence, Muslims are encouraged to abide by the tenets of Islam and not deal with interest because of the great torment that awaits those who deal with *riba*. Therefore, it is imperative on Muslims in the West in general, and the U.S. in particular, to establish financial institutions that provide them with interest-free choices.

It is necessary to understand that there were multiple factors for the decline in scientific progress in the Muslim world was foreign invasion of Mongols in Baghdad, the Crusades in Syria and Palestine, and the loss of Spain resulting in loss of the world's renowned teaching and research centers. Subsequently, two parallel systems of education were developed, namely 'Shariah science of Islamic jurisprudence' and 'Ulumal Aqliyyah' and the natural science and technology. The new schools, Madrasas, discouraged the teaching of science and technology and focused only on theology, spiritual, and ritual aspects of Islam. These were the major factors resulting in deterioration in the new Muslim generation to acquire new knowledge and to do scientific research. Religious fanaticism, narrow-mindedness and a lack of tolerance finally resulted in the severe decline of the progress in this area.

Science does not belong to a particular ethnic or religious group. It is an evolutionary process that will continue to progress by contributions from difference races and groups. We hope that this book will become a source of inspiration to the young Muslims who will contribute to the human civilization by making scholarly contributions.

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Prologue

M. Basheer Ahmed

The history of advancement of knowledge in Europe and U.S. acknowledges the work done by Greek and Roman scholars until 300 A.D. and then it picks up again in 1500 A.D. – the beginning of the Renaissance. Very little is mentioned about the history of social, political or scientific development between the periods 300 – 1500 A.D. Morowitz (1992) described this phenomenon as “**The history’s Black Hole**” that the Renaissance arose like phoenix from ashes – smoldering for a millennium – of the classical age of Greece and Rome.”

During the height of Islamic period of 700-1500, there was a major development in Arts and Science. Muslim scholars learned from Greek and Roman scholarly works, saved them from extinction by translating them into Arabic, critiqued and improved them, and finally passed them on to posterity, thus facilitating a European Renaissance. The scientific, medical, academic and scholarly work had virtually stopped in Europe for thousand years. One of the major reasons for this was the anti-intellectualism of the church dogma. Most of the work done by the Greek scholars and some Roman scholars remained dormant during this interregnum. Burning of the great library of Alexandria in 390 A.D. by fundamentalist Christians lost a great deal of classical heritage. The Muslim scholars made their observations and original research and added a vast treasure of scientific knowledge in the field of philosophy, astronomy, history, mathematics, chemistry and medical sciences. The contributions of Muslim scientists show the highest quality of scientific development in the Muslim world. These scholars, through their

original research work and brilliant contributions, proved that philosophy, sciences and theology could be harmonized as a unified whole and Islam does not subscribe to any contradiction between true faith and tested and tried science.

Arab Muslims transmitted zero from India to the world. Leonardo studied the Arabic numeral system and introduced it in Europe. Algorithm (Algorism) was invented by Al-Kawarizmi in the 9th century. Abul Wafa developed the trigonometry. Ibne Haiytham developed optics proving that rays passed from objects toward the eye. He wrote about optic illusions, binocular vision, mirages, rainbows and halos. Jabber bin Hayyan prepared sulphuric acid and classified chemicals in 8th century. Paper manufacturing technology was brought by Muslims in 9th century and spread to Middle East and Europe leading to expansion in publication of books. The Muslim Scholar Ibne Khaldun is credited with founding the discipline of sociology. Al Idrisi lived in Sicily and compiled a book on medieval history and geography of Europe giving 70 maps of the world. Al Biruni and Ibne Batuta were famous travelers and historians whose scholarly works are still regarded as pioneering contributions to history and geography.

The best Islamic hospitals were several centuries in advance of European hospitals. In teaching methods, they exerted a strong influence and Arabic methods of making teaching ward rounds in medical schools has been re- discovered many times from school at Salernano to Sir William Osler at the end of 19th century in Canadian, British and US schools. They remained the standard methods of teaching in Western medical schools.

In medicine long before William Harvey discovered circulation of blood, Ibne Nafis Al Qarshi of Damascus charted and explained circulation of blood three centuries before Harvey's discovery. Al Razi differentiated between measles and small pox. Al Tabari was to regard tuberculosis as an infection. In Spain Al Zahrawi invented surgical instruments, removed cataract and perfected many surgical procedures. Ibne Zuhr started suturing wounds with silk and thread.

It was pharmacology to which Muslim physicians made the most lasting contribution. They not only discovered many herbal drugs but also perfected many of the techniques of chemical extraction including filtration, distillation and crystallization. The great work of systematizing drugs in England in 17th century-the pharmacopoeia of the London College of Physician (1618), was illustrated with portraits of the few great scholars: Hypocrites, Galen, Avicenna (Ibne Sina) and Mansu (Ibu Zakriya bin Masawaib).

Muslim physicians had undertaken and accomplished a monumental task of producing the first classical medical textbooks in the format, which would be recognizable to the medical students even today. These textbooks were based as much on the original Greek works as on the new scientific data gathered by the Muslim physicians. The most famous academicians and scholars who helped in producing such a work were Al Razi (932), Al Zahrawi (1013) and Ibne Sina (1092).

Muslim scientists and scholars introduced the scientific knowledge to Europe when Europe was in the so-called "Dark Ages". The Muslim scholars held the turf of

leadership in scientific development between 8th and 14th centuries and exercised a profound influence upon the history of human mankind. The scientific legacy they left behind laid the foundation for the progress in science and technology in Europe in the 2nd millennium. They played a vital role in the evolution of human civilization. These scholars indeed served as the true harbingers of the European Renaissance. Their work was used as text books in many European universities until 1600 A.D. The work of Muslim scholars in Arabic was translated into Latin and other European languages. Universities in Baghdad, Spain, Syria, Cairo and Iran became the major teaching centers of the world where students flocked from all over Europe to study. Famous physicians, Al Razi (Rhazes) and Ibn Sina's (Avicenna) encyclopedic work on medicine was taught in European universities until 16th century. Morowitz further states history as taught in U.S. is presented as having a cultural black hole in the Middle Ages. This is a myth that gives distorted views.

George Sarton (1947) dealing with Muslim scholars wrote “during the period 750 to 1150 A.D. the contributions of the Muslim scholars were un-matched in its brilliance and included such intellectual giants as Al-Razi, Al-Farabi, Ibne Haiytham, Al-Khawarzmi, Ibne Sina, Al Biruni and Ibne Khaldun. Briffault (1938) writes “what we call science arose as a result of new methods of experiments, observation and measurement which were introduced into Europe by Arabs. Modern science is the most momentous contribution of the Islamic civilization, which was made accessible to all regardless of gender, race, caste, creed, or national origin...

The first regional conference of the Association of Muslim Social Scientists was held in Dallas, TX in June, 2001, on ‘Muslim Contribution to Human Civilization.’ The objective of the conference was to introduce to both Muslim and non-Muslim audiences the great contributions the Muslim scientists and scholars have made to mankind. Human Civilization was not developed in the 19th century or in 400 BC, but many people have woven the fabric of human civilization since times immemorial. It is like building a block in which every nation and ethnic group had made their own contributions. This particular conference highlighted the scholarly and scientific knowledge of Muslims in the Middle Ages, leading to Renaissance in Europe, and the rise of the West to the present heights. Its preservation lies in better understanding, sharing, and recognition of our common heritage.

Several nationally known speakers, and authorities on this subject participated in the conference. We are presenting in this book selected papers presented at the conference, covering a variety of subjects such as ‘Islamic contribution to the political science, economics, physical and biological sciences, humanities, jurisprudence, medical science and the impact of Islam on the Western thought in general. During the conference, other subjects were also covered. Hopefully we will publish another set of proceedings covering these subjects in the near future.

References

Briffault. “The making of Humanity” (1938). Published by Islamic

“Science in the medieval Muslim world”. Published on website by Khwarzimi
Science Society. Pakistan Nov. 01.

Morowitz, H.J. “History’s Black Hole” – hospital practice, May 1992, p. 25-31

Sarton, George. “Introduction to the History of Science”, Vol. II Carnegie Institute of
Washington, William and Wilkins-Baltimore, USA, 1947.

What the West Has Learned from the Islamic Civilization

AbdulHamid AbuSulayman

Given the contemporary social and political climate in the world, it is more significant now than ever before to discuss the contributions of Muslims to civilization, with a view to building bridges of appreciation and understanding among peoples of various cultures and ideological orientations. A computer search for the need for cross-cultural understanding yields 306,000 webpages (Google, .2004).

Having spread all over the world as faith communities, the inheritors of the Abrahamic tradition of monotheism have had the greatest influence on human history (Dirks, 2002). At this juncture of history, when the whole world is like a village, it is of immense importance to work together toward mutual understanding of the common grounds, common goals, common dedication to the spiritual as well as the moral aspects of life to bring humanity back to its senses with a view to bringing about lasting peace with justice, by resolving problems created through distorted history. If there is any way to make real peace in this world, people of the Abrahamic faith trio have a special role to play (ummah.com, 2004).

While Christianity and Islam have been behind most of human accomplishments, it is also due to distortions of these two faiths that we have braced and are still facing the stupendous problems of global proportions. Christianity with its message of peace and tolerance was distorted so much so that it justified ruthless imperialism and its injustices

throughout its colonies in Asia, Africa, and Latin America. Indeed, it was a distortion of that great religion and its spirit. It also gave birth to nationalism where man emphasizes only differences that conveniently served the opportunists as a basis for hatred and wars. Its propaganda also contributed to the distortion of the Islamic faith and people. Islam came to elevate the human civilization out of the dark ages to new heights, and brought about a new civilization through advanced empirical and experimental sciences as well as through enhancing an awareness of the need for human unity based on the concept of monogenesis (al-Faruqi, 1992)

The lasting spiritual light of Islam immensely impressed people of other faiths so as to change not only their religious beliefs but also their customs and even their languages. It has been unprecedented in human history. Northern Arabia, North Africa, and East Africa were not Arabic speaking, which they later became. It was the imprint of these pioneers at a time of darkness, which built the strong foundations of the new civilization, leading to Europe's Protestant revolution, Renaissance and the Enlightenment. Deliberate distortions of history have covered up contributions of Islam and Muslims to human civilization (Cantor, 1999). Regrettably, Muslims themselves have little or no idea about their own spiritual light, which has now lost its luster. Consequently, the Muslim people are making little or no significant contribution to the field of modern science today.

To bring the genuine peace to this global village, we need to revive the pristine purity and spirit of monotheistic equality and justice for all. We have to make sure that these spiritual values are back in power to bring man to his senses. While the United Nations declared that war is illegal, there were more wars in the world between 1950 and 2000 than ever before. So it is not mere words but also the spirit that brings people together to appreciate one another. The whole idea of Islam, and before that of Christianity, is to bring man to this universal spiritual message and to make them identify with each other as creations of One and the Only God and as to serve the good cause in this world and to achieve eternal happiness in the hereafter (Siddiqui, 1998).

Islam in reviving the real values of Christianity made it clear that man is created from a single source (soul). The differences among peoples, the creation of peoples and tribes, should not be allowed to lead to conflicts or to seek superiority. It is to interact (the Qur'anic word *yata'arath*) because, if we are all the same or identical, there is no meaning or method of interaction. But when we differ in a positive sense, we will interact to contribute to social, economic, and political justice. It is a law in nature for positive-negative and male-female to interact to mutual benefit.

Islam doesn't deny that there are different colors or different languages, yet this is not a cause for determining superiority or inferiority of individual and groups. It is to bring to man the wonders of Allah (swt) in creation. So it is a positive phenomenon. According to both Islam and Christianity, justice and personal responsibility are central (Isaacson, 2003). And we have to always do justice to everybody, even to our enemies. And what Islam brought forth it is to bring religious freedom. Whenever there was a war for the sake of Islam it is only to bring people their freedom, whoever agrees to that have

to be in peace together. Whoever denies man freedom to his own conviction and religion should not be allowed to do so.

In this global village, we need to have the philosophy of peace and freedom to practically identify and appreciate one another. Real freedom means to be able to do the right thing, and not to do the wrong thing. Freedom without ethics without values, without a worthy cause is a curse upon human kind, it is destruction of civilization. And that is where comes the role of all genuine faith communities to serve the divine cause to facilitate life and lend real meaning to it through love, conviction and mutual acceptance.

The Association of Muslim Social Scientists (AMSS) represents the cream of the Muslim communities in this country. It is for the first time, I believe, that the Muslim immigration of intellectuals has happened to this free, influential and an open society. It is the duty of the Muslims in this country with their intellectual and financial resources to reform their culture to sift it from all the wrong things, which have developed within the Muslim communities. They need to bring back the real values of Islam, to bring back this kind of moral sense of justice and responsibility (Quran, iv.58; vii. 29). To contribute to this country of theirs and to its people, they ought to get together to serve the good cause of balancing the spiritual and material benefits to mankind.

It is a mission for this Muslim community to seize this opportunity for freedom and resourcefulness to shatter the shackles of oppressive pressures in dictatorial regimes to rethink their religion their culture and to bring back the true light and spirit of common

cause of justice. And to work together with their fellow beings for the best of this country and the world. This country can serve as a vital force for peace and the prosperity of the entire humankind, or with the misuse of its resources, it can turn to be a source of destruction. The power is great, yet it needs much needed self- control and proper spiritual guidance. It is up to these faith communities and their mutual cooperation that they can fulfill the mission of peace with justice. And it is their duty and an opportunity which they cannot afford to lose. They need to work together to the benefits of mankind, insha' Allah.

References

Cantor, Norman F. The encyclopedia of the middle ages. New York, NY: Viking, pp. 349-50.

Dirks, Jerald F. Abraham: the friend of God. Beltsville, MD: Amana Publications, p. 1.

al-Faruqi, Ismail R. Al Tawhid: its implications for thought and life. Herndon, VA: The International Institute of Islamic Thought, pp. 78-79.

http://www.kisarazu.ed.jp/alt/handbook/cross_cultural.htm

<http://www.ummah.com/forum/archive/index.php/t-4689.html> -

Isaacson, Walter. Benjamin Franklin: an American life. New York, NY: Simon Schuster, p. 84.

Quran. Translation and commentary by A. Yousuf Ali, iv. 58; vii. 29

Siddiqui, Ataullah (ed.) Ismail Raji al-Faruqi: Islam and other faiths. Leicester, UK: Islamic Foundation, pp 28, 146, 153.

OVERCOMING THE RELIGIOUS-SECULAR DIVIDE: ISLAM'S CONTRIBUTION TO CIVILIZATION

Louay M. Safi

Language is a powerful dimension of social existence and interaction. It facilitates communication among individuals, and helps create agreement and consensus. It is, as such, an essential tool to advancing both knowledge and society. But language can be also a source of antagonism, misunderstanding, and confusion, and therefore has the power to undermine social harmony and to close the human mind. The impact of language on thinking and behavior is particularly noticeable when communication and exchange takes place across cultures. Under such circumstances the question of commensurability becomes relevant. The question can be posed as thus: Can peoples with different historical experiences have meaningful exchange of ideas, given the fact that understanding the meaning of a term presupposes an experience of a sort of the object to which the term refers? The relationship between knowledge and experience gives rise to a series of questions with regard to understanding the grand concepts of "religion," "secularism," and "liberalism," and the way each relates to the others. Such terms are not easily and fully interchangeable across cultures and civilizations, and misunderstanding results from extrapolating one's experience across cultures. Thus, superimposing the experience of a historically determined being on another--be it an individual or a community--is bound to stifle or even destroy the latter's chance to develop and mature.

While realizing the above difficulty, I do believe that scholars in general and Muslim scholars in particular are duty bound to explore meaning across cultures and civilizations, and to stimulate exchange of ideas and experiences. As a Muslim intellectual who has had the opportunity to experience both Muslim and the Western cultures, I do think that the two cultures stand to benefit a great deal by learning from one another. I do also think that the future of human civilization is directly linked to our ability to learn from the historical experiences of Islamic and Western civilizations, and our willingness to build on the accomplishments of both.

Although Islamic and Western civilizations appear to be far removed from each other at the level of structure and organization, both seem to share a common commitment to the universal values of social justice, equality, common good, social welfare, political participation, religious freedom, and a host of other common principles and values. Western civilization has perfected the structural elements of social life so as to allow a better integration of the above universal values into social organization. Western successes were, however, achieved by overcoming two major historical forces that are peculiar to the West: feudalism and organized religion. This fact has contributed to the erosion of the very moral basis in which Western Renaissance is rooted—Enlightened religiosity.

Islam, on the other hand, is a tremendous spiritual force in search of modern forms. Historically, Islam is credited for building an outstanding world civilization in

which science and religion, and the secular and religious, worked in harmony to advance human life. Can Islam play a similar role in restoring the moral core to modern life and arresting the increasingly immoral and irrational tendencies of the post-modern world? Many Muslim intellectuals would answer this question in the affirmative. The challenge of course is to re-institute Islamic values and ethos into modern forms. But for that to happen, Muslim scholars must re-conceptualize the various spheres of knowledge and society in relation to Islam and its fundamental principles and underlying ethos. The efforts advanced in this paper fall within the framework pointed out above, as I will focus, in particular, on the notions of religion, secularism, and liberalism.

My basic argument is that a political order rooted in Islamic norms shares with the modern secularist orders its desire to liberate the body politics from narrow religious and cultural interpretations. Unlike the secularist order, the Islamic political order, however, encourages the fostering of moral values in accordance with the overall scheme of moral autonomy. I conclude by emphasizing the priority of the institutions of civil society over those of the state, and the inevitability of invigorating inter-communal action to ensure the autonomy of both the individual and community, and to limit the power of the modern state.

RELIGION-POLITICS INTERPLAY

Although a deep understanding of the interaction between the political and religious spheres requires a systematic and elaborate examination of their meaning, I will

limit my statement to delineating their boundaries and identifying few areas of friction between the two.

Religion refers to those aspects of life that relate to the determination of the total meaning of existence. It is concerned, in particular, with three grand questions about human existence: its origin, its purpose, and its destiny. Although the above three questions can be raised from a philosophical point of view, the religious response to them is distinguished from the philosophical by the degree of conviction one enjoys over the other. That is to say, a religious conclusion with regard to the above grand questions is not only supported by rational arguments, but by emotional attachment as well. This difference gives religion an advantage over philosophy in that it makes religiously based convictions a better spring for action. It is a fact of history that people with deep religious conviction are willing to endure greater difficulties and make greater sacrifices in pursuit of their religious ideals than those whose attachment to their ideals is based on purely rational demonstration.

Paradoxically though, religion's source of strength is also its source of weakness. For it is always easier to dissuade people from erroneous convictions when the latter are based on theoretical arguments rather than religious convictions. And while shared religious conviction can create more harmony in the public sphere, the possibility of interpersonal and inter-communal conflicts are bound to increase in multi-religious societies.

The question we need to address here is not whether religion and politics stand in conflictual or harmonious relationship, but rather how and under what conditions religious commitment can strengthen and improve the quality of social life.

DEGREES OF SECULARISM

Politics is about organizing the public sphere, i.e. regulating action and deciding direction. As such both the convictions and interests of a people influence public regulations. In its drive to develop a social order in which religion and politics strengthen one another without suppressing individuality and creativity, Europe went through two interrelated processes: religious reformation and secularization. Reformation involved a struggle to liberate the individual from the control of religious authorities, viz. the Catholic Church. Secularization involved the liberation of the state from control by particular religious groups, to ensure that public policy is based on rational arguments, rather than religious injunctions.

But while religion ceased to have a visible influence in the public sphere, it continued to be an important force in shaping public policy and public life. This is true because rational arguments about the nature of public order have to start from a transcendental understanding of the meaning of public life and social interaction. The notions of right and wrong, good and evil, and the tolerable and the intolerable are the result of both religious conviction and political compromise.

It is important to realize that secularization is multi-faceted phenomenon. One facet of secularization, and the one that was initially intended by its early advocates, is the separation of state and church. But because it was achieved by negating history and tradition, it gradually led to the “death of god,” the erosion of religious values and convictions in western society by the turn of the 20th century, and to the “death of man” at the dawn of the 21st century. The secularism of the post-modern age is ruled by the ideas of self-interest, self-indulgence, and excess.

THE ORIGIN OF SECULARISM

Secularism refers to complex and multifaceted attitudes and practices that cannot be easily captured in a brief description or rendered into a simple definition. While one may find certain similarities between modern secularist attitudes and practices and those that existed in pre-modern societies, it is fair to say that secularism as we know it today is an essentially modern phenomenon that grew in the modern West, and later took roots in different societies.

In its essential sense, secularism denotes a set of notions and values whose aim is to ensure that the state is neither engaged in promoting specific religious beliefs and values, nor uses its powers and offices to persecute religion. To prevent state officials from using their political authority to impose a narrow set of religious attitudes and values on the larger society, and to foreclose the possibility of using religious symbols to agitate one religious community against another, western intellectuals embarked on a

project that aimed at separating political authority from religious affiliation. To do that, the Enlightenment scholars embraced a set of concepts and principles, and used them as the basis for reconstructing modern European consciousness. The new political ideology advanced by Enlightenment activists and thinkers emphasized concepts such as equality, freedom of conscience and conviction, and the supremacy of law, all of which were advocated by the Religious Reformation that put an end to the ancient regime of Europe.

The underlying socio-political morality advocated by the pioneers of the secular state in Europe was derived from the religious tradition delineated by the religious reformists of fifteenth century Europe, but argued in rational terms and common-good logic. Early advocates of the separation of state and church, such as Descartes, Hobbes, Locke, and Rousseau, had no intention to undermine religion, or faith in the divine, but rather predicated their reformist ideas on the notion of God and civil religion. Descartes (1986) for instance, argued "that the certainty and truth of all knowledge depends uniquely on my awareness of the true God, to such an extent that I was incapable of perfect knowledge about anything else until I became aware of him." Similarly, Rousseau (1968), while critical of the way religion was traditionally taught and practiced, recognized the need, even the necessity, of religious commitment and faith for the modern state to function properly. He, therefore, identified a number of "dogmas", and argued for their inclusion in the "civil religion" he advocated: "The existence of an omnipotent, intelligent, benevolent divinity that foresees and provides; the life to come; the happiness of the just; the punishment of sinners; the sanctity of the

social contract and the law – these are the positive dogmas. As for the negative dogmas I would limit them to a single one: no intolerance."

Even Kant, who limited the notion of truth to empirical experience and labored to set morality on rational foundation insisted that "without a God and without a world invisible to us now but hoped for, the glorious ideals of morality are indeed objects of approval and admiration, but not springs of purpose and action (Kant, 1929)."

However, by denying the possibility of transcendental truth, and as a result of the relentless attack on the authority of revelation as a source of ethical and ontological knowledge, secularist scholars have been able to successfully marginalize religion and undermine morality. The efforts to ground morality in utility and cost-benefit calculation, rather than truth, proved to be counter intuitive and futile, and gave rise to egoism and moral relativism.

There were, of course, intellectuals who have less sympathy to religion particularly among French intellectuals, but these did not represent the larger sentiments of the great majority in Europe. The French revolution displayed a clear anti-religious sentiment, but these were not, as Nietzsche was to discover later, directed against religion per se, but against organized religion represented primarily by the Catholic Church. "Modern philosophy, being an epistemological skepticism, is," Nietzsche argued, "covertly and overtly, anti-Christian—although, to say this for the benefit of more refined ears, by no means anti-religious (Nietzsche, 1966)."

The essential secularist sentiment is, therefore, rooted in the religious reformation; more specifically, it is rooted in the Protestant revolt against religious hierarchy and centralized religion. Secularism was not originally intended as a way to separate religion from society or religious consciousness from political action, but only to isolate the state from the church structure and to separate religious and political authorities.

The tone started to change, however, a century later among progressive European intellectuals who saw in religion a negative force whose elimination, they believed, was essential for further emancipation and progress. Karl Marx, while agreeing that the secular state has successfully neutralized religion and purged it from the public sphere, still saw a great danger in religious life. This is because, he argued, secularism reduced religion into a private matter only insofar as the state is concerned. However, the privatization of religion gave it in effect more influence in the organization of civil society. Even in the United States where religion has been domesticated and individualized to the greatest extent, it continues to divide society into distinct religious communities, thereby allowing for the formation of internal solidarity with a clear bearing on economic life. Religion, Marx further thought, is an instrument in the hand of privileged classes to justify social misery and economic inequality. In *The Jewish Question*, Marx has the following to say about the need to emancipate humanity from religion:

The decomposition of man into Jew and citizen, Protestant and citizen, religious man and citizen, is neither a deception directed *against* 'citizenhood', nor is it a circumvention of political emancipation; it is political emancipation itself, the political method of emancipating oneself from religion. Of course, in periods when the political state as such is born violently out of civil society, when political liberation is the form in which men strive to achieve their liberation, the state can and must go as far as the abolition of religion, the destruction of religion. But, it can do so only in the same way that it proceeds to the abolition of private property, to the maximum, to confiscation, to progressive taxation, just as it goes as far as the abolition of life, the guillotine.

Nietzsche, like Marx, condemned religion as a negative social force responsible for preserving the meek and the weak, and hence weakening the human race. By praising poverty and glorifying the taming of the natural instinct, Nietzsche insisted, religion contributed to delaying the refinement of the human species. By giving “comfort to the sufferers, courage to the oppressed and despairing, a staff and support to the dependent” Christianity, he contended, “preserved too much of what ought to perish.”ⁱ Unlike Marx, who saw religion as an obstacle in the way to achieving universal equality, Nietzsche’s rejection of Religion in general, and reformed Christianity in particular, was anti-democratic, directed against the egalitarian spirit it promoted, and hence against its failure to promote the order of rank, a hierarchical social order which he believed to be both intrinsic to humanity and desirable to social life (Nietzsche, 1966).

RELIGION AND THE STATE IN MUSLIM SOCIETY

Many Muslim intellectuals insist today that Islam is an integral part of the state. The state in a society committed to Islam, they stress, is by definition an Islamic state since political authorities are bound to Islamic law, which has a direct bearing on constitutional law. This has created confusion about the nature of the Islamic state, and has given rise to apprehension on the part of modernist scholars who feared that remarrying Islam and the state is bound to give birth to theocracy.

The confusion is, of course, not limited to outside observers and commentators who tend to extrapolate in their analysis from the historical experience of western society, but also affect those who advocate the formation of political state on the basis of Islamic values. The difficulty arises from the efforts to combine the principle of popular government with that of a state bound by the rules of Islamic law. This confusion is, in my opinion, the result of equating the political structure of the *Ummah* with the political structure of the state, and consequently, mixing up the *Shariah* functions with that of the state. This confusion is not restricted to obscure works. Rather it is found in the works of influential contemporary Islamic thinkers. Under the title “The Objectives of the Islamic State” Abul Ala Mawdudi (1985), for one, points out two kinds of objectives to be assigned to the Islamic state: negative objectives “like deterring the aggression and preserving the freedom of people and defending the state,”¹³ and positive objectives such as banning all forbidden things which have been condemned by the

Qur'an.”¹⁴ Mawdudi concludes by affirming the totality of the state's objectives on the basis of the comprehensiveness of the *Shariah* objectives. He writes:

Obviously, it is impossible for such a state to limit its framework, because it is a totalitarian state encompassing the whole human life, and painting every aspect of human life with its moral color and particular reformist programs. So nobody has the right to stand up against the state and exempt himself from the liability by saying that this is a personal matter, so that the state does not intrude. In brief, the state encompasses the human life and every area of civilization according to its particular moral theory and particular reformist program. So, to some extent, it is similar to the communist and fascist state. But despite this totality the Islamic state is free from the color that dominates the totalitarian and authoritarian states of our age. Thus the Islamic state does not curtail the individual freedom nor has it much room for dictatorship or absolute authority.¹⁵

The above statement reflects the state of confusion we just pointed out. In a single paragraph the author characterizes the Islamic state as totalitarian, likens it with the communist and fascist states, and stresses that no one has the right to stand up against the state and resist its intrusion into personal life. He then backs up, two sentences later, denying that the Islamic state may curtails individual freedom.

Certainly the claim regarding the totalitarian character of the state is the result of mixing state functions relating to the *Shariah*'s legal dimension with the functions of the

Ummah concerning moral and educational dimensions. The differentiation between these two kinds of objectives is, thus, of vital importance to prevent the state from imposing on the larger society a normative order based on a narrow interpretation of the law. The Islamic state, it should be emphasized, is not an institution devoted to advancing the interests of the Muslim community, but a political system based on universal principles, and one committed to maintaining peace, security and welfare for all citizens, irrespective of their doctrines, religions, nationality, race, or gender.

As will be shown below, the Islamic system in the past did not lead, nor should it lead in the future, to imposing a narrow and limited concept or a particular opinion on society. This is because the principle of religious and doctrinal plurality has been considered since the very inception of the *Ummah*, as a cardinal political principle. Here the Quranic verses both the, Makkan and Madinan, clearly stress on the centrality of the principle of religious freedom in the Islamic concept.

Lately the concern over how religious commitments relate to the exercise of power reached into the ranks of Islamists. Mainstream Islamic groups have been moving gradually away from the early concept of centralized Islamic political order envisaged by early leaders, such as Hassan al-Banna and Taqiyyuddin al-Nabhani. Leaders of major Islamic movements in Egypt, Jordan, Pakistan, Syria, Turkey, and Tunisia, to name a few, have come openly in favor of a democratic, pluralistic political system in which freedom of speech and association is guaranteed for citizens, regardless of their political orientation or religious affiliation (al-Ghanoushi, 1993).ⁱⁱ

THE FORMATIVE PRINCIPLES OF THE MADINAN STATE

The notion of the Islamic state advanced today by populist writers is, as I tried to show above, a mixture of the nationalist structure of the modern state with the communal structure of historical *Shari'ah*. The concept of the state that emerges as a result is in a complete contradiction with the nature and purpose of the polity found by the Prophet, or developed historically by successive Muslim generations. A quick review of the guiding principles of the first Islamic polity reveals the disparity between the two. The principles and structure of the early Islamic polity are epitomized in the Compact of Madinah (Sahifat al-Madina) that formed the constitutional foundation of the political community established by the Prophet (See Ibn Hisham's Sirah of the Prophet).

The Compact of Madinah established a number of important political principles that, put together, formed the political constitution of the first Islamic state, and defined the political rights and duties of the members of the newly established political community, Muslims and non-Muslims alike, and drew up the political structure of the nascent society. The most important principles included in this Compact are as follows:

First, the Compact declared that the *Ummah* is a political society, open to all individuals committed to its principles and values, and ready to shoulder its burdens and responsibilities. It is not a recluse one, whose membership rights and securities are

restricted to a select few. The right to membership in the *Ummah* is specified in: (1) accepting the principles of the Islamic system, manifested in the commitment to adhere to the moral and legal order; (2) declaring allegiance to the system, through practical contributions and struggle to actualize the objectives and goals of Islam. Thus, allegiance and concern for public good are the principles determining the membership of the *Ummah* as defined by the first article of the document: “This is a Compact offered by Muhammad the Prophet, (governing the relations) among the believers and the Muslims of Quraish and Yathrib (Madinah), and those who followed, joined, and labored with them (Ibn Hisham).”

Second, the Compact delineates a general framework that defines individual norms and the scope of political action within the new society, but preserved the basic social and political structures prevalent then in tribal Arabia. The Compact of Madinah preserved tribal structure, while negating tribal spirit and subordinating tribal allegiance to a morally based legal order. As the Compact declared that the nascent political community is “an *Ummah* to the exclusion of all people,” it approved a tribal division that had already been purged of tribal spirit epitomized by the slogan “my brethren right of wrong,” subjecting it to the higher principles of truth and justice. The Compact therefore declared that the emigrants of the Quraish, Banu al- Harith, Banu al Aus, and other tribes residing in Madinah, according “to their present customs, shall pay the blood wit they paid previously and that every group shall redeem its prisoners.”

Islam's avoidance of the elimination of tribal divisions can be explained by a number of factors that can be summarized in the following three points. (1) The tribal division was not mere political divisions but also social divisions providing its people with a symbiotic system. Therefore, the abolition of the political and social assistance provided by the tribe before developing an alternative should have been a great loss for the people in society. (2) Apart from its being a social division, the tribe represented an economic division in harmony with the pastoral economy prevalent in the Arabian Peninsula before and after Islam. The tribal division is the ideal division of the pastoral production as it provides freedom of movement and migration in search of pasture. Any change in this pattern requires taking an initiative first to change the means and methods of production. (3) Perhaps, the most important factor that justified the tribal division within the framework of the *Ummah* after the final message had purged the tribal existence of its aggressive and arrogant content, is the maintenance of the society and its protection from the danger of central dictatorship, that might come into existence in absence of a secondary social and political structure and concentration of political power in the hand of a central authority.

Hence Islam adopted a political system, based on the concept of the one *Ummah* as an alternative for the divisional tribal system and upheld the tribal division having cleared it from its aggressive elements. It left the question of changing the political structure to gradual development of economic and production structures. Although Islamic revelation avoided any arbitrary directives, aimed at immediate abolition of the

tribal division, it criticized openly tribal and nomadic life. (Quran: al-Tawbah . 97, and al-Hujurat. 14).

Third, the Islamic political system adopted the principle of religious tolerance based on freedom of belief for all the members of the society. It conceded to the Jews the right to act according to the principles and rulings in which they believed: “The Jews of Banu Auf are one community with the believers. The Jews have their religion and the Muslims theirs.” The Compact emphasized the fundamentality of cooperation between Muslims and non-Muslims in establishing justice and defending of Madinah against foreign aggression. “The Jews must bear their expenses and the Muslims their expenses. Each must help the other against anyone who attacks the people of this Compact. They must seek mutual advice and consultation.” It prohibited the Muslims from doing injustice to the Jews or retaliating for their Muslim brothers against the followers of the Jewish religion without adhering to the principles of truth and goodness. “To the Jews who follow us belongs help and equality. He shall not be wronged nor shall his enemies be aided (Ibn Hisham).”

Fourth, the Compact stipulated that the social and political activities in the new system must be subject to a set of universal values and standards that treat all people equally. Sovereignty in the society would not rest with the rulers, or any particular group, but with the law founded on the basis of justice and goodness, maintaining the dignity of all. The Compact emphasized repeatedly and frequently the fundamentality of justice, goodness, and righteousness, and condemned in different expressions

injustice and tyranny. “They would redeem their prisoners with kindness and justice common among the believers,” the Compact stated. “The God-conscious believers shall be against the rebellious, and against those who seek to spread injustice, sin, enmity, or corruption among the believers, the hand of every person shall be against him even if he be a son of one of them,” it proclaimed.

Fifth, The Compact introduced a number of political rights to be enjoyed by the individuals of the Madinan State, Muslims and non-Muslims alike, such as (1) the obligation to help the oppressed, (2) outlawing guilt by association which was commonly practiced by pre-Islamic Arab tribes: “A person is not liable for his ally’s misdeeds;” (3) freedom of belief: “The Jews have their religion and the Muslims have theirs;” and (4) freedom of movement from and to Madinah: “Whoever will go out is safe, and whoever will stay in Madinah is safe except those who wronged (others), or committed sin.”ⁱⁱⁱ

RELIGION AND THE STATE IN HISTORICAL MUSLIM SOCIETY

Adhering to the guidance of revelation, the *Ummah* has respected the principle of religious plurality and cultural diversity during the significant part of its long history. The successive governments since the Rashidun period have preserved the freedom of faith and allowed non-Muslim minorities not only to practice their religious rituals and

proclaim their beliefs, but also to implement their religious laws according to an autonomous administrative system. Likewise, the *Ummah* as a whole has respected the doctrinal plurality with both its conceptual and legal dimensions. It has resisted every attempt to drag the political power to take side with partisan groups, or to prefer one ideological group to another. It has also insisted on downsizing the role of the state and restricting its functions to a limited sphere.

Any one who undertakes to study the political history of Islam would soon realize that all political practices, which violated the principle of religious freedom and plurality, were an exception to the rule. For instance, the efforts of the Caliph al-Mamoon to impose doctrinal uniformity in accordance with the Mu'tazili interpretations, and to use his political authority to support one of the parties involved in doctrinal disputes, were condemned by the *ulama* and the majority of the *Ummah*. His efforts to achieve doctrinal homogeneity through suppression and force eventually clashed with the will of the *Ummah*, which refused to solve doctrinal and theoretical problems by the sword. This compelled Al-Wathiq Billah, the third caliph after al-Mamoon to give up the role assumed by his predecessors and abandon their oppressive measures.

Obviously, Muslims have historically recognized that the main objective of establishing a political system is to create the general conditions that allow the people to realize their duties as moral agents of the divine will (*Khulafa*), not to impose the teachings of Islam by force. We, therefore, ascribe the emergence of organizations working to compel the *Ummah* to follow a narrow interpretation, and calling for the use

of the political power to make people obedient to the Islamic norms, to the habit of confusing the role and objectives of the *Ummah* with the role and objectives of the state. While the *Ummah* aims to build the Islamic identity, to provide an atmosphere conducive to spiritual and mental development of the individual, and to grant him or her the opportunity to realize his or her role and aims of life within the general framework of the law, the state makes efforts to coordinate the *Ummah*'s activities with the aim to employ the natural and human potentials and possibilities to overcome the political and economic problems and obstacles that hinder the *Ummah*'s development.

Differentiating between the general and particular in the Shariah and distinguishing between the responsibilities of the *Ummah* and the state, is a necessity if we want to avoid the transformation of political power into a device for advancing particular interests, and ensure that state agencies and institutions do not arrest intellectual and social progress, or obstruct the spiritual, conceptual, and organizational developments of society.

DIFFERENTIATING CIVIL SOCIETY AND THE STATE

Historically, legislative functions in Muslim society were not restricted to state institutions. Rather there was a wide range of legislations related to juristic efforts at both the moral and legal levels. Since the major part of legislation relating to transactional and contractual relations among individuals is attached to the juristic legislative bodies, the judicial tasks may be connected directly with the *Ummah*, not with the state. *The differentiation between civil society and the state can only be maintained by dividing the process of legislation into distinct areas that reflect both the geographical and normative differentiation of the political society*

The importance of the differential structure of the law is not limited to its ability to counteract the tendency of centralization of power, which characterizes the western model of the state. Rather, it is also related to guarantees extended to religious minorities. The Islamic model should maintain the legislative and administrative independence of the followers of different religions, as the sphere of communal legislation does not fall under the governmental authority of the state. On the other hand, the majoritarian model of the democratic state deprives religious minorities of their legal independence, and insists on subjugating all citizens to a single legal system, which often reflects the doctrinal and behavioral values of the ruling majority.

The early Muslim community was cognizant of the need to differentiate law to ensure moral autonomy, while working diligently to ensure equal protection of the law as far as fundamental human rights were concerned. Thus early jurists recognized that non-Muslims who have entered into a peace covenant with Muslims are entitled to full

religious freedom, and equal protection of the law as far as their rights to personal safety and property are concerned. Muhammad bin al-Hasan al-Shaybani states in unequivocal terms that when non-Muslims enter into a peace covenant with Muslims, “Muslims should not appropriate any of their [the non-Muslims] houses and land, nor should they intrude into any of their dwellings. Because they have become party to a covenant of peace, and because on the day of the [peace of] Khaybar, the prophet’s spokesman announced that none of the property of the covenanter is permitted to them [the Muslim]. Also because they [the non-Muslims] have accepted the peace covenant so as they may enjoy their properties and rights on par with Muslims (al-Maududi, 1985).” Similarly, early Muslim jurists recognized the right of non-Muslims to self-determination, and awarded them full moral and legal autonomy in the villages and towns under their control. Therefore, al-Shaybani, the author of the most authoritative work on non-Muslim rights, insists that the Christians who have entered into a peace covenant (*dhimma*) – hence became *dhimmis* – have all the freedom to trade in wine and pork in there towns freely, even though such practice is considered immoral and illegal among Muslims. However, *dhimmis* were prohibited to do the same in towns and villages controlled by Muslims.

Likewise, early Muslim jurists recognized the right of *dhimmis* to hold public office, including the office of a judge and minister. However, because judges had to refer to laws sanctioned by the religious traditions of the various religious communities, non-Muslim judges could not administer law in Muslim communities, nor were Muslim judges permitted to enforce *shari`ah* laws on the *dhimmis*. There was no disagreement

among the various schools of jurisprudence on the right of non-Muslims to be ruled according to their laws; they only differed in whether the positions held by non-Muslim magistrates were judicial in nature, and hence the magistrates could be called judges, or whether they were purely political, and therefore the magistrates were indeed political leaders.^{iv} Al-Mawardi, hence distinguished between two types of ministerial positions: *plenipotentiary* minister (*wazir tafwid*) and *executive* minister (*wazir tanfiz*). The two positions differ in that the former acts independently from the caliph, while the latter has to act on the instructions of the caliph, and within the limitations set by him.^v Therefore, early jurists permitted *dhimmis* to hold the office of the executive, but not the *plenipotentiary* minister.

But while early shari'ah law recognized the civil and political rights and liberties of non-Muslim *dhimmis*, shari'ah rules underwent drastic revision, beginning with the eighth century of Islam. This was a time of great political turmoil throughout the Muslim world. It was during that time that the Mongols invaded Central and West Asia inflicting tremendous losses on various dynasties and kingdoms, and destroying the seat of the caliphate in Baghdad. This coincided with the crusaders' control of Palestine and the coast of Syria. In the West, the Muslim power in Spain was being gradually eroded. It was under such conditions of mistrust and suspicion that a set of provisions attributed to an agreement between the Caliph Omar and the Syrian Christians were publicized in a treatise written by Ibn al-Qayyim (al-Mawardi, 1983). The origin of these provisions is dubious, but their intent is clear: to humiliate Christian *dhimmis* and to set them apart in dress code and appearance. Their impact, however, was limited, as the Ottomans,

who replaced the Abbasid as the hegemonic power in the Muslim world, continued the early practice of granting legal and administrative autonomy to non-Muslim subjects.

ISLAM, CIVIL SOCIETY, AND THE STATE

The modern state emerged to foster individual freedom from arbitrary rule, and to ensure that the members of the political society assume full control over public institutions. To do so, the modern state found it necessary to free public institutions from the control of all exclusive groups, including organized religions. However, despite the clear desire of the pioneers of the secular state to replace religious morality with civic virtue as the moral foundation of the state, secularism gradually developed anti-religious tendencies, leading to the gradual erosion of the moral consensus. The continuous erosion of morality, and the rampant corruption in modern politics threatens to turn the state into an instrument in the hands of corrupt officials and their egoistic cronies.

This has prompted calls for the return of religion and religiously organized groups into the political arena. Nowhere are these calls louder and clearer than in Muslim societies where Islamic values have historically exerted great influence on the body politics. Unfortunately, the reunion envisaged by the advocates of the Islamic state is often presented in crude and simplistic terms, as it fails to appreciate the great care that was taken by early Muslims to ensure that the state incorporates, both in its

objectives and structure, the freedom and interest of all intra- and inter-religious divisions.

This calls upon Muslim scholars to engage in new thinking that aims at redefining political principles and authority. In doing so, Muslim scholars should be fully aware of the need to transcend the historical models of political organizations in Muslim society. Political structures and procedures adopted by early Muslim societies are directly linked to their social structures, economic and technological developments, and political experiences. While historical Islamic models provide a mine of knowledge for contemporary Muslims to utilize, any workable formulation of the modern Islamic model of the state that is true to Islamic values and ethos must emerge out of fresh thinking that takes into account the structure of modern society.

Islamic political thought, I believe, can make a profound contribution towards reclaiming the moral core of social life, and preserving religious traditions, without sacrificing the principle of freedom and equality promoted by the modern state.

The hallmark of Islamic political experience is the limitations historical Muslim society was able to place on the actions of rulers, and the presence of vigorous and robust civil society. Many of the functions the secular state assumes today were entrusted to civic institutions, including education, health, and legislation. The state was mainly entrusted with questions of security and defense, and was the last resort in question relating dispensation of justice. This understanding of state power would

potentially free religious communities from intervention of the state and state officials, who tend to enforce their religiously based values and notions on the members of society, including those who do not share with them some of those values and beliefs.

The notions of individual freedom and equality are intrinsic to Islamic political thought, and those principles require that individuals have the basic civil liberties offered by the modern state. However, by freeing civil society from the heavy hand of the state, and by extending individual liberties to the community, and recognizing the moral autonomy of social groups. Social and religious groups under the Islamic conception of law (shari'ah) would have the capacity to legislate their internal morality and affairs in their communities. While the new sphere of freedom acquired under this arrangement allow for differentiation among citizens, equality would have to be maintain as the criteria of justice in the new area of public law, and in access to public institutions—i.e. in matters that relate to sphere of share interests and inter-communal relations.

References

Descartes, Rene. *Meditations on first philosophy*, trans. John Cottingham. Cambridge, UK: Cambridge University Press, 1986, p. 49.

Ibn Hisham. The compact of Madinah. In *Al-Syrah al-Nabawiyah* [The Biography of the Prophet]. Damascus, Syria: Dar al-Kunuz al-Adabiyah, n.d., vol. 1, pp. 501-2.

Ibn al-Qayim, *Sharh al-Shurut al-Umariyyah*. Beirut: Dar al-‘Ilm lilmalayin, 1961/1381.

al-Ghanoushi, .Rashid. *Al-Huriyyat al-Ammah fi al-Dawlah al-Islamiyyah* [General Liberties in the Islamic State]. Beirut, Lebanon: Markaz Dirasat al-Wihda al-Arabiyyah, 1993, p. 258.

Kant, Immanuel. *Critique of Pure Reason*, trans. Norman Kemp Smith. New York, Macmillan, 1929), p. 640.

al-Mawardi, Ali bin Muhammad. *al-Ahkam al-Sultaniyyah*. Cairo: Dar al-Fikr, 1983/1401, pp. 20-23, 24, and 59.

Mawdudi, Abul’ala. *Nazariyat al-Islam wa Hadiyah* (Jeddah: Dar al-Saudiah, 1985, p. 47.

Nietzsche, Friedrich. *Beyond good and evil*. New York, NY: Vintage Books, 1966, pp. 66, 74-5, and 45..

Qur’an: Chapters Al-Tawbah 97, and Al Hujurat 14.

Rousseau, Jean-Jacque. *The social contract*, trans. Maurice Cranston. London, U.K. : Penguin Books, 1968, p. 186.

Al-Mawardi's Political Paradigm: Principles of Islamic Political System

Syed A. Ahsani

Following the Western domination of Muslim countries, Islamic thinkers have reacted to it at three levels in respect of its political system. First, the *apologists* have advocated total adoption of the Western model of democracy. In reaction, *the Traditionalists* argue that the wholesale adoption of the Western model will lead to secularization, contradicting the Islamic value system. The third group, *the moderates*, takes the middle of the road position- benefiting from the Western learning as the lost heritage of Islam, but observing the fundamentals of Islamic *Shari'ah*. These divisions are not new; they existed in Abbasid period when *Motazalites*, the rationalists gave primacy to reason. The rise of philosophy under Caliph Mammon inspired the fear that Revelation might be threatened by Reason, which gave rise to two kinds of reaction, *Ahle Hadith* or Traditionalists, who totally *rejected* reason, and *Asha'rites* who put limits on it in order to save Revelation from being rejected. Mawardi, who took up the debate in later times when the rationalists had been banned, was neither *Ahle Hadith* nor *Asha'rite*, but an independent thinker who held firmly to rationalist theology, where revelation was silent, and did not lay down the law. His greatest contribution was the introduction of the concept of “political justice” into the *Shari'ah*.

Mawardi's al-Ahkam al-Sultaniyya laid down the public law in such a manner that it deemed *Shari'ah* as an insufficient yardstick for 'adl' (justice). This points to the developed practice among Muslim rulers of defining *Shari'ah* as observance of religion in line with the recommendations of the *Ulama*. This practice satisfied the *Ulama* who then undertook to abstain from judging the politics of the Caliph. Interestingly, this led to the separation of religion from politics, indirectly defeating the commonly held view that the secular and the religious are inseparable in Islam. **I** The root of this idea lay in the practice of Muhammad (PBUH) -as Prophet and Statesman, and the *Khulafa-e-Rashideen*, in the formative period of Islam (Hanna, 1995).

The Constitution of Medina: The Medina state was the oldest known in history; it established the principle of legality-submission of the state to the rule of law. .

The salient features of the Constitution of Medina were:

1. The territory became the basis for granting citizenship instead of tribal lineage. All residents became one Ummah, including polytheists and the Jews (Articles.20 b and 25);
 2. The Prophet, may peace be upon him (pbuh), became the Head of State and the Final Court of Appeal;
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3. The practice of tyranny and injustice was rejected (Articles 13, 15, 16, 36 and 47). Equality was established as the basic principle of an Islamic State (Articles 15, 17, 19 and 45);

4. The principle of “*pacta sunt servanda*” treaties are binding, as laid down in modern international law, was adopted, allowing other tribes and minorities to accede to the Medina Charter;

5. Specific provisions were made regarding murder, sheltering of criminals, liability of only those who committed crimes, preclusion of individuals from signing separate peace with enemies of the state. The Jews were allowed a share in the booty and also a share in the expenses of war. In that case, they did not pay the *jizya* (poll tax);

6. Some traditions like blood money were maintained on the principle of ‘*Urf*’ (Customary Law), preserving what was sound and abolishing what was corrupt;

7. The Constitution was a comprehensive document, covering all the exigencies- jurisprudence, defense, plans for raids and battles if attacked, financial resources, *Zakah*, treaties and delegations;

8. The political system established by the Constitution of Medina covered the functions of Legislature, 2 Judiciary and Executive, anticipating the modern state system (Qureshi, 1991).

While studying the Mawardi paradigm in the context of *Mota'zalite and Ash'arite* debates, an attempt will be made to delineate the principles that we can learn and adopt from the *Khulafa-e-Rashideen* (Rightly Guided Caliphs) model. Also, this paper will seek to underline principles of an Islamic State. After such analysis of past practices, especially in the light of the *Quran* and *Sunnah*, it can be determined as to how far the present democratic model is in consonance with the Islamic political system, based on the *Quran and Sunnah*. If it is not, what model can be evolved and adopted on the basis of *Ijtihad* (El-Awa, 1980) in light of the evolution of modern political thought over the centuries, not only in the Muslim world but in the West as well?

Distinctive Features of Islamic Political Theory:

Upon the passing away of the Prophet, (pbuh), *Ansars* gathered, and three *Muhajirin* companions joined (Abu Bakr, Umar, and Ubaida Bin Jarrah) them at Bani Saqifa where , Abu Bakr was elected as Caliph of the Messenger-Khalifat ar-Rasul (**Al-Bukhari, # 2462**). Later, this election was confirmed by voting -*Baiya*- (Handshake) in the General Assembly at the Medina Mosque. The following principles were established at Bani Saqifa, as part of the political theory of Islam:

1. The election of the Caliph is by *Shura* (consultation), in two stages, indicating that it was for the Muslims to decide since the Prophet, did not take any decision on the matter, leaving it up to the community to make such a determination given the time and the

place. The will of the *Ummah* was, therefore, an essential principle for selecting the Head of State as successor of Prophet-*Khalifat al-Rasul*. Umar, who became the Second Caliph, later told the Council of Elders-Hal w' al-Aqd-"You must kill any one of you who claims command over you without consulting the Muslims."³ The method of consultation is not prescribed in the *Quran* and Traditions, and can vary depending on the time and circumstances, as is evident from the election of four Rightly Guided Caliphs (Ahmed, 1986).

2. The criterion for electing a Head of State is excellence in religion-*taqwa*. But a Caliph is also the temporal Head of State, ⁴ as has been outlined in detail by Mawardi in *al-Ahkam as-Sultaniyyah* (El-Awa, 1980).

3. The selection of a Caliph cannot brook any delay, even for the burial of the Prophet. ⁵ The companions did not want to be without a *Jam'ah* even for part of the day (Enayat, 1982).

However, Umar was nominated by Abu Bakr, with the consultation of ahl *al hal wal 'aqd*, people who "loosen and bind", meaning the elders with knowledge, wisdom and discernment. According to Mawardi, this was election by a single elector- a precedent quoted by later *jurisconsults* in justification of nomination of sons by Caliphs and Sultans. However, Mawardi failed to mention this practice as something in violation of the essential criteria of religious knowledge-*Ijtihad*, judgment, courage and physical health, apart from the Caliph being from the *Quraysh*.

The selection of Umar, tantamount to election which he was bound to win in general voting or *bayia*, was fully justified in the light of his vast knowledge, administrative judgment and great services to Islam during the Prophet's time, and as a close Adviser to Abu Bakr, the first Caliph.

The election of Uthman established the principle that the office of Caliphate was not hereditary, for Umar, unable to make a choice, while selecting the Electoral College omitted his son, Abdullah, on the ground of being his son. Also, it established the precedent that six persons could constitute an Electoral College, while other jurists considered three, or even one, sufficient, as was the case in Abbas's '*baiya*' (Handshake) of Ali who was told that if he did not accept, the rebels against Uthman may elect one of their own. Besides, Ali was one of the six candidates considered by Umar as fulfilling the conditions for the office of Caliphate. After the third Caliph, Uthman's assassination! , he was the only choice.

The assassination of Uthman raised the issue of rebellion against the Caliph-whether it is justified in Islamic political theory. Most jurisconsults view it as unwarranted on the basis of a Tradition: "After me governors will rule over you, and those who are upright will rule over you by their uprightness, and those who are corrupt will rule over you by their corruption; listen to them and obey them in everything which is compatible with truth-if they are correct in their dealings, then it will be to your benefit and theirs, and if they act incorrectly, then that will still be to your benefit (in the next world) but will be held against them."(**Attermethe, # 1849, Muslim # 1854**).

Rebellion is justified in case of ‘unbelief’ as provided in the *Quran*. Hasan Basri, a leading Tab’ee (Second Generation Companion), prohibited fighting against the ruler in a civil war. Learning and practicing Islam is better than arguing and bickering, so say some scholars who refrained from rebellion against the ruler, as it will lead to chaos and anarchy, far more harmful than tyrannical rule despite its long duration. A well-known Fiqhi doctrine says:

*"When you are faced with two damaging situations, choose the lesser evil."*⁶ Those who justify rebellion against the ruler rely on Abu Bakr’s Sermon on his election: *" Follow me if I am acting according to the Quran and Sunnah, but do not obey me if I do otherwise."* (Khan, 1995).

Accordingly, some who were influenced by the propaganda of a converted Jew, Abdullah Bin Saba, came from Iraq and Egypt to Medina, demanding Uthman’s resignation despite his clarification in response to their accusations of nepotism in appointing his relatives as Governors.⁷

According to Rashid Rida, the Imamate of Necessity, *-al-imamat al-dururat-* must be obeyed while fulfilling its raison d’être of justice, efficiency and descent from Quraysh (though *Kharjites*, Ibne Khaldun and Ottomans disagreed) in order to avoid anarchy and chaos. However, rebellion is justified on grounds of Caliph’s loss of moral probity, physical disability, insanity, captivity, apostasy, disbelief, or injustice. Therefore, *ahl al – hal wal-aqd*-those who loosen and bind, the wise elders, should resist oppression, but the

urge to revolt must be weighed against the fear that it might result in anarchy which Islam seeks to avoid as far as possible. Al Ghazali, Ibne Taymiyya considered quietism or submission to injustice preferable to anarchy incidental to rebellion. It is said: "*Status quo being the lesser of the two evil is preferable to civil strife.*" Nevertheless, Turks revolted against Ottoman Sultans in 1924. In opposing rebellion, Rashid Rida agrees with Ibne Taymiyyah who made Muslims conscious of a forced choice between anarchy and injustice.⁸

Traditionally, the *Ulama* were defenders and monitors of status quo. As *ahl al hal wal aqd*-the wise elders, they were expected to oversee that the ruler enforced the *Shariah*, assuming responsibility for proper management of public affairs and restoring the pristine standards of simplicity, humility and frugality in life style. Also, they should ensure that those who wanted to occupy the office might be debarred in accordance with a tradition:

"talib al wilayat la yuwalla"-seeker of office should not get it (**Al-Bukhari, # 6722, the Prophet discouraged asking to be nominated**).

Some of these principles for the election of the Caliph are: *Shura*, Justice, Freedom, Equality, Succession and Election: The Islamic political system does not lay down specific and detailed system of governance. It will be more correct to say that the *Shariah* delineates general principles only, leaving further details to specific circumstances of time and place. The Caliph who is elected should enjoy sound health, possess knowledge of the *Shariah* to exercise *Ijtihad*, and be able to carry on domestic and foreign policy

with ability, courage and wisdom. He should abide by the *Shariah* and promote public good. So long as he does, Muslims should obey him, offer him advice on what is right and correct him if he is wrong. The principle of *Shura* was followed in case of the four Rightly-Guided Caliphs in four different ways, proving that changes in circumstances can result in adoption of a different methodology (Mehdi, 1991).

Shura:

Shura is the most important principle of Islamic political theory. Addressing the Prophet, Quran informed him: "It is by the mercy of Allah that you were lenient with them, for if you had been rough and harsh-hearted, they would have dispersed from around you. So pardon them and ask forgiveness for them and consult with them on the matter."(3:159).

In order to underline the importance of *Shura*, Allah is directing the Prophet to consult with them despite their view being contrary to the Prophet's, who was in favor of fighting the infidels within the confines of Medina while the companions advised going out. He was proved right, but since he accepted their advice, the Companions were absolved of their error of judgment. Also, it indicates that the leader should not keep grudge for giving the wrong advice, nor refrain from future consultation. Further, the *Quran* says "and those who answer the call of their Lord and establish prayer and who conduct their affairs by counsel, and who spend of what We have bestowed upon them."(42:38)

According to Shaikh Muhammad Abdu, Shura is mandatory as consultation is an essential quality of those who “*enjoin good and forbid wrong*.” Abu Hurairah said, “I have never seen anyone else who seeks consultation of his companions more than the Prophet himself.” However, *Shura* is not required, in case there is revelation, though the Prophet held *Shura* even though *Wahy* had come as in the case of Treaty of Hudaibiya. But *Shura* is also extended to interpretation of the Divine revelation and matters in which there was no *Wahy* (Al-Ahsan, 1992). (Al-Bukhari # 4844, Muslim # 1783, 1785, 1807, Abu-Dawood # 2349: numbers reflect pages in the books). 9

While asking for *Shura* (Advice), the ruler should not dismiss or veto the advice, as the Prophet followed the advice of Companions for going out in Uhud. *Baiyah* or oath of fealty is conditional upon the Caliph abiding by the *Shura*, otherwise *Baiyah* becomes null and void. This view is held by majority of *jurisconsults*. Their minority which considers *Shura* not binding relies on the verse: “*When you decide, put your trust in Allah*”, apart from the *Sunnah* of the Prophet in Hudaibiyah; Abu Bakr’s stand in sending army to Syria; his waging war against the Apostates, and Umar’s decision not to distribute lands occupied in Iraq, but retain them for future generations. Tabari considers the above-mentioned verse relevant to *Wahy* (Revelation), which must be followed irrespective of the *Shura*, as happened in Hudaibiya. Then Umar’s inquiry from the Prophet as to why Muslims should accept the peace was ‘*Nasihah*’ and not *Shura*, and before he was told by the Prophet about *Wahy*. Though not obligatory, Abu Bakr’s holding *Shura* in following the Prophet’s action of dispatching the army to Syria, was indicative of the imperative nature of *Shura*, laying a precedent for future generations,

proving at the same time that even though not abiding by *Shura* advice, he had carried out *Shura*, in form and spirit, for they, including Umar, promptly reconsidered their opinion, agreeing to Abu Bakr's reasoning.

Likewise, Umar was able to win the *Shura* over his decision on land in Iraq. Indeed, *Shura* is mandatory on both the ruler and the ruled as a religious duty, *Ibadah*: on the ruler to hold *Shura*, and on the ruled to give the right advice. If a ruler does not hold *Shura* and the ruled do not offer advice, they are guilty of dereliction of religious obligation, committing a sin.

In case there is no *Wahy*, *Shura* is to be held at three levels:

a) *Ahl al-hal wal-aqd*-Wise Elders, as practiced by the Prophet and the Rightly Guided Caliphs.

b) Specialists who have an advanced level of knowledge on the subject such as war, foreign policy, or domestic policy, etc.;

c) Referendum/Parliament/Popular Vote.

It is exercised in case *Shura* of *Ahl al-hal wal-aqd* has been held and the decision is put before the people for ratification. During the time of the Prophet or the Rightly Guided Caliphs, there was no permanent *Majlis*, Cabinet or Parliament. Voting was not held, nor there was formal majority / minority, or Government in power and party in

Opposition. The *Shura* proceedings were confidential and *Shura* members did not publicize their opinions, leaving the announcement to the ruler who had direct access to the people without *ahl al-hal wal-aqd* (Wise Elders) acting as the Spokespersons.

Also, once *Shura* was given, Wise Elders did not feel let down if their opinion was not accepted. The *Shura* was given with good intentions regardless of personal ego or gaining benefit. In fact, *Shura* was an exercise in *Ijtihad* aimed at finding the truth with due concentration on effort by men gifted with knowledge of *Shari'ah* and right judgment.

Some examples of *Shura* by the Prophet are:

Before Badr: On receiving the news that a trade caravan of Quraysh was proceeding to Syria, the Prophet held a *Shura* (consultation) about pursuing it, not engaging in fight. The companions, majority of whom were *Ansars* (Medinite Helpers), pledged full support unlike the Bani Israel who had asked Moses to go and fight. The Prophet went with companions in pursuit, making the departure public as a strategy with the result that Abu Sufyan asked for reinforcements from Mecca and changed the route via the coast. A second *Shura* was held to decide whether to return to Medina or confront the reinforcements coming from Mecca; in Medina, there was a distinct possibility of hypocrites, the Bedouins, non-Muslim Arabs and the Jews taking advantage of the absence of Muslims. Also, they came hardly prepared for a regular battle, numbering only 313. Nonetheless, they again pledged full support to proceed to *Badr*. Meanwhile, the Prophet received the revelation that Muslims preferred to go after booty whereas

Allah had destined victory for them. His action to seek advice was to reinforce companions' conviction and enthusiasm. (**Al-Bukhari # 4609, Al-Albani # 3340**).

The lesson is that the leader should not disclose his own personal judgment, before allowing free expression of other opinions. The Prophet decided to camp in a low area. **Munzar**, a Companion, finding that it was not the result of revelation, advised occupying a spring on high ground to deprive the Quraysh any access to water; it was not a *Shura*, but '*Nasihah*', given privately, indicating that one should not hesitate to express one's opinion to the Commander, who should carefully consider it and accept any sound and timely advice from anyone regardless of one's status. This was done by the Prophet, who announced the decision without any public disclosure as to who had made the suggestion influencing it.¹⁰

Before the fight, the Prophet announced that Abbas and another companion should not be killed; Abu Hudaifa disagreed, vowing to kill him. Prophet asked Omar who had known of Abbas becoming secretly Muslim whether hurting Abbas made sense; Omar offered to kill Hudaifa, but was restrained by the Prophet, realizing that Abu Hudaifa's vow reflected ignorance, excused him, establishing the Sunnah principle that a commander should tolerate free expression and difference of opinion for which he should not punish the dissenter. ¹¹

After Badr: The Prophet held *Shura* about the prisoners of war, when Abu Bakr advised accepting '*fidya*' while Umar and four other companions favored killing them. The Prophet went inside to reflect and on coming out, he favored Abu Bakr who also knew about Abbas having become Muslim. The Prophet's simile of Abu Bakr as Jesus saying "some are softer than milk"; while Umar's similitude to Noah-"others are harder than stone", leaves room for both traits of human nature (**Muslim # 1763**).

Here, the Prophet, knowing the supreme national interest, and helped by *Wahy* (Revelation) not by self-interest, did not disclose it to allow free expression of opinions. He did not oppose any opinion outright without full reflection on it. This establishes the principle of Islamic political theory that *Shura* is mandatory, both on the ruler and the ruled. This *Shura* on prisoners of war also lays down the principle for the ruler that it is *Sunnah* (the Prophetic example) to keep the counsel or private judgment confidential to oneself so as not to stifle free expression. That is why Allah in his infinite Mercy supported the consensus **12** "*yad allah ma'a al-jama'a*"; He asked the Prophet to forgive those in favor of '*fidya*' (*Sodiq, 1992*).

Justice:

Justice is the cardinal principle of Islam:

"Allah enjoins justice and kindness, and charity to kins, and forbids indecency and abomination, and wickedness (16:90); "Allah orders you that you return the trust to their rightful owners, and that if you judge between people, you judge justly." (4:58);

"And do not let hatred of any people dissuade you from dealing justly. Deal justly, for that is closer to Godliness: (5:9); " O you who believe! Be firm in justice as witness for Allah, even in such cases as are against yourselves, your parents or your kin."(4:135);

“And if you give your word, you must be just, even though it be against your kin, and fulfill the covenant of Allah. For that is what He has commanded you so that you may remember.”
(6:152).

Allah said, "Verily", We have sent our Messengers with clear Signs, and revealed with them the Book and the Scale of (judgment) so that people may be firm in Justice; and We provided iron, wherein is mighty power and many uses for mankind, and that Allah shall know who will help Him and His Messengers in the unseen" (57:25).

Ibn Taymiyyah says: "The aim of commissioning the Prophets and of revealing the Books, therefore, is to have people administer Justice in the cause of Allah and in the right of His creatures... Thus he who deviates from the book shall be corrected by iron (force of arms) (Ahmad, 1986).

Also, Ibne Taymiyyah states: "Allah gives victory to a non-Muslim Government which is just and defeats the Muslim government which oppresses (Harris, 1968).

Allah says: "The indictment shall be upon those who oppress people, and those who commit injustice and wrongdoing on earth shall be severely punished."(42:42);

"Allah does not like that evil be spoken about openly except by one who have been wronged." (4:148);

"Those who are fighting have been granted permission to do so because they have been oppressed, and Allah is indeed able to grant them victory" (22:39);"

And those towns which we destroyed when they became oppressors, and We had set a fixed time for their destruction" (18:50);

"And those who commit oppression shall know what kind of destiny they shall meet." (26:227).

According to *Ahadith* (the Prophet's Traditions), "the just ruler will be placed foremost among the seven whom Allah will cover with His Shade on the Day when there will be no shade but His (**Al-Bukhari # 6806**). The Prophet warned: "Stay clear of oppression, for oppression is darkness on the Day of Judgment."(**Muslim # 2578**).

Freedom:

Freedom is another principle of Islamic political system. To protect their freedom of belief and expression, Muslims should migrate to a country where they can worship Allah and carry out their religious obligations. Early Muslims' migration to Abyssinia set a precedent: "And this is the migration that shall not cease until the Day of Judgment." (97-99)

The Abyssinia migration proves that those people who consider migration to US or any other non-Muslim country as a sin have not understood *Quran and Sunnah*. Allah would ask Muslims who are persecuted in their homeland on the Day of Judgment whether the earth was not wide enough for migration. This concept is further supported by the Prophetic mission assigned to Muslims - *Amr Bil Maroof Wa Nahi Anil Munkar* (to enjoin good and forbid evil,) which requires a ! and, allowing freedom of opinion and expression. Muslims should have the freedom to say what they consider to be an act to be: permissible (*Mubah*) or obligatory (*Wajib*). Under *Mubah*, a Muslim has the choice to do or to ignore it, as distinct from *Wajib*: "what is required to be done", to the extent that neglecting it shall be a sin. The exercise of the right to "enjoin good and forbid evil" has broad applications, covering all aspects of public life, be they political, economic or social.

Equality:

Long before the American Bill of Rights and Rousseau's Social Contract laid down the principle of equality, *Quran* said: "O people! We have created you from a male

and female, and have made you nations and tribes so that you remain God-fearing. Allah is Knower, Aware." (59:13)

The Prophet said: "Allah has relieved you of the fanaticism of *Jahiliyah* and of its pride in ancestors. Whether you are a pious Muslim or a miserable debauchee, you are the son of Adam and Adam was from dust." (Ibn Taimiyah, 220/1)

Again, in his farewell message, he said. "Indeed, there is no superiority of an Arab over a non-Arab, and indeed, no superiority for a red man over a black one except through *Taqwa* (fear or consciousness of Allah) However, before the law everybody is equal, pious or impious; the pious will get the reward in the Hereafter." **(Ibn Majah # 2494, Attermethe # 2464).**

When a companion intervened on behalf of a noble woman who had committed robbery, the Prophet said." By Allah, if Fatimah, the daughter of Muhammad had committed theft, I would have had her hands cut off. Caliph Abu Bakr said in his first address after assuming office: "And the weak among you shall be strong in my eyes until I secure his right, and the strong shall be weak in my eyes until I wrest the right from him."

Once Ali, the fourth Caliph appeared before a judge as a defendant against a Jew who allegedly stole his armor. When the judge asked him to sit next to him, he reminded the judge that his preferential treatment was violation of the principle of equality between

the complainant and the defendant. The judge refused to accept the evidence of Hasan on the ground that he was Ali's son, allowing the Jew to retain the armor whereupon the Jew, impressed by the impartial justice by an independent Judiciary, became a Muslim.

Accountability of the Head of State:

As the ruled are to obey the ruler who can use force to quell their rebellion, the *Ummah* has the right to question the ruler when he abuses his authority.

Quran says: "And when he turns away, he will try to spread corruption on earth and to destroy the crops and mankind, and Allah dislikes corruption. (2:205)

The Prophet said: "You are guardians, responsible for your wards (**Al-Bukhari # 2558**)" He also said: "A Muslim must hear and obey whether he likes it or dislikes it, except when ordered to commit a sin, in which case there shall be no hearing nor obedience." adding "Obedience is only in righteousness", as was stated by Abu Bakr.

Accordingly, a ruler can be removed if he acts in contravention of his official duties, or commits immoral, oppressive acts or violates the commandments of the *Quran and Sunnah*.

Conclusion:

It is clear, therefore, that Mawardi, being part of the Abbasid Administration, (*Qadi* and Envoy) has analyzed in detail the late Abbasid political history, summarizing the opinion of all juriconsults on the criteria for the selection of Caliph, the qualities of Caliph and Wise Elders, selection of *Wizirs*, Governors, Jihad for Public Good, Judiciary, Prayer, *Imam*, *Hajj* Administration, *Zakah*, *Fay* and *Ghaneemah*, *Jizyah* and *Kharaj*, Regional Statutes, Revival of Dead Lands, Reserve and Common Lands, Grants and Concessions, *Diwan*, Criminal Actions and Ombudsman or Public Order (*hisbah*). (Hanna, 1995).

While giving interpretation like the ruler may apply *Shariah*, but may be unjust, he stopped short of passing judgment (*Ijtihad*), being constrained by holding office of a judge. However, it was left to later scholars like Rashid Rida and Mawdudi who were courageous enough to criticize the policy of Uthman for retaining Muawiya for nearly 20 years as Governor, thus making him very popular. Also, most juriconsults agree that in Islam there was no hereditary transfer of power. Another important principle is *Shura* by the ruler, which became extinct when monarchy replaced the Guided Caliphate. In early *Omayyad* period, a Caliph gave a long Friday Sermon till *Asr* (afternoon prayer); on objection by a Companion to fear Allah, his head was chopped off. No wonder that many righteous juriconsults like Abu Hanifah and Malik refrained from accepting posts of Chief Judge, suffering torture in prison. **13**

***Shura* is mandatory both on the ruler and the ruled as *Ibadah*, and refraining from it is a sin .for, "Allah's hand is on collectivity." as happened in *Badr and Uhud* when Allah gave Muslims victory.**

There is no veto in Islam. When given, the *Shura* is binding on the ruler. Even on the dispatch of Army to Syria, the first Caliph, Abu Bakr following Prophet's death, his fighting the apostates who refused to pay *Zakah*, and *Ummah*'s denial of *Zakah* money to early Muslims for *talif al qulub* (winning over), on the ground that Islam had gained strength were the outcome of *Shura* (consultation).

Further, it is amply clear that early jurists exercised *Ijtihad* in their time, but their decision is not binding on later generations. Validation of *Ijtihad* is dependent on *Maslahah* (Public Good), *Urf*, *Istehsan*, *Qiyas* and is therefore a continuing exercise in the light of changing circumstances, as has been mentioned by Imam Malik, and other three *Hanafi Imams*. Even Medina scholars differed from Iraqi school, but they did not accuse each other of unbelief, as was done in later periods- a practice prevalent now. **14**

On the basis of '*Urf*', Islam retained such practices as *Hajj*, removing idols and forbidding naked circumambulation around *Kaabah* or '*Tawaf*'. On the same analogy, present and future principles, concepts and methodology in Western political system can be adopted provided it is not incompatible with *Shariah-Quran and Sunnah*. If Islam is universal, and no doubt it is, it has to leave room for accepting what is good in the light

of research and practices evolved in the modern world. That is what the International Institute of Islamic Thought (IIIT) is doing and its scope has also included Political Science from a *Tawhidi* (Islamic) perspective.

While accepting the possibility of errors, the writer could not cover such aspects of political theory as sovereignty of Allah, the concept of *Hukumat Ilahiyah*, Theocracy versus Democracy, and its compatibility with Islamic political system. Likewise, the participation of Muslims in the polity of non-Muslim countries (*Dar al-Harb or Dar al-Bayah*) was left out, being outside the purview of this paper, even though Dr. Hamidullah (1963) considers that in *Meccan* period, affairs of Muslims were not decided under the law of polytheists, but by the Prophet, amounting to a State within a State. This and other topics mentioned above require further research .15

References

(N.B.: All Qura'anic References Follow the chapter: verse format. All Hadith References Follow the Number of the Prophetic Saying in Respective Sources)

Ahmed, Mumtaz (ed.). State Politics and Islam. Indianapolis, Indiana: American Trust Publications, 1986.

Al-Ahsan, Abdullah, Ummah or Nation?: Identity Crisis in Contemporary Muslim Society. Leicester, United Kingdom: Islamic Foundation, 1992.

El-Awa S. Muhammad. On the Political System of the Islamic State. trans. Ahmed Naji al-Imam, Indianapolis, Indiana: American Trust Publications, 1980.

Enayat, Hamid. Modern Islamic Political Thought. Austin, TX: University of Texas Press, 1982.

Hamidullah, Muhammad. The Emergence of Islam. 1963 Lectures at Bahawalpur University. Translated and edited by Ambassador Islamic Research Institute in collaboration with the Dawah Academy, Islamabad, International Islamic University, 1993.

Hanna, Mikhael. Politics and Revelation, Mawardi and After, Edinburgh, U.K.:University Press, 1995.

Harris, Proctor J. (ed). Islam and International Relations, Durham, North Carolina: Duke University, 1968.

Khan, Majid Ali. The Pious Caliphs, Safat, Kuwait, Islamic Book Publishers, P. O. Box 20210, 1995.

Mehdi, Muhsin. Political Philosophy in Islam, chapter on Ibn al-Farabi.

Qureshi, Muhammad S. Foreign Policy of Hadrat Muhammad. New Delhi, India: Kitab Bhavan, 1993.

Sodiq, Yushau. Imam Malik's Concept of Maslahah (The Consideration of the Common Good), an unpublished Ph.D. dissertation, at Temple University, Philadelphia, 1992.

End Notes:

1. The author has offered a perceptive analysis of Mawardi's comprehensive political treatise, explaining how different scholars, before and after Mawardi, dealt with the relationship between reason and revelation; and how politics including justice are connected with revelation, comparing Islamic and Western thought. He concludes that in the nineteenth and the twentieth centuries Muslims, after the impact of the Western political thought, realized the need for a more intellectual orientation of the Islamic political system.
 2. The Prophet sent 30 letters to Heads of States and tribes, sent 80 delegations, signed 33 treaties and organized 85 battles and expeditions in defense.
 3. In a brilliant introduction, Mumtaz Ahmad has underlined the need for enunciating an Islamic political theory; Several renowned scholars like Fathi Osman, Khalid Ishaq, Javed Iqbal, Fazlur Rahman, Abdulaziz Sachedina, Ahmad Moussavi and Jamilah Jimmod have made notable contribution to aspects of Islamic political thought such as Bai'ah of Imam, principle of Shura, Vilayat-i-Faqih, Marja' iyyat-I-taqlid, Islamic social order and Jihad.
 4. In this thought provoking book, the author gives the genesis of an Islamic political system, its objectives and principles, suggesting that Ijtihad should continue in it in modern times.
 5. Islamic political system greatly stresses systemic and organizational soundness, hence the need for righteous and effective leadership geared to maintaining peace with justice. Thus, the Ummah is not to be left leaderless under any circumstances.
 6. Strictly from the perspective of the Quran and Sunnah, the paramount criterion of the head of an Islamic state is piety and an acute sense of accountability to Allah (SWT) and in terms of practical implementation of the human rights (huquq al 'baad).
 7. That "Scholars like Rashid Rida and Mawdudi who were courageous enough to criticize the policy of Uthman for retaining Muawiya for nearly 20 years as Governor deserves comment. Those so-called scholars are not courageous but rather ignorant to criticize Uthman for not sacking Muawiya. Muawiya was described by the Prophet (peace upon him) as a knowledgeable companion and the Prophet prayed for his increased knowledge. Second, he was a very skillful governor, who was assigned at the time of Abu-Baker then Omar continued him in his position, and neither Khalifah fired Muawiya. Why should Uthman be criticized for that? We believe nowadays a lot of rumors and you can see how the media fabricates the news and we have hard times verifying them. So how can any human verify what took place 1400 years ago to judge. Any person who does is, to say the least, irresponsible
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8 Important aspects covered include: divergence and convergence in Shiite and Sunni political concepts, Rashid Rida's view of Islamic State, Nationalism, Democracy and Socialism and concepts of Taqiyyah, Martyrdom and modern constitutionalism

9. While important topics like the concept of Ummah, rise of Muslim nation states, identity crisis of Muslims, organization of Organization of Islamic Conference as an entity for cooperation in political, economic and social fields, the author omitted to mention that according to Medina Constitution, minorities acceding to it became part of the Ummah and were allowed a share in the booty.

10. Abdullah Bin Saba, was a Jew who pretended to be a Muslim and attempted to spread problems in the Muslim state. According to some he was not a Muslim.

11. The "so called Turks rebellion" against the Ottoman Sultans was also carried out by Jews pretending to be Muslims. Kamal Attaturk was a Jew and there are available books written by western journalist on how he was the brain behind the destruction of the last Islamic Khilafah in 1924

12. This hadith is weak and not authentic about the suggestion of Al-Habbab bin Al-Munther.

13. Mawardi's book or analysis implying that *Shari'ah* as an insufficient yardstick for 'adl' (justice) is Kufr or disbelief. Clearly, Allah said in Surat Al-Maedah in the holy Quran said: "Today I have completed your religion and perfected my blessing upon you (ISLAM) and I am satisfied with Islam as your religion" verse 3, chapter 5..For anyone to think that Islam as a religion is lacking some concepts, implying directly that he knows better than Allah or Allah forgot something which he has presumptuously found. This concept is in contradiction with the message of Islam and the verse mentioned above.

14. The concept of Imam Malik's Maslahah is well-accepted doctrine, underlining the need of the community for Ijtihad to suit the community in various times. According to Shiite tradition, Ijtihad never stopped, as is evident from Iran's political history in which Ulama have a constitutional role. (The author can be contacted at: Syedahsani@sbcglobal.net)

15. Muhammad Hamidullah, The Emergence of Islam, Lectures at Bahawalpur University, translated and edited by Ambassador Afzal Iqbal, for the Islamic Research Institute in collaboration with Dawah Academy, International Islamic University, Islamabad, 1993, in the chapter on State and Administration. Dr. Hamidullah is the first scholar to suggest the concept of State within State, namely, Muslim Administration at Mecca for, no matters relating to Muslims

were referred to pagans but to Prophet, peace be on him, pages 155-157. This is relevant to position of Muslim minorities in West. Ghannouchi, a Tunisian scholar and founder of al-Nahda, now residing in London is opposed to Muslim minorities striving for a separate state as was done in Nigeria and Pakistan, limiting such minorities to missionary role of *amr bil maaroof wa nahi anil munkar*-enjoining good and forbidding evil, converting people to Islam; they should project good Muslim character as caring neighbors, honest workers and responsible participants in political system, making the West a moral and spiritual power in the world, heralding an era of peace, freedom, equality, honor, dignity and justice for all.

The companions set an example of democracy and freedom never repeated in the history of mankind and will never be repeated even in the USA. When the companions migrated from Mecca to Madina (they were considered foreigners with our current definition of citizenship). They lived in Madina only 10 years then the prophet peace upon him died. The people of Medina were majority yet they elected Abu Bakr (foreigner according to our definitions today) to be the ruler. Then Omar was nominated and all people of Medina agreed then Othman the Ali. Where in the history of mankind has an immigrant, after only a few years, become the president of a country he has migrated to? Only Muslims did that because Islam teaches us to choose the best and righteous. Yet Both Abu-Bakr and Omar were from poor weak not well-known tribes. We challenge the whole world to give us a similar example. (The author can be contacted at: Syedahsani@sbcglobal.net)

Intellectual History of Euro-American Jurisprudence and the Islamic Alternative

Peter M. Wright

ABSTRACT

The legal systems that presently prevail in Europe, the Americas, and in polities colonized and formerly colonized by Europe evolved in specific historical contexts and cultural milieus. Nevertheless, they share certain common presumptions that are rarely articulated or exposed to critical scrutiny. It is the task of this paper to begin to articulate these common presumptions and to attempt to constructively engage them through a comparative study of a rival legal system such as may be found in accepted principles of Islamic Shari'ah.

In the American context, the notion is widespread that research on a familiar subject (by virtue of the subject's very familiarity) ought to be easily accessible. But much Continental work in social science challenges this idea at a fundamental level. It asserts that the mysteries of social existence are densest, not in the behavior of far-off exotic peoples, but in our own everyday usages. Here, familiarity has bred an ignorance which arises not from the strangeness of the object of investigation, but from its very transparency. Living within it, so thoroughly suffused with its assumptions that it is even hard to recall just when we adopted them, we tend to lose the critical perspective which

makes ‘social science’ more than simply a recital of what everyone already knows. The common sense of things, the knowledge everyone is sure to have, is precisely the *starting* point for the investigations of such a social science (Terdiman, 1987).

A most difficult intellectual task we routinely face is to identify what is always before us; our familiarity with a thing is often precisely what conceals it from us. Sometimes it is even easier to first consider what something familiar is *not*, before we can begin to adequately say just what it *is*. This is the approach taken by the French thinker Tzvetan Todorov in a remarkable “essay in general anthropology,” *Life In Common*, originally published in 1995 and then translated into English in 2001. I prefer to open these “preliminary remarks” with reference to Todorov’s essay because I am about to attempt an explication of the familiar. I do not trust myself to give an adequate account of the obvious—or what seems to me *should* be obvious—without assistance.

Todorov’s essay begins with a chapter entitled “A brief look at the history of thought.” Now this characterization offers an object lesson in the very problem I have just identified and on account of which I have turned to Todorov for aid. Despite Todorov’s inclusive title, the “history of thought,” he does not mean the history of *all* thought, but the history of European and Euro-American thought exclusively. This assertion is obvious from Todorov’s opening sentence (“As one studies the broad currents of European philosophical thought...”), but he omits any such qualification in his chapter

heading (Todorov, 2001). A most difficult intellectual task we routinely face is to identify what is always before us. Even the best among us fail to meet the challenge.

I am willing to forgive Todorov this initial blind spot because he manages to move beyond it and expose to view what I find to be a fascinating, if “invisible,” familiar. He states that “As one studies the broad currents of European philosophical thought...” one *discovers* (although few seem to have noticed) that a “definition of man”—of the human being—begins to emerge. It is a definition that presents human beings as essentially “solitary” and “nonsocial” creatures. Todorov goes so far as to characterize all of the “broad currents of European philosophical thought” as “antisocial traditions.” He then proceeds by way of example to offer evidence in support of this astonishingly sweeping assertion (Todorov, 2001).

Before we allow ourselves to be carried away with the tide of Todorov’s argument, we must make a threshold observation. Even if we grant Todorov his characterization of “the broad currents of European philosophical thought” as essentially antisocial, philosophy is one thing, law another. Todorov, a literary critic by training, develops his thesis from readings of the relevant philosophical literature. But what place does a book such as Todorov’s rightfully occupy in a discussion of European and/or Euro-American legal systems?

None, I would suggest, unless a link can be established between the intellectual traditions Todorov identifies and the social institutions that we wish to consider. To find such a link, it may prove helpful to move beyond Todorov’s book—or perhaps behind it—and review the work of yet another French intellectual, Pierre Bourdieu.

Reading Bourdieu is never easy. He favors complex sentences composed of strings of subordinate clauses separated by commas. And he has developed a unique vocabulary—his own conceptual apparatus—but one that has not gained wide currency on this side of the Atlantic. Consequently, I introduce Bourdieu’s work into this discussion at the risk of trying the reader’s patience. I would not do so if I knew a better alternative.

Bourdieu turned his attention to European and Euro-American legal systems in an article he published in volume 38 of The Hastings Law Journal. In this article, Bourdieu outlined what he called a “rigorous science of law,” which he identified with his own enterprise as a social scientist, and distinguished this science from “what is normally called jurisprudence in that the former takes the latter as its object of study” (Bourdieu, 1987).

From this vantage point, Bourdieu hopes to avoid entanglement in the debate about law that preoccupies European legal scholars: whether the law develops in “absolute autonomy ... to the social world” (a position Bourdieu identifies as “Formalist”) or whether law is merely a “reflection, or a tool in the service of dominant social groups” (a school of thought Bourdieu identifies as “Instrumentalist”). Bourdieu charts a third way that contains elements reminiscent of the other two but that is not identical with either and that possesses unique properties of its own (Bourdieu, 1987).

In charting this third way, Bourdieu makes use of his own conceptual apparatus—most importantly, for our purposes, the notion of *habitus*. As summarized by the translator of this article, Richard Terdiman, *habitus* indicates “habitual, patterned ways of understanding, judging, and acting” which arise from one’s “particular position” as a

member of a given social structure. Terdiman writes: “The notion asserts that different conditions of existence—different educational backgrounds, social statuses, professions, and regions—all give rise to forms of habitus characterized by internal resemblance within the group...” (Terdiman, 1987). This concept seems to me to owe much to the sociology of knowledge: one’s understanding of the world is preconditioned and mediated by one’s membership in society. As Bourdieu himself puts it: “Shaped through legal studies and the practice of the legal profession on the basis of a kind of common familial experience, the prevalent dispositions of the legal habitus operate like categories of perception and judgment that structure the perception and judgment” of legal practitioners. He continues:

There is no doubt that the practice of those responsible for “producing” or applying the law owes a great deal to the similarities which link the holders of this quintessential form of symbolic power to the holders of worldly power in general, whether political or economic. This is so despite the jurisdictional conflicts which may set such holders of power in opposition to each other. The closeness of interests, and, above all, the parallelism of habitus, arising from similar family and educational backgrounds, fosters kindred world-views. Consequently, the choices which those in the legal realm must constantly make between differing or antagonistic interests, values, and world-views

are unlikely to disadvantage the dominant forces. For the ethos of legal practitioners, which is at the origin of these choices, and the immanent logic of the legal texts, which are called upon to justify as well as to determine them, are strongly in harmony with the interests, values, and world-views of these dominant forces (Bourdieu, 1987).

Bourdieu places the “interests, values, and world-views” of those who hold and wield what he characterizes as “this quintessential form of symbolic power,” the power to make and apply law, in an institutional context. Those who populate legal institutions share not only their membership in their common “field” (another word that occupies an important place in Bourdieu’s conceptual apparatus), but also a common habitus, a way of being-in-the-world fostered by “similar family and educational backgrounds.” It is here, I suggest, that one may entertain a link between Todorov’s “broad currents of European philosophical thought” and the law. These intellectual traditions are not so much consciously appropriated by lawyers and judges as they are simply imbibed by them throughout the processes of socialization that precede their formal legal training. They do not typically take the form of well-wrought ideological positions but as inchoate assumptions, presumptions, and prejudices. They are the spectacles through which any decently educated and socialized individual in the West will view the world.

One need not be a French intellectual to appreciate the significance of the social phenomena Bourdieu describes. A. John Simmons’s 1992 study of Locke’s theory of

rights opens with a series of observations that are consonant with the notion of habitus—without recourse to Bourdieu’s social scientific jargon:

Most people in the English-speaking world (and many outside it) have a practical, nonacademic acquaintance with the Lockean theory of rights. A commitment to (parts of) that theory grounds many of their social and political practices and institutions, and, as a result, guides many of their commonsense judgments about right and wrong, just and unjust. It provides prominent and comforting landmarks in their moral world. American school children learn by rote (or, at least, used to learn) some of the content of the Lockean theory: “that all men are created equal, that they are endowed by their Creator with certain inalienable rights, that among these are life, liberty, and the pursuit of happiness” (Simmons, 1992).

I would hasten to add that they learn as well what Locke conceived to be the seat or location of the Divine endowment—the individual self or soul—with the concomitant belief that every individual self or soul has the prerogative to assert his or her rights as against every other individual and/or against society itself.

Todorov argues his thesis that the predominant intellectual traditions of the West are, at bottom, anti-social traditions, in two distinct ways. The first way consists of a review of the major proponents of these traditions. Here we find a roll call of the usual suspects: Hobbes, Kant, the French materialists-encyclopedists—in short, the names we often associate with that period of history known to Europeans as their “Enlightenment”

and the thoughts we associate with those names.^{vi} The second way Todorov chooses to argue this thesis is by way of contrast: he juxtaposes those currents of European thought he has identified as predominant with an exception to those very currents taken, in the Eighteenth century (as Europeans traditionally reckon time), by the Swiss philosopher Jean-Jacques Rousseau. Todorov suggests that Rousseau's understanding of the human being is not only an exception to the rule of European and Euro-American thinking on the subject, but represents "a real revolution" in thought. According to Todorov, Rousseau "became the first to formulate a new conception of man as a being who *needs others*" (Todorov, 1987). Without belaboring the point, I feel obliged to again expose the Eurocentrism in Todorov's statement of his case: Rousseau may well be the first *European* to formulate a new conception of man as a being who needs others but, as we shall see, Rousseau's European exception is an Islamic commonplace. In any event, the "assumptions" Todorov characterized as latent in European philosophical thought are "antisocial" in the sense that they portray human beings as creatures who are so constituted that they do not *need* one another in Rousseau's sense of human necessity. And what sense is that? According to Todorov (and I concur with his reading), Rousseau insisted that "man brings to existence an innate insufficiency and that, therefore, each of us has a real need of others, a need to be *considered*, a 'need to attach his heart'" (Todorov, 1987).

Todorov asserts that the broad currents of European thought deny to human beings this "insufficiency." In European tradition, men and women are innately self-sufficient—particularly where the moral sense is concerned. European moral reflection has therefore focused upon the individual in isolation from others. According to Todorov,

“The different versions of this asocial vision are easy to identify.” Beginning with “the great moralists of the classical period”, i.e., the Stoics, “... [d]ealing with others is a burden to be discharged ...” –something one would do best to avoid, where possible. This tradition translated neatly into its successor, the Christianity of St. Augustine, whose *Confessions* exemplifies the intensely personal nature of the Augustinian encounter with God. In the waning days of the Medieval period, thinkers emerged who understood “[s]ociety and morality [to] conflict with human nature [by] ... impos[ing] rules of communal life on an essentially solitary being. It is this conception of man,” writes Todorov, that “the concept (is) found in the most influential political and psychological theories of today” (Todorov, 1987). It is also, I would add, the unspoken anthropological presumption that pervades the European and Euro-American legal habitus. In the (North) American version, self-sufficiency is not merely a fact of being human; it is seen as a *desideratum*, a goal one should strive to realize in one’s daily life. The implication is that, in order to be *fully* human, we must each learn to make our own way independent of the claims that others, our society, make upon us.

Rousseau’s position, on the other hand, represents for Todorov the Great Road Not Taken: Western civilization’s missed opportunity. Reading Todorov and Bourdieu together, we may begin to formulate an approach to the study of Euro-American legal institutions that reflects an appreciation for the following paradox: that the actors who populate and determine the tone and policy of these social institutions uncritically share certain anti-social presumptions.

This is Todorov’s interpretation and it is one that I find compelling enough to take as a point of departure and examine, in its light, those legal institutions that have evolved

under the aegis of European intellectual history. Such an undertaking is, admittedly, a monumental task; it is not one that I can hope to encompass in an essay I have styled as “preliminary remarks.” Be that as it may, I believe, as a scholar, I dare not avoid Malinowski’s admonition that one “cannot study separately the institutions and mentality of a people. Only by investigating them side by side, by seeing how certain ideas correspond to certain social arrangements, can both aspects become intelligible” (Cantor, 1997). Accordingly, I turn to yet another French intellectual, Michel Foucault, whose landmark study of Western penal institutions, Discipline & Punish, offers an original reading of the history of Western theory and practice of judicially authorized punishment.

Reading Foucault is no less challenging than reading Bourdieu. His analyses are sophisticated and nuanced. I do not pretend here to treat of Foucault’s book with any critical depth. I wish only to suggest that Foucault’s study of social institutions supports Todorov’s thesis concerning European intellectual history in telling respects. Foucault situates Western penal institutions alongside other social institutions (e.g., schools, hospitals) as foci of social control. Each of these institutions individually and, increasingly, in concert with others, exercises subtle—and not so subtle—degrees of coercive influence over the individuals subject to its jurisdiction. Beneath the rhetoric of reform that often is invoked to characterize the evolution of the Western penal institution, Foucault finds a progressive movement towards more sophisticated forms of bureaucratic dominance over the human personality. For Foucault, the predominance of the prison over other forms of discipline and punishment in Western society must not be understood as a movement from barbarism to humanism; rather, it is a change—or, possibly, a

refinement—of focus: from the exercise of coercion over human bodies to the exercise of coercion over the human soul (Foucault, 1995).

What Foucault intends by the word “soul” is not what that word has signified to Western ears over the course of Christendom’s sway; neither is Foucault’s intention completely incompatible with traditional understandings. For our purposes, it will suffice to take Foucault’s use of the word “soul” as a marker for those aspects of human personality that have, heretofore, escaped bureaucratic interference: that small space left open to each one of us concerning which government has yet to express an interest—or found a means to subject to surveillance.

The prison’s rise to predominance in Western societies represents for Foucault the latest effort on the part of the powerful in those societies to perfect the techniques of coercion and control that such groups have been honing since the advent of the Modern state:

In several respects, the prison must be an exhaustive disciplinary apparatus:

it must assume responsibility for all aspects of the individual, his physical training, his aptitude to work, his everyday conduct, his moral attitude, his state of mind; the prison, much more than the school, the workshop or the army, which always involved a certain specialization, is ‘omni-disciplinary’ ... Not only must the penalty be individual ... it must also be individualizing ... ‘Alone in his cell, the convict is handed over to himself; in the silence of his

passions and of the world that surrounds him, he descends into his conscience, he questions it and feels awakening within him the moral feeling that never entirely perishes in the heart of man' ... [T]his [is the] primary objective of carceral action: coercive individualization, by the termination of any relation that is not supervised by authority or arranged according to hierarchy (Foucault, 1995).

Foucault's prisons are "reformatories" in the sense that they are designed to permanently impress upon their inmates those asocial attributes that are expected of members of Western societies. When one leaves such a reformatory, one is expected to exemplify the socially acceptable antisocial attributes cultivated therein. The process of individualization that takes place in Foucault's prisons is one that attempts to reconcile individuals to a life of isolation from other individuals—for the sake, ostensibly, of their moral (and, therefore, civic) improvement. This process, by which one learns to accept one's essential alienation from one's neighbor, is a process by which one is rendered sufficiently docile to be socially useful (Foucault, 1995).

The success of prisons as factories of individualization is demonstrated for Foucault by the fact that they are documented failures as factories of moral and/or civic improvement. "Detention," Foucault argues, "causes recidivism; those leaving prison have more chance than before of going back to it; convicts are, in a very high proportion, former inmates ..." (Foucault, 1995). The conclusions drawn by Foucault regarding Western penal institutions appears to be quite compatible with Todorov's reading of

European intellectual history, *vis.*, that Rousseau was right about human beings needing one another. And if Rousseau was right, Western social institutions have congealed around an anthropology that is, at best, self-defeating. Or at least Western penal institutions have done so.

I would gladly linger with this tantalizing possibility, but I think it may be more productive to move on to a discussion of a different set of “philosophical currents” that flow through a different model for juridical institutions. Let us put aside, for the moment, Europe and the West and consider the anthropology at the heart of Islamic *shari’ah*.

Before doing so, it is necessary to be clear from the outset what meaning Muslim scholars of *shari’ah* intend by that Arabic term. Perhaps it may be useful to begin with what they generally do *not* intend. As I read the literature, *shari’ah* does not have the meaning that most treatments in English assign to it, e.g., “the body of Islamic sacred laws derived from the Quran, the sunnah (q.v.) and the ahadith (q.v.)” (Armstrong, 2000). The laws themselves are the product of *fiqh*, or Islamic jurisprudence. *Shari’ah* is something else—something more primitive, in a way, something that must be in place *before* the field of jurisprudence may be entered. Here, again, I find recourse to Bourdieu’s conceptual apparatus most helpful. Because if *shari’ah* is ever to be distinguished from the legacy of misunderstanding that has accumulated around it in the West, we, in the West, will need to learn a new vocabulary; we will need to develop a conceptual apparatus that is capable of bearing the polysemous freight that native speakers of Arabic take for granted when they use their words. To develop an appropriate sense of the meaning of *shari’ah*, it is useful to think in terms of *habitus*—those

“habitual, patterned ways of understanding, judging, and acting” which arise from one’s “particular position” as a member of a given social structure.

With this meaning—or approximation of the meaning—of *shari’ah* in hand, it is arguable that *shari’ah* belongs to a distant—but by no means forgotten—past. Because *shari’ah* does not reside in the body of laws developed over the centuries by Muslim jurists, one cannot simply return to those laws, or attempt to implement them, in the hope that, in the process, *shari’ah* will be revived. The role of *shari’ah* is to animate *fiqh*—not *vice versa*; it must therefore first reside in the Muslim jurists themselves—in their “habitual, patterned ways of understanding, judging, and acting” as these are determined by a given jurist’s “particular position” as a member of an Islamic social structure.

The most interesting questions one can ask today about Islamic sacred law are these: what is the prevailing social structure in those places where Muslim jurists presently practice and how does it compare to the social structure that prevailed when the body of *fiqh* that those jurists have inherited was developed? These questions open the door to an even more momentous question of philosophical import: in what sense may one speak of *shari’ah* as a present reality?

These are not questions that I intend to essay an answer to—at least not within the confines of the present paper. Fortunately, I have smaller fish to fry. There is no question that Muslim jurists developed a body of sacred law over a period of several centuries, and that they did so within a particular *habitus*. A description of this *habitus* may afford us some insight into what *shari’ah* once was—and we shall leave aside for the present those questions which would lead us to speculate what, if anything, *shari’ah* now is or may some day prove to be.

Few scholars writing in English have offered any satisfactory account of the *habitus* from which emerged the great schools of thought responsible for the past production of Islamic sacred law. Karen Armstrong, however, is a recent exception that proves the rule. In the Preface to her Islam: A Short History, Armstrong offers a succinct description of a distinctively Islamic way of inhabiting space and time:

In Islam, Muslims have looked for God in history. Their sacred scripture, the Quran, gave them a historical mission. Their chief duty was to create a just community in which all members, even the most weak and vulnerable, were treated with absolute respect. The experience of building such a society and living in it would give them intimations of the divine, because they would be living in accordance with God's will. A Muslim had to redeem history, and that meant that state affairs were not a distraction from spirituality but the stuff of religion itself. The political well-being of the Muslim community was a matter of supreme importance. Like any religious ideal, it was almost impossibly difficult to implement in the flawed and tragic conditions of history, but after each failure Muslims had to get up and begin again (Armstrong, 2000).

One cannot help but recognize in this passage a counter-tradition to that which Todorov discovered in the "broad currents of European philosophical thought on the definition of what is human." Dealing with others is not a burden best avoided; in fact,

the notion that it is even possible to engage in such avoidance is not within the purview of Islamic thought. One's duty to God demands that one *consider* the Other—and not merely as a given part of the landscape, as so much furniture—but as an essential aspect of one's own moral, spiritual, civic, well-being. Isolation is not an option.

Armstrong bases her interpretation of the mission of Islam upon her study of the history of Islam and Muslims; but the impetus of this mission originates in an anthropology contained in the Qur'an—indeed, in its very language. The Arabic root *Hamzah-Nun-Sin* appears throughout the Qur'an as a general term for humankind. But it is also used to signify persons who seek after familiarity, intimacy. The implication of this etymological exercise (which, traditionally, occupies an honored place in Qur'anic exegesis) is that Islamic tradition includes the belief that human beings need one another—an anthropology not unlike that which Todorov attributes to Rousseau.

As with Western individualism, Islamic sociality presents juridical entailments: “The central notion of Justice in the Shari'ah is based on mutual respect of one human being by another,” writes ‘Abdur Rahman Doi:

The just Society in Islam means the society that secures and maintains respect for persons through various social arrangements that are in the common interests of all members. A man as Khalifat-Allah (vice-regent of Allah) on earth must be treated as an end in himself and never merely as a means since he is the cream of Creation and hence the central theme of the Qur'an. What is required is the equal integrity of each person in the society and his loyalty to

the country concerned which in turn will make it the duty of the society to provide equally for each person's pursuit of happiness (Doi, 1984).

General statements of principle such as the foregoing abound in treatises written by Muslim scholars on the meaning of *shari'ah*. To the Western ear, such pronouncements are liable to be dismissed as vague, platitudinous, or utopian fluff; but *shari'ah*, as *habitus*, is not reducible to a set of rules—much less to what common law lawyers like myself refer to, in our own legal tradition, as “black letter law.” Notice Doi's reference to “social arrangements,” as opposed to, say, the “legal system” or “penal institutions.” This is not a question of idiosyncratic word choice. Islamic sacred law is predicated not upon the establishment of certain juridical institutions, but rather, upon the creation of a certain kind of community. Such a community, according to Doi, is socially egalitarian: “The treatment accorded by the Shari'ah made the aristocracies of birth, race, wealth, language, the features which vary from person to person, all suspect as disrespectful of persons.” Such a community is also economically equitable:

The Shari'ah, it should be noted, gives priority to human welfare over human liberty. Muslims as well as non-Muslims living in a Muslim state are duty bound not to exploit common resources to their own advantage, destroy good producing land, and ruin the potential harvest or encroach upon a neighbor's land. Since a man in Islam is not merely an economic animal, each person's equal right to life, to a decent level of living, has priority over the so called economic liberty (Doi, 1984).

It bears remarking that such issues are the subject of continuing legislation and litigation in modern Western societies; Doi's point is that *shari'ah* assumes the resolution of such issues—or, at the very least, that the resolution of such issues should not be left to the pendulum swings of party politics or judicial gerrymandering. “Behind every legal, social or political institution of Islam,” asserts Doi, “there is a divine sanction which every believer is expected to reverence no matter where he lives. He cannot change his own whims into laws. There are the limits of Allah (Hudud-Allah) which are imposed in order to curtail man's ambitions and devices.” The limits of Allah, Doi continues, are the two poles of “halal” (permissible) and “haram” (impermissible) that are contained in the Qur'anic revelation and are elaborated by Prophetic pronouncement and example in the *hadith* literature. These poles set the boundaries within which the Islamic community is free to define itself as a polity with distinctive faith and moral commitments (Doi, 1984).

To this point, I have made no mention of specific juridical institutions contemplated by *shari'ah* or instantiated in the history of Islamic societies. This is due to the fact that, in the former case, it is difficult to say what specific juridical institutions, if any, *are* contemplated by *shari'ah*; and the latter case is itself rendered problematic by the difficulties raised in the former. I do not wish to deny the rich history of *fiqh* (attempts to apply *shari'ah*), its elaboration by *'Ulama* (the learned) and *Fuqaha* (those who are particularly learned in matters of *fiqh*), or even the reality of decisions rendered in particular cases by, say, a village *Qadi* (judge). I wish only to affirm Armstrong's observation regarding the Muslim commitment to the creation of a just community (as expressed in the broad outlines of *shari'ah*): “Like any religious ideal, it was almost impossibly difficult to implement in the flawed and tragic conditions of history....”

Consequently, the extent to which any particular juridical decision conforms to the requirements of *shari'ah* is always a matter of debate among Muslims—because the ideal rarely finds adequate expression in the messy circumstances of daily life.

This is not to suggest that societies with majority Muslim populations have failed, throughout the world and history, to create viable juridical institutions. But majority Muslim societies function with a set of juridical instincts that are distinguishable from those that prevail in the non-Muslim West. One evidence of this difference may be inferred from the types of sanctions traditionally made available to the Muslim community under *shari'ah* as compared to those utilized in Western societies. If we accept the verdict of Foucault, Western individualism finds juridical expression in the prison system. Individualism is privileged at the expense of the community—as expressed by the familiar adage that it is sometimes necessary “to destroy the village in order to save it.” Muslim communitarianism, whether in its ideal (*shari'ah*) or applied (*fiqh*) expression, is unwilling to take such a risk. As a result, incarceration—though not unknown under *shari'ah*-based systems—has never been regarded by majority Muslim societies as a great civilizing or humanizing advance over other forms of sanction.

Be that as it may, I would be remiss if I failed to acknowledge what I take to be a corollary anthropological intuition common to Muslims: an intuition that the form of understanding Bourdieu termed *habitus* is embodied, if at all, in individuals and not—for lack of a better term—corporations. Islamic emphasis upon the collective never rules out the indispensable role of the individual in creating the just community (Asad, 1987).

Such considerations suggest a paradox that appears to me to afflict both Muslim communitarianism and Western individualism—a paradox recently articulated by the

American philosopher Richard Eldridge in an insightful study of Wittgenstein's later work. Eldridge asks: Which is to be changed first, human character or sociopolitical institutions? Change in human character and change in sociopolitical institutions presuppose one another with no evident way to break into this circle of presuppositions. One will fail in trying directly to educate and elevate the human beings who are formed under sociopolitical institutions, and one will fail in trying directly to change the sociopolitical institutions that express human character. "All improvement in the political sphere is to proceed from the ennobling of character—but how under the influence of a barbarous constitution is character ever to become ennobled?" (Eldridge, 1997).

As a general proposition, I would suggest that thoughtful Muslims and non-Muslims could be expected to agree as to the validity of this conundrum. Where the two would potentially part company is in the response to the problem. Insofar as the Muslim understands her role in history as one of re-fashioning sociopolitical institutions in conformity with *shari'ah*—as the Divinely ordained "way to break into this circle of presuppositions"—one could expect sociopolitical activism. The response of non-Muslims in the West would be, predictably, more varied, more individualized. It could be anticipated to run the gamut from sociopolitical activism (such as we find today with the so-called "Christian right") to resigned quietism. This is not to suggest, however, that the latter course is not open to Muslims. L.C. Brown has recently argued that political quietism has a long and distinguished career among Muslims living in majority Muslim polities (Brown, 2000). *Shari'ah* may be argued to authorize the same varied and individualized responses among Muslims that one would anticipate finding among non-Muslims in the West, given the appropriate circumstances. The essentializing tendencies

of a legal scholar such as Doi—or of an historian such as Armstrong, or our French intellectuals—should spur the reader onto more thorough investigation and greater efforts to articulate the sociopolitical and historical contexts, inculcating the *habitus*, by and through which laws are promulgated, interpreted, applied, and enforced.

References

Armstrong, Karen (2000). *Islam: A Short History*. New York: The Modern Library, p. 202.

Asad, Muhammad (1987). *This Law of Ours and Other Essays*. Gibraltar: Dar al-Andalus, Ltd., pp. 34-37.

Bourdieu, Pierre (July 1987). *The Force of Law: Toward a Sociology of the Juridical Field*. Translated into English by Richard Terdiman. *The Hastings Law Journal* 38(5), pp. 805-853.

Brown, L. Carl (2000). *Religion and State: The Muslim Approach to Politics*. New York: Columbia University Press.

Cantor, Norman F. (1997). *Imagining The Law: Common Law and the Foundations of the American Legal System*. New York: HarperCollins, "CREDO."

Doi, 'Abdur Rahman I. (1984). *Shari'ah: The Islamic Law*. London: Ta Ha Publishers.

Eldridge, Richard (1997). *Leading a Human Life: Wittgenstein, Intentionality, and Romanticism*. Chicago: University of Chicago Press, p. 73 (quoting Schiller).

Foucault, Michel (1995). *Discipline & Punish: The Birth of the Prison*. Translated into English by Alan Sheridan. New York: Vintage Books, pp. 22-24, 293-308.

Simmons, A. John (1992). *The Lockean Theory of Rights*. Princeton, New Jersey: Princeton University Press, p. 14.

Terdiman, Richard (July 1987). *Translator's Introduction to Bourdieu, The Force of Law: Toward a Sociology of the Juridical Field*. Translated into English by Richard Terdiman. *The Hastings Law Journal* 38(5), pp. 805-853.

Todorov, Tzvetan (2001). *Life in Common: An Essay in General Anthropology*. Translated into English by Katherine Golson and Lucy Golson. Lincoln, Nebraska: University of Nebraska Press.

Middle Eastern Origins of Modern Sciences

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As the saying goes, there is nothing new under the sun. Since the times immemorial, human beings have inherited existing knowledge from previous generations, improved upon it by adapting it to their present needs, and transmitted it to future generations. Besides this vertical transmission, the transfer of knowledge also occurs horizontally from one place or culture to another through continual exchanges of ideas. Human civilization has been built over a period of about seven millennia with its beginnings along the banks of Shattal-Arab, the Nile, and the Indus. Knowledge has been gathered through patient observation, experience, as well as serendipity. Prior to the Greco-Roman civilization, scholars of Khalidiah, Babylon, Phoenicia, Egypt, India, China had greatly contributed to human understanding of the universe up to the 7th century BC. Greek learning progressed up to the second century BC, when it succumbed to the iron fist of Rome. The latter failed to encourage creativity. Innovation and scientific investigation. During this time, the Greek contributions lapsed into oblivion until they were discovered and improved upon for onward transmission by Muslims.

The responsibility of coordinating such exchanges falls, by default or by design, upon the contemporary dominant power(s). During the past four centuries, the West has pushed to significant lengths the envelope of inheritance, coordination, improvement, and dissemination of knowledge. Its contribution to modern science and technology has

remained unmatched and is likely to remain so for quite sometime to come. Especially the digitization of data, images, and sound, and miniaturization of tools like wireless computer technology supported by the space-based global positioning systems have been revolutionary and mind-boggling.

Unlike in other cultures, the social science tradition as developed in Europe has played down the similarities among various cultures and civilizations and exaggerated the dissimilarities for their own politico-economic reasons. One major motivation behind this practice was to conceal the contributions of the colonized nations to human civilization. Such a tendency helped perpetuate the notion of "the white man's burden to civilize the world" and thus exploit with impunity their natural and technological resources.

The Rationale

One might ask as to why we should discuss the heyday of a nation left so far behind others in the march of scientific and technological progress. What good is it to keep harping on our past laurels in the spirit of "Pidaram sultan bood" (My father was king.) without going into causes for our miserable plight today? There is more than one single reason for invoking our past.

The modern world is now experiencing three major trends: a) revolution in the area of information technologies, b) globalization, and c) privatization. It is the first one of the three, especially digitization of information part of it, that has brought various

peoples closer together to interact with one another in the global trade arena, and has allowed individuals access to information and knowledge (if not wisdom) in an unprecedented manner. Thus, these trends have made nations more interdependent upon one another. The increased interdependence is both enriching and troubling in that it can bring about a scramble for limited global resources and commodities and in turn conflicts never ever faced earlier.

To counter potential conflicts, we need to remove the cultural stereotypes the colonialists promoted as a policy of 'divide and conquer, and rule.' Realistic mutual understanding through a dialogue of civilizations rather than a clash of civilizations is a must for the global peace with justice to prevail. Besides this moral imperative, it is also incumbent on the part of the academe to set right the historical records about origins of western higher education and scientific development.

For us in the West, it is also vital to cope with increased competition in global trade. The neo-colonialist desire of Darwinian domination needs to be civilized through fair competition and healthy cooperation. For sustained development our media also needs to cultivate in the audience a taste for truth and wisdom, for objective rational and responsible journalism instead of resorting to sex, violence, and sensationalism based on the "If it bleeds, it leads" type of programming. Pompous pride and complacency need to be replaced by accurate understanding of our own strengths and weaknesses. A valid assessment of their past accomplishments and present predicament can enable Muslims to

properly educate themselves and their next generations, which in turn will enable them to realistically plan their further progress with greatest confidence.

Moreover, Muslims should also compensate for their own failure to tell the world their own story, which has been distorted by ignorance, arrogance, and often by malfeasance of anti-Islamic forces of material greed and bigotry. Without being defensive, the Muslims ought to fill this knowledge gap in cross-cultural understanding.

Contributions to Science in General

One of the attributes of science is that it is incremental and cumulative in nature. All scientifically and technologically developed nations have to pass through the three phases: translation, coordination, and contribution (Khan, 1994, p. 251). They correspond to the three terms mentioned earlier: inheritance, improvement through innovation and creation, and transmission of knowledge. The intervals between these stages of development have varied according to the size of the existing knowledge base as well as the level of communication technology and speed of life as a whole. Thus, comparatively speaking, the narrower the inheritable knowledge base available to a generation, the more significant its contribution. The real value of the Muslim contribution to science ought to be assessed in view of the attitudinal change humanity experienced as a result of the advent of the Holy Quran in the early 6th century AD.

James Burke, III (1988), in his book “The Day the Universe Changed, asserts that prior to the advent of the Quran human attitude toward nature was either that of fear or adoration and devotion. The created things like snakes and other dangerous animals that generated in man a feeling of fear; he worshipped them to avert potential harm from them. Also he venerated beneficial parts of nature like cow, water and fire etc. out of his gratitude to and admiration for their benefits.

On the contrary the Quranic commandment was not to worship nature or any other part of Divine creation but to bow themselves only to their Creator. He invited human reason to search in creation His signs and to draw lessons for their own evaluation and development. It is this pioneering role of Muslims on the basis of which their contribution ought to be compared with others. It was this revolutionary change of human attitude toward nature and emphasis on reason that empowered Muslims to study nature from scientific perspective, and to change the Universe forever, as it were. Again, it was Muslims need to fulfill their Islamic obligations that soon led them to develop mathematical formulas to calculate various passages and phases of the moon, the sun and the locations of various stars. The Quranic commandments on Zakat (poor due) and shares of inheritors in the property bequeathed by parents and other relatives led them to develop calculus, trigonometry and other devices for meticulous calculations.

Ibne Haiytham's scientific method, erroneously attributed to Francis Bacon, led to phenomenal breakthroughs in different descriptions of natural sciences, which eventually led Europe toward its scholastic tradition and subsequently to Renaissance.

By dint of the Quranic emphasis on the use of reason in all deliberations Muslim scientists utilized logico-empirical methodology of research and showed that there was no incompatibility between reason and revelation. So unlike the Western tradition, from the Muslim scientists' perspective there has not been any conflict between science and religion. Alvi and Douglass (1995, p. 9) have identified five major reasons for the seminal development of Islamic science: a) the immense esteem Islam accords to scholarship; b) generous support by rulers and other affluent people available to scholars; c) Muslims willingness to exchange ideas with all, d) the Arabic language soon becoming a means of exchange of ideas throughout the Muslim world; and e) requirements of precision and punctuality in fulfilling Islamic duties. These notions are also affirmed by Colish (1997, pp. 129-159).

Historically, the knowledge of logic and geometry traveled from their Phoenician roots, originally from Iraq, to Egypt, from Egypt to Greece. The Muslim scholars then inherited them from the Greeks. They took astronomy and arithmetic from their Indo-Iranian origins and advanced them further to unprecedented levels. Thus the entry of Muslims into the domain of organized knowledge helped human journey from "sapience" to "science" (Nakosteen, 1964). On the subject of Islamic Astronomy, Owen Gingerich (1986) says: "While astronomy withered in medieval Europe it flourished in Islam.

Renaissance astronomers learned from the texts of Islamic scholars who had preserved and transformed the science of the ancient Greeks."

As has been pointed out earlier, Ibn Haiytham's logico-empirical method enabled subsequent scientists to make phenomenal advances in umpteen scientific disciplines, both basic and applied. Muslim scientists realized that the proper place for empiricism was only in the domain of physical phenomena, not in the metaphysical ones. However, once the latter were revealed, they made logical and rational sense evidenced by analysis of historical events. They, therefore, classified knowledge into two broad categories: revealed and acquire.

Democratization of Knowledge

The true significance of Islamic sciences can only be understood in light of the Quranic concept of Tawheed (Unity), which encompasses all apparent diversity and interdependence. The interconnectedness of everything in the universe upon one another indicates the unity of cosmos. It logically follows that the creator or programmer of this supra-system must be One, otherwise there would be chaos rather than cosmos. The third unity is that of all forms of life. God clearly stated in the Quran: "We have created every living thing from water (Ali, 21:30, 24:45, 25: 54)." This revelation was made at a time when this "unity of life" was not part of human knowledge, indicating the divine origin of

the Holy Quran. From the Human Relations point of view it is vital to appreciate the value of the fourth unity, namely that of the human race created from one single soul a pair and from them the whole humanity (Ali, 2: 213, 4: 1, 39: 6, 46: 13). This concept of “monogenesis” enabled Muslims to democratize all knowledge. A Sudanese scholar, Dr A.Waheed Yousef (1978), who is currently an advisor to UNESCO, showed with documentary evidence that the twentieth century 20-point lifelong education mission attributed to the United Nations existed in practice during the early Muslim Abbasid period of the ninth century. There, for the first time in human history, access to all knowledge was made available to all regardless of gender, race, ethnic origin caste, class, nationality, or any other factor on which human beings have no control. Contrast this Islamic democratization of science and other forms of knowledge with the strict restrictions imposed by the privileged upon the downtrodden communities of all other cultures including Greek, Roman, Persian, as well as Indian until recently.

During the seven centuries of their leadership in science and technology (8th to 15th), Muslims introduced these disciplines through higher education institutions they established throughout the region ruled by them. Their universities in the Near East, North Africa, and Spain provided an open-access model for the Spanish Muslim universities at Toledo, Cordoba, and Seville attracted students also from other parts of Europe. They saw for themselves this democratization of learning and participative decision-making (“Shura”) in the Muslim world. Once back in their own lands, they started to demand similar human rights from their church and state. When they were

denied these rights, they “protested” against the authorities, the Church and their feudal lords. This was precisely the origin of the Protestant movement in Europe.

The fifth unity in Islam is the unity of knowledge (truth). Unaware of the Quranic origin of this concept, the Harvard University Biologist, Edward Wilson (1998) came up with the notion of “consilience” in his book of the same name, and stressed the need for interdisciplinary studies to overcome the myopic and disjointed pursuit of knowledge called “reductionism”. From an Islamic perspective, this unity of knowledge and truth is nothing new.

The Muslim introduction of higher education, meticulous documentation, paper making, Arabic numerals as well as other advanced applications of scientific knowledge to agriculture, medicine, architecture, and navigation led to gradual advancement of Europe eventually culminating into the Renaissance and Reform movements of the 15th & 16th centuries. The subsequent European colonization of the Americas resulted in transfer of gold and other forms of wealth to Europe.

During the Muslim rule itself, centers of higher learning, research and developments institutes, libraries, teaching hospitals, science laboratories and observatories became common in Muslim cities like Madinah, Damascus Baghdad, Neshapore, Cairo, Qairawan, Cordoba, Toledo, and Seville (Salim and Hilmi, 1990).

This spree of institution building and development was emulated in Italy, France, Germany, England, and other parts of Europe.

Without the Arabic numerals advanced mathematical calculations could not be imagined given the limitation of Roman numerals. One can get a general idea of the scholarly activities of the Muslim world from Ibne Nadeem's (Bhatti, 1990) *al-Fehrist* (10th c), which lists about four thousand prominent scientists and other scholars. Ibn Khallikaan's *“al-Wafayaat”* in seven volumes documents similar protagonists and their contributions in various fields of higher learning (1994). Many other reference resources have documented the Islamic cultural milieu, history of various disciplines and sub-disciplines. Despite the fact that a lot of works of the Muslim scholars of that period have been translated from Arabic into Modern European languages, it is estimated that about seventy thousand of them have still remained un-translated into these languages.

Contributions to Mathematics

As has been pointed out that the Quranic commandments concerning five-time daily prayers, start and finish of the fasting month of Ramadhan, distribution of inheritance, and calculations of Zakat (poor due) called upon Muslims to be proficient in Mathematics. As an advanced language can be a means of communication in humanities and social sciences, mathematics is considered to be the language of natural and physical sciences. From the 8th century A.D., Arabic became a language of higher learning and

mathematics written in Arabic numerals and symbols was the language of science for about seven centuries.

The Muslims introduced the Arabic numerals (originally borrowed from India), the concept of zero, and the decimal base of ten, and advanced mathematics into Europe. Prior to the 8th c., one had to write the letter 'M' a thousand times to write one million. Imagine the ease of writing the same thing in only seven digits. By the 9th Century, Al-Khwarizmi had already given the world advanced algorithms or formulas. Notice that the English word algorithm is nothing but the Europeanized form of this Muslim name, al-Khwarizmi, who gave the world the first mathematical formula and trigonometry (Sine, cosine, tangent, co-tangent). The arithmetical and geometrical concepts and calculations of Pi, hyperbole, series, progressions, are also Muslim contributions to advanced mathematics later introduced into Europe, too.

It was the Muslim named al-Mutawakkil al-Farghani who invented Nilometer devices. More sophisticated devices like compasses originally meant for determining the direction of the Kaabah, the Cube like Mosque of Prophet Abraham, in Mecca for all Muslims to face toward while praying. Speaking of the inherent relationships between Islamic beliefs and values, Jane Norman (2001) states: " Appreciation for a basic relationship between art and the religion of Islam increases with familiarity.....Geometric motifs were popular with Islamic artists and designers in all parts of the world, at all times, and for decorating every surface.... As Islam spread from nation to nation and region to region, Islamic artists combined their penchant for geometry with pre-existing

traditions, creating a new and distinctive Islamic art. This art expressed the logic and order inherent in the Islamic vision of the universe."

Contributions to Chemistry

The Muslim victory in Western China in the 8th c. enabled them to benefit from the contemporary Chinese technologies including paper making, which in turn they introduced into the entire Muslim world including Spain. From there it was taken to the rest of Europe. This indeed was a revolutionary discovery leading to wider dissemination of knowledge and democratization of learning. Through increasingly more widespread exchange of ideas in form of conveniently transportable books, and due to monogenetic concept of equality of mankind, the earliest explosion of knowledge became possible throughout the world.

Muslims made tremendous progress in the field of chemistry, of which the Arabic "al-Keemya" is the etymological origin. They invented all the fundamental processes of chemical research and development, including sublimation, crystallization, evaporation, distillation, purification, amalgamation, and acidation (sulphuric, nitric, hydrocholic, and acetic). They then applied these processes in manufacturing sugar, various types of dyes, alcohol and arsenic for mostly medicinal purposes. By 950 AD, they came up with the process of heating mercury (Hg) to form mercuric oxide (HgO) and discovered that this chemical alteration does not cause any loss of weight of the basic substance itself.

Muslims, due to Islamic emphasis on cleanliness and aesthetics, were fascinated with the chemical process of purification of gold to be used in making jewelry, food, as well as in architectural decorations.

Contributions to Physics and Astronomy

By the 9th Century, Muslim scientists had discovered laws of strength of materials, mechanics, and stability. In his study of laws of physics, Al-Kindi scientifically described the phenomena of reflection and refraction of light, theories of sound and vacuum. The 10th and 11th centuries saw the Muslim scientific principles related to pendulum long before Galileo (1564-1642). Not until 1992 did the Pope forgive Galileo for the heresy of teaching that the Earth revolved around the Sun. In the 10th Century, Ibn Haiytham described and utilized his scientific method. It is worth noting that the term “science” was never used in Europe until 1340 AD, and it was only in 1840 AD that the word “scientist” was used in the English language for the first time. Abne-Haiytham’s findings on geometrical optics of 965 AD, which were later utilized in European inventions like cameras and sophisticated eyeglasses, are erroneously attributed to Snell (18th and 19th centuries) as Snell’s laws.

Muslim scientists also discovered the principles of homogeneity and heterogeneity in the context of rarefied air. Concepts and kinds of aberrations of images were explored and utilized in manufacturing lenses and mirrors. Not only did they know

that light has velocity but they also compared velocities of light and sound and found out that the former was greater than the latter. They studied and formulated laws of mechanics and hydrostatics, which they used in determining tensions of various types of surfaces, specific gravity and density of different forms of matter.

The concept of earth's gravity was known to Al-Khazini in the 12th century, that is, several centuries before Isaac Newton, who only further refined it. It was Al-Khazini himself who also explained the natural phenomenon of rainbow in optical terms. He is credited with coming up with many astronomical instruments described in his "Mizan al Hikmah" (the Balance of Wisdom), which has been translated into English by N. Khanikoff for the Journal of the American Oriental Society of New Haven, CT, in 1859.

Omar Khayyam of the twelfth century, who is known to the western world only as a poet of Persian 'rubaiyat' (quatrains), made remarkable contributions to Mathematics as well. He refined the calendar calculations, by pointing out one-day error in 5,000 years instead of 3, 330 years as presumed earlier. Another Muslim, Ulugh Beg of Samarqand, further refined his calculations. Al-Khawarizmi, who has been mentioned above for his contributions to Mathematics, was also the founding father of Muslim astronomy. Several centuries before Galileo, he and his followers had known the earth to be spherical. And he himself had calculated distances between various cosmic bodies.

The 9th century scientist and astronomer, Abu- Ma'ashar, had accurately drawn latitudes and longitudes, discovered the relationship between the phases of the Moon and

the ocean tides, scientifically explained lunar and solar eclipses, refined calculations of the differential in earth's circumference at different points of the globe. It was he who very accurately measured and explained the length of the terrestrial degree to be 56.67 Arabic miles.

Al-Sa'ati Khurasani, who is named after his invention of clock (sa'at: also time), of the twelfth century built a clock tower in Damascus, Syria. It was the Muslim geographer, Al-Idrisi, who presented King Roger II the gift of his silver globe. Abdur Rahim identified and named about 1,000 stars, and explained the elliptical paths of cosmic bodies in the known solar system. He is also credited with his significant researches in other fields like agriculture, architecture, literature and linguistics.

In the field of applied physics, Al-Jazari of the thirteenth century proved his prominence through his book dealing with the subject of hydraulic appliances, "Kitab al-Ma'arif al-Hiyal al-Handasah." His contemporary, Najm al-Rammah, gained fame through his exhaustive volume on pyrotechnic techniques and devices, both for defense and ceremonious uses.

In 845 A.D., that is hundreds of years before Darwin, Al-Nazzaam presented the theory of evolution. Within the same time frame, Al-Jahiz wrote a voluminous treatise on animals, their struggle for survival and adaptation to physical environments. As early as 9th century, Al-Hasib wrote a volume on the benefits of precious stones. The in 13th century his co-professional, al-Teefaashi, improved his work and added his studies on 24

precious stones and their affective and medicinal properties. Many others like Al-Jawaliqi, Abdal Momin, and Al-Dhamiri, made immense contributions to knowledge through their treatises on zoology and anatomy, especially on horses and their breeding.

Al-Dimashqi made a mark in Botanical studies on plant pathologies, categorizing plants as living beings and with gender distinctions. Al-Biruni, generally known as a renowned historian, discovered the origin or source of the Indus Valley and its civilization. He also observed that the number of petals in flowers vary between 3 and 6, or they are eight. They are never seven or nine. These and many other Muslim scientists left a rich scholarly legacy in Africa, Asia, and Europe.

Decline of Muslim Sciences

It is usually asked as to why Muslims at some of point in history stopped developing in the field of science and technology. There were many factors, both internal and external, behind their stagnation and decline. Historically, in case of most dominant powers, arrogance, ignorance of other societies and their state of development, and topsy-turvy priorities have been the major causes of their own internal weaknesses. Successes and their sustenance call for a balanced approach to different demands of human life, of body, mind, and soul. When this moderation is disturbed anomie sets in.

In its heyday, Islam was practiced as a comprehensive way of life. An overemphasis on its spiritual aspect continued to shrink its original scope. Consequently, many crucial concepts associated with it also shrunk. The concept 'Ibadaah' (worship), which originally meant any practical act pleasing to God, became mere ritualistic prayers. The 'nawafil' any extra deeds of charity, turned into only excessive ritual prayers; and the concept of seeking knowledge became confined to mere theological learning. The roles of reason and creativity were played down even in areas where they were originally permissible, such as in economic, political, and social domains.

The Muslims perhaps ignored the illustrative dialogue between the Prophet (PBUH) and his companion, Ma'ad bin Jabal when the latter was being dispatched to the governorship of Yemen. On this occasion, Ma'ad, in response to the Prophet's question

as to how he would rule there, had said that in cases where there was no clear-cut simple answer in the Quran and Sunnah (Prophet's sayings) he would do *ijtihad*. That is he would exert his own rational judgment from a pragmatist and problem-solving perspective. The answer had obviously satisfied and pleased the Prophet (PBUH).

Moreover, there had been an internal debate and later a showdown between the Mu'tazilah, who were influenced by the Hellenistic starkly rationalistic analysis, and the Asha'arites, who had the theological approach to even new issues facing the 'ummah' (the global Muslim community). The latter were traditionalists who relied on the analogical interpretations to the extent that they assumed that early scholars of Islam had finally interpreted the Quran and Sunnah for all times and climes. This myopic mindset of the traditionalists was not without reason. They had seen the excesses of Hellenistic hypocrisy in ignoring the limits of human reason in form of fallacious acceptance of over-relativism, which is bedeviling the contemporary thinking in almost all walks of life. While some rulers took advantage of the misuse of creativity and innovation in the name of 'ijtihad', others sided with the traditionalists in suppressing even the genuine use of all rational tools of development.

The sad result of this conflict between 'riwayah' (tradition) and 'dirayah' (rationalism) was the stagnancy and closure of the doors of rational and analytical genius of Muslim scholars and scientists. The religious scholarship became restricted to memorization of quotations and copying of old manuscripts from past scholars. The lone major voices since the eighteenth century urging the revival of *ijtihad* includes Ibn

Wahhab, Shah Waliullah, Sir Syed Ahmed Khan, Jamaluddin Afghani, Mohammed Abdo, as well as Mohammed Iqbal and Mawdudi. All of them stressed the need for a balance between blind following of traditions on the one hand and on the other bold yet cautious interpretation of the same traditions within the framework of the seminal sources of Islam, and in light of the context and demands of specific times and places. They have urged the ummah to distinguish between ‘ijtehad-e-mutlaq’ (absolute exertion) through scholarly consensus and ijtehad-e-idhafi (relative exertion) by renewing the old principles of shariah to handle new situations facing the community.

With regard to the external challenges, the community has faced historical events like the 11th c. crusades, siege of Baghdad by the Mongols in 1258, expulsion from Spain in 1492, end of the caliphate in 1922, communism and colonialism, and the more recent neo-colonialism resulting from oil politics accompanied by the powerful media onslaught stereotyping victims as oppressors and oppressors as victims.

Other significant Muslim contributions are summarized below in tabular form in the Appendix One of this paper. In view of Basheer Ahmed’s article, in the same volume, on Muslim contributions to Medicine as well as other participants’ on social sciences and humanities, I have limited myself to works in modern natural sciences only. The readers may also refer to the pre-conference document prepared for the regional conference of the Association of Muslim Social Scientists (AMSS) held in Dallas, Texas, on June 22-23, 2001, pp. 61-86.

References

Ali, Yusuf (undated). Commentary and Translation of the Meaning of the Quran al Kareem in the English Language. Beirut, Lebanon: Dar al-Fikr (chapter: verse- 21:30, 24:45, 25: 54).

" (chapter:verse-2: 213, 4: 1, 39: 6, 46: 13).

Alvi, Karima and Douglass, Susan (1995). Science and Religion: The Inseparable Traditions (Manuscript), p. 9.

Bhatti, Ishaq (trans.1990). Al-Fehrist by Ibne Nadeem (Translated from Arabic into Urdu). Lahore, Pakistan: Midway Press.

Burke III, James (1988). The Day the Universe Changed. A companion book serialized on PBS in the late 1980's.

Colish, Marcia (1997). Medieval Foundations of the Western Intellectual Tradition-400-1400: The Yale Intellectual History of the West, pp.129-159.

Haq, S. Moinul (ed., 1996). Ibn Khallikan's Wafayat al-A'yan wa Anba' Al-Zaman. Translated into English by M. de Slane. New Delhi, India: Kitab Bhavan. Volumes I-VII.

Hitti, Philip (1970). History of the Arabs. London, UK: Macmillan Education Ltd., pp. 363-428.

Khan, Ishratullah (1994). Ehd-e-Mamun Ki Tibbi wa Falsafiyana Kutub Kay Trajim: Ek Tehqiqi Mutalea (Translations of Medical and Philosophical Documents in the Abbaside Era: A Research Study), p. 2.

Nakhosteen, Mehdi (1964). Near-eastern Origins of Western Higher Education. Boulder, Co: University of Colorado Press.

Norman, Jane (2001). Focus on Asian Studies: Asian Religion, New Series, Vol. II, and No. I. New York, NY: Asia Society

Salim, M. AbdulAziz and Hilmi, M. Salahuddin (trans.1990). Islam fil Maghrib wa al-Andalus (Islam in North-West Africa and Spain) Edited by Levi Provencal.

Wilson, Edward (1998). Consilience: Unity of Knowledge. Cambridge, MA: Harvard University Press.

Yousif, A. Waheed (1978). Life-long Learning in Early Abbasid Period. An unpublished doctoral dissertation completed at the Ontario Institute of Studies in Education (OISE), University of Toronto, Canada.

Appendix One

CONTRIBUTORS TO THE ORIGINS OF WORLD SCIENCE

| P eriod | Sc ientist | |
|--------------------------------|---|--|
| 721-815 Abbasid | Jabir ibn Hayyan (Geber?) Founder of modern Chemistry Logician Philosopher | 3000 treatises on (Walid ibn Malik) Scientific method concep measurement of chemical Physics: mechanics Medicine: Clinical Pathol Contributed to the establis the first Medical College Bait al-Hikmah at Baghda |
| 801-873 | Abu Yusuf al-Kindi (Al-Kindus) The Philosopher-Scientist of the Arabs | Precursor of al-Farabi Description of the inhabit the Earth Al-Shamasiah Observator Global postal system Book of Countries Contemporary of: Hishan al-Yaqubi |

| | | |
|-----------------------------------|-----------------------------------|--|
| 810-877 | Hunain ibn Ishaq (Juannitius) | Physician-Philosopher Commentator of Galen |
| 826-901 | Thabit ibn Qurrah | Vol. of paraboloid 3 rd degree figures in Geometry Mathematics Physics, Medicine Astronomy Theory of Trepidation Naval developments (Indian Ocean; Volga & C Early Maps Contemporaries: Balakhi, Maqdisi |
| ?-863 (the period of al-Mamun) | Mohd. Al-Khwarizmi (algorithm) | Al-Jabr wal Muqabilah (advanced algebra) Introduction of Arabic numerals into Europe Trinomial equations Astronomical Tables Innovative computations Geography: shape of the earth Observatory at Al-Shamasiah (with Naubakht) |

| | | |
|---------|--|--|
| 865-925 | <p>Mohammad Al-Razi (Rhazes) (184 workers)</p> <p>Clinical physician (Al-Hawi): Continens anti-Aristotelian speculations</p> <p>Emphasis on time, space & causality in physics direct observation of hard data</p> <p>Music to al-chemy Student of al-Tabari</p> | <p>Small pox/measles</p> <p>Observatory at Raqqa (Shiraz)</p> <p>Contemporaries: Abul Wafa Buzjani (4th degree Karakhi)</p> |
| 870-950 | <p>Abu Nasr Al-Farabi (Alpharabius)</p> <p>Philosopher</p> <p>Social Scientist</p> | <p>Commentaries on works of Aristotle</p> <p>First classification of sciences</p> <p>Ikhwan-al Safa Risalat-al- Jamia</p> |
| ?-956 | <p>Abul Hasan al-Masudi</p> <p>Scientist Historian Anthropologist Geographer Geologist</p> | <p>Travelogues</p> <p>Meadows of Gold & Mines of Gems</p> |

| | | |
|----------|---|---|
| 980-1037 | <p>Abu Ali ibn Sina (Avicenna)</p> <p>Medical Scientist Physician</p> | <p>Shaikh al Rais</p> <p>Cannon (Al-Qanoon)</p> <p>Kitab al Shifa</p> <p>Dar-al Ilm (Cairo)</p> <p>Observatory at Hamadan</p> <p>Scholarly conferences & proceedings</p> |
| 965-1039 | <p>Abu Ali al-Haiytham (Alhazen)</p> <p>Mathematician Physicist (Astro) Medical scientist Ophthalmologist</p> | <p>Kitab al Maakir (Optics) first eyeglasses (lathe)</p> <p>Scientific method</p> <p>Measurement of the Nile floods</p> <p>Observatory at Seville (Falah)</p> <p>Spherical and parabolic mirrors; refraction angle</p> <p>Principle of least time</p> <p>Contemporaries: Nusairi Khusro (Diary); al-Ba Geography)</p> |

| | | |
|-----------|---|---|
| 937-1051 | <p>Abu Raihan Al-Biruni</p> <p>Contributions to Mathematics; Astrophysics; Geography/Geodesy History and anthropology</p> | <p>Commentaries on Aristotle</p> <p>Chronology of Ancient Nations</p> <p>Canon of Al-Masudi</p> <p>Astrolabes (used in Navigation)</p> <p>Motions of the earth</p> <p>Levity and gravity of planets</p> <p>Elliptical orbits</p> <p>Contemporaries: Al-Khazini (Physics): inclination impetus, momentum</p> |
| ?-1007 | <p>Abul Qasim al-Majriti (Madrid, Cordoba)</p> <p>Mathematics, Chemistry, and Astronomy</p> | <p>Epistles of al-Ikhwan</p> <p>Observatory at Toledo (Zarqali)</p> |
| 1058-1111 | <p>Abu Hamid M. Al-Ghazali (Algazel)</p> <p>Philosopher</p> <p>Religious Scientist</p> | <p>The Revivification of Religious Sciences</p> <p>Contemporaries: Mansuri/ Nuri (Hospitals)</p> <p>Al-Idrisi (Geography: the Globe, and Botany)</p> |

| | | |
|---------------------|--|---|
| 12 th c. | A. Rahman Al-Khazini (The Greek) | Scientia vs sapientia Mechanics and hydrostatics Centers of gravity & balance of matter & balance Standards: weights |
| 1040-1130 | Abul Fath Umar Khayyami (Omar Khayyam) Mathematician Scientist Poet | Algebra Quatrains (translated into English by Fitzgerald) |
| 1126-1198 | Abul Wahid M. ibn Rushd (Averroes of Cordoba) Medicine Religious Law Comparative Studies | Pure Aristotelian (38 commentaries) |
| 1201-1274 | Nasir al-Din al-Tusi Mathematics Astronomy Philosophy | Universal Scientific genius The Tusi Couple Saved libraries from Halab (Observatory at Maragha) New planetary models |

| | | |
|-----------|--|---|
| 1236-1311 | <p>Qutb al Din Al-Shirazi</p> <p>Medicine (optics) Mathematics (Geometry) Astronomy/Geography Philosophy</p> | <p>Commentaries on Canon of ibn Sina</p> <p>Encyclopedic works on Astrophysics</p> |
| 1332-1406 | <p>Abdul Rahman ibn Khaldun</p> <p>Philosophy and science of History (Historiography) Psychology Father of Social Sciences</p> | <p>Kitab al Ibar</p> <p>History of North Africa Al-Muqaddimah Rise and fall of cultures Contemporaries Kasha Qazizadah (Trigonometry: Value of Pi) Observatory at Samarqand Busti, Maridini</p> |
| 1546-1621 | <p>Bahauddin al-Amili</p> <p>Mathematics, Chemistry Architecture Religious Sciences</p> | <p>Shaikh al Islam</p> <p>Applications of Mathematics & Geometry to ar</p> <p>Decimal fractions</p> <p>Contemporaries: Yazdi & Isfahani</p> |

CONTRIBUTIONS OF MUSLIM PHYSICIANS AND OTHER SCHOLARS DURING THE 8TH THROUGH THE 14TH CENTURY AD

M. Basheer Ahmed

Introduction

Prior to the advent of Islam, the Arabic society was uncivilized, ignorant, barbarous, and they showed little interest in intellectual matters. Quran was revealed to Prophet Muhammed in years 612-632 as a book of guidance, and this had a profound effect on the Arabic society. The first revelation of the Quran inspired the Prophet of Islam to acquire knowledge and emphasized the importance of learning in human life. The Quran repeatedly urges mankind to understand the forces of nature for the benefit of man and his intellectual growth, and it brought to humanity the interest in scientific thinking. “Your Rabb is the most Gracious Who taught by the pen, taught man what he knew not.” (96:3-5) ^{Malik (1997)} The Quran makes it clear that all that is in the heaven and in the earth has been made subservient to human beings, the viceregent of Allah. Allah has endowed human beings with the capacity to use their intellect to reflect upon things, and to express their ideas by speech, and in writing. (55:1-4) ^{Ali (1989)} Muslims are encouraged by the commandments of the Quran and Prophetic sayings to seek knowledge, and study nature to see the signs of the Creator, which thus inspires human intellectual growth. This was the major reason why Muslims have made contributions to scientific development. In another verse the Quran emphasizes upon the reader to think, investigate, and find out the

mysteries of the world. “Do they not look at the camels, how they were created? The heaven, how it was raised high? The mountains, how they were firmly set? And the earth, how it was spread out? So keep on giving admonition, for you are an admonisher...”

(88:17-21) ^{Malik (1997)} Quranic verses encourage man to reflect (think) and understand the nature He created. “In the earth there are tracks side by side, gardens of grapes, corn fields, and palm trees; with single and double trunks. They are all watered with the same water, yet we make some of them excel others in taste. Surely in this there are signs for people who use their common sense.” (13:4) ^{Malik (1997)} There are hundreds of similar verses in the Quran which describe mysteries of the universe and stimulate human thinking towards understanding and exploring the laws of nature. Quran emphasizes the need for observation of natural processes and reflects on what He has observed. No verse in the Quran contradicts scientific data. Thus, theology, philosophy, and science are finally harmonized through Islam’s ability to reconcile religion and science. ^{Lande (1988)}

According to the sayings of Prophet Muhammed (PBUH), “there is no illness without a cure” and since Allah has created a cure for all diseases except old age, it is necessary for the scientists to search for the cure of the diseases through advances in medical treatment. Few of the several prophetic traditions such as: “The search for knowledge is obligatory on every Muslim or Muslimah.” “The ink of Scholars is worth more than the blood of martyrs,” “He who adores knowledge, adores God,” “Wisdom is the goal of all believers, acquire it from anyone,” “Whoever wishes to have the benefit of this world, let him acquire knowledge. Whoever wishes to have the benefit of the world hereafter, let him acquire knowledge” further emphasize the importance of seeking knowledge. ^{Nadvi}

Prophet Muhammed further pointed out that only the learned will inherit his legacy, and

will be the trustees on Allah on earth. He is said to have encouraged Muslims to go over to China if necessary in search of knowledge. Muslims should not regard the worldly sciences as discouraged or forbidden. When Prophet says: “Who goes in search of knowledge, he is in the path of Allah till he returns” and “Allah makes easy the path of Paradise to him who journeys for the sake of knowledge.” ^{Khan (1997)} Obviously, when the Prophet emphasizes going out to seek knowledge, he is not referring to the knowledge of Quran and Shariah only, which was readily available in Mecca and Medina. Therefore, Muslims during the early period of Islam had a better and deeper understanding of Quran and Prophetic guidance and took upon themselves to go all over the world to seek knowledge, and establish fine institutions of learning throughout the Muslim world. The new methods of experimentation, observation, and measurement on which modern science is based are all contributions of those who followed the true teachings of Islam.

Mirza (1986)

The pre-Islamic Arabs had limited knowledge of physical and experimental sciences. It was after the conquest of Egypt and some territories of the Byzantine Empire that the Muslims came across some scientific institutions in Jundaishapura, Harran, and Alexandria. They discovered the scientific and philosophical work of the Greeks in these places that raised curiosity and the desire to acquire knowledge. ^{Saud (1994)} The period between the eighth and the fourteen centuries is regarded as the Golden period in Muslim history during which the Muslims established the most powerful empire and produced the most brilliant scientists and scholars of that time. The Muslim scholars such as Ibn-Sina, Al-Khawarizmi, Ibn-Razi, Zahrawi, Al-Biruni, Ibn Haytham, Al-Idris, Al-Kindi, Ibn-Khaldun and hundreds of other Muslim scientists made their observations and original

research and added a vast treasure of scientific knowledge in the field of mathematics, medial sciences, astronomy, geography, economics and philosophy. The contribution of Muslim scientists and scholars show the highest quality of scientific development during that period. Muslim scientists were spread throughout the Muslim empire from Bukhara (Uzbekistan) in the east to Baghdad (Iraq), Isfahan (Iran) and Cordoba (Andalusia-Spain) in the West. They established universities and learning centers that attracted students from all over the world. Cordoba in Andalusia (Spain) alone contained 17 universities, 70 public libraries and hundreds of thousands of books for students.

Abercrombie (1988)

Muslim scholars, under the guidance of the Quran and Sunnah that encouraged scientific exploration of the world as a form of worship, produced excellent scientific and other scholarly works that eventually had a profound influence on western thought, and western civilization,. This was during the time of the West's "Dark Ages" in which the entire intellectualism of the church dogma suppressed scientific progress. The church opposed freedom of thinking, and even a great scientist such as Galileo was punished due to his theory that the world rotates around the sun, which clashed with the church's dogma. For a thousand years, the scientific, medical, and scholarly work had virtually stopped in Europe. Most of the work done by Greek and some Roman scholars remained dormant. The burning of the great library of Alexandria in 390 A.D. by fundamentalist Christians had already resulted in the loss of valuable works. ^{Whitty (1999)}

Unfortunately, the West has continuously suppressed and downplayed the contributions of Muslim scientists. Most books and articles on the history of medicine and the sciences outline the contribution of Greek scientists that is usually followed by

scientific progress since the Renaissance. Students are taught that Christian European scientists made all the scientific advances after the original Greek contributions. The scholarly work of Muslim scientists is rarely acknowledged in major publications of medical and scientific works in the West. Morowitz, a historian, described this phenomenon of concealment as “History’s Black Hole.” “This is [a] myth that gives a distorted view by giving the impression that [the] Renaissance arose Phoenix-like from ashes, smoldering for a millennium of classical age of Greece and Rome.” Morowitz (1992)

Nevertheless, a number of distinguished historians and scientific investigators (like John Williams, EA Myers, Max Meyerhof, Philip K.Hitti, George Sarton, M. Ullman, EG Brown and Savage Smith) have fully acknowledged the part played by medieval Muslim scientists not only in preserving the knowledge of Ancient Greece, Persia and India, but also adding original contributions to the wealth of knowledge. Brown (1962), Hamdani (1962), Ullman (1978), Savage (1994), Sarton (1947)-I, Myers (1964), Hitti (1964) Bernard Lewis further

clarifies in his book on Middle East that Islamic scientific development was not solely dependent on ancient Greek knowledge. He wrote: “the achievement of medieval Islamic science to the preservation of Greek learning, nor to the incorporation in the corpus of elements from the more ancient and more distant East. This heritage which medieval Islamic scientists handed on to the modern world was immensely enriched by their own efforts and contributions. Greek science on the whole rather tended to be speculative and theoretical. Medieval Middle Eastern science was much more practical and in such fields as medicine, chemistry, astronomy, and agronomy, the classical heritage was clarified and supplemented by the experiments and observations of the medieval Middle East.”

Lewis (1998) The output, originality, and creativity in science and technology in the Muslim

world continued until about the 16th century. During this period, the Muslim scientific and scholarly work gradually spread to Europe. ^{Nasr (1976)} Sicily and Spain were the principal sources of such dissemination. From Spain the knowledge penetrated beyond the Pyrenees into Western and Southwestern France and Sicily. The Christian ruler Roger II was instrumental in transferring the Muslim scientific contributions and culture through Italy across the Alps to various European cities that became centers of Arab learning.

This article aims to contribute to a more accurate understanding of the history of medicine and the sciences, by focusing on the contributions Muslim scientists made during this era of the Muslim “Golden Age.”

Within two centuries after the death of Prophet Muhammed, the Muslims conquered new lands, their empire extended from India in the East to Spain in the West, and included Arabia, Syria, Egypt, Iraq, North Africa, Iran, and Turkey. These isolated nations now became part of the Muslim empire. As a result of this, Muslims were introduced to different languages and scientific technological advances from various civilizations of the world. Muslim scholars and businessmen traveled to other distant places, like India and China, and brought back knowledge with them. In addition to a geographical unity of Asian, African, and European countries, the Arabic language became an international language facilitating communications across different cultures and regions and it also became a language of science and technology.

Islam’s tolerance and encouragement of both secular and religious learning, created the necessary climate for the free exchange and propagation of ideas and knowledge. Baghdad (Iraq) and Cordoba (Spain) became the world’s greatest learning

and teaching centers. All available scientific work on mathematics, philosophy, medicine, and astronomy were translated from Greek, Roman, Indian, Persian, and Syriac languages into Arabic. The Abbasid Caliphs who were recognized for their pursuit of knowledge and support of academics, established the *Baitul-Hikmah* (House of Wisdom) and sent emissaries to various parts of the world, including the Byzantine Empire, to collect scientific manuscripts. Caliph Al Mamun established a school of translation and appointed Hunan Ibn. Ishaq, a Christian, as the director who was a gifted translator and scientist. Hunan Ibn Ishaq did major translations of the entire works of Aristotle, Hypocrites and Galen into Arabic. The *Baitul Hikmah* had a long-lasting influence on mathematics, economics, astronomy and philosophy, chemistry, and the medical sciences. It produced famous Muslim thinkers like Al Kindi and Al Farabi. Caliph Al Mutadad (9th century) patronized another scholar Thabit Ibn Qurrah (a Sabian) who translated and published commentaries on the works of famous Greek scientists and philosophers and published some original work on mathematics, astronomy and philosophy. Sinan, son of Thabit Ibn Qurrah became the Director of several hospitals (Bimaristans) in Baghdad.

The Spanish Umayyad Caliphs' liberal support for academic work also played a significant role in producing original scientific works. "The world is held up by four pillars: the wisdom of the learned, the justice of the great, the prayers of the righteous, and the valor of the brave" was the inscription often found around the entrance of the universities in Spain during the Muslim era. ^{Abercrombia (1988)} In Spain, the involvement of non-Muslim scholars in the scientific enterprises also shows the admirable quality of interfaith tolerance and cooperation of Umayyad Caliphs.

Commenting on the rise of Islamic civilization and its policy of tolerance towards people of all faiths, John Esposito pointed out: “The genesis of Islamic civilization was indeed a collaborative effort, incorporating the learning and wisdom of many cultures and languages. As in government administration, Christians and Jews who had been the intellectual and bureaucratic backbone of the Persian and Byzantine empires participated in the process as well as Muslims. This ecumenical effort was evident in Caliph Al Mamun’s reign. The House of Wisdom’s translation center was headed by the renowned scholar, Hunayn Ibn Isaac, a Nestorian Christian. This period of translation was followed by one of Muslim intellectual and artistic activity. Muslims ceased to be disciples and became masters, in the process of producing Islamic civilization dominated by the Arabic language and Islam’s view of life.” ^{Esposito (1998)} Unfortunately, this aspect of Islamic tolerance is not recognized in the West today.

The Arabic translations of important treatises from Greek, Indian and other pre-Islamic civilizations preserved precious work for thousands of years and prevented it from extinction. Many translations, along with Arabic commentaries were translated again into Latin and reintroduced in Europe. These translations and the original contributions of Muslim scientists and scholars became the foundation of modern medical and other sciences. ^{Nadvi} Muslim physicians established medical schools in Baghdad and Cordoba where students from the Middle East and Europe came to study. The European medical schools of Montpellier, Padua and Pisa were founded on the pattern of Muslim medical schools in Cordoba. The medical encyclopedic work, ‘al-Qanun’ of Ibn-Sina (The Canon of Avicenna), and the surgery books of Abul Qasim al

Zahrawi remained the textbooks of medical sciences throughout Europe, until the 16th century, when European works came to replace these texts. Briffault (1928)

Greek scientists were excellent in theorizing and formulating hypotheses. They were great observers, but not experimentalists. Greek literature did not show any documentation of experiments. Muslim scientists, for the first time, introduced the concept of the recording of data based on both observations and experimentations. The Greeks had a strong belief that Aristotle and Plato's opinions were final and there was no possibility of mistakes in their views, although they were only theorizing and attempting to explain various phenomena to the best of the capabilities of their speculative knowledge. Whitty (1999) As Briffault wrote, "Science owes a great deal more to the Arab culture, it owes its existence to Arab scientists, who made startling discoveries and revolutionary theories. The Greeks systematized, generalized, and theorized, but the patient ways of investigation, the accumulation of positive knowledge, the minute methods of science, detailed, prolonged observation, and experimental inquiry were introduced to the European world by Arabs only." Briffault (1928)

I turn now to elaborating on some more specific contributions from the field of medicine, chemistry, pharmacology, mathematics, astronomy, geography, political science, sociology, philosophy and technology.

Medical sciences- The major well-researched scientific progress in medicine was made between the 8th and 11th centuries during the era of Umayyad and Abbasid Caliphates. Muslims became acquainted with Greek anatomical descriptions, and through their own research, found many errors in their work. For instance, in opposition to Galen, who thought that the human skull consisted of seven bones, the Muslim scholars held that it

had eight. They also found that there were ossicles in the ear, which facilitate the hearing capacity. ^{Wasti (1962)} Yuhana Ibn Masswayh dissected a monkey to get more information about the human body. Al-Zahrwai emphasized that knowledge of anatomy is necessary to become a surgeon.

During the 9th-12th centuries, many great hospitals were built. These hospitals were called “Bimaristan” (Bimar - sick, stan -a place to stay). They were well-organized institutions based on the principles of human dignity, honor and hygiene. They were well administered by competent physicians, and also served as Teaching Hospitals and Research Institutions. Many famous Muslim physicians were associated with these hospitals. One of the early hospitals, Muqtadi was founded in Baghdad in 916 under the direction of a famous physician, Al-Razi. This hospital retained several physicians on the staff, including specialists like surgeons, and bone-setters (orthopedic surgeons). The development of these hospitals was an outstanding contribution of Muslim physicians. The hospitals served all citizens free of charge and irrespective of race or religion. There were separate units for male and female patients, and special wards for medical diseases, contagious diseases, and psychiatric patients. The physicians and nursing staff were licensed to assure quality of care. Libraries were also affiliated with the hospitals that were frequently used by students and teachers. It is recorded that these hospitals were furnished like palaces. Ibn Jubayr, the renowned Arab traveler described the care for the patients in Muqtadi Hospital as follows: “In this hospital, best arrangements exist for providing medical aid. The patients are dealt with very courteously and sympathetically. All patients are given food and care freely. For meeting the sanitary requirements, the water of Tigris is supplied through pipes. Every Monday and Thursday eminent medical

consultants visit this hospital and assist the regular staff in diagnosing complicated and chronic diseases, and suggesting their treatment. In addition, medical attendants prepare food and medicine for every patient under the guidance of the medical men treating him.”

Wasti (1986)

In major cities like Baghdad, the mentally ill were treated in separate hospitals. The first known hospital for the mentally ill was built in the 10th century in Baghdad (Iraq), and later in Damascus (Syria). The mentally ill patients were treated with kindness and dignity, and their suffering was recognized as part of the illness. This was the period when the mentally ill were regarded as ‘witches’ and ‘possessed’ in Europe, and some of them were burned alive. Contrary to this, the mentally ill patients in hospitals of Baghdad received medications and support services. It was not until 1793 that Philippe Pinel introduced humane treatment for the mentally ill in France, which was adopted in Europe at a later date.

Muslims physicians initiated the regulating of the medical practice through the licensing of physicians and pharmacologists. Similar rules were later established in Sicily, when Roger II, King of Sicily (1095 – 1154), established the requirement of passing an examination before a physician could start practicing medicine. Thus the requirement of licensing began in Europe through Italy, then Spain and France.

Through the European medical schools at Montpellier and Salerone, the vast medical knowledge was passed on to Europe. The *Pharmacopoeia* of the London College of Physician (1618), a classic work systematizing drugs, recognized this debt to Muslim (and Greek) physicians as it was illustrated with portraits of the few great

scholars: Hypocrites; Galen; Avicenna (Ibn Sina); and Mesue (Ibn Zakriya bin Masawaih).^{Whitty (1999)}

Muslim surgeons developed a number of surgical techniques that were extremely advanced, especially in eye surgery. They used cauterization extensively in surgery, and described a variety of illnesses that were treated by cauterization. Ibn Zuhr (12th century) described the operation of a tracheotomy and Al-Zahrawi (10th century) invented many surgical instruments, such as instruments of internal examination of inner ear, inspection of urethra, and an instrument for the removal of foreign bodies from the throat. His books of surgery contained the picture of all surgical instruments he was using. Muslim physicians also made use of anesthetic substances while performing operations.

Muslim physicians were the first to write medical textbooks in a format that medical students could use in their learning. These textbooks were based on original Greek and other existing works and also new scientific data gathered by the Muslim physicians. The most famous medical scholarly works were produced by Al Razi (Rhazes- 932), Al-Zahrawi (Albucasis- 1013) and Ibn Sina (Avicenna-1092). Al Razi was the first physician who described how to differentiate between measles and smallpox. He also discussed the treatment of various ailments by dietary restrictions and regulations. After several centuries, we are once again including dietary regulations as the most important part of treatment of some severe illnesses like diabetes, hypertension and heart disease. Al Razi's textbooks were translated into Latin and used in European medical schools until the 16th century. Ibn Sina's encyclopedic work- "Qanun Fil Tib" surveyed the entire medical knowledge available from ancient and Muslim sources. He also documented his original contributions such as the recognition of the contagious

nature of Pthisis and tuberculosis, and the spread of diseases through water and soil. His books contained the authentic record of 760 drugs that were in use. His books were translated and used as textbooks for medicine for several centuries in Europe.

Al-Razi along with Ibn Sina described the different parts of the eye and noted that the movement of the eyeball was caused by contractions of eye muscles, and pupillary movements were caused by contractions and expansions of the iris. Muslim surgeons also performed operations for the removal of cataracts. Ibn Haiytham's (956-1038) most important contribution was giving a correct concept of the process of visual perception. He was the first to prove that rays passed from objects towards the eyes, not vice versa which was the prevalent belief postulated by Euclid and Ptolemy. He also described that the impressions of objects made upon the eye are conveyed along the optic nerve to the brain, culminating in the formation of visual images. ^{Wasti (1962), Ali (1999)}

Abul Qasim Al-Zahrawi was born in Cordoba, in 936 and is considered the greatest surgeon whose comprehensive medical text combining Eastern and classical teachings shaped European surgical procedures until the Renaissance. He wrote famous books: 'Al-Tasreef' in 30 volumes, which contained the work of previous surgeons, and his own surgical procedures. The last part of the book containing drawings of more than 200 instruments that constitute the first illustrated independent work on surgery. His books remain the leading book of surgery for 500 years in Europe. ^{Encycl. Brit. (1983)}

Muslim physicians described the anatomy of the lung and bronchi and the interactions between the human body's blood in vessels and air in the lungs. Ibn Nafees (1213-1288) was the first to describe about the two circulatory systems, namely Aortic,

and Pulmonary, three centuries before Harvey's discovery. He also elaborated on the function of coronary arteries in supplying the heart muscle.

Chemistry- Muslims developed chemistry as a distinct branch of science,, and the word 'chemistry' is derived from the Arabic word: "Al chemya." It needs to be pointed out that Muslim scientists who pioneer the work in chemistry are often called Al-chemists, and sometimes Al Chemya is associated with a pseudo-science of transmutation of the base metal into gold. "Al" in Arabic means 'the,' and "chemya" means chemistry. Therefore, the word: "Al chemya" means 'the chemistry' and should not be associated with pseudo sciences. ^{Muslim Cont. Chemistry (2003)} The most notable Muslim scientists opposed the false notion that ordinary metals can be changed to gold by a chemical process. The 8th century Muslim scientist from Iraq, Jabir bin Hayyan (Geber), is known as the Father of Chemistry. He is the first scientist to introduce experimental investigation (*tajribah*) into chemistry by perfecting techniques of crystallization, distillation, sublimation, evaporation, and he developed several instruments to perform the tests. He discovered several minerals and acids that he prepared for the first time. Jabir described three distinct types of substances: spirit, those that vaporize with heat as camphor and ammonium chloride; metals such as gold, silver, and iron; and compounds which can be converted into powder. He has written over 2000 papers on his experimental work. Jabir bin Hayyan advised his students not to accept anything as true until they examined it themselves. "The most important task of the Al Chemist is to do practical work and to carry out experiments. Without practical application and experiment, nothing can be achieved." ^{Khan (1997)}

David Tschnaz stated that Jabir's works on Al Chemy (Chemistry) were translated into Latin and made their way into Europe, and for centuries, they served as the ultimate authority to European scientists including Arnold of Villanova (1240-1313), Roger Bacon (1214-1294) and Albert Magnus (1193-1280). In this process, many of the basic terms of chemistry and pharmacology, eg: Alkali syrup, julep, and alchemy (chemia) itself were introduced with European languages-a testimony to the wide-ranging contribution of these early Arab scientists. ^{Tschnaz (2001)}

Al-Razi, one of the greatest Muslim physicians of the 9th century was also a brilliant chemist who continued his work on chemistry while practicing as a physician. He refined the processes of distillation and sublimation. He introduced mercurial compounds for the treatment of various ailments. Ibn-Sina, another brilliant scientist, also adopted Ibn-Jabir's methods for chemical experimentation, and used them as basis for determination of the efficacy of new pharmaceuticals.

Gustave Le Bon, the French Orientalist, attributes modern European chemistry to Muslim scientists: "It must be remembered that no signs, either, of chemistry, or any other science, was discovered all of a sudden. The Arabs had established 1,000 years ago their laboratories in which they used to conduct scientific experiments and publish their discoveries without which Lavoisier (called The father of chemistry) would not have been able to produce anything in this field. It can be said without the fear of contradiction, that owing to researches and experiments by Muslim Scientists, modern chemistry came into being, and that it produced great results in the form of great scientific inventions." ^{Zahur (2000)}

Pharmacology- Muslim physicians also made the most significant contribution in pharmacology. They not only discovered many herbal drugs but also perfected many of the techniques of chemical extraction, including distillation, sublimation, filtration, coagulation, and crystallization due to their expertise in chemistry. Al-Zahrawi (936-1035), a prominent surgeon who was very skilled in the use of simple and compound remedies, was known as a pharmacist surgeon. The 13th century Muslim Spanish scientist, Al-Baitar visited Africa, India and Europe and collected samples of plants through extensive field studies. He classified plants by their characteristics in alphabetical order and therapeutic qualities. He also wrote Arabic, Roman and Berber names of the plants and gave information about the preparation of drugs and its administration. He discovered, and documented 200 new plants that were not known previously. His famous book “Kitabel Jami Fil Advia Mufradat,” (A compendium of simple drugs and foods) was translated into Latin and was used in the formulation of the first London Pharmacopoeia issued by the College of Physicians during the reign of King James I.

Lande (1988), Ashoor (1984), Khan (1982) According to Levey, the Muslims were expert organizers of knowledge, and their pharmacological texts directed carefully along lines that were useful to the apothecary and medical practitioner. Levey (1973)

Mathematics- Muslims made numerous discoveries in the field of mathematics, which have been passed on to modern science, contributing to the technological revolution that sprang up in early modern Europe. One of the most notable of these innovations was to pass on the concept of zero. Al-Khawarizmi, a Persian scholar living in the ninth century was appointed as a scientist in Bait-ul-Hikmah of Baghdad by the Caliph. He developed the concept of Algorithms –a way of calculating -which bears the

Anglo-cized version of its inventor's name. His work in Algebra was outstanding, as he gave analytical solutions of linear and quadratic equations which established him as the Father of Algebra. The word 'algebra' is derived from his famous book, "Al Jabr wa al Muqabalah" (the compendious book on calculation by completion and balancing). The book contained the most important of al-Khawarizmi's work. This work is generally considered the first to have been written on the subject. Al-Khawarizmi also learned the concept of zero from India, and through his works it was transmitted to Europe. The Indians had left a blank for a zero, and al-Khararizmi's addition was to give it a symbol, the "0." Even the English word 'zero' is derived from the Arabic name for this symbol "sifr." Leonardo Di Vinci studied the Arabic numeral system and introduced it to Europe.

Saud (1994)

Abul Wafa- Al-Buzjani (940-997) developed trigonometry. He was the first person to show the generality of the Sine theorem relative to spherical triangles. ^{Sarton}

^{(1947)-II} Al-Tusi, another Muslim scientist of the 13th century developed the subject of spherical trigonometry including 6 fundamental formulas for the solution of spherical, right-angled triangles.

Astronomy- A Muslim astronomer of the 10th century, Al-Battani made several original contributions in the field of astronomy. He determined the solar year as being of 365 days, 4 hrs and 46 minutes. He proposed a new and ingenious theory to determine the condition of visibility of the new moon. European astronomers used his observations of solar eclipses in 1749 to determine the acceleration of motion of the moon.

Muslims invented the compass and Al-Fargani (860) estimated the circumference of the earth to be 24000 miles. ^{Salam} Muslims were the first to use the pendulum, build

observatories, catalogue the maps of the visible stars, and correct the sun and moon tables. They also wrote about sunspots, eclipses, and comets. Muslim scientists made a distinction between astronomy and astrology, and regarded astrology as a pseudoscientific subject. The 13th century Muslim astronomer, Al-Tusi earned his fame by producing astronomical tables called Al-Zij-Ilkhani, which became the most popular tables among astronomers. He pointed out several serious shortcomings in Ptolemy's astronomy, and foreshadowed the later dissatisfaction with the system that culminated in the Copernican reforms. In the 10th century, Muslims built an observatory in Baghdad and the famous Samarkand observatory was built in the 13th century when Tusi worked on the measurements of planetary movements. Ibn Shaitor of Damascus (14th century) continued the work on planetary movements, using a combination of perfect circulatory motions. The famous European astronomer Copernicus was familiar with Ibn Shaitar's work and used his theories to suggest a heliocentric system of movements of planets, as opposed to the geocentric system of Ptolemy. Sayeed (2000)

Geography- Al-Masudi, a 10th century Muslim geographer and historian, traveled to Baghdad, India, China and several other countries of the world. He described his experiences of various countries, people, climates, and the geography and history of countries he had visited. He documented historical events chronologically. He wrote 34 books covering a variety of these subjects. Al-Biruni, another great Muslim scholar of the 11th century from Uzbekistan was famous for his world travels. He also recorded his travels with a graphic account of their historical and social conditions. He translated many books from the Indian language, Sanskrit, into Arabic, introducing the work of

Indian scholars to Muslim scholars. Al-Idris, a 12th century Muslim geographer from Southern Spain, studied in Cordoba and traveled widely in Spain, North Africa, Anatolia, and Europe. He settled in Sicily (Italy) and wrote one of the greatest books of descriptive geography- “Kitab Nuzhat al-Mushtaq Fi Ikhtaraq-al-Afaq” (The pleasure of excursion of one who is eager to traverse the region of the world.) Al-Idrisi described the customs, people, and the distance between the major cities, the products and climates of the entire known world. He prepared a silver plainsphere on which a map of the world was depicted. He also wrote extensively on medicinal plants. ^{Encycl. Brit. (1983)-IV}

Political science- Although less is known in the West, Muslim scholars have made contributions in the development of political science and defined the role of politics in Islam, where there is no separation of State and Church. Al-Mawardi was a political scientist of the 11th century. He was a great jurist, sociologist and expert on political science. He discussed the principles of political science with special references to the functions of Caliphs, the Chief Minister, other ministers and the relationship between various elements of the public and a government. He laid down clear principles for the election of Caliphs and criticized the established practice by asserting that Shariah (Islamic law) by itself is an insufficient yardstick for justice. His greatest contribution was the introduction of political justice into Shariah. ^{Ahsani}

Sociology- Ibn-Khaldun, a 14th century Muslim sociologist who wrote Muqaddimah (Introduction), the first volume of the world history that gave him a special place among historians, sociologists, and philosophers. He documented the psychological, economic, environmental and social factors that contribute to the advancement of human civilization. He postulated the theory of cyclical change in human

civilization caused by dynamically changing social, economic, political, and geographical factors. His writings on the development of history on its totality gave a new discipline of social science. As a historiographer, a philosopher of science of history, he has had no equal so far in any age or country. ^{Encycl. Brit. (1983)-IV}

Philosophy- The Muslim philosophers admired the work of Greek philosophers, Plato and Aristotle, wrote commentaries on their works, and made original contributions. Al-Kindi, (9th century) was one of early Muslim philosophers who was distinguished as the “Philosopher of Arabs.” He explained that philosophy does not conflict with religion, and philosophy may give us a deeper understanding of the religion (Islam). Al-Farabi, an Andalusian Muslim philosopher of the 10th century built his arguments on abstract knowledge and founded a neoplatonic school in Islamic philosophy. He wrote a book on a model city similar to Plato’s Republic that was conceived within the Islamic framework. He made the study of logic more easy by dividing it into two categories: Takhayyul (idea) and Thuboot (proof). The 11th century Muslim philosopher and theologian, Al-Ghazali, was the dean of the Nizamiyah University in Baghdad, who portrayed the inability of reason to comprehend the Absolute the Infinite. He further elaborated that an infinite time is related to infinite space. He was able to create the balance between religion and reason, identified their respective spheres as being the infinite, and the finite respectively. The twelfth century Spanish Muslim philosopher, Ibn Rushd, was regarded as the greatest rationalist of his age. He was a great exponent of harmony of philosophy and religion. He stated that, “Man is neither in full control of his destiny, nor is it fully predetermined for him.” He also promoted the idea that philosophy does not conflict with Islam, and supported rationalism by quoting verses of the Quran.

Ibn Rushd's philosophy influenced the 13th century Christian philosopher, St. Thomas Aquinas. He was credited with building the greatest Catholic system of thought that has ever been offered. He synthesized the philosophy of Aristotle, theory of St. Augustine, and philosophy of Al Ghazali, and Ibn Rushd. In his famous work, "Summa Theologica" he followed Al Ghazali's 'Yahya ulum al-Din' (Revivification of Sciences of Religion)⁷ He developed an understanding of relationship between philosophy and faith. His understanding of the harmony between religion and natural sciences derives from the high culture of Islamic Spain and Ibn Rushd's philosophical writings. Another 13th century Spanish Muslim philosopher, Ibn al-Arabi, incorporated many fragmented and mono-systematic mystic doctrines into a system, and gave an explicit theoretical formulation. His work: "Fusus Al-Hakim" was regarded as a masterpiece of mystic thought in Sufism. Another renowned Muslim philosopher of the 13th century, "Rumi," is well known to the West. His famous book: "Mathnavi" offers solutions to many complicated problems in metaphysics, religion, ethics, and mysticism. He explains various hidden aspects of Sufism and their relationship with worldly life. ^{Sayeed (2000)}

Technology- The Muslim contributions to technology were equally superb. The landmark contribution was the introduction of paper, the knowledge of which had been acquired from China. Muslims established paper factories in Samarkand (Uzbekistan) and later in Baghdad (Iraq) and Syria. ^{Salam} During the 8th and 9th centuries, these mills were spread all over Islamic countries from Spain to Iran, whereas the first paper factory in Europe was established in the late thirteenth century. Paper replaced parchment and papyrus that had a profound effect on the spread and democratization of education, and it became possible to write books and to preserve and distribute knowledge more easily. In

some Middle-eastern schools in the 9th century, paper was available free of charge. Syria also established glass-making factories producing glassware and pottery of high quality. This technique of glass manufacturing was transferred to Venice, Italy in the 12th century. Venice still produces the finest glasswork in the world.

Muslims made advances in the fabric, silk, cotton, and leather industries. During the 9th to the 10th centuries, hundreds of ships from Muslim countries docked at the shipyard of Canton in China. Muslim traders established a system of letters of credit similar to checks. They worked on all the metals e.g.: gold, silver, bronze, iron and steel. Muslims practiced farming in the scientific way and knew the value of fertilizers. ^{Rowen (1960)} In the 12th century, the Muslim operations in agriculture, irrigation, and manufacturing of farm equipment were far more advanced than European ways. This advanced technology was later transferred from Spain to Italy and Northern Europe. ^{Al-Hassan (1988)}

Philip Hitti writes, “During all the first part of the Middle Ages, no other people made as important contributions to human progress, as did the Arabs. From 9th to 12th century, there were more philosophical, medical, historical, astronomical, and geographic works written in Arabic than in any other language of the world.” ^{Hitti (1964)}

Conclusion- This chapter has highlighted Muslim scientists’ contributions to civilization. Unfortunately, this contribution of Muslim scholars and scientists has gradually declined, and stopped due to the sharp decline in political power, and a significant change in inspiration for education and technological achievement.

When Southern Spain was conquered by Ferdinand in 1490, hundreds of thousands of Arabic volumes of scientific discourses were burned. The Spanish

government even prohibited possessing any book written in Arabic by Muslim scholars except the ones that were translated into Latin. Mongols burned the valuable books written by Muslim scholars in Baghdad (13th century) and the Crusaders had destroyed many of Muslim scientific works in Syria (12-13th century).

Many Non-Muslims translated the original work of Muslim scholars, and Latinized the Muslim names. In subsequent years, Europeans failed to recognize that Muslim scholars did the original work on which current scientific progress was made. Anti-Muslim prejudice also played a significant role for loss of recognition for Muslim scientists' scholarly work.

Although Muslims' production of scientific work came to a halt due to the factors mentioned above, the scientific progress continued. The major scientific work of Muslims was translated from Arabic to Latin, and Christians in Europe learned medicine, chemistry, physics, math, and philosophy from the books written by Muslim scholars. Many European students graduated from famous universities of Cordoba, Toledo, Baghdad, and Damascus, and returned to Europe to establish and teach in the newer universities. In many European schools, the Arabic language as well as Latin became the medium of instruction. New medical schools were established in Europe, teaching the same curriculum as in Muslim Spain and Baghdad. The textbooks written by Muslim scholars were translated into Latin, and remained a major source of learning until the 16th century.

The major reason for Muslim scientific decline is directly related to their gradual loss of interest in scientific subjects. Two parallel systems of education were developed, namely *Shariah*-Science of Islamic jurisprudence and *Ulumal Aqliyyah*- the natural

sciences and technology. Most scientific theories such as the theory of evolution was recognized as anti-religious and many Muslims turned away from modern sciences. The decline in progress continued due to apathy towards scientific discoveries. The schools (*Madrasas*) were refraining from teaching the more advanced courses of mathematics, science and philosophy and focused on theology, spiritual and ritualistic aspects of Islam and Islamic Law (Shariah). There was an overall demoralization in the new Muslim generation to acquire new knowledge and to do scientific research. Commenting on religious fanaticism, narrow-mindedness and a lack of tolerance, Manzoor Alam stated: “The transfer of science and technology from the Islamic realm to Europe was followed by a sharp decline of political power of Islam, and the rise of fanaticism in Islam dealt a mortal blow to the development of science. It is symbolized by the destruction of the Istanbul Astronomical Observatory in 1580 by the fanatics which was established by Taqiuddin in 1545. The rise of the clerics and fanaticism stifled the growth of science in the countries ruled by Muslim rulers such as the Mooghul (Moghul) Empire in India, Ottoman Empire in Turkey and Arabia and smaller kingdoms in the Maghreb. The language barrier re-emerged forcefully since most of the post 16th century scientific researches were conducted in Spanish, German, Italian, French, and English languages. Hence the language of science and technology once again became inaccessible to Muslims all over the world and consequently the Muslim countries rapidly lapsed into decay.” Alam (2002) One wonders about the possible shape of the world today if Muslim scientists had been able to continue their research and scholarly work.

Today, Muslims are seriously under-represented in science. Less than 1% of world scientists are Muslims, whereas 25% of the world’s population is Muslim. Muslims

have developed a false perception that all knowledge is in the Holy Qur'aan. Most conservative Muslims discourage learning science, regarding it as "Western." Many conservative clerics discourage rational questioning and innovation. But to become a scientist, it is essential to have critical thinking and an inquisitive mind. A scientist's work is dependent on thinking, developing a hypothesis, experimenting, and writing down the observations. Thus, science and technology (*Ilm ul Hikmah*) have been transferred from the East to the West. Science does not belong to a particular ethnic or religious group. It is an on-going evolutionary process that will continue to develop by contributions from different races and groups at different times.

After 400 years of stagnation, the Muslim nation is now once again reawakening and seeking their lost identity. We are reviewing and learning about the contributions of Muslim scholars to science and civilization. We are taking pride in the scientific work of Muslim scientists. We are now recognizing our responsibilities to correct the erroneous notion that modern civilization and scientific advancement are a creation exclusively of any one culture or civilization.

The new generation of Muslim youth will hopefully enhance their self-perception of belonging to a Muslim Nation that has made a significant impact on world civilization. The progress in science we are seeing today is like a building block where all nations – including Muslims and others, have made their contributions. It is the result of cooperation, communication and passing on the wealth of information to successive generations from the Greeks to the Muslims to the West, and finally back to the new generation from East and West. This brief article on the contributions of Muslim scientists may not fully reflect the work they have done but it will serve as an

introduction to their scholarly pursuits and accomplishments. However, just glorification of the past is not enough and we must continuously encourage Muslim youth to become dynamic researchers and follow the path of great Muslim scholars to benefit the fellow human beings everywhere.

References

- Abercrombie T.J. When the Moors Rules Spain. National Geographic. (July 1988) 86-119.
- Ahsani, S.A. "Al-Mawardi's Political Paradigm: Principles of Islamic Political System"- Unpublished work..
- Alam, Manzoor S. "A Critical Appreciation of Arab Human Development Report" (2002) Unpublished work.
- Al-Hassan, Ahmady and Hill, Donald. "Islamic technology-An Illustrated History. Cambridge University Press, Cambridge, U.K. (1988).
- Ali, A. "The Arab-Muslim legacy to Ophthalmology." Hyderabad, India. Islamic culture (1999).
- Ali, Abdullah Yusuf. The Holy Quran- Translation and Commentary. (1989)
Published by Amaria Corporation Brentwood, MD, USA. 55:1-4 -p. 1472
- Ashoor, AZ, "Muslim medieval scholars and their work." (1984) The Islamic World Medical Journal.
- Briffault. "The making of Humanity." (1928) Published by 'Islamic Science in the medieval Muslim world'. On website by The Khawarzimic Science Society, Pakistan. Nov. 2001.
- Brown E.G: Arabian Medicine. Cambridge University Press, (1962).
- Encyclopedia Britannica (1983) Volume 9. Page 147-149
- Encyclopedia Britannica. (1983) Micropedia I. p. 37
- Encyclopedia Britannica (1983) Volume 9. Page 198-199
- Esposito, J. "Islam: The Straight Path" Oxford University Press, (1998).
- Hamdani, SAR "Notable Muslims." Ferozsons Press, (1962).
- Hitti, P.K. "History of the Arabs" Macmillan and Co, London, (1964).
- Khan, HR. "Contribution of Muslims to medicine and Science upto middle of 13th century" J Journal of Islamic Medical Association, (1982) Vol. 14 111-114
- Khan, M.A. "Origin and development of Experimental Science." BITT. Dhaka, (1997).
- Lande P., "Science in Al-Andalus". Published in Science the Islamic Legacy- Aramco- Washington DC, (1988).
- Levey, M: "Early Arabic Pharmacology." E.J. Brill. Leiden (68-70), (1973).
- Lewis, Bernard. "The Middle East." New York: Scribner Publication, (1998).
- Malik, Farooq. Holy Quran- English translation of the meaning of Al-Quran. Published by Institute of Islamic Knowledge, Houston, Texas, (1977), . 96:35- p.736
- Malik, Farooq. Holy Quran- English translation of the meaning of Al-Quran. Published by Institute of Islamic Knowledge, Houston, Texas, (1977) 88:17-21- p. 720
- Malik, Farooq. Holy Quran- English translation of the meaning of Al-Quran. Published by Institute of Islamic Knowledge, Houston, Texas, (1977) 13:4- p.307
- Mirza, M.R, Siddiqi M.I. "Muslim Contribution to Science" Kazi Publications Pakistan, (1986).
- Morowitz, H.J. "History's Black Hole" – hospital practice" (1992) 25-31
- Muslim Contributions to Chemistry. (2003) Published by FSTC Limited.

www.muslimheritage.com

- Myers, E.A. "Arabic thought and the western world in the golden age of Islam" Funga Publication, NY., (1964) 7-10, 66-77
- Nadvi, SHH "Medical philosophy in Islam and the contributions of Muslims in the advancement of medical sciences." Academic Research series #6, Durban S. Africa.
- Nasr, S.H. "Islamic Science- An Illustrated Study" World Islamic Trust Lendar, (1976).
- Rowen, Herbert. "A History of Early Modern Europe 1500-1815. Hort, Rinehart And Wenston Inc. New York, (1960).
- Salam, A.A. "Islam and Science" Institute of Theoretical Physics- Tresste, Italy.
- Sarton, G. "Introduction to History of Science." Vol. 1, Published by Carnegie Institute, Washington, William & Wilkins, Baltimore, (1929) Reprinted 1950.
- Sarton, G "Introduction to History of Science." Vol. 2. Published by Carnegie Institute, Washington, William & Wilkins, Baltimore. (1931) Reprinted 1950.
- Saud M. "Islam and Evolution of Science" (1994) Adam Publishers- Delhi, India.
- Savage-Smith E. "Islamic Culture and Medical Arts" (1994) National Library of Medicine Bethesda MD.
- Sayeed, H. "Muslim Scholars." Published by National Science Council of Pakistan- Internet Edition.
- Tschnaz, David. "Jabir Ibn Hyyan and Arab AlChemists: Makers of Modern Chemistry." www.islamonline.net/English/Science/200108/article
- Ullman, M: "Islamic Medicine" Edinburgh Press. Karachi, Pakistan, (1978).
- Wasti, H. N. "Hospitals are owned by Arab physicians in the Middle Ages" "Muslim Contributions to Science." Edited by Mirza M.R, Siddiqi M.I. Kazi Publications, Pakistan, (1986).
- Wasti, H. N. "Muslim Contribution to Medicine." Lahore, (1962)
- Whitty, C.J.M., "The impact of Islamic Medicine on Post-medieval England-Islamic Culture. (1999).
- Zahur, A. "Muslim History 570-1950, Gaithersburg, MD: ZMD Corp., 2000.

End Notes

1. Glorious Quran various chapters
2. Sahih-al-Bukhari
3. Brown EG: Arabian Medicine. Cambridge University Press, 1962
4. Hamdani SAR "Notable Muslim" Ferozsons Press 1962

5. Ullman M: "Islamic Medicine" Edinburgh Press, 1978, Karachi, Pakistan.
6. Rahman F. "Health and Medicine in the Islamic Tradition" Crossroad Publication, NY, 1987.
7. Nadvi SHH "Medical philosophy in Islam and the contributions of Muslim in advancement of medical sciences", Academic Research series #6, Durban S. Africa
8. Encyclopedia Britannica, Crestview Publication
9. Savage Smith E "Islamic Culture and Medical Arts" National Library of Medicine Bethesda MD, 1994
10. Sarton G "Introduction to History of Science" William & William, Belton, 1927-1942
11. Myers EA "Arabic thought and the western world in the golden age of Islam, 1964" 7-10, 66-77, Funga Publication, NY
12. Hitti PK "History of the Arabs", 1964 Macmillan and Co, London
13. Whitty, C.J.M., "The impact of Islamic Medicine on Post-medieval England-Islamic Culture Jan 1999.
14. Briffault. "The making of Humanity" (1938). Published by Islamic "Science in the medieval Muslim world". Published on website by Khwarzimi Science Society. Pakistan Nov. 01.
15. Lande P., "Science in Al-Andalus". Published in Science the Islamic Legacy-Aramco- Washington DC 1988.
16. Bammate H. "Muslim Contribution to Civilization". Crescent Publication Maryland 1962.
17. Elgood. "Medical History of Persia and Eastern Muslim Caliphate.
18. Sarton, George. "Introduction to the History of Science", Vol. II Carnegie Institute Of Washington, William and Wilkins-Baltimore, USA, 1947.
20. Salam, A.A. "Islam and Science" Institute of Theoretical Physics- Trieste, Italy.
21. Rowen, Herbert. "A History of Early Modern Europe 1500-1815. Hort, Rinehart And Wenston Inc. New York 1960.
22. Wasti Hakim Nayyar. "Muslim Contribution to Medicine". Lahore 1962.
23. Saud, Mohammed "Islam and Evolution of Science" Tazeen Press, Islamabad, Pakistan- 1986
24. Azmi AA. "Contribution of Muslim Physicians in the Middle Ages". Hamdard 1988.
25. Ashoor AZ, "Muslim medieval scholars and their work." Islamic World Med. Journal, 1984.
26. Hayek S, "How Al-Zahrawi reached the occident."Islamic World Med.Journal1984.
- 27.Hamarneh SK. "Vistas of Arabic Healing Arts in Theory and Practice." Hamdard 1989.
28. al-Farouqi, Ismail "The Cultural Atlas of Islam". McMillan Publishing Co. 1986.
29. Fakhry, Majid, A History of Islamic Philosophy". Columbia U. Press, N.Y. 1970.

30. Osler, William, "The evolution of Modern Science". New Heaven Yale University Press 1921.
31. Thompson J.W., Johnson & N. "An introduction to medieval Europe 300-1500 AD- W.Worton & Co. 1968.
32. Chejne, AG: "Ibn Hazm". Kazi Publication Chicago 911. 1982.
33. Al Qifr Ali Ibn Yusuf. "Tarik Al Hukma" Leipzig 1903.
34. Morowitz, H.J. "History's Black Hole" – hospital practice, May 19992, p/25-31
35. Nasr, S.H. "Islamic Science- An Illustrated Study". World Islamic Trust Lendar 1976
36. Zahur A., "Muslim History 570-1950" ZMD Corp. Gaithersburg, MD 2000.
37. Said M. "Ibn Al-Haitham" Hamdard Foundation- Pakistan
38. Ali A, "The Arab-Muslim legacy to ophthalmology" Islamic culture. Hyderabad, India. Jan. 1999.
39. Ahmed, M.B, "Contribution of Muslim Physicians and Scholars of Spain during 9th-13th centuries'. Journal of Islamic Medical Association, USA. Vol. 23. 1991.

Feasibility of Islamic Economic System in a Modern Economy

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Abstract

This lecture examines the feasibility of Islamic economic system in a modern economy. Contemporary economic system is sophisticated and very complex. Islam established the foundations of its economic system fourteen hundred years ago and its principles are deemed straightforward and simple. So the question arises: How can such a straightforwardly and simple system handle the complicated problems of a modern economy? This is exactly what I intend to answer in this short presentation using the problems of poverty and inequity as an illustration.

Instead of talking about the problems in the world, however, I will talk about them in the context of the United States of America, simply because this country is the most affluent, technologically most advanced, and has all the means at its disposal to eliminate at least the blight of poverty from its economy, but chronically suffers from it. I will first show the nature of the problems in terms of poverty, hunger, homelessness, lack of medical care, and

inequity in the distribution of income and wealth, in stark contradiction to the affluence of the country. Then I will demonstrate how the application of the Islamic principles can within a very short time solve these problems without at all stifling the prosperity of the society.

This conclusion, however, should not be misconstrued as if Islam cannot deal with the problems in the context of developing countries—Islamic principles worked like miracles in solving these and other problems with the least amount of resources during the early days of Islam.

1. Introduction

The theme of this conference is Muslim contributions to civilization.

Contribution to economic progress made by the Islamic economic system is an important logical candidate for discussion here, as economic prosperity is one of the pre-requisites for achieving scientific development. Given the time constraint, however, I will limit my presentation to one important aspect of these contributions—economic justice and human development. This restricted presentation hopefully will help the clarity of my talk in conveying the message to you and thereby will offer you an appreciation of the Islamic economic system in general.

Before getting into the subject, however, I have to lay before you the foundational principle of overall Islamic system, as Islam is not just a religion but a complete way of life and its economic system is only an integral part of that complete system. I will, thus,

make my presentation in three steps: First, I will put forth the basic Islamic principle of establishing and administering a system—social, economic, or political—and compare it with the basic tenet of contemporary systems. Second, I will explain the concept of economic progress drawing the distinction between growth and development and showing their implications for justice and human development.

The fundamental characteristics of an Islamic economic system will then be listed and their implications examined. Next, I will talk about the problems of poverty and inequity in the United States of America. Finally, I will show how easily the application of Islamic principles can solve these problems without having any adverse effects on economic progress.

2. Foundational Principle of Islamic System

The pre-conditions for the functioning of any system and, more so, for it to make any contribution to civilization are social and political stability and economic prosperity. There are two alternative ways to achieving these pre-conditions: Forcing the participation through coercion or inducing voluntary participation by winning the hearts and minds of the people.

The establishment of an elaborate and complex legal system to ensure participation and the use of strong-arm strategy for its implementation, coupled with harsh punishment for non-compliance, is the systemic way of forcing participation. In

this category, capitalist and communist (socialist) are the two systems dominant in the contemporary world of ideas and practices. Islamic system provides the alternative that functions and prospers through dedicated voluntary participation of the members of the society.

The fundamental difference between these two systems is philosophical as to how they view and treat human life. The former—both capitalist and communist—consider human life consisting of a body and a mind only; the soul is completely deported from the system supposedly to individual lives of the people or its existence and role go completely unrecognized. Since the soul is of no value in the social, economic, and political arena, people generally find very little use for it in their individual lives either. The members of the society thus gear towards achieving material possession and power and their enjoyment only, having little or no moral guidance and no consideration for the needs of the soul. In the absence of any ideal higher than material possessions and power, the Darwinian principle of survival of the fittest then becomes the sole guiding principle for individuals in their competitive pursuit for material success in life. In an environment of such fierce competition, trampling of the weak by the strong and the concomitant frictions and tensions are logical outcomes. Thus, these materialistic societies find no other option but to institute an elaborate legal system with stringent punishment for violation and depend solely on this legal system to maintain stability and insure prosperity. In the absence of any moral code of behavior required for soul-uplifting (spiritual development), however, individuals generally abide by the law only

when there is fear of getting caught; otherwise breaking the law for gaining material possession and power is no uncommon an occurrence in these systems.

It is no wonder that these societies achieve extraordinary material progress, but face similarly extraordinary social problems. This contention is illustrated by the high rate of economic growth achieved through state ownership and control in a communist system or through the allocation of most of the resources to a small group of people in the society to play the engine of growth in a capitalist system, on the one hand, and the enormous cost the society is forced to pay in the form of the loss of individual freedom in a communist system, the creation of extreme inequity in both the systems, and generation of chronic poverty in a capitalistic system, on the other. While the harsh competition for insatiable material progress leads to intense conflicts of interests, the inequity and poverty it generates create the dissatisfaction out of the feeling of relative and absolute deprivation—the logical outcome again is a variety of difficult problems for the society to tackle. The society thus responds enacting more laws complicating the system further and making punishments for non-compliance harsher.

How harsh and stringent the legal system becomes to maintain stability of the social-political-economic system in such a situation can be illustrated by the extent of incarceration in the USA—about seven million people are currently in incarceration, probation, and parole; that is approximately three percent of the total population. It, however, cannot claim to have reduced crime to any significant extent, although it keeps the system functioning. But it costs \$70 billion a year to keep about two million

individuals behind bars at the rate of \$35,000 per inmate. Note that this is only a fraction of the total cost of running the criminal justice system.

In contrast, Islam maintains social and political stability and attains economic prosperity by establishing an equitable and just system through dedicated voluntary participation of members of the society. This is achieved, however, not by the threat of law, but by training the individual members of the society and helping them develop the best possible human character. In this respect, Islam treats human life, unlike the contemporary western thoughts, consisting of three components—body, mind, and soul. All these three aspects are given equal importance in Islamic philosophy and practice for successful development of a personality with the best of human qualities and therefore, for efficient functioning of the system. The importance of this balanced development of human life may be understood better by the fact that without the soul (spirit), the body is a piece of dead meat and the mind (represented by the functioning of the brain) is similarly decomposed and non-functioning. The soul, however, does not die—when an individual dies, the soul simply leaves the body, but exists as spirit somewhere in God's universe. While the body and the mind relate to the material aspects of human living, the soul provides the human spirit and thus relates to the spiritual side of human life. Both material and spiritual components make up the full and complete human life and thus, balanced development of both aspects of life is essential for successful human living.

This balanced development of human personality plays a very important role in Islamic system in establishing and maintaining social and political stability and achieving

economic prosperity, in essence, laying the foundation of Islamic civilization. Islam requires its followers to believe that the life on this earth is temporary, the real life starts after death that is infinite, the individual's deeds in this life will determine the quality of his/her life in the hereafter, there is a day of judgment after death when the rewards for good deeds and punishment for evil deeds will be handed out by God. More importantly, individuals are accountable to God for his/her own deeds, God is keeping a complete and perfect record of everything we think, we say, and we do, and this record will be produced before us at the time of judgment (Just think of a surveillance camera a little better than ours, but God's surveillance camera may be million times better). This aspect of Islamic faith almost completely does away with the need for legal monitoring—members of the society are not only dedicated voluntary participants, they are self-monitored. Thus, while the spiritual uplifting of individual human life introduces self-monitoring of individuals' own behavior following the universal moral code of conduct, physical and mental development causes unimpeded material progress leading to growth of civilization.

There are two important benefits that derive from this process—first, self-monitoring eliminates, or at least, reduces the need for instituting an elaborate and complex legal system along with its very expensive monitoring system; second, it motivates every member of the society to voluntarily participate in the process of personal and community development. While the first frees huge amount of society's resources—both human and material—for utilization in developmental activities, the second leads to economic development or to be more appropriate, human development.

The latter aspect eliminates the social conflicts and tensions caused by the dissatisfaction arising out of extreme inequity and poverty endemic in the contemporary systems. This again minimizes the use of resources unnecessarily needed for conflict resolution and administration of justice in the systems devoid of any role for spiritual aspect of human living, thus allowing the use of the saved resources for human development.

3. Relevance of Economic Development

The economists for a long time used the concepts of 'economic growth' and 'economic development' interchangeably. It is only in the late nineteen hundred sixties, they have started making the distinction between them (Seers, 1969), unfortunately only to go back in nineteen hundred eighties to emphasizing the importance of economic growth for prosperity and applying the policy of growth world over. The only remnant of the recognition remains in the form of human development index constructed and published annually by the United Nations Development Program (UNDP, 1991). Islam, however, recognized the importance of economic development for human development and applied the policy and achieved extraordinary results fourteen hundred years ago.

At this point, the meanings of growth and development need to be spelled out. Economic growth refers to increase in per capita income accompanied by improvement in technology and changes in the structure of the economy from primary to manufacturing and technology-based production. Contrarily, economic development means creating the environment for the realization of human personality to its maximum potential for every

individual in the society. Thus, economic development implies affording the members of the society the opportunity to realize their human development to their fullest potential. In essence, development includes growth and adds human contents to it—growth measures economic progress in terms of increasing societal income (wealth) without any consideration for who is enjoying the wealth, while development takes into account the implications of rising wealth on the general population in terms of food security, nutritional standard, healthcare, longevity, education, etc.

The policy of achieving economic prosperity through the state mandate under communism and through the allocation of most of the resources to a small business class under capitalism is a policy of economic growth. It is a fast way to attain economic prosperity and technological progress. However, it takes place at a huge cost to humanity in the form of poverty, hunger, under-nutrition, homelessness, unemployment, lack of medical care, lack of education, etc. The extreme inequity it generates causes dissatisfaction and lack of respect for law resulting in incarceration of a large number of people. Not only that it costs the society in terms of both lost productivity because of dissatisfied workers and increased expenditure in administration of law, it also makes the system inherently unstable. The contributions to civilization the system makes, thus, face a constant threat of being lost. The disintegration of the erstwhile USSR illuminates the consequences of this instability.

The policy of economic development internalizes the policy of human development along with increasing the societal wealth. This simply means that every

member of the society is afforded the opportunity to participate in the process of generation of wealth and to share in equitably the attained prosperity. Thus, economic development establishes a just and equitable system. The economic prosperity and technological progress the system achieves are steady and the contributions to civilization it makes are stable and under less threat of being lost as a result of inherent forces of destruction.

The Islamic policy of ensuring the dedicated voluntary participation of all through winning their hearts and minds is the policy of economic development, rather more, a policy of human development. The prosperity this system achieves is just and equitable, and hence steady and stable. Therefore, the contributions it makes to civilization are more or less permanent, unless external forces threaten to destroy them.

4. Islamic Economic System

An economic system is distinguished by its characteristics with respect to the ownership and use of property, the nature of the exchange mechanism, the method of allocation of resources and distribution of income and wealth, and the role of the society in modifying the outcomes. The contrast between the capitalist and the communist systems is clear and well known. The features of the Islamic system, however, need spelling out in details, as the system is new to the modern world and it overlaps between capitalism and communism.

The ownership of property is a critical factor determining the nature of a system and needs to be addressed first. In Islam, God has created everything in the universe and therefore, God owns everything including the humans. The humans, as vicegerents of God on earth, are given the trusteeship over everything else—the right to use and preserve everything else for their welfare. This right to use, however, comes with duties and responsibilities. Unlike both capitalism and communism, Islam grants humans the right to use, not the right to own—the substantive difference being that the right to own grants right to use anyway the owner wants to, while the right to use puts restrictions and obligations defined by the owner. God, in Islam, has imposed elaborate restrictions on the use of resources and attached important obligations thereto. Islam, thus, introduces moderation into this important institution of private property and frees the society and its members from the tyranny of ownership of resources either by the private individuals or by the state. This right to use in Islam, however, is granted to private individuals as in capitalism, not to the collective authority of the society as in communism. The society, however, is given the responsibility of ensuring that the individual members discharge their duties and fulfill their obligations in using the resources. In essence, Islam grants individual's right to freedom as to the use of resources, ensures its appropriate utilization by imposing duties and responsibilities on this right, and entrusts the society with the authority to enforce them. Islam is thus a moderate blend of individual's right to freedom and social authority to regulate, of capitalism and socialism.

Given the private right to use resources, Islamic system functions through the operation of the market. Free private enterprise is the heart of an Islamic economy—it

encourages initiative and drive, facilitates innovations, and rewards productivity. God declares in the Qur'an, "He it is Who created for you all that is in the earth." (2:29). "When the prayer is ended, disperse in the land and seek of God's bounty."—the Qur'an enjoins (62:10). These categorically suggest that the earth is for the humans to explore and utilize. The Qur'an further says, "God has made subservient to you whatever is in the heavens and whatever is in the earth and granted you his bounties both manifest and hidden." (31:20). These verses ascertain the place of material well-being in Muslim life. In fact, Islam sets no limit on how much an individual can earn and spend; it, however, sets strict restrictions on how an individual earns and spends. The permissible and forbidden methods and activities of earning and spending are clearly stated. The Qur'an declares, "Allah has glorified trade and forbidden Riba." (2:275). Riba is a pre-determined fixed return on loans irrespective of whether the borrower earns profit or incurs losses. This implies that Islam encourages productive circulation of income and wealth, but forbids unproductive accumulation of wealth and exploitative earning of incomes. Hoarding for the purpose of raising prices and gambling are examples of forbidden activities of such nature.

Islam requires self-reliance on the part of every member of the society and discourages dependence on others. Two stories from the life of Prophet Muhammad (s) can convincingly make the point. One day a man came to the Prophet (s) for help. The Prophet (s), instead of giving him any handout, asked him if he had anything at home that he could spare. When the man told him that he had a few kitchen pots that could be spared, he asked him to bring them to him. After the man brought the pots, the Prophet

(s) auctioned them to his companions, gave some of the money from the sale to the man to buy food for himself and his family and gave the remaining amount to him to buy an axe for cutting wood from the forest.

On another occasion, the Prophet (s) noticed that a man was staying in the mosque praying for days and going out only for nature's calls. He also noticed that a man had been bringing him food all those days. So the Prophet (s) called on the man and asked him why he was staying in the mosque all the time, who the man was that was bringing him food, if he had a family and children, and who was taking care of them. The man replied that he wanted to worship God all the time, the man was his brother, he had family and children, and his brother was taking care of them. After hearing all these, the Prophet (s) said, 'your brother is a better worshipper than you are.'

These two stories clearly suggest that dependence on others is not an acceptable way of living in Islam for people of abilities and self-reliance is admirable and therefore, encouraged. Prophet Muhammad (s) said, 'A man has not earned better income than that which is from his own labor.' (Ibn Majah). The Prophet (s) is also reported to have said, 'If God provides anyone of you with an opportunity for earning a livelihood, let him not leave it unexploited until it is exhausted or becomes disagreeable to him.' (Ibn Majah). These sayings clearly indicate the importance of economic prosperity in Muslim life. More importantly, the concept of worshipping God Islam generalizes is broad and far-reaching in guiding human behavior in this respect—living the earthly life following the commandments of God is worshipping, rather a better way of worshipping God. This

ensures the participation by everyone in the process of generation of income, offers them the opportunity to explore their potential, and induces the best contribution they can make to the society.

In requiring self-reliance and participation in productive activities for every member of the society, Islam makes sure that they enjoy an equal opportunity in acquiring complementary resources to work with. The first and the most important complementary resource is human capital and Islam makes acquiring this resource (knowledge) obligatory for every Muslim man and woman (Bukhari). The importance of learning is also evident from the first injunction revealed by God to Prophet Muhammad (s): “Read in the name of your Lord Who created. Created human from a clot.” (The Qur’an, 96:1-2). In addition to enjoining to learn, God is also talking about the science of creation in this very first revelation. This strongly indicates that spiritual knowledge requires a proper understanding of the functioning of the material world. That this knowledge relates to material aspects of living also is evident from the Prophet’s (s) instruction, ‘If necessary, seek knowledge in China.’ (Bukhari). The foundation of Islamic civilization is based on this role of learning in Muslim life—Muslim contributions to civilization that are exhaustively presented to you in various sessions today testify to this fact.

In addition, Islam puts in place important economic institutions to provide material resources to everybody in the society so that no body is deprived of the opportunity to participate productively. The institution of inheritance is one such

institution—unlike the western institution of primogeniture that grants sole ownership of the parent's estate to the first child only, Islam grants inheritance rights to a large number of members of the family. The members who are entitled to a share in the estate and their respective shares are clearly defined and pre-determined by Islam and nobody has any authority to change them. Even the holder of the estate, unlike the western system of granting rights to the owner to give his/her estate to anybody he/she desires, does not have the authority or even the right to deprive any member of his/her share by way of writing a will before death.

These injunctions and institutions, in addition to providing complementary resources to almost every member of the society for productive participation, eliminate the potential for concentration of income and wealth, on the one hand, and creation of poverty, on the other. The distribution of the estate among a large number of inheritors after the death of a person attacks at the root of the problem of concentration of income and wealth and reduces the potential for the creation of poverty. In addition, it reduces the chances of inefficient utilization of assets by large asset-holders who might simply rely on unearned income and increases the productive efficiency of assets by innovative inheritors. Note that the larger the number of people getting complementary resources, the greater is the probability of inventions and innovations in the system. Islam, thus, engages the largest possible number of people in the productive process and thereby encourages efficiency, induces inventions and innovations, and facilitates economic prosperity. Most of all, this prosperity is achieved in a just and equitable process through increased circulation of productive resources in the system.

Islam, however, recognizes that there would always be some less fortunate people in the society—people suffering physical and mental disabilities, victims of natural calamities, socially displaced, and demographically and economically handicapped, such as orphans, widows, elderly, unemployed, etc. Here Islam deals with the problem both at individual and social levels to make sure that “wealth does not circulate only among your rich.” (The Qur’an, 59:7).

At the individual level, Islam makes it obligatory on the part of the more fortunate to take care of the less fortunate in the society. Prophet Muhammad (s) said, ‘He is not a Muslim who takes his fill and his neighbor goes to bed hungry.’ (Bukhari). This, however, is not prescribed as a pity to the less fortunate; it is a way of expressing gratitude to God for making them more fortunate. As vicegerents of God on earth, God has granted a minimum of human dignity to every individual including the less fortunate and the expression of gratitude to God in the form of giving charity to them must be dignified. In essence, God has granted the needy a legitimate share in the wealth of the rich. In this sense, the rich simply perform their obligation to (worshipping) God by giving a share of their wealth to the needy. Zakah, one of the five pillars of Islam, is one such obligatory duty required of a Muslim—two and one-half percent of accumulated wealth after some deductions to be paid out as poor dues at the end of the year. While as a proportion of total accumulated wealth this seems insignificant, I will show in Section 6 that this is a very potent economic instrument in eradicating poverty from the society completely with the least impact on the holder of wealth.

Islam actually makes it a social responsibility for the community to eradicate poverty. The existence of poverty in the society is considered to be an abominable sin for the community as a whole. The most serious sin in Islam is ‘Kufr’ that means denying the Authority of God. Prophet Muhammad (s) said, ‘Poverty is a sin worse than Kufr,’ (Bukhari). This implies that poverty is not tolerated in an Islamic system, or more categorically, a system that tolerates poverty denies the Authority of God, and therefore, is not an Islamic system.

In concluding this section, it can be summarized by saying that the Islamic economic system combines the beneficial characteristics of both capitalism and communism, but is free of their undesirable features. The application of free enterprise and market mechanism along with the use of egalitarian principle offers the system to be both efficient and equitable. The absence of ownership right on resources and of unrestricted authority on their use for both the individual and the state frees the society from the tyranny of ownership and use. In this sense, the Islamic system is a balanced middle path—a moderate system devised for the benefit of humanity.

5. Poverty and Distributional Inequity in the USA

To illustrate the effectiveness of these simple and straightforward principles of Islam in dealing with the problems of a complex modern economy, the problems of absolute poverty and inequity in the distribution of income and wealth in the United States of

America may be used. The USA is the most affluent country in the world today and has the most technologically advanced economy. However, the country suffers a serious problem of chronic absolute poverty—hunger, homelessness, and lack of medical care, in spite of the fact that it has all the means at its disposal to eliminate the blight from the society. At the same time, it has a very high inequity in the distribution of income and wealth that is getting even worse over time.

Absolute poverty is defined as the inability of a family to afford the minimum basic needs of life and therefore, a condition of living below the standard of subsistence. In the USA, an official poverty line is constructed based on this definition and all those falling below this line are called absolute poor. This poverty line is calculated as the cost of a least expensive bundle of vegetarian diet providing the minimum nutritional needs, multiplied by a factor of three to include the cost of other basic needs of life—shelter, clothing, medical care, etc. The poverty line income used by the US government in 1999 was \$8,501 for an unrelated individual, \$10,869 for a family of two, \$13,290 for a family of three, and \$17,029 for a family of four (US Census, 2000). Based on these thresholds, the estimate shows that 32.4 million people, 11.8 percent of the total US population was in absolute poverty in 1999 (US Census, 2000).

The 1999 census figures also show that 42.6 million people, that is, over 15.5 percent of the total population do not have any form of medical coverage (US Census, 2000). The Urban Institute (2000) reports over two million homeless people in 1996 that has continued to increase, and increased by 15 percent in 2000 over that of 1999,

according to the Conference of Mayors (USCM, 2000). The Tufts University Center on Hunger, Poverty, and Nutrition Policy (CHPNP, 2001) estimates that 12 million people are chronically hungry, while more than 35 million suffer food insecurity (1997 figures). Note that families that are marginally above the poverty line can fall below the line at any time—hence they are also food insecure along with the poor. A US Department of Agriculture Report (USDA, 1998) shows that one in every ten US households suffers food insecurity.

This condition of poverty has serious adverse effects on human development. Lack of proper nutrition and medical care causes physical and mental debilitation, stunted growth for children, susceptibility to diseases, and ultimately premature death. These show up in the human development index constructed by the United Nations Development Program—the USA has the highest infant and maternal mortality rate and lowest longevity for both males and females in the industrial world, although it has the highest per capita GDP adjusted for purchasing power parity (UNDP, 2000).

Why does the USA have such a serious problem of poverty and hunger? A look at the minimum wage figures can provide an insight into this situation. Assume that the minimum wage is \$5.65 per hour and an individual works full time that is 40 hours per week and 50 weeks a year. The weekly earning will be \$226, assuming that \$26 will be deducted for social security, temporary disability, etc. the weekly take-home pay is \$200. This gives an annual income of \$10,000 that is less than the poverty level income for a family of two. Assume again that a one-bedroom apartment costs \$500 a month that will

take away \$6,000 from the yearly income, leaving only \$4,000 for everything else. If food costs \$300 a month, a total of \$3,600 per year, only \$400 is left for the whole year for transportation, clothing, medical care, education, electricity, gas, phone, etc.—an impossible task. Poverty is the inevitable outcome.

How the low wage perpetuates the condition of poverty is clear from the trend in minimum wage over time. The US Department of Labor compiled a list of minimum wage figures for a long period of time (BLS, 2000). This list shows that the real minimum wage in 1998 dollars, instead of going up, has actually gone down over the years. In 1968, the minimum wage was \$7.49 (in 1998 \$), it fell to \$6.19 in 1977, \$4.40 in 1989, and rose slightly to \$5.23 in 1997, but still far below the 1968 figure. This is exactly the reason why hunger has been continuously increasing over time. Tufts University Center for Hunger, Poverty, and Nutrition Policy's research shows that there were 20 million hungry Americans in 1985, which increased to 30 million in 1992, and 35 million in 1997.

One important aspect of the US economy's health needs to be spelled out here. The problem of poverty and hunger just described prevailed during a period of unprecedented economic prosperity—during 1990's; the economy has been growing steadily at about four percent annually with almost no unemployment, zero inflation, and very low interest rate.

[Table 1 About Here]

Who is then enjoying the economic prosperity? The figures in Table 1 give a clear answer to this question. These figures relate to 1989, the latest analysis done by Wolff (1997). Top 20 percent of the US households enjoy 55.5 percent of the national income, a share greater than that of the bottom 80 percent of the households, while the bottom 20 percent a meager 3.1 percent. The distribution of net wealth (assets minus debts) is even worse—the richest 20 percent receiving 84.6 percent (leaving 15.4 percent for the bottom 80 percent of the households), while the bottom 95 percent only 37.2 percent. The shares of the top one and five percent are 40.9 and 62.8 percent, respectively. Worst is the distribution of financial wealth (financial assets minus financial liabilities)—93.9 percent going to the richest 20 percent and 27.8 percent to the bottom 95 percent. Here the shares of the top one and five percent of the households are respectively, 48.1 and 72.2 percent.

Studies also show that this inequity in the distribution of income and wealth has increased further during 1990's (Collins, et al.). While the real wage has been decreasing, the CEO pay has been skyrocketing—the average yearly CEO pay reached \$5.6 million in 1996, raising the CEOs-workers pay ratio to 209:1 from 44:1 in 1960s. In addition, the tax burden has shifted continuously from the rich to the middle class during the 1980's and 1990s (Barlett and Steele, 1995).

6. Islamic Solution to Poverty and Inequity in the USA

The most important thrust of Islamic system is the development of human personality. Once the well-balanced human personality is developed and put in place, the rest becomes easy—the injunctions of permissible and forbidden are adhered to. The implementation of a policy thus becomes a matter of informing the community about the policy and it is carried out by a dedicated and self-monitored membership of the society.

In the absence of such a system, however, the implementation of an Islamic policy in the USA has to depend on the existing system of external monitoring. Since personal material well-being is the only consideration in this materialistic secular society, the policy has a greater chance of success if it entails a smaller personal sacrifice than that of the existing one. Thus, I will have a brief discussion on Islamic instruments that are relevant to reducing poverty and inequity, but might not be easy to implement without having a full-fledged Islamic system. I will then make a strong case for the implementation of the system of zakah to solve the problems, as it implies much smaller personal sacrifice and easy to implement.

The introduction of the Islamic law of inheritance can go a long way in reducing inequity and poverty. Similarly, the application of the laws relating to permissible and forbidden activities and methods of earning and spending can eliminate many sources of accumulation and concentration of income and wealth and concomitant generation of poverty. Gambling, production, trade, and consumption of drugs, hoarding, and speculative manipulation of the market are examples of such activities. It is the consumers' behavior that determines what the market provides and thereby provides

incentive for these activities. Islam puts a great emphasis on the consumption behavior of an individual as an economic entity. Correcting the individual behavior with respect to demand for drugs, for example, can eliminate the problem of drug production and drug dealing and the USA may never have to fight drug wars in other countries spending huge amount of resources that can be easily used for fighting poverty at home.

More importantly, we will not have to spend huge amount of resources in fighting the drug war at home and in filling our adult correctional institutions with inmates. This will turn millions of our youth into productive resources—this by itself will reduce poverty significantly, as the families and children of the incarcerated individuals are basically sentenced to poverty by their incarceration.

All these, however, require Islamic education and development of Islamic personality. In their absence, the Islamic institution of charity—both voluntary and obligatory—can play an effective role in eliminating poverty completely and thereby diminishing inequity to a certain extent. The USA already has a tradition of supporting the poor using the welfare system and the people make voluntary donations significantly. The problem is that the system is designed to support the poor, not to get them out of poverty, thereby having the undesirable effect of perpetuating the problem. The introduction of zakah not only can eliminate poverty, it can turn the poor into productive members of the society. Moreover, the required payment is so small a percentage of the asset-holders' accumulations that it is not expected to have any adverse effect on the incentive to productive accumulation and utilization of assets. This coupled with the

productive participation of the erstwhile poor can lead to equitable prosperity, rather than stifling growth that is blamed to happen with conventional redistribution policies.

The zakah, translated poor dues, is an obligatory wealth tax imposed and collected by the society to help the less fortunate and to turn those among them who are physically and mentally able into productive members of the society. It is only two and one-half percent of the assets accumulated at the end of the year with some deductions, such as the value of owner-occupied home and of a small amount of jewelry regularly worn by women. The early Islamic society established by Prophet Muhammad (s) practiced this instrument with great success—within a few years of its institution, it was so successful that the system could not find any body deserving of the support. It is worth mentioning that the early Islamic economy was not an affluent economy at all compared to the US economy today.

To see what can happen if the instrument of zakah is institutionalized, I will quote the figures estimated by Wilhelm (1998) and used by Ackerman and Alstott (1999) in their proposal for a wealth tax to replace the income tax. Using a household exemption of \$80,000, they show that a two percent wealth tax can yield the revenue of \$378 billion per year. Adjusting this figure for two and one-half percent zakah rate, total yearly zakah collection can be \$472.5 billion. Now dividing this among the 32.4 million poor, the society can pay \$14,583 per year to every individual, which is \$43,750 for a family of three. This calculation shows that the society can eliminate poverty completely in just one year—this gives the families not just the support, but enough to invest in education,

attain occupational skills, and become productive. In a few years of its implementation, this social help may fully eliminate the need for any external support for these families.

To compare this zakah figure with the welfare expenditure in the country, take the two important programs mainly geared towards the poor—Aid to Families with Children and Food Stamps. Both federal and state government spent in 1996 a little over \$40 billion on these programs, which is expected to be even smaller now as a result of the welfare reform. Any way, this expenditure is only a small fraction of the total zakah money collection underlining the important role zakah can play.

This zakah program, in addition to eliminating poverty, will reduce the problem of inequity also. The importance of this inequity reduction cannot be ignored, because it will reduce inequity through a process of bottom up, rather than the conventional process of top down. It is the top down process that the wealthy in the society objects and resists; the bottom up process is welcomed and facilitated by every body in the society.

One more point needs mentioning here. The country spends \$70 billion a year to keep about two million incarcerated behind bars. The elimination of poverty through the institution of zakah most probably will reduce the problem of incarceration and save the resources for productive utilization. This suggests that the zakah program can go a long way not only in solving poverty, but also other problems the society suffers.

7. Conclusions

I would like to conclude this presentation emphasizing that Islamic economic system is not only feasible in a modern economy, but also it is indeed the answer to their problems. Modern system has become complex and is getting more complex so as to make the issues intractable only because it denies one very important aspect of human life—the soul (spirit) and directs the whole system towards a fierce competition for gaining material possession and power as much as possible. In the Darwinian battle for survival of the fittest, more appropriately, the battle for ascension to position of wealth and power for the fittest, in the absence of any kind of moral code of behavior, the secular modern society creates many problems it is absolutely ill equipped to deal with. The only thing it does is to enact more and more laws with stringent punishment for violation, but to no avail; the allure of material possession and power is much too great to keep the aspirants for material success from violating the law.

Islamic system is simple and straightforward for every body to understand, the spiritual guidance is much persuasive to make them abide by the divine injunctions that are universally beneficial for the humanity, and the society is geared towards creating and maintaining the environment for both material and spiritual uplifting for every body in the society. If applied, this system can successfully eliminate the problems of the complex modern economy in straightforward and simple ways and can lead to economic development, rather than growth. The institution of zakah illustrates this possibility well.

References

- Ackerman, Bruce, and Anne Alstott, 1999; *The Stakeholder Society*; New Haven: Yale University Press.
- BLS (Bureau of Labor Statistics), 2000; *Value of the Federal Minimum Wage, 1938-1997*; U. S. Department of Labor.
- Barlett, Donald, and James Steele, 1995; *America: Who Really Pays the Taxes?* Andrews and McMeel.
- CHPNP, 2001; *Hunger in the U.S.*; Tufts University Center on Hunger, Poverty, and Nutrition Policy; <http://hunger.tufts.edu/us.shtml>.
- Collins, Chuck, Betsy Leonard-Wright, and Holly Sklar, 1999; *Shifting Fortunes: The Perils of the Growing American Wealth Gap*; Boston: United for a Fair Economy.
- Pickthall, Muhammad, M., 1977; *The Meaning of The Glorious Qur'an—Text and Explanatory Translation*; Makkah: Muslim World League—Rabitah.
- Seers, Dudley, 1969; The Meaning of Development; *International Development Review*; 3-4.
- UCM, 2000; *Mayors' 16th Annual Survey on "Hunger and Homelessness in America's Cities" Finds Increased Levels of Hunger, Increased Capacity to Meet Demand;* http://www.usmayors.org/uscm/news/press_releases/documents/hunger_release.htm
- UNDP (United Nations Development Program), 1991; *Human Development Report 1991*; New York: Oxford University Press.
- UNDP (United Nations Development Program), 2000; *Human Development Report 2000*; New York: Oxford University Press.
- U.S. Census, 2000; *Current Population Survey, March 1999 and 2000*; U. S. Bureau of Census.
- USDA, 1998; *Prevalence of Food Insecurity and Hunger, by State, 1996-98*; U. S. Department of Agriculture.
- Urban Institute, 2000; *Millions Still Face Homelessness in a Booming Economy*; <http://www.urban.org/news/pressrel/pr000201.html>.

Wilhelm, Mark, 1998; *Estimates of Wealth Tax*; Unpublished Paper; Pennsylvania State University, University Park.

Wolff, Edward N., 1997; *Economics of Poverty, Inequity, and Discrimination*; Cincinnati: South-Western Publishing.

Table 1
Households' Share of Income and Wealth in the USA (1989)

| | Top 20% | Top 1% | Top 5% | Bottom 20% | Bottom 80% | Bottom 95% |
|-----------|---------|--------|--------|------------|------------|------------|
| Income | 55.5% | 16.4% | 29.7% | 3.1% | 44.5% | 70.3% |
| Wealth | 84.6% | 40.9% | 62.8% | -1.4% | 15.4% | 37.2% |
| Financial | | | | | | |
| Wealth | 93.9% | 48.1% | 72.2% | -2.3% | 6.1% | 27.8% |

Source: Wolff, 1997.

Islamic Financial Institutions in the U.S.: Viability and Prospects

Abdel-Hameed M. Bashir

Abstract

Since the prescriptions of Islam prohibit charging or receiving interest, Muslims in the West, particularly in the U.S., find themselves effectively unable to deal with the interest-based financial institutions. Hence, a genuine need arises for establishing financial institutions that serve a growing Muslim population while at the same time adhere to the rules and regulations of the U.S. financial system. The question now is: How can the Islamic financial institutions bridge the gap between religious constraints and financial regulations?

I. Introduction

It is a consensus among Muslim jurists and scholars that the interest rate charged by conventional banks is the prohibited *riba*. While Muslims adhere closely to the directives of *Qur'an* and *Sunnah*, it is sometimes helpful to understand the rationale behind such prohibition. It has been argued by many prominent Western economists that the system based on interest and debt is unstable and subject to financial crises. The last decade had witnessed many debt crises in different parts of the world, Latin America, East Asia and Russia. The single most common factor of all these crises was bank loans made at excessively high rates of interest. When the indebted companies and currency traders defaulted, the whole financial systems tumbled. The Islamic financial system, based on participation and risk sharing offers a viable remedy for the world debt crisis. Under the Islamic modes of financing, the lender is expected to share part of the risk involved in investing. Accordingly, Islam financing encourages active participation and asserts that money borrowed is not

entitled to a reward. Thus the system of shared risk is expected to reduce the possibility of financial crises and be more fair and equitable. Hence, Muslims are encouraged to abide by the tenets of Islam and not deal with interest because of the great torment that waits those who deal with *riba*. Therefore, it is imperative on Muslims in the west in general, and the U.S. in particular, to establish financial institutions that provide them with interest-free choices.

Recently, a survey by the Council on American Islamic Relations (CAIR) and other Muslim organizations, estimated the number of Muslims in the U.S. and Canada to be over 10 million. The survey went further to conclude that sizeable portions of the Muslim community are middle class professionals with a major savings pool¹. One major lesson to be learned from this recent study is that the Muslim communities in the West are dynamic and changing over time. During the 1960s and 1970s, the pioneering Muslim emigrants (mainly students) were occupied by organizing themselves in college campuses to preserve their Islamic identity. During the 1980s and 1990s, the process has changed to building local institutions like Mosques, schools Islamic centers, as well as social, cultural and professional organizations. Certainly, the urgent challenge facing the Muslims in the 21 century is building economic and political for empowerment and active participation. In particular, Muslims are faced with urgent needs for financial institutions that conform to the tenets of Islam. The absence of Islamically-oriented institutions has forced Muslims to deal with the interest-based conventional system. Notwithstanding the

¹ Available statistics reveal that American Muslims have average per capita income ranging between \$35,000 and \$45,000, well over the national average of \$24,000 to \$27,000.

religious and secular constraints arising when dealing with riba-based institutions, the Muslim communities found themselves financially weak and marginalized. Being relative small communities, large financial institutions were uninterested in serving their needs or catering for their religious restrictions. Consequently, the two groups mostly affected by this situation were Muslim consumers and small business for, historically, these two groups relied heavily on local banks for their credit and payments needs. Small businesses are imperative because they play an essential role in the economic prosperity of smaller communities. Hence, for all practical purposes, there exists an indisputable demand for financial institutions providing services and products to satisfy the needs of the Muslim clientele. The question is why the development of Islamic financial institutions in the U.S. is slow or limited? The purpose of this paper is to shed some lights on the factors limiting the growth of Islamic financial institutions within the U.S. financial system. Section II of the paper focuses on the constraints facing these institutions and how to overcome them. Section III discusses the current state of the existing institutions, their challenges and potential successes while section IV sheds some light on new opportunities and unsatisfied needs. Some concluding remarks will be given in section V.

II. Obstacles and Challenges

Theoretically, Islamic financial institutions have to overcome many obstacles before they can operate in the U.S. financial system. It is important to keep in mind that some of these obstacles have become less restrictive recently. Islamic institutions have a better chance to succeed given the profound changes just getting underway in the U.S. banking industry; the most obvious being mergers, deregulation, information technology, and financial integration. The implications of these changes for profitability and safety on banks have been widely discussed. Meanwhile, the implications of these changes on Islamic financial institutions are yet to be argued. One may legitimately argue that the current changes will benefit Islamic finance by relaxing the entry restrictions to the financial markets. If Islamic banks are allowed to operate in the U.S. (as community banks or national banks) the Muslim communities will have access to financial services that are compatible with the Shari'a. Surely, regulations such as the Community Reinvestment Act (CRA), which requires that banks to lend in all areas in which they take deposits, would certainly benefit Islamic consumers and small businesses². On the contrary, one might argue that the new changes would not be conducive for Islamic financial institutions for two reasons. First, Islamic financial institutions cannot succeed in a riba-based environment because they have to adhere to controversial type of regulations. Second, because of their size, Islamic institutions will not be able to compete with large organizations created by mergers. Nonetheless, for Islamic

² The CRA played an important role in the development of community banks, allowing the community banks to mobilize the community savings and reinvent these savings in the community.

financial institutions to be able and succeed in the U.S., they have to overcome certain impediments. These include regulation, innovation, competition, lack of accounting standards, and the perception of the Muslim communities.

II.1. *Financial Regulations*

Until recently, the primary constraint hindering the growth and development of Islamic banks in the U.S. financial markets is financial regulation. If Islamic banks, for example, were chartered to operate in the U.S., they would be required to adhere to the same set of rules and regulations applied to their counterparts, regardless of their nature and scope of their operations³. The Banking Act of 1933, which requires the separation between banking and securities industries, was a major hurdle for operating a bank on the Islamic basis⁴. However, until now Islamic banks were not able to get chartered in the U.S. because the Islamic modes of contract (*Mudarabah*) put the depositors' funds at risk contrary to the safety measures demanded by regulators. Accordingly, the rapid growth (15% annually) and the global success of Islamic banks worldwide have led many traditional banks to open windows for Islamic deposits (Citibank). Another major hurdle against the operations of Islamic banks in the U.S. financial system is reserves requirement. The equity-like nature of Islamic profit-loss sharing (PLS) deposits makes them different than ordinary deposits in a conventional bank. Many jurists and Islamic economists argue against

³ Islamic banks, for example, should abide by chartering requirements, capital adequacy, deposit insurance, and restrictions on asset holdings. The same set of regulations also applies to non-banking institutions like insurance companies, pension funds, real estate agencies, and mutual Funds.

subjecting PLS deposits to reserve requirements. They argue that, since PLS deposits are neither guaranteed nor entitled to fixed returns, subjecting them to reserve requirements will be an extra burden on both the depositor and the institution, since reserve requirements provide no returns⁵. Furthermore, deposit insurance (and insurance in general), could also be considered a barrier given the controversy over the conventional insurance contract. However, the passage of Gramm-Leach-Bliley Financial Services Modernization Act of 1999 (GLBA) has made establishing of an Islamic bank in the U.S. possible and eminent⁶. In particular, Islamic banks would have to pay more attention to their *Camel rating* (acronym based on five areas: capital adequacy, assets quality, management, earnings, and liquidity) in order to adhere to the U.S. financial regulations.

II.2 Financial Productions

Another obstacle hampering the expansion of Islamic financial institutions in the U.S. is the financial instruments available for mobilizing and utilizing Muslims' savings. The current instruments can be classified into two categories: equity-like and mark-up and debt-like instruments. In fact, there are many types of instruments

⁴ Because Islamic banks are more akin to finance companies, it may be useful to adopt the same regulations established by the Securities Exchange Commission (these include type of securities, risk factors, internal control, and performance indicators).

⁵ Since Islamic banks guarantee demand deposits only, a 100% required reserve on demand deposit would help reduce the problems of asset-liability mismatch caused by unexpected demand deposit withdrawals.

⁶ The GLBA made two major changes. First, it allowed bank holding companies to merge with insurance and securities companies and cross-sell their products. Second, it allowed bank holding companies that did not merge to underwrite securities, selling or underwriting insurance, and make equity investments in business firms.

(contracts) in each category, whereby jurists and financial practitioners have established their validity and conformity with the Shari'a. Nonetheless, the existing instruments are limited in scope and can hardly cope with the contemporary financial needs. Many Muslims and non-Muslims lack a clear understanding of their applicability in this continuously innovative financial environment. Hence, Islamic financial institutions have to develop and innovate (financial engineering) short-term financial instruments that satisfy the Shari'a requirement while at the same time allowing banks to diversify their portfolios and secure short-term funds if needed. Islamic financial institutions also have to invest heavily in familiarizing their potential customers and clients with these instruments before they can expect to attract new customers or survive the competition.

II. 3. *Accounting Standards*

Another constraint that could be detrimental for the growth and development of Islamic financial institutions the U.S. markets is the lack of standard accounting principles that facilitate disclosure and surveillance of bank performance. Standardization of accounting policies is important to Islamic financial institutions for the same reason it is for conventional ones: to facilitate meaningful comparisons and analyses of results. In most cases, it is not possible to use the conventional accounting principles and apply them to the Islamic financial concepts because the framework of the two systems is different. Recently, the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) has introduced twelve (12)

accounting standards, which precisely cover disclosures and the transparency of the balance sheets and financial statements. It is hoped that, by adopting the AAOIFI standards, the nature of Islamic financial institutions business activities become more transparent.

II. 4. *Competition*

For Islamic financial institutions to survive in the U.S. financial system, they should be innovative and well capitalized. More importantly, the ability of Islamic institutions to exist in a well-developed and highly innovative system depends on whether these institutions can compete with well-established, well-capitalized institutions. In an environment of financial integration, where the securities and insurance companies have recently been allowed to enter the banking business, Islamic financial institutions will face a tough competition in both the deposit and financial service markets. Therefore, Islamic financial institutions will face a tough competition in both the deposit and financial service markets. Therefore, Islamic financial institutions should be innovative and aggressive in designing new modes of financing in order to attract deposits and provide financial services for their customers.

On the other hand, financial integration would enable Islamic financial institutions to reduce costs and diversify their portfolios to generate more profits and provide competitive returns. The fact that Islamic banks do not guarantee the

nominal values of their deposits and do not provide fixed returns creates a strong incentive for risk taking. Hence, it would be necessary to raise the capital ratio to reduce additional hazards. In particular, enough capital is needed to reduce the risk of insolvency (capital ratio more than 8%). In a well-regulated financial system, competition is necessary for efficiency and quality. A certain level of competition is required before these institutions can meet the demand of a growing Muslim population.

II.5. Commitment

For Islamic financial institutions to flourish and expand, we need authentic presence and commitment. Authentic presence requires commitment to the Shari'ah from both the institutions and their clientele. More importantly, the Muslim community's perceptions and willingness to patronize these institutions are key ingredients for success. An Islamic bank cannot succeed without clients who are committed to the notion of Islamic financing. Equally, the Islamically committed customers cannot patronize a financial institution unless the institution satisfies their religious and financial needs. That is, unless the institution provides services similar to the un-Islamic alternatives available in the market while satisfying the tenets of the Shari'ah. On the other hand, being socially responsible, Islamic financial institutions should operate as community banks, mobilizing the savings of the community and reinvesting it in the same community. An Islamic financial institution can effectively and efficiently play a social and religious role by pooling the zakat money and

redistribute them in the community. However, these institutions would not succeed unless they become committed to their mission: abide by the Shari'a and provide the financial needs of their customers. Indeed, the Masjid, and other social and educational institutions can play a pivotal role in educating the community about the importance of patronizing the Islamic financial institutions.

III. The State of the Existing Islamic Financial Institutions

Certainly, the enormous bloc of Muslims in the U.S. cannot be bypassed by the growth and prosperity of the U.S. economy. The phenomenal surge or otherwise of the U.S. market (as indicated by various indices like DJIA, NASDAQ, S&P500) in the last decade has inspired many people, Muslims included, to invest in stocks and other financial assets. Consequently, few institutions emerged to mobilize Muslim resources and provide them a bridge to economic and financial security. The bulk of the Islamic institutions operating in the U.S. financial markets today focus on assets management, consumer financing, and non-bank activities. Apparently the success of some of these institutions has inspired companies like the Dow Jones, International Investor, and the FTSE International to launch global Islamic Index series (DJII, TII Global Islamic Index, and FTSE International) to track the performance of investing in Islamic equity funds. Despite being small and fragmented, some of the existing institutions have made major successes in the areas in which they concentrate. In many cases the annual returns have outperformed both large and small capitalizing stocks in the last few years. For example for Amana Income Fund, the average annual

return for the last 10 years was 11.69% compared to S&P 500's return of 17.43%, while Amana Growth Fund averaged 17.81% compared to Russell 2000's 10.53% for the same period. Between 1996 and 1999, Dow Jones Islamic Index Fund averaged 27.25 % outperforming S&P 500 (24.37%) and Russell 2000 (12.86%). Furthermore, the NAIT annual returns have averaged 6% compared to 5.6% deposit rates.

IV. Challenges Ahead

The absence of interest-free banks from the U.S. financial landscape can be attributed to regulations as we stated earlier, or to simple economics. In any case of the cause, the apparent success of the existing Islamic funds has attracted many traditional institutions to consider providing Islamic financing (Citibank, Fannie Mae). Realizing the importance of satisfying the religious needs of the Muslim community, the Office of the Comptroller of the Currency (OCC) is reviewing several applications of chartering Islamic financial institutions. Moreover, the wide use of the Internet has made it possible for foreign banks to provide their services to Muslims in the U.S. Online Islamic banking could benefit consumers by lowering fees or increasing returns on profit-loss deposits.

As we mentioned above, the existing institutions have concentrated their businesses on mutual savings (NAIT), real estate financing (UBK/Al-MANZIL, ISLAMIC CO-OP, MSI), car leasing and home financing (LARIBA), mutual funds and assets management (AMANA, DOW JONES ISLAMIC INDEX FUND, ISLAMIQ.COM), and insurance (TAKAAFUL USA). Obviously, the Muslim financial needs are not limited to what is provided by the existing Islamic institutions.

One way to describe the problem is to think of the Islamic consumers and small businesses. As consumers, fixed income people cannot invest in stocks (the focus of these institutions) because of the high risk associated with stocks. There is, therefore, an urgent need for institutions specializing in Islamically viable low-risk investments to attract the savings of such groups (Islamic pension fund?). Muslim students are also not well served by the existing institutions. Specialized student loan institutions are undoubtedly needed to cater for this group. Institutionalizing zakat and Waqf could be a viable solution to this problem. Muslim communities also need small businesses for halal products (stores), professional and specialized services, schools, etc. Because of their vital importance to the communities, these small businesses need specialized funding opportunities. Lastly, but not least, Islamic institutions should establish national foundations that give grants for research and community development.

V. Conclusion

The transformation of the banking system, the change of regulations, and the information technology can benefit the Muslim communities in the U.S. by allowing Islamic financial institutions to operate under both the American regulations and the tenets of the Shari'ah. The success of the existing Islamic institutions has paved the way for new services, new instruments, and new institutions.

Where Do We Go from Here?
Muslim Contribution to Civilization: The Harbinger of the Third Renaissance

Syed Ali Ahsani

The 1992 Quincentenary celebrations of Columbus's discovery of America in 1492 was a turning point in Muslim intellectual revival set in motion following WW II. Outside Spain, the first international, of which this writer was the Chief Coordinator, was held on Islamic Spain in al-Hamra, Lahore in 1991. Over 60 Muslim scholars, including 23 from outside the Subcontinent, presented papers on the glorious contribution of Islamic Spain to civilization.

Starting 1150 AD to the Sixteenth century, the Jewish, Christian, and Muslim scholars from Western Europe and Spain translated, in Toledo Academy, set up by Alfonso, Sabio-the Wise, books from Arabic into Latin. They were transported to academic centers in Europe, leading to Renaissance, the revival of knowledge in Europe.

Unfortunately, the proceedings of the Lahore Conference were not published. Included in the papers presented was a research article by Dr Raisuddin Ahmed of Dacca University. He proved that the Muslims first entered into Spain during the time of Usman, the third Caliph, who commanded that they proceed to Istanbul overland. Uqba bin Nafe,

the ruler of Egypt and his brother entered Spain but did not have to return as Berbers accompanying him did not continue the expedition and further reinforcements were cut off. This was narrated by Dr Mohammad Hamidullah in his *Wathaiq-al-Siassaia*. Also, Masumi has written a paper on the same subject.

The Lahore Declaration adopted at the conference called for establishment of chairs, offering courses on Islamic Spain, naming of streets after illustrious scholars of the period, holding conferences, seminars, on Islamic Spain; commissioning translation and publication of pertinent manuscripts extant in Spain and elsewhere. However, it was left to the Association of Muslim Social Scientists (AMSS) to facilitate accomplishment of some of these goals. They financially helped in organizing the first ever Regional Conference in Dallas on June 22-23, 2001, on Islamic contributions to civilization. With 14 scholars from all over United States, including the President of the International Institute of Islamic Thought (IIIT), presented their well-researched works at this conference. Well-attended by scholars from all faiths communities, the event was a great success.

In Dallas Declaration, it was agreed to establish a regional chapter of AMSS in the South-West of the United States, to hold a regional conference at least every two years, and to carry out other scholarly activities pertinent to the mission of the Association. A copy of the Press Release on the event was also issued.

Apart from the local media, the conference got publicity in regional, national, and international press. It was heartening to note that the message reverberated in California.

Under the leadership of Imam Hamza Yusuf, a task force was set up under Mr. Youssef Ismail to carry the message of Islamic contributions to civilization to the US academia; and to establish mobile museums subsequently leading to a full-fledged museum on this theme. The Council of Humanities may also consider providing appropriate funds for the purpose. Detailed information material was supplied to the Coordinator. It was hoped that other AMSS chapters will be also be established elsewhere, potentially in the West and the Mid-West, where Br Abdullah is keenly interested in this project.

Similar efforts are in the offing elsewhere in US and abroad. For instance, in Jacksonville, Mississippi, a museum on Muslim Spain has been set up; an exhibition on Muslim Spain will be held, from October 2001; a documentary on Muslim Spain has been prepared there. In Georgetown University, a Graduate Seminar was held in 1997 on the same theme. At South Methodist University, a museum on Spain has been set up displaying artifacts on its Muslim period. With publicity, similar on-going and proposed activities may be discovered domestically and globally. In Lahore, Pakistan, Al-Khawarizmi Society has shown great interest and put out information on the AMSS-SW regional conference on its web site. In Spain, an Islamic University has been established, of which Dr Ali Kettani is the Rector. In United States, Salma Khadra published two volumes on the Muslim legacy in Spain in 1992. In Madrid, Spain itself, seminars were held during the 1992 month-long Quincentenary celebrations of Columbus's Discovery of America.

In adopting Islamic Contributions to Civilization as an important topic can be a vital tool of generating true awareness of Islam and Muslims among neighbors, co-workers, and fellow compatriots. The benefits of doing so can be:

The Mission

1. Following the event, an institutional framework will be created to promote inter-faith dialogue, exchange of ideas, communication and methodology for establishing a genuine civil society in USA;
2. Given common Judeo-Christian-Islamic heritage, this endeavor will aim at making US a “Light Unto Nations,” as envisaged by William Jefferson, a moral superpower, based on monotheistic concept of human rights, equality, justice, mutual respect and peace at home, and in foreign relations;
3. On the model of Toledo Academy, set up by Alfonso, the Third King of Jews, Christians, and Muslims, this institution building will promote the Second Renaissance in the West, especially in US, on the foundations common spirituality, family values and shared knowledge and learning.

4. The broader Muslim community in the area will become aware of the contribution their forebears made to the human civilization;
5. The conference will project to the teachers, corporations, and the political and social elite, the historical period of flowering of knowledge in the Middle East (so-called 'Dark Ages') heralding Renaissance in Europe and the rise of the West to the present heights;
6. The publication of the proceedings will serve as a valuable source of research and instruction for students, academic and non-academic scholars;
7. Following this event, ground will be prepared for the establishment of a Regional Chapter of the Association of Social Scientists (AMSS) in the South and South Central Region, including Louisiana, which has a Professional Association of substantial number of academicians as members;
8. A proposed Quarterly Journal , the New Millennium Studies, will be published by the AMSS-SW, which will be its

regional vehicle, promoting research on the theme, apart from an electronic newsletter;

9. Being the Tenth Anniversary of Islamic Spain Conference in Lahore, held in 1991, this event will be held every two years, the first event being an international conference in 2003;

10. Efforts will also be made to initiate courses on this topic in the universities of North Texas and elsewhere; and

11. The event will also help in presenting a positive image, obliterating the unrealistic current negative stereotyping of Islam and Muslims in the media.

Knowledge is a continuum and the Muslim contribution to civilization is no exception. Such a contribution continued even after the heyday of Islamic apogee in civilization. Even in the period of decline, Muslim scholars were busy writing books on various aspects of learning, both secular and religious.

How can another Renaissance be brought about? As is commonly understood, the European Renaissance took place from the 14th to 17th century. Considering its meaning as

rebirth or revival of humanistic flowering of knowledge in arts and sciences, such Renaissance first took place in the Middle Ages from 10th to 14th century, the era of glorious Muslim civilization, mistakenly called 'Dark Ages'. As such, this will be the Third Renaissance, ushering in a Utopia and an era of peace, plenty, and prosperity. Let's hope that it will be brought about by the common endeavor of Abrahamic faiths—Judaism, Christianity, and Islam.

Conceptually, the ground for revival has already been paved in the principles laid down in the Quran and Sunnah of the Last Messenger. He is reported to have foretold that after the regime of dictatorship and authoritarian rule, will follow "khilafah". After thirty years of "khilafah rashidah", monarchy and authoritarian rule were established in Muslim lands, which have continued to this day. Whether that system of government was sanctioned by the Quran and the Sunnah is another debate, on which Ulama (religious scholars) have differing views. Al-Mawardi considers that Muslim ruler may establish Shariah but may be unjust. Ghazali favors tolerance of an oppressive ruler to avoid total anarchy. Ibne Taimiyyah opined that a "kafir (unbelieving) government which establishes justice is better than an oppressive Muslim regime." Ibne Hazm and some other scholars allow rebellion against an unjust and oppressive ruler. The essential point in this public discourse, whether relating to political or any other field, is the fundamental question: What is the guiding principle of the Shari'ah?

Since the passing away of the Messenger, there was agreement among scholars that the Quran and the Sunnah and Ijtihad (Quiyas: analogical reasoning or innovative thinking

within the Islamic framework) formed the fundamental constitutive principles of the Shari'ah. The Messenger is reported to have asked Muaz Bin Jabal, upon being dispatched for governorship of Yemen, as to how he would decide matters. He expressed his satisfaction with Muaz's response that he would rely on the Quran, the Sunnah, and Ijtehad. Later, Ijma'a or consensus of early companions was added as the fourth principle of the Shari'ah.

However, Ibne Hazm, a great Shari'ah scholar of al-Andalus (d.1064) firmly rejected Qiyas and Ijma'a as Bid'a (impermissible innovation) thus confining the Shari'ah constitutive principles strictly to the Quran, the Sunnah, and Ijtehad. He was opposed to 'Taqlid' (blind following). His advocacy of 'Taqlid', believing in harmonization of faith and reason—an idea later pronounced by Ibne Tufayl and Ibne Rushd (Averroes). Both Ibne Rush and Ibne Hazm disavowed 'Quiyas' (analogical reasoning), 'Ta'aweel' (allegorical interpretation) for arriving at legal decisions. But Ghazali was Shiite in law, Asha'arite in dogma, and Sufi (mystical) in morality, though both agreed on reaching the truth, and were committed to the Quran and the Sunnah; disapproved excesses of philosophers for overemphasis on natural phenomena to the neglect of Divine Revelation. They equally ridiculed the religious scholars for frowning upon natural sciences, and used logic as a tool for establishing proof. Also, they agreed on the concept of knowledge.

Ibne Hazm's influence lasted for centuries. Despite adherence to Hanbalite school, Ibne Taimiyyah (d. 1328) was opposed to 'Taqlid' (imitation), relying on the Quran and the Sunnah, and favoring Ijtehad (individual inquiry). Ibne Khaldun followed Ibne Hazm on

historiography, environmental determinism, and the conception of sciences in respect of vision, dream, alchemy, astrology, and music.

The ideas of Ibne Hazm influenced Europe in regard to validity of intellect for establishing proofs, arriving at the truth, advocacy of harmony of faith and philosophy, and advocacy of liberal arts education and interdependence and harmony of religious and secular sciences. His works were translated into Latin and other European languages, thus contributing to flowering of European Renaissance.

How the topic of Muslim contribution to civilization will herald a new Renaissance: this can be brought about in the same way as was the Renaissance in Europe in the 14th to 17th centuries, through translation of works from Eastern language into Western language and wider dissemination, utilizing modern means including the Internet. Like Toledo Academy (1150-1550 AD) many such academies, universities and other educational institutions could be persuaded to allocate special research grants on Islam and its contribution to civilization with a view to holding conferences, publishing manuscripts and carrying out research on this topic.

To this end, the message of AMSS in the next 30 years has to be broad-based in terms of building consensus on a new research paradigm for arriving at the truth. The goal is to bridge the philosophical hiatus that currently divides the East and the West. This strategy of AMSS can and ought to be pursued as a movement, not merely relying on academic research in an ivory tower. A program of expansion of the AMSS mission by

establishing its chapters as well as various discipline forums in various parts of the US and abroad. In view of the current debate on clash/dialogue of civilizations, a special panel on contributions of various cultures to world civilization, including those of Muslims, ought to be allocated in all AMSS national conventions to continually explore cultural interactions. Linkages ought to be established between AMSS and other professional organizations for collaborative projects on the theme.

Epilogue

Dilnawaz A. Siddiqui

This volume has largely concentrated on Muslim contributions to specific fields of knowledge: basic and applied physical and biological sciences including medicine, legal and political theories and practices, economic and financial concepts, models, and institutions, etc. Here, we would like to shed some light on the general areas of emphasis in a societal order based on Islamic principles.

The conceptual foundations of such a superstructure governing human life and its pertinent inherent relationships, with the Creator, fellow humans, other living beings, as well as with its inanimate environment, lie in a set of such lasting universal principles

that can tap, through basic freedoms, the optimal positive human potential for a sustained period of time. These principles properly practiced can provide a new purpose of life and a sense of its right direction. They can also release in humankind their personal and collective creative genius, intellectual and spiritual vitality (Madkour, 1983).

Islam provided the world with modes of institutionalization practical implementation of the sterling principles of monogenetic equality, human dignity, justice and fairness, disciplined individual freedom, and above all integrity of character based on an acute spiritual sense of accountability for their deeds as to how best they ought to treat one another, the fauna and flora, and the natural resources. These divine blessings have been utilized for the benefit of humanity at large without wasting them flippantly.

By implementing these principles, Muslims rebuilt the spiritual, social, economic, and political structures that entirely changed for the better the human condition for all times to come. These structures freed humans from biases based on differences in gender, race, caste, creed, or national origin, and recognized righteousness and responsibility for one's actions as the only standard to determine an individual's superiority or inferiority. Islam emphasized the role of family in building individual character from infancy, even in one's pre-natal stage.

Good and decent laws bring about great societal structures, which in turn generate decorous individuals, who in turn prefer and promote decency and righteousness as the hallmark of their collective culture. Rose W. Lane (1997), discussing the impact of

Muslim life on Europeans, writes:” But the returning Crusaders brought back to Europe the first idea of a gentleman that Europeans had ever had. Until they invaded the Saracen’ (a derogative for Syrians, and by extension Arab and Muslim) civilization, they had never known that a strong man need not be brutal. The Saracens were splendid fighters when they fought, but they were not cruel; they did not torture their prisoners, they did not kill the wounded. In their own country, they did not persecute the Christians. They were brave men, but they were gentle. They were honorable; they told the truth, they kept their word.”

These Islamic characteristic traits first impressed the educated Italians, who were the early Europeans to come in contact with Near-Eastern Muslims. The British cherished these Muslim imprints on themselves. Lane further states that “It is still producing perhaps the finest class of human beings on earth today, the men and women of the British ruling class. It is an ideal that permeates all of American life... From such dim indications an American can get some idea of the people with whom the Italians were dealing, before and while they were “awakening” Europe.”...

“All Italians were prospering from trade with the Saracens. Italian merchants, traders, sea-captains, sailors, were constantly meeting men of greater knowledge and wider experiences than theirs, richer men, better dressed , better fed, cleaner and better groomed; men who thought and acted quickly, acted independently. They had better methods of navigating ships, quicker ways of computing costs and adding bills. With incredible swiftness, they dispatched their business affairs over great distances.” No

activity of theirs, spiritual, social, economic, or political, was devoid of morality. They had a clear code of conduct in earning their livelihood and in spending it.

Women were free and equipped with a high level of literacy to adopt any decent occupation. And in case of economic need were able to move around the world while keeping their high character. Members of all non-Muslim minorities, who were often exempt from military service, were protected by the Muslim majority. It was incumbent upon the latter to defend their lives, lands, and liberties. Education at all levels was accessible to all regardless of gender, race, creed or socio-economic status. Slaves too had an ample opportunity to rise even to the level of kingship. The long reign of the Turkish slave dynasty of kings from the eighth to the fourteenth centuries in Muslim India, and those of the Mamluk, the Muslim slave kings of Egypt, from the thirteenth to the sixteenth centuries are a testimony to the pluralism of Islamic societies, which long pre-dated such freedoms anywhere in the West. The renowned historian of Princeton University, Philip Hitti (1986) writes about the Mamluks: “The bondsmen of yesterday became the army commanders of today and the sultans of tomorrow.”

Islam has a very broad concept of worship, which includes any worthy act in any domain of life so long as it was done in accordance with the divine guidance, bridging the gap between the moral and the merely legal. In an Islamic polity there is no separation between the moral and the mundane. It thus has brought humanity to its most moderate and balanced state. Islam highlights the role of one's conscience in all one's activities. Not worshipping due to fear any objects of nature like snakes or monkeys, or because of

indebtedness to creatures like cows or other humans and animals, human beings, through Islam, were able to inculcate in their children a feeling of chivalry and freedom from fear (Nadvi, 1974). These values attracted people of diverse races, religions, and ethnic backgrounds into the fold of Islam to form a rare and real multi-color rainbow of peoples. All are equal in the sight of God, the only Islamic criterion to judge one's worth was one's righteousness behavior in all human affairs. Thus, Muslims were able to establish a societal order completely free from class considerations and immune to any psychological complexes arising out of power consciousness or alienation due to learnt helplessness.

Without succumbing to their animal instincts, Muslims were able to internalize and implement their God-given human potential and mission. In their heyday, Muslims made continual progress and unprecedented accomplishments in almost all human activities.

The Islamic culture effectively intervened between extreme forces engaged in mutual destruction, and thus saved humanity from these trials and tribulations for centuries. The global feeling of freedom and dignity on the part of all and sundry brought about a prolonged period of progress and a comprehensive development, which balanced the inner and outer forces of life. Islam inspired humanity to evolve a middle path between awareness of its self- worth and God-consciousness. It brought about an order, characterized with the supremacy of principles of justice over merely personal preferences and pleasures, and unprincipled passion to possess property at all costs. It

balanced between extremes of individualism and total self-negation, between the value of human reason and divine revelation, between stark atheistic self-reliance and diseased dependence on only Providential provision without working hard enough within one's means. Also, it placed fulfillment of one's own duties and responsibilities before claiming one's rights from others. It sought to remove the confusion between means and ends, without justifying unfair means to gain so-called 'good' ends. Islam refuses to accept freedom, wealth, power and control as ultimate ends but merely as means to some worthy ends. So it raises the bottom-line question as to what end and how these necessary means are to be utilized, with the worthiest goal of a Muslim being just and fair in all spiritual, economic, social, and political dealings with all others, Muslims or non-Muslims.

The Islamic values enabled believers to be absolutely clear about preferred gender roles to protect family as an essential and foundational institution, in which spouses did not confront each other with hostility, but cooperated with each other like the wheels of a smoothly running vehicle of life. They enabled human intellect and sincere passion to channel them harmoniously toward a constructive rather than destructive direction. Modesty in appearance, eating, clothing, speaking, and walking is the responsibility of both sexes so as not to give rise to any laxity in pre-marital or infidelity in matrimonial relationships.

It is unfortunate that Muslims have failed not only to acquaint the fellow human beings of their universal faith and their illustrious contributions to world civilization but they

themselves by and large are ignorant of their own golden history. They need to end their isolationism and ghettoization and interact with the people of other faith communities to learn about their value systems and share with them the Islamic values in an attempt to collectively address problems facing humanity, and proactively prevent potential conflicts.

Such occasions can serve as effective harbingers of the much needed atmosphere of true interfaith and cross-cultural diversity leading to peace with justice across the globe. Also, they can significantly contribute to democratic discourses among various civilizations instead of beating drums of conflicts and clashes among them.

As Louay Safi (2001) has rightly emphasized in his article in this volume the inclusive nature of Islam, which led to subsequent exchanges among scholars of all faiths and their willingness to learn from one another in the selfless pursuit of truth. It was the historic interfaith understanding, tolerance, and mutual respect characteristic of Muslim communities that helped them coordinate contemporary knowledge from China, India, Middle East, North Africa, and Greece. They inherited, critiqued, and further advanced this ancient learning. The Muslim contributions to human civilization led to the European Renaissance of the Elizabethan period, and ultimately inspired the democratic ideals of our constitution as well as the current cross-cultural climate of America.

The sudden end of the Cold War has catapulted the U.S. into the position of global leadership. Our nation has a choice between becoming a force of freedom and democracy

and yielding to the temptation of Darwinian 'survival of the fittest to dominate the weaker world, between working for the benefit of all and working for the profit of a few, between brute competition and genuine global cooperation, and between peace with force and peace with justice. The prevailing reading of human history leaves us with the impression that everything worthwhile has originated in Greece or Rome, and that the next phase of progress occurred in the 16th century Renaissance. This assumption fails to acknowledge the contributions of other non-Western cultures to the world civilization in general and to the re-awakening of Europe in particular. Such myopia has often given the religious and commercial media a free hand in stereotyping certain communities: Jews, African-Americans, Catholics, Japanese, Communists, and now Muslims and Islam.

One would expect the academe to do better in promoting the truth. The secular academia itself has developed an aversion to discussing contributions of religious principles of any culture or community. This denies a fair chance to them for clearing the air of any negative stereotyping against them, let alone setting aright distortions of history of human civilization as a whole. The tragic events of September 11, 2001 have made us realize the danger of terrorism and have engendered a sense of vulnerability. At the same time, our national leadership has acted wisely by not isolating themselves from the rest of the world, but has begun to engage the nation in global affairs. One might disagree with their unilateralism and pre-emptive military actions against weaker nations, yet they have tremendous potential to contribute to peace with justice, which they can do only by attempting to understand the democratic aspirations for basic freedoms, human rights, fairness and justice for all. Working with Muslim Americans as well as other

representative leadership in the Muslim world at large, the U.S. can fulfill the goal of establishing a genuinely just and judicious societal order across the globe. Instead of harping on civilizational clashes, we can engage ourselves in mutual learning from the rich legacy of Islamic culture and the unprecedented technological and administrative contributions the West has made to the modern world.

References

Hitti, Philip K. (1986). History of the Arabs. New York, NY: Macmillan (10th Edition). P. 672.

Lane, Rose W. (1997). Islam and the discovery of freedom (with an introduction and commentary by Imad-ad-Dean Ahmad). Bethesda, MD: the Minaret of Freedom Institute, and Beltsville, MD: Amana Publications, pp 47-48.

Madkour, Ibrahim (1983). Past, present, and future. In “The genius of Arab civilization: source of Renaissance (Second Edition) by J.R.Hayes. Cambridge, MA: The MIT Press, pp 243-246.

Nadvi, S. AbulHasan (1974). Insani duniya par Musalmanon kay urooj-o-zawal ka asar (The impact of rise of fall of Muslims on human civilization (8th Edition). Karachi, Pakistan: Majlis-e-Nashariaat-e- Islam.

Safi, Louay (2001). Overcoming the religious-secular divide: Islam’s contribution to civilization. Presented at the 2001 AMSS Regional Conference, Dallas, TX.
