

Encounters between  
Faith and Reason  
in Christianity and Islam



Professor Vartan Gregorian  
(Photo: © OCIS)

# ENCOUNTERS BETWEEN FAITH AND REASON IN CHRISTIANITY AND ISLAM

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by

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## INTRODUCTION

Dr. F. A. Nizami

*Director, Oxford Centre for Islamic Studies*

It is a pleasure, on behalf of the Oxford Centre for Islamic Studies, to welcome Professor Vartan Gregorian, President of the Carnegie Corporation of New York, to speak to us today on the subject *Encounters between Faith and Reason in Christianity and Islam*.

Professor Gregorian is well-placed to discuss this theme. Born in Tabriz, to an Armenian Christian family, in his teens he left for Beirut, to complete his secondary education at the *College Armenien*. He subsequently studied history at Stanford and took particular interest in 'Toynbee and Islam'.

For his doctoral dissertation he worked on 'Traditionalism and Modernism in Islam'.

Professor Gregorian's subsequent career has been equally diverse. He has served on the faculties of several universities, including the University of Pennsylvania, where he became Provost in 1978. In the eighties he served as President of the New York

Public Library. He then returned to academia as President of Brown University, before being elected as president of the Carnegie Corporation of New York in 1997.

For his extraordinary contribution to public life he has received the National Humanities Medal and the Presidential Medal of Freedom, the highest civilian award in the United States.

The dynamic relationships between religion and science have for long held the interest of the best analytical minds – whether modern or medieval – and that is particularly so for the Islamic and Christian traditions. This evening we are fortunate to have the opportunity to learn more about the encounters between faith and reason in the two traditions, from an expert witness of this interplay, and – it might be argued – an onlooker born at the interface between Christian and Islamic traditions.

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Professor Vartan Gregorian  
President, Carnegie Corporation of New York



I'm honoured by the invitation to speak in this distinguished series of the Oxford Centre for Islamic Studies, an institution of excellence dedicated to the promotion of both scholarship and the advancement of inter-religious understanding.

As some of you know, I was born in Tabriz, Iran. As an Armenian Christian who grew up living among Muslims, both in Iran and later, in Beirut, Lebanon, where I went to school, I had no choice but to reflect on the relationship between Islam, Muslims, Christianity and Christians.

Among my schoolmates were many Muslims. We played, we fought, we got into plenty of trouble with our pranks – in other words, we were typical kids. I used to hear: 'The only good Muslims are the Shi'a.' I did not really understand what that meant because I did not know there was any other kind. I did not know the difference between Sunni and Shi'a until I went to Beirut. There, I discovered a dozen different kinds of Muslims and Christians. I discovered Arab Christians who, to my great surprise, called God Allah because Allah means God in Arabic. On any given Friday or Sunday, the air was a symphony of bells and calls to prayer. One thing was clear to me: that all these people were worshiping one God – the same God: their Creator.

Hence, since my childhood, Islam has been part of my consciousness in one way or another. Even when I graduated from school in Lebanon in 1955 and had the good fortune of attending Stanford University in California in 1956 – which was for me, of course, a

life-changing experience – the history of Islam and its influence, along with the histories of the Ottoman Empire and the Middle East, as well as European intellectual history, were among the subjects I studied, and eventually, taught.

During my college years and even after that, I kept coming across expressions such as ‘Islam and the West’.<sup>1</sup> Frankly, I was surprised by the juxtaposition of these terms. I still am. I understood the idea of comparing geographic regions, for example – this one is dry, that one is temperate or mountainous or has a long history of conquering or being conquered – but to compare a religion with a geographic region, or an entire culture, made little sense to me unless, of course, ‘the West’ had a distinct identity as a civilization, a culture, or an ideology. Moreover, the idea of considering Islam as completely separate from the faiths that one generally identifies with ‘the West’, meaning Christianity and Judaism, also seemed somewhat strange to me, since I did not think that one could successfully untangle either the development or the tenets of the Abrahamic faiths from each other. After all, the followers of Judaism, Christianity and Islam all claim to be the children of Abraham and consider him as their forefather.

When I arrived in the US, I was struck by the fact that most Americans were barely acquainted with the idea that there was an Abrahamic family of traditions, including Islam, to which most of them belong. Perhaps this was so striking a disparity to my way of thinking because, even in the Shah’s Iran, we

youngsters were taught in school that there was only one civilization: one *tamaddon*. And no, I don't mean Persian or Iranian civilization: I mean one world civilization. All the people of the world brought their cultural contributions to this one world civilization that included all of humanity, with no divisions of civilizations and no hierarchy among them.

Indeed, we were taught that civilization was a banquet: humanity's collective banquet. We did not know about, nor were we taught at that time about the idea that there might be a hierarchy of civilizations. In fact, when I came to America in 1956 and discovered that Americans believed in the idea of American civilization – universities even offered academic majors in that subject – and further, Americans believed that America represented the future, I assumed that the old world civilization was the past. It was also in the US that I came across the works of Beatrice and Sidney Webb, founders of the Fabian Society, including their 1935 book, *Soviet Communism: A New Civilization?* which led me to consider the idea that the future was perhaps going to revolve around competition between US and Soviet civilizations.

That was an interesting idea, in keeping with what I understood about the notion of civilization as the repository of diverse traditions and cultures, since both the Soviet Union and the US, whether competitors or not, were characterized by great diversity. However, as a curious student of history, I was surprised to find out that, before and in the aftermath of World War I, there were some French and other historians who put

forth the view that European or Western civilization must be conceived of as Latin and Anglo-Saxon, but not Germanic; that Germans were the Huns, the outsiders. To this day, I remember reading about how on November 11, 1918, Armistice Day, when the Allies signed the cease-fire with Germany and its allies, newspaper headlines shouted that the Huns had been defeated and that 'The Beast of Berlin is in Flight'. The latter was referring to Kaiser Wilhelm II.

Around this same time, I read Oswald Spengler's *The Decline of the West*, which had been published in 1918. While it was a remarkable and absorbing work, it left me wondering how to define what Western civilization really was. In contrast, Edward Gibbon's six-volume *Decline and Fall of the Roman Empire*, published between 1776 and 1789, which I had also read, provided a very detailed and well-defined portrait of the scope, institutions, culture and other attributes that characterized Roman civilization. Spengler's discussion of the West was more amorphous. So in all honesty, I was bewildered by what, exactly, 'Western civilization' was, and is. Where did it begin? What is its scope? Its range? What are its core values and institutions? What does it include? What does it exclude?

Such questions, of course, bring me to the late Samuel Huntington, and one of the most trenchant, contemporary analyses of the post-Cold War era, namely, his thesis of the 'clash of civilizations' as outlined in his influential writings, particularly, *The Clash of Civilizations and the Remaking of World*

*Order.*<sup>2</sup> Naturally, Huntington's ideas sparked great controversy and drew enormous attention to his premise that there were civilizational 'fault lines' that modernity cannot breach. Furthermore, Huntington viewed the post-1989 world as ordered by a set of civilizations competing in a zero-sum game for the resources of modernity, the major players in this drama being the West, Islam, and East Asia. For Huntington, global cultural contradictions and conflicts were intrinsic to a world order in which civilizations replace nation-states as actors and the zero-sum aspect has the potential for global inter-civilizational warfare bringing about a shift in the balance of power among civilizations and their core states.

As one who has studied the works of Arnold Toynbee – who of course, attended Balliol College at Oxford – I saw Huntington's work as an attempt to displace Toynbee's philosophy of history with his own. In Toynbee's view, as presented in his magnum opus, the 12-volume *A Study of History*, which traces the rise and fall of some 23 civilizations, if there is conflict inherent in civilization itself, it is rooted in the tension between modernists and traditionalists in all societies. Toynbee refers to modernists and traditionalists respectively as 'Herodians' and 'Zealots', terms he borrowed from the Jewish experience. In his theory of history, he states that civilizations rise when people make creative responses to a variety of challenges, including geographic, economic, political and spiritual; and their continuing creativity sustains their civilizations. He theorized that civilizations fall

in a downward spiral, with creativity faltering and challenges not being met, thus creating anarchy. This is when tyrants take charge. Ultimately, these declining civilizations are threatened by more creative and dynamic ones. In response, Toynbee says, the threatened people typically follow one of two basic paths. If the Zealot leaders prevail, the civilization responds by isolating itself and trying to revive ideas and practices from an idealized past. If Herodians take the lead, the civilization responds by borrowing its opponents' best tools, synthesizing their best ideas and using the new tools and ideas to compete and regain strength and control. Naturally, in his view, successful civilizations are those that accept the Herodian challenge, while the others ossify and eventually decline. However, it is necessary to note here that Toynbee also argued for civilization as an overarching concept that was not necessarily doomed to failure; in fact he endorsed the idea that the disintegration of civilizations could be prevented and even reversed. In effect, he was hopeful about the future of humankind and its ability to overcome its challenges. Samuel Huntington took a different, and darker view: in his argument, Western civilization is set against the rest of the world.

As I noted earlier, whereas in the aftermath of World War I, some French intellectuals wanted to exclude Germany from Western civilization, Huntington had no problem excluding Russia – indeed, all the Slavs – as well as adherents to the Greek Orthodox faith. His Europe was Catholic and

Protestant. I always wanted to have the opportunity to ask Huntington, how could the Greeks not be part of Western civilization? In addition, what would he have to say about NATO, the defender of 'the West', which includes not only Greece, a Greek Orthodox nation, but also Turkey, a Muslim nation?

Perhaps even more puzzling to me was the limbo in which Latin America was placed under Huntington's construction of clashing civilizations. After all, here is Latin America, conquered by Europeans and for 500 years adhering to Catholicism, Protestantism; with populations speaking European languages such as Spanish, Portuguese, German, French and English; steeped in Spanish, English, French and Portuguese literatures; and deeply influenced by Western ideologies such as Liberalism, Conservatism, Socialism, Marxism, Communism, Republicanism and Democracy. So why isn't Latin America part of Huntington's Western civilization? And speaking of Latin America, several years ago an Argentine scholar raised a fundamental question at a conference in Portugal, asking why should the seat of Western civilization be in Europe rather than Latin America? He noted that from the start, Europe and Christendom were internally scarred by fratricides: by the fifth century AD, religiously motivated killings of Christians by other Christians had far surpassed the more celebrated death tolls of the Roman Emperors' persecutions. In addition, the West, in modern times, had given us Communism, Fascism, and Nazism, two World Wars, the Holocaust, slavery and colonialism

among other terrible scars etched upon history. Latin America, said the Argentine scholar, was guilty of no such crimes. Let me point out that of course, in saying all this, he ignored the fate of the indigenous peoples and tribes of Latin America. In any case, my response was to look at the balance scales: Europe had also given us medieval architecture, the Renaissance, the Reformation, the Age of Reason, the Enlightenment, the Scientific Revolution, the Glorious Revolution of 1688, the French Revolution, which began in 1789 and upheld the concept of liberty and citizenship, not to mention the countless great works of art, literature, music and philosophy, as well as scientific and medical breakthroughs, extraordinary advances in technology and other developments that continue all the way through the twentieth century into the twenty-first. Therefore, today, when we judge what we call Western civilization, the truth is that we tend to consider mostly its inarguably great accomplishments and its progress, rather than its ills – but when we take the measure of other cultures, we tend to view them with a much more jaundiced eye, counting up their less positive associations more readily than their contributions.

This is, of course, particularly the case with the idea of a monolithic ‘Muslim World’. Frankly, I don’t know what world that is since I have plenty of Muslims in my world, and I believe that I also live in theirs. This world we are in together contains a diverse array of nations and peoples and languages who are still in the ongoing process of trying to understand each other.<sup>3</sup>

The Qur'an itself allows for – even celebrates – nuance and diversity. The so-called 'Muslim World' is not a cohesive or monolithic entity, as attested to by the fact that there are more than 50 predominantly Muslim countries that encompass many different races, cultures, languages, and ethnic groups.

Yet, in relation to Islam and Muslim societies, this diversity is a reality that most of us are not usually attuned to. Living as we do mainly in the present, and subject to the influences of the recent past, we find ourselves swimming in a sea of media images and news reporting. Reading news reports from foreign countries, particularly about Africa and the broader Middle East, is like learning about a city exclusively from reading its daily crime statistics.

The sum total of the national disasters, violence, unrest and tragedies that make the daily editorial cut of newsworthiness are then aggregated in our minds into a total picture of a society, a culture, even a religion. Regions run the gamut from misfortunes to disasters. Their inhabitants – particularly if they are Muslim – seem to us to divide their time between waging 'wars within' and waging wars directed against 'us'.

Meanwhile, during the many years now that I have lived in the US, Islam has become the fastest growing religion in our nation. It has been estimated that America, now, is home to the most diverse Muslim community in the world. For Americans to be ignorant about Islam is, increasingly, to be ignorant about ourselves, our fellow citizens, as well

as about our fellow men and women around the globe. For Americans to claim to be world leaders and yet continue to be ignorant about the 1.5 billion people who are Muslims – fully 21% of the world’s population – is an untenable position.<sup>4</sup>

When I became President of Carnegie Corporation of New York in 1997, we held a number of meetings about how we might best address such issues. Two major themes for our work emerged: the need to promote US public understanding about the history and diversity of Islam, and the need to ease the integration of Muslim citizens into American society and encourage their participation in its democracy.

That is how, in the summer of 2001, I came to be writing a report on these subjects to the Board of Trustees of Carnegie Corporation in order to frame our work in this area, which would be a new one for our foundation. After the terrorist attacks of 9/11 and the loss of life in New York City (which is my home), as well as in Washington, D.C. and in Shanksville, Pennsylvania, the Corporation issued my report to the Board as *Islam: A Mosaic, Not a Monolith*.<sup>5</sup> My intention was to provide an overview of the complexity of both the religious and political history of Muslim societies, which stands in direct contradiction to the essentialist, generalizing narratives that purport to describe those same societies. During the research I carried out for the report, I found that from the seventh century onward, there was not one instance of complete political or denominational unity, notwithstanding professions of fraternity and

solidarity. Differences over leadership, right practice, scriptural interpretation, political parties, and jurisprudence, not to mention cultural, ideological, economic, and theological differences, abounded over the centuries. One thing was clear: God did not spare Muslims from *realpolitik*. It was not simply the purview of the West.

This is not unique to Islam; every religious movement emerges as a rainbow of diverse manifestations as it passes through the prism of our minds. This is particularly natural since many of the world's great civilizations – Mesopotamia, Persia, Egypt, East and West Africa and South Asia, along with areas of the ancient Roman Empire – came into the sphere of Islam. One of the most interesting manifestations of this cross-fertilization was that over the centuries, Christians have fought against Christians, Muslims against Muslims, and Christians have fought with Muslims against other Christians, and vice versa, even in the medieval period when this was expressly forbidden, because political identity and allegiance were one with religious identity, and acts of blasphemy or apostasy were technically treason against the nation.

Today, the dramatic rise in the internal diversity of all our societies, through immigration flows and rising standards of individual autonomy and tolerance, renders incoherent such conclusions as Huntington's notion that: 'From Yugoslavia to the Middle East to Central Asia, the fault lines of civilizations are the battle lines of the future.' Indeed, while Huntington's

'bloody borders' exist in the minds of some individuals – and certainly these individuals can be found in every country and culture – it is nowhere set in stone that these divisions are what inevitably lie ahead for humankind.

In other words, human beings, their religions and their societies share common traits, and I've come to feel that the significant convergences of the faith traditions, particularly among the Abrahamic faiths, are less well known than their doctrinal and historical divergences. In arriving at this viewpoint, I recognize that I converge with the scholars of the Common Word initiative that is now being promoted from Jordan to Canterbury, to Rome to the United States. The Common Word religious dialogues, which stem from an exchange of letters in 2006 and 2007 between Pope Benedict XVI and 38 Muslim scholars representing all branches of Islam, emphasize the love of God and the love of neighbours in Islam and Christianity. The Common Word initiative also stresses that the faiths share much that is scriptural.

It surprises me that we have to remind ourselves again and again that Judaism, Christianity and Islam all trace their roots back to the prophet Abraham and that Moses is considered by all three faiths to be a great prophet. The confrontations Moses had with the Egyptian pharaoh, his miracles in the desert and his ascent of the mountain to receive God's commandments are all acknowledged in the Qur'an. For Muslims, Jesus – Isa – is also a great prophet and messenger of God, the promised messiah who

brought ‘the Word of God and Spirit from Him’. Jesus is considered the son of the ‘sinless’ Virgin Mary, Maryam, who is mentioned more often in the Qur’an than in the Bible. Muslims believe that Jesus preached the Word of God and worked miracles; but, like Jews, Muslims reject the Christian concept of Jesus as the divine son of God. The Qur’an states that Jesus did not die on the cross, but was rescued by God and taken to heaven.

In addition to scripture, Christianity, Islam and Judaism all share the interplay of reason and faith across history. This is why the Qur’an deals with all three faiths as ‘People of the Book’. Followers of the Abrahamic faiths are enjoined to seek knowledge and to reason about the world and its Creator – perhaps most of all in Islam.<sup>6</sup>

Both reasonings around religious law and revelation and reasonings about theological mysteries follow some similar patterns and pathways in Christianity and in Islam. We show some family resemblance in our intellectual and spiritual struggles. Therefore, the unifying properties of religion come not only from their shared teachings, but from their shared aspirations as well.

While reading the correspondence of two legendary scientists, Max Born and Albert Einstein, I was astonished to find that Einstein, in his inimitable fashion, went right to the heart of the matter, asserting that materialists try to explain all phenomena by cause and effect. But, Einstein says: ‘This way of looking at things always answers only the question “Why?”

but never the question, “To what end?” No utility principle and no natural selection will make us get over that [question].<sup>7</sup> In a famous essay published in 1940 that created quite a stir at the time, Einstein even suggested that it is the ‘grandeur of reason incarnate in existence’ which ‘appears to be religious in the highest sense of the word’.

For many centuries, all around the world, scientists, philosophers and theologians have struggled with that challenge, namely, what is the relationship of faith and religion to science and to reason? While there has long been a continuous and rigorous pursuit of scientific research and concurrent breakthroughs in science and technology, many have felt compelled to ask one of the most fundamental questions that progress always poses: To what end? Is existence solely about the welfare of humanity in the here and now? Or is there some transcendent purpose to life beyond mere utility and earthly comfort? Are we accidental objects or part of some great design? Is religion, as the famous saying goes, really the opium of the masses? These questions have been with us for a long time and will probably never go away.

I certainly had to confront these issues as a student when I read the work of the seventeenth century French scientist and religious philosopher Blaise Pascal. For me, he summed up, in a poetic way, the question Einstein and others have posed: To what end? I paraphrase Pascal’s answer: I know not who put me into the world, nor what the world is, nor what I myself am. I am in terrible ignorance of everything. I

find myself tied to one corner of this vast expanse of the universe without knowing why I am put in this place rather than in another, or why the short time I have to live is given to me now rather than at any other time in the whole of eternity. I see nothing but infinities on all sides, which surround me as an atom and as a shadow that endures only for an instant and returns no more. The eternal silence of these infinite spaces frightens me.<sup>8</sup>

Since Pascal wrote those words, science has opened up many of the secrets of the natural world to us, from the DNA of our cells to the depths of the oceans to the vastness of outer space. Still, nothing we have learned has displaced faith and religion, which strive to give meaning to the billions of people who continue to search out answers to Pascal and Einstein's ultimate question: To what end?

Down through the centuries, there has been a dialectical relationship between faith and reason, between doctrine and science, between orthodoxy and heterodoxy. Conflicts have often arisen, along with periods of conciliation, reconciliation and even synthesis. But while conflicts have been and will continue to be endemic, one thing is clear: reason is not always antithetical to faith, nor faith to reason, nor religion to science. For example, in the 1950s, Pope Pius XII<sup>9</sup> accepted the Big Bang theory because it seemed to validate the Book of Genesis, in particular, the lines 'And the earth was without form, and void; and darkness was upon the face of the deep'. After all, that's what the Big Bang means: first there was

nothing, then there was everything. Muslims often hear the Big Bang in the Qur'an, especially the lines: 'The Originator of the heavens and the earth! When He decrees a thing, He says to it only: Be! And it is.'

In his 1963 Encyclical, *Pacem in Terris*, Pope John XXIII also took the position that scientific discoveries in no way diminish the status of God or the place of religion in our lives. He wrote: 'In obedience to the providential designs and commands of God respecting our salvation and neglecting the dictates of conscience, men must conduct themselves in their temporal activity in such a way as to effect a thorough integration of the principal spiritual values with those of science, technology and the professions.'

The late Pope John Paul II held similar views. In 1988 he declared: 'Christianity possesses the source of its justification within itself and does not expect science to constitute its primary apologetic.'<sup>10</sup> In his 1998 Encyclical Letter he also said: 'Faith and reason are like two wings on which the human spirit rises to the contemplation of truth; and God has placed in the human heart a desire to know the truth – in a word, to know himself [or herself].'

The stance of these popes and others is rooted in the tradition inaugurated by St. Thomas Aquinas in the thirteenth century, deeply relying on Maimonides and, before him, Ibn Rushd (Averroes) on the non-contradiction of spiritual truths and those derived by human reasoning. Aquinas was also concerned about the relationship between faith and reason. While he had no doubt about faith being revealed through the

divine, he also held that it was possible – and in some instances, perhaps even desirable – to achieve a deep and genuine knowledge about God and faith through the rigorous application of human reason. After all, he said, reason was a God-given gift, so ‘to disparage the dictate of reason is equivalent to [negating] the command of God’.<sup>11</sup> St. Thomas believed that since both the light of reason and the light of faith come from God, there could not be a contradiction between them. And because of this, he saw no problem with including in his arguments for the synthesis of faith and reason, ‘classical Greek and medieval Jewish and Islamic philosophers, as well as... Christian thinkers’.<sup>12</sup>

This quest for larger truths, purposes and explanations lies at the heart of the religious and reasoning experiences. At times, faith and reason have appeared to be at odds; at times they have carved out space for one another, or set limits upon one another. But more often they are more than compatible: *homo religiosus* and *homo rationalis* are one. And human reason finds reason in the fabric of the universe; as stated earlier, in the 1940 essay Einstein suggested that it is the ‘grandeur of reason incarnate in existence’ which ‘appears to be religious in the highest sense of the word’.<sup>13</sup>

In a way, for individuals who are interested in reconciling faith and reason, exercising our reason is exercising our humanity and doing justice to God’s gift. Neither faith nor obedience has any meaning if neither is chosen; this gives a perennial, and crucial, role to doubt. Reason has been a compass shared

by the Abrahamic faiths during their long journey together. The Protestant reformer Calvin reasoned that while humankind's original sin led to man's alienation from God, reason is the lamp by which we are guided and our fallen lives are reconstructed here on earth.

While Muslims and Jews would not subscribe to that rationale – original sin is not part of their canon – both faiths accept that reason is a universal human faculty, a gift shared by human beings. Reason and science are universal and transcend cultural and religious differences, as Ibn Khaldun, the great Arab scholar and historian summed up: 'The intellectual sciences are natural to man, inasmuch as he is a thinking being. They are not restricted to any particular religious group. They are studied by the people of all religious groups who are all equally qualified to learn them and to do research in them. They have existed (and been known) to the human species since civilization had its beginnings in the world.'<sup>14</sup>

The opening lines of the Qur'an, as transmitted by the Archangel Gabriel, say: 'Read, in the name of your Lord who created [you].' And, just as it orders people to read, the Qur'an orders them to think and think critically, making this a religious obligation. The Qur'an condemns those who base their opinions and beliefs on blind imitation of what has been handed down.<sup>15</sup> It also condemns those who forge their beliefs or opinions from guesswork, observing: 'Guesswork is of no value against the truth.'<sup>16</sup> The Qur'an also

commands: 'Bring your proof if you are telling the truth.'<sup>17</sup>

These are not abstractions. We know that mathematics, astronomy, optics, engineering and medicine were among the sciences that flourished in Muslim cultures. Historian of science Ahmad Dallal estimates: 'Until the rise of modern science, no other civilization engaged as many scientists, produced as many scientific books, or provided as varied and sustained support for scientific activity.' The production was so voluminous that, to this day, the large majority of Muslim scientific manuscripts remain unedited, even unexamined. We also know, however, for it has been studied thoroughly, that Arab and non-Arab philosophers alike critiqued and expanded upon Aristotle and Plato. Scientists critiqued and expanded upon Ptolemy. Physicians critiqued and expanded upon Galen, using observation, dissection and experimentation. The work of such philosophers and scientists was sometimes theoretical, sometimes applied, sometimes encyclopedic, often all three, as in the case of the great figures of Persian philosophy, science and medicine: Abu Bakr Muhammad ibn Zakariyà al-Razi (Rhazes, d. 925) and Ibn Sina (Avicenna, d. 1037). The great translator Adelard of Bath, who learned Arabic in order to advance science and learning in Europe, wrote: 'Of course God rules the universe. But we may and should enquire into the natural world. The Arabs teach us that.'<sup>18</sup>

Ismail Serageldin illustrates the scientific method in Ibn al-Haytham's *Doubts about Ptolemaeus*. Ibn al-

Haytham (d. 1040), who extended Euclid's *Elements* and based his *Optics* on experiment rather than authority, wrote: 'He who searches for truth is not he who reviews the works of the ancients... [it is] he who follows argument and evidence, not the statement by an individual, who is inevitably affected by context and imperfection. It is the duty of he who reads science books, if he wants to learn truths, that he should set himself up as an opponent to all he looks at...' <sup>19</sup>

In fact, in ninth-century Baghdad and Iraq, Muslim theologians lived through a period not unlike the Christological controversies of the early Church. More and less philosophical doctrines battled one another, with temporal rulers taking sides. Specifically, in the case of the Mu'tazilite movement, key points of dispute were questions of determinism and the nature of God. Indeed, underlying the entire doctrine of Mu'tazilitism was the relationship of faith and reason. But at stake was the issue of whether beliefs could be reasoned out to their logical conclusions.

For Mu'tazilites, the justice of God meant the rationality of God. Humans, too, were rational actors, able to make choices. Man, in fact, was the creator of his own deeds. While this notion saved God from being responsible for men's evil deeds, the doctrine of free will had political implications – a bit like our legal liability today. It held a ruler responsible for his actions; he could not blame God for them.

Mu'tazilite belief in the pure unity of God, somewhat like Aristotle's God, meant that the many human qualities attributed to God simply could not

be true. And just as Christians had fought over God's will and God's word, or logos, Mu'tazilites did battle over the same words, resulting in their doctrine that the Qur'an was not an eternal word of God but had to have been created by God.

The involvement of the rulers turned disputes into inquisitions. First the great Caliph al-Ma'mun instituted a litmus test, the Mihna, that all must believe the Qur'an was created, or face possible punishment. Later his successors, from al-Mutawakkil onward, punished those who believed the opposite. In either event, what was assured was the ruler's control over the theological, judicial and scholarly establishment, the realm of thought and belief.

The most well-known opponent of the Mu'tazilites was a famous scholar and traditionalist, Ahmad ibn Hanbal (780-855), who had been jailed and persecuted by the Mu'tazilites. He was uncompromising in his convictions and believed that the Qur'an, as the Word of God, was both 'uncreated' and eternal.<sup>20</sup> Similar debates had occurred in the West. Across time, space, and incidentally, three religions, Averroes, Maimonides, and Aquinas, who I discussed earlier, were engaged in a single conversation, both philosophical and theological. They didn't agree, each of them having his own view about the ways in which reason and Divine truth did not contradict. But they were reasoning about the same things, and they even converged on the way a proposition is argued and judged to be proven or not (thanks in part to their common ancestor, Aristotle).

Most Muslim scholars, not unlike their Western peers, conducted their activities through religious colleges — *madrasas* — often with the support of charitable endowments under the patronage of emperors, provincial rulers, or prominent members of the ruling elite. So, in a way, religious institutions in and of themselves were not hostile or antithetical to learning or to the promotion of rationalism and discussion of the relationships of faith to reason and of faith to science. Libraries also played a central role in education and research, as did the great teaching hospitals. Medieval colleges combined the work of seminaries with logic and other curricular elements including natural philosophy. In that connection, al-Karaouine college was founded in Fez in 859, and al-Azhar was founded in Cairo in 969. Tenth-century governor and philanthropist Badr ibn Hasanawayh al-Kurdi is said to have established 3,000 *masjid-khan* complexes serving as residential colleges.<sup>21</sup> In addition, there was also the rise of literary salons of a sort, as well as organized debates in the courts. In his study, *Humanism in the Renaissance of Islam*, Joel Kramer relates the arrival of ‘a pious Andalusian theologian’ Ahmad ibn Muhammad ibn Sa‘di, at a salon in Baghdad in the late tenth century. The traveller declared himself, ‘shocked by the excessive tolerance he witnessed... there were present not only Muslims of all sects, but also infidels, Mazdaeans, materialists, atheists, Jews, and Christians — in short, infidels of every sort. Each sect had a spokesman who defended the position it professed. The rules of discussion proscribed appeal

to the authority of revelation. Each discussant was restricted to arguments derived from reason’.

As noted earlier, over time, in Iraq, Egypt and other Muslim intellectual centres, from the mosques grew the *madrassa*, and the study of religious law became prominent in the traditional curriculum.<sup>22</sup> Gradually, the study of other sciences took place in fewer learning establishments and on fewer subjects until reaching a low point after the twelfth century. While institutions of learning that included the sciences dwindled, the emphasis on legal and religious studies of Qur’an and *hadith* grew proportionately. The ‘*waqf*’, or religious endowment, though enduring, had less independence and flexibility than institutions in Europe founded as corporations. But the death blow came in the thirteenth century, which brought devastating invasions from the east including wholesale massacres and depopulation of urban centres.

Meanwhile, in Europe, the relationships between Church and State, philosophy and theology, science and dogma, faith and reason, went through many upheavals, too. The Catholic Church was shaken by the Protestant revolution. Europe faced political struggles compounded by fierce theological disputes. The road to scientific revolution was not an easy one, since the commonwealth of learning was fractured. But one thing remained clear. Organized religion was not inherently opposed to intellectual innovation. For example, Nicolaus Copernicus was a canon of the Catholic Church; Pierre Gassendi and Marin Mersenne were priests. Galileo’s contemporaries who

excelled in conic sections and invented the mercury barometer, Torricelli and Viviani, were Jesuits. Blaise Pascal was a Jansenist. Descartes and Fermat were Catholics, while Tycho Brahe, Johannes Kepler, and the Scottish mathematician John Napier were Protestants.

Of course both Catholic and Protestant churches also persecuted their members and non-members alike. No one has forgotten the Spanish Inquisition against marranos and moriscos ('crypto' Jews and Muslims). The Church took action against Giambattista della Porta and Campanella, as well as Galileo, and executed Giordano Bruno and Lucilio Vanini. Michael Servetus, who denied the Trinity and believed that God was One, was burned at the stake in Calvin's Geneva in 1553.

The Protestant persecution of Hugo Grotius merged the religious and the political, while Pierre Bayle escaped from Catholic persecution in Catholic France to be gradually hounded to the grave by upholders of Protestant doctrine in Rotterdam.<sup>23</sup> For Bayle, reason was 'natural light... a sure and infallible rule, by which we must judge everything, not excepting the question of whether such a thing is contained in scripture [or not]'.<sup>24</sup> His battle against Augustine's specious reasoning about 'compel them to come in' – a saying of Jesus used to justify forced conversions and the persecution of the heterodox – was eventually victorious. Voltaire also ruled out the possibility of universal agreement on matters of faith, saying: 'It would be the height of folly to try to make all

men think in a uniform manner about metaphysics. It would be easier to subjugate the entire universe through arms than to subjugate the minds of a single village.’<sup>25</sup> John Locke, on the other hand, judged there were groups that could never be tolerated: Catholics and Muslims because they owe allegiance to a foreign prince, and atheists, because they cannot be bound by oaths. And though Pierre Bayle extended tolerance to ‘all religious sects including Socinians (Unitarians), Moslems, Jews and Catholics’, he said ‘they should be deprived of the power of doing mischief’.

Those who ‘could not be tolerated’ were often eradicated, particularly if they were ‘troublesome’ thinkers. In Christianity, the death sentence was standard for heresy, which was seen as a dangerous contagion from the earliest centuries of the faith. Heresy threatened the unity of the Church. No less than Thomas Aquinas had to concede that those who relapse into heresy ‘are admitted to penance, but are not delivered from the pain of death’. From Catholicism, execution of heretics was continued by Protestant Huguenots, Calvinists and English Puritans. And the Christians were not alone in applying this ‘remedy’. They were in good company when it came to Muslims. Some of those who were thus dispatched for their beliefs included the brilliant writer and free-thinking philosopher Ibn al-Muqaffa, executed under the Caliph al-Mansur, ca. 756; the mystic al-Hallaj, executed in 922; and Shihab al-Din al-Suhrawardi, a Muslim philosopher and theologian, in 1191, and on.

From the ninth century to the sixteenth century, we see a constellation of Muslim and non-Muslim intellectuals, scientists, mathematicians, astronomers and others whose works had a major impact in Europe. For example: al-Khwarizmi (d. 850, pioneered *al-jabr* or algebra, though greatly improved by later Muslim mathematicians); Al-Kindi (d. 873); Abu Ma'shar (d. 886, student of al-Kindi, yet far more influential in Europe as 'Albumasar' the astronomer and astrologer); al-Farabi (d. 950); al-Biruni (d. 1048, Persian scientist); Ibn Sina (d. 1037); Ibn al-Haytham (Alhazen, d. 1040, scientist, very influential in Europe as the 'second Ptolemy'); Ibn Bajja (d. 1138, Avempace, astronomy, science); Ibn Tufayl (d. 1185, influential neoplatonic thinker known in Enlightenment Europe); Ibn Rushd (d. 1198); Ibn Khaldun (d. 1406). Today, the mystical thinkers Ibn 'Arabi (d. 1240) and Rumi (d. 1273) are influential in all regions of the world.

Some of their texts were translated, incorporated, and indeed, used as textbooks in European universities. In fact, we are just beginning to recognize the enormous influence that what is known as the Golden Age of Islam<sup>26</sup> had on Western Christendom. As W. Montgomery Watt reminds us: 'It is clear that the influence of Islam on Western Christendom is greater than is usually realized. Not only did Islam share with Western Europe many material products and technological discoveries [it stimulated] Europe intellectually in the fields of science and philosophy.'<sup>27</sup>

In light of the aforementioned intellectual and scholarly progress in Muslim lands, a crucial question

has often been raised: why did modern science rise in Europe in the sixteenth century and not in the other, competing and, at the time, equivalent Chinese and Islamic civilizations? We are familiar with such standard answers as the impact of the Protestant Reformation (Richard Tawney), the rise of capitalism and the influence of the Protestant Puritan work ethic (Max Weber), and Oriental despotism (Karl Wittfogel).

Two recent books, *The House of Wisdom: How the Arabs Transformed Western Civilization* by Jonathan Lyons and *Islamic Science and the Making of the European Renaissance* by George Saliba<sup>28</sup> offer fresh insights into this conundrum. One theory is that in Europe, both the Church and secular powers provided continuity. It is evident that both in Europe and in the realm of Islam, charitable endowments played a role in the success of scientists, philosophers, and theologians. In Europe, as well, we witnessed the advent of monasteries, which the Papacy relied on, along with universities and other educational institutions, to exert its authority. As a matter of fact, Jesuits alone built some estimated 1,000 colleges. In addition, in Europe, the secular power of the princes – who at the same time were both defenders of the faith and secular rulers – added great weight to the patronages they provided. Side by side with theology, we see the emergence of European universities dedicated to secular subjects: medicine, law, engineering, et al. There was also the rise of guilds in Europe, which institutionalized continuity.

But the growing strength and influence of European universities was, perhaps, the key development. The first university to use that appellation was the University of Bologna, founded in 1088. Others followed including the University of Paris, 1150; the University of Oxford 1167; the University of Cambridge 1209; the University of Salamanca 1218; the University of Padua 1222 and many others.<sup>29</sup>

These universities offered a haven for researchers and they provided continuity. They institutionalized the study of theology, science and other subjects. The endowments they had were not controlled from outside, but were durable and lasting, which allowed them to plan. Of course, the invention of the printing press also had a major impact, especially after the Protestant Reformation. Books were published and the ideas they promulgated, often circulated in pamphlets, broadened the outreach of learning and knowledge. In addition, many academies of sciences were founded such as the Pontifical Academy of Sciences in 1603, the Royal Society in 1660, the French Academy of Sciences in 1666, the Union of the German Academies of Sciences in 1700, the Russian Academy of Sciences in 1724, and many others.<sup>30</sup>

The reputations of rulers, the interests of the state, rivalries among rulers, particularly between Catholics and Protestants, became a boon to these academies. It became a matter of prestige and a symbol of a nation's strength to create and support these institutions and to ensure their excellence. But as George Saliba

points out, there were other critical developments that were influential at this time. One was the idea of patenting new discoveries, which emerged in Venice in 1477. Thus, scientific and technological production was commoditized and became commercialized. According to Saliba, scientists became producers of capital. This reinforced the role that science played in the acquisition of capital during the Age of Discovery.<sup>31</sup> Patenting became an efficient system of record for scientists. This development was followed by the emergence of business associations that claimed monopolies on trade under the umbrella of the British, Dutch, French, Spanish and the various East India companies. They became, arguably, comparable to today's multinational corporations.

The ability to patent new scientific and technological discoveries and the wealth this generated funded further patentable research. It is the connection between science, technology and the incentives of commercial profit that advanced the progress of modern science. Meanwhile, in the East, we saw the rise of educational institutions, but they did not develop into institutions comparable to those in the West where, under one roof and supported by patronage, science and theology could coexist and prosper.

As far as patents are concerned, there are statements attributed to Prophet Muhammad condemning monopolies. The question of sharing knowledge and not monopolizing it are addressed in such Prophetic statements as: 'Whoever denies

knowledge to his fellow believers will be brought to the Day of Judgment with a bridle of fire across his mouth.’ Knowledge was defined as public property – thus, for moral reasons it could not be monopolized or patented.

Having considered all this, naturally, we must also note the shifting currents that formed the intellectual foundation of scientists and philosophers. In the nineteenth century, for example, in Muslim societies, there emerged a generation of intellectuals and reformers. Often writing in and reacting to colonial contexts, they called for a renewal of *ijtihad* – the exercise of personal reason – acting in the trust that divine commands are intelligible to human reason and thus require reasoning. A discussion of the purposes of the tenets of religious law of the fourteenth-century scholar al-Shatibi came alive and continues to enlighten and fascinate thinkers today. Another renewed concept was that of *maslaha*, the public good, put to new uses in political and social reforms.

The nineteenth century brought a new generation of Muslim leaders, both religious and secular, who did not view the glorious past of Islamic civilization as a source of consolation in the midst of Western imperial domination of their lands and peoples, but rather as a source of inspiration, a clarion call for renewal of their societies. These Herodians, to use Arnold Toynbee’s characterization, saw in education, in the reconciliation of faith and reason, and in science, the keys for reconstruction of their societies; the means

by which to achieve economic, cultural and social progress and the eventual liberation of their realms from colonial rule.

Egypt and India became leading centres for modernist scholars. The work of these new leaders ranged from advocacy for the notion that Western ideas were compatible with Islam – because Europeans recognized Islam’s large contributions to Western civilization – to fundamental reconstruction of the Muslim societies of North Africa, the Middle East, and South Asia. These modernists, including Rifa’ā al-Tahtawi in nineteenth-century Egypt, placed great emphasis on the exercise of reason and knowledge in every field of social endeavour. In many ways, they put forward an ambitious agenda for Muslim societies – an agenda that is still with us.

One of the major leaders of the modernist movement was Muhammad Abduh (1849–1905), an Egyptian religious reformer. He believed that a modern society could adopt European ideas and sciences without abandoning Islam. He tried to reconcile Islam with the premises of European civilization such as liberalism and the modern state. While he believed that religious observances of Islam were immutable, societal aspects of Islamic law could be reformed in such areas as marriage, divorce, and inheritance. He argued that the Qur’anic ideal was monogamy, not polygamy. He supported women’s education and restructuring the traditional curriculum.<sup>32</sup> Central to Abduh’s thought was the notion that Islam was compatible with the basis of the scientific method, which is universal and not attached to any religion.

Abduh was a disciple of al-Afghani (1838–1897), a seminal figure who called for fresh interpretation of holy texts and a renaissance of *ijtihad*. He believed that reason, science and technology were integral to Islam and Muslim civilization, and that Muslim societies should reclaim them. Al-Afghani also believed that Muslims could succeed in their struggle against European colonialism provided that they did not ignore or reject the sources of its strength, namely, science and technology. He advocated the reformation of the educational system, the establishment of parliamentary government to limit the power of rulers and believed that science was universal. In a ‘Lecture on Teaching and Learning’, given in 1882 in Calcutta, al-Afghani said: ‘The strangest thing of all is that our ulama these days have divided science into two parts. One they call Muslim science, and one European science. Because of this they forbid others to teach some of the useful sciences. They have not understood that science is that noble thing that has no connection with any nation, and is not distinguished by anything but itself. Rather, everything that is known is known by science, and every nation that becomes renowned becomes renowned through science.’<sup>33</sup>

Al-Afghani also wrote that: ‘The father and mother of science is proof, and proof is neither Aristotle nor Galileo. The proof is where there is proof and those who forbid science and knowledge in the belief that they are safeguarding the Islamic religion are really the enemies of that religion. The Islamic religion is the closest of religions to science and knowledge,

and there is no incompatibility between science and knowledge and the foundation of the Islamic faith... There was, is, and will be no ruler in the world but science.<sup>34</sup>

Whereas al-Afghani issued a kind of manifesto of reform in the Middle East, in South Asia we see two major reformers emerge and call for reconstruction of their societies. Naturally, the first individual I'm referring to is Sayyid Ahmad Khan (1817-1898), a key figure in defining Islamic modernism in India. He attempted to demonstrate that natural science and its discoveries are in fact compatible with Islam's faith, by arguing that science and religion relate to completely different realms so they neither contradict nor conflict with each other. The adoption of a natural scientific view entails the acceptance of God as the Creator of the universe. Sayyid Ahmad Khan attempted to establish the compatibility between the modern sciences and the Qur'an. In his view, the word of God is, in fact, synonymous with the natural laws of modern science. Therefore, reason should be used fully when interpreting the Qur'an and when the text seems to contradict what is known, it should be interpreted symbolically.

In a series of essays, he called for the establishment of 'the original religion of Islam which God and the Messenger of Islam have disclosed, not that religion which the ulama and preachers have fashioned'. He maintained that Islam was compatible with reason and the laws of nature and was, therefore, in perfect harmony with modern scientific thought. He argued

for acceptance, not rejection of the best of Western ideas. To further these progressive goals, he founded the Aligarh Muslim University in India, patterned after Cambridge University.

The second reformer is Muhammad Iqbal (1877-1938). Iqbal was a philosopher and a scholar, well steeped in Western philosophy, history and literature, who wrote in Persian as well as Urdu. (He was educated in Cambridge and Munich University with law and doctorate degrees in philosophy.) He was greatly impressed by the dynamism of the West. But at the same time he rejected nationalism, materialism and atheism. In Europe, nationalism had led to destructive racism and imperialism. He hailed European cultures, science and technology but condemned Europe's colonialism, the dehumanizing and exploitive nature of Capitalism, the atheism of Marxism, and the bankruptcy of secularism. He criticized five centuries of dogmatic slumber that the Muslim world had endured, lamented its decadence and called for unity and reform. He criticized the ulama for perverting the spirit of Islam and Islamic law. In his *The Restoration of Religious Thought in Islam*, he upheld the hope of the spiritual regeneration of Islam. He believed that it was Islam that provided both the moral and spiritual foundation for individuals. He argued that the equality and brotherhood of believers made democracy a political ideal in Islam. His revolutionary ideas led him to take a stand for *ijtihad* (individual interpretation) of the law along with that of *ijma'* (consensus). He invested the right

to interpret Islam in the community, transferring that right from the ulama (religious authorities) to a national assembly. Such collective or cooperative authority would be the best guarantee of an Islamic democratic society. Needless to say, Iqbal also believed in the value of education and science as vehicles to unleash the potential of Muslim individuals and the Muslim community.

Now, let me attempt to sum up the themes I have discussed in my remarks. I will begin by saying that it is encouraging, today, to see that those who advocate for reform and reconstruction of Islam – in essence, those who want to reclaim it – accept science, education and technology as necessary. Even the most ardent fundamentalists such as the Taliban in Afghanistan love their Toyotas, their cell phones and all the other cutting-edge technologies, including the latest weaponry. In this global economy, nobody can remain an isolated island. Nobody can be a Zealot, to use Toynbee's term, and retreat completely into a cocoon. In many ways, both the West and the East have followed the same path in terms of pondering how to reconcile science and faith, and even more importantly, how to provide a private sphere – such as in universities – for scientists, philosophers and educators to pursue their ideas. In the West, this aim was achieved by the separation of Church and State. In the East, at least until recently, attempts were made along the same lines, but it is now a struggle to maintain the independence and autonomy of academic institutions. The Western concept of academic tenure

comes into play in any discussion of this sort, because tenure ensures the security of academics to do their work and follow where their ideas lead them even in the most inhospitable environments.

I began my lecture today by referencing the mission of your institution, so let me end up with that as well. Dialogue and honest conversation are necessary if religions, communities, nations and societies have any hope of ever living harmoniously. In that connection, acceptance and tolerance are certainly goals we should aspire to, but not simply tolerance that is based on legal compulsion. True tolerance must be based on real understanding and respect for the faith and belief of ‘the other’, whoever he or she may be. In this regard, pseudo-dialogues are not helpful, as illustrated by the story of two religious interlocutors discussing their faith: one says to the other, ‘Brother, we both serve the Lord – you in your way and I in His’.

There have been significant attempts to develop true inter-religious discourse, and I am a great admirer of these efforts. For example, in 2004, Archbishop of Canterbury Rowan Williams spoke at al-Azhar in Cairo, continuing the venerable tradition of medieval dialogues. I have a high regard for the Archbishop for taking upon himself the mission to reach out, explain, listen, and even defend. He spoke with feeling about the doctrine of the Trinity, acknowledging the diverse views of this mystery held by Christians over the centuries. God does not contain three different individuals, he said, but is One as fingers and a hand

are one: 'A source of life, an expression of life, and a sharing of life.' And he noted the Alexandrian and Egyptian origin of some of the greatest Trinitarian theologies. He is adamant in his assertion that the children of Abraham worship the same God, and that the ways humans have conceived of God are more numerous than the human family itself.

The Archbishop said at al-Azhar: 'the disagreement between Christian and Muslim is not, I believe, a disagreement about the nature of God as One and Living and Self-subsistent... The greatest challenge today for our world is how to react to circumstances in a way that is faithful to God's will.' In saying this, the Archbishop has acknowledged differences, the importance of reasoning about them, and he invites us to turn our reasoning toward other challenges: our common needs for justice, dignity, mercy and love. He invited us to change the questions we are asking one another.

It sometimes seems that, what science was to eugenics, today, history is to the anti-Islam, anti-Christian, anti-Judaism business. The assertions made are assertions about history, and it is selective history at best. History provides the material that you need to chew and to cherry-pick, in order to portray a diverse 1400-year history as nothing but conflict, or one-sided aggression. On all sides, incitements to conflict often take the form of selective historical narratives, as well as the essentialist reading of cultures and scripture. We are, unfortunately, often fed hate with our history.

As an historian, I like to quote Friedrich von Schlegel: ‘A historian is a prophet in reverse.’ We historians see grand visions and designs, but while looking backward: we see them in the past. Although not as powerful as the real thing, this backwards prophecy is a powerful force. That’s because history is something we shape, even if we feel it is shaping us – and it is.

In my capacity as ‘a prophet in reverse’, I think I saw the future just recently. It was in a clipping from a small Florida newspaper. This is what it said:

‘Members of St. Martha Catholic Church, Temple Emanu-El and the Islamic Community of Southwest Florida will again join together ... for the ninth annual Feast of Abraham... with the following oath:

“We pledge that we will courageously support each other in time of trouble. We will defend each other from discrimination, vilification and abuse, using all powers of persuasion and all the resources of the law. We make this pledge recognizing that we are not distant relations but brothers and sisters in the shared parenthood of Abraham and so required to always treat each other with respect, compassion and love. We ask God to forgive our past hardheartedness against each other, recognizing that it has its basis in ignorance and fear. It is our sincere hope that God will instruct each community in the piety of the other, thereby strengthening the bond between us.”<sup>35</sup>

While I welcome the dialogue of religions and civilizations, it is paramount that these discussions should be held inside every country. The dialogue shouldn't be just between religions, nor even within them, but every country should bring secular people and scientists together with their religious leaders.

Embarking upon these dialogues should not be as difficult as it sounds because we all have a similar starting point. Christianity has the Logos and the Gospel. Jews have the Torah and the Law. Muslims have the direct speech of God, El, al-Lah. What I infer from all this is that God must have thought highly of men and women for He did not make the job easy for us, no matter what faith we profess. Effort, learning and discovery are enjoined upon us by all religions. When we do otherwise, the Qur'an has not failed Muslims, nor the Bible failed Christians, nor the Torah failed the Jews; it is the practitioners of these faiths who have failed to live up to their own traditions and beliefs.

The first command of the Qur'an is '*Iqra*', read. All the People of the Book, sooner or later, have to confront this important injunction of the Qur'an, to read. And to read means to learn. To learn means to understand. To read, learn and understand means to reason. Hence, reason and faith lead to one another, contain one another, require one another. Hence, reason and faith can never be antagonists.

As Albert Einstein wrote, the questions of scientific reason and religious faith – the questions of 'why' and 'to what end' – will always be with us. They

have always existed in both Christian and Islamic traditions, despite inquisitions and persecutions. Drawing on the enduring ideas of St. Thomas Aquinas, Pope John Paul II also commented on these questions, noting that faith and reason 'are like two wings on which the human spirit rises to the contemplation of truth'. They will always exist together, and there will always be creative tension around them, because God gave reason as an obligation to question. Or, as the man whom Aquinas called 'the Commentator', Ibn Rushd (or Averroes), put it: 'divine law makes reasoning obligatory.'<sup>36</sup> The mind will never cease to ask both 'why?' and 'to what end?'. Reason raises questions about 'why?'. Faith raises expectations about 'to what end?'.

Suppression of one will always undermine the other. And so we are bound always to respect faith's freedom of conscience and the mind's freedom of inquiry.

## Endnotes

- <sup>1</sup> I first came across this term in *The Western Question in Greece and Turkey*, by Arnold Toynbee.
- <sup>2</sup> New York: Simon and Schuster, 1996.
- <sup>3</sup> The Holy Qur'an itself addresses this idea over and over again. Some examples:  
'O mankind! We created you from a single [pair] of a male and a female and made you into nations and tribes that ye may know each other [not that ye may despise each other].'  
'Mankind was but one nation, but differed [later].'  
'And among His signs is the creation of the heavens and the earth, and the variations in your languages and your colours: verily in that are signs for those who know.'  
'If thy Lord had so willed, He could have made mankind one people: but they will not cease to dispute.'
- <sup>4</sup> The most recent polls still show a majority of Americans still reporting that they know little to nothing about Islam, and that their negativity is increasing rather than decreasing. When we look at where Americans get their information about Islam, we find that people with negative sentiments disproportionately get their information from the media, rather than from knowing someone who is Muslim, or from their educational experiences, at all levels.
- <sup>5</sup> Later reprinted as *Islam: A Mosaic, Not a Monolith* by Brookings Institution Press, June 2003.
- <sup>6</sup> As Franz Rosenthal tells us in *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam* (Leiden: Brill, 1970): 'The pursuit of knowledge is the single most striking feature in a system of great revelation such as Islam.' Also: 'In Islam, the concept of Knowledge enjoyed an importance unparalleled in other civilizations.' I'm glad, also, that Ismail Serageldin, Director of the Library of Alexandria reminds us that '*ilm* [knowledge] and its derivatives occur 880 times in the Qur'an (*Space for Freedom*, London: Butterworth Architecture, 1989). Indeed, scholarship has served as the chief qualification for religious authority in most Muslim societies.
- <sup>7</sup> *The Born-Einstein Letters 1916-1955* (Basingstoke; MacMillan (1971) 2005).
- <sup>8</sup> Blaise Pascal, 1623-1662, writing in *Les Pensées*.

- <sup>9</sup> 1876–1958.
- <sup>10</sup> Letter of Pope John Paul II to the Reverend George V. Coyne, S.J. Director of the Vatican Observatory, 1988.
- <sup>11</sup> *St. Thomas Aquinas: Philosophical Texts* (London: Oxford University Press, 1951).
- <sup>12</sup> *Religion and Theology*, by Mortimer J. Adler and Seymour Cain (Encyclopedia Britannica Inc., 1961). See also *The Summa Theologica*, St. Thomas Aquinas. Averroes was banned and banished. The books of his follower Maimonides were burned by the faithful (Jews). In 1277, soon after his death, Aquinas was denounced by the Bishop of Paris at the instigation of the Pope. A decree enumerated his 219 heresies. The Dominican order mobilized to defend him and won their ultimate victory by his canonization.
- <sup>13</sup> *Victory and Vexation in Science* by Gerald Holton (Cambridge, MS: Harvard University Press, 2005).
- <sup>14</sup> Ibn Khaldun (1332–1406), *The Muqaddimah*.
- <sup>15</sup> 43: 23–4.
- <sup>16</sup> 53: 28.
- <sup>17</sup> 2: 111.
- <sup>18</sup> Jonathan Lyons, *The House of Wisdom: How the Arabs Transformed Western Civilization* (London: Bloomsbury, 2009), p. 201.
- <sup>19</sup> Ibn al-Haytham, *al-Shukuk fi Batlaymous* (Doubts about Ptolemy)
- <sup>20</sup> The efforts of the ulama to formalize Islamic doctrine for mainstream Sunni Muslims led to the emergence of four prominent schools of Islamic law in the eighth and ninth centuries. They made a religious science out of *hadith* by checking the authenticity of each link in the chain of sources of oral history and resolving discrepancies in reports on the Prophet's words and deeds. One of these schools, which is followed mostly in Saudi Arabia, is named after Ahmad ibn Hanbal.
- <sup>21</sup> George Makdisi, *The Rise of Colleges: Institutions of Learning in Islam and the West* (Edinburgh: Edinburgh University Press, 1981), pp. 29–30.
- <sup>22</sup> George Makdisi, in his history of colleges and learning, listed many corresponding elements in the medieval West, south and north of the Mediterranean, including the donor-driven establishment of charitable trusts; universities established by rulers in North Africa and Europe; dialectical methods in legal and theological studies; the status of the professor, the witness and the notary; and the

forms of commentary, argumentation and use of source texts that grounded the scholastic method in Europe. In short, the manner in which an assertion was proved true or false appears to have been shared, or transferred, across the Mediterranean.

<sup>23</sup> Bayle fled to Geneva, then Holland, but his brother was imprisoned in France as a consequence of Bayle's writing, and died in prison.

<sup>24</sup> *Selections from Bayle's Dictionary*, p. xii.

<sup>25</sup> 'Ce serait le comble de la folie de prétendre amener tous les hommes à penser d'une manière uniforme sur la métaphysique. On pourrait beaucoup plus aisément subjuguier l'univers entier par les armes que subjuguier tous les esprits d'une seule ville.' *Voltaire, Traité sur la tolérance*, ch. XXI.

<sup>26</sup> The early, formative period of the Muslim empire was followed by the 'Abbasid Caliphate (750–1258) named after the Caliph Abu al-Abbas al-Saffah, who claimed descent from an uncle of Muhammad. He transferred the seat of power from Damascus to Baghdad and inaugurated what is known as the Golden Age of Islamic Civilization. This golden age is no mere footnote in Islamic history, for arguably, 'Islamic' civilization was essentially human civilization – one that, like prior Greek and Roman civilizations, embraced and thrived on all human achievement.

<sup>27</sup> W. Montgomery Watt, *The Influence of Islam on Medieval Europe* (Edinburgh: Edinburgh University Press, 1972), cited in Makdisi, *The Rise of Colleges: Institutions of Learning in Islam and the West*.

<sup>28</sup> Cambridge, MS and London: MIT Press, 2007.

<sup>29</sup> Some others: The University of Naples Federico II, 1224; the University of Siena, 1240; the University of Valladolid, 1241; the University of Cambra, 1290; the University of Rome La Sapienza, 1303; the University of Perugia 1308; the University of Florence, 1321; the University of Pisa, 1343; Charles University of Prague, 1348; University of Angers, 1356; University of Pavia, 1361; Cracow Academy, 1364; University of Vienna, 1365; University of Pécs, 1367; Ruprecht Karls University of Heidelberg, 1386; University of Ferrara, 1391; University of Würzburg, 1402; University of Turin, 1404; University of Leipzig, 1409; University of Provence, 1409; University of St. Andrews, 1410; University of Rostock, 1419; et al.

<sup>30</sup> Other academies of sciences included The Royal Swedish Academy of Sciences, 1739; The Royal Danish Academy of Sciences and Letters, 1742; The Royal Academy of Sciences, Letters and Arts of Belgium, 1772; The Academy of Sciences of Lisbon, 1779; The Royal Society of Edinburgh, 1782; The Royal Irish Academy of Sciences 1785; The Slovak Academy of Sciences, 1792; The Royal Netherlands Academy of Arts and Sciences 1808; et al.

<sup>31</sup> Generally, the fifteenth to the seventeenth centuries.

<sup>32</sup> The ideas in this section are drawn from *The Oxford History of Islam*, edited by John Esposito (Oxford: Oxford University Press, 1999).

<sup>33</sup> Sayyid Jamal al-Din al-Afghani, 'Lecture on Teaching and Learning', November 8, 1882, Albert Hall, Calcutta, as reprinted in Nikki R. Keddie, *An Islamic Response to Imperialism* (Berkeley, CA: University of California Press, 1968), p. 107.

<sup>34</sup> Ibid.

<sup>35</sup> *Herald Tribune*, Sarasota FL, March 10 2009.

<sup>36</sup> Averroes, Introduction to the *Decisive Treatise*, *Fasl al-maqal*.