The Scientific Revolution and its Dependence on Muslims

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Long before the times of Copernicus, Galileo and Newton, there was a large scale social endeavour that in pace of production parallels and presages the Industrial Revolution of the 19th century. Britannica Encyclopaedia (2009 edition), in its *Industrial Revolution* article tells us:

> in modern history, the process of change from an agrarian, handicraft economy to one dominated by industry and machine manufacture. This process began in England in the 18th century and from there spread to other parts of the world.

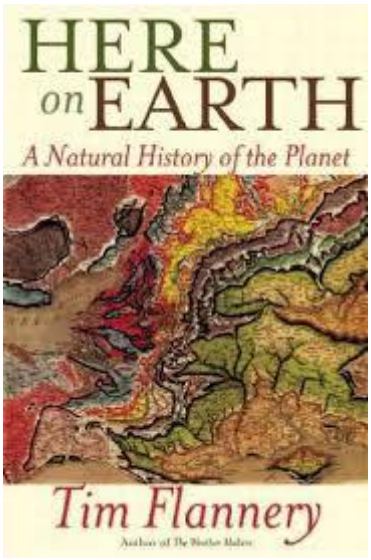
Britannica continues:

> The main features involved in the Industrial Revolution were technological, socioeconomic, and cultural. The technological changes included the following: (1) the use of new basic materials, chiefly iron and steel, (2) the use of new energy sources, including both fuels and motive power, such as coal, the steam engine, electricity, petroleum, and the internal-combustion engine, (3) the invention of new machines, such as the spinning jenny and the power loom that permitted increased production with a smaller expenditure of human energy, **(4) a new organization of work known as the factory system, which entailed increased division of labour and specialization of function,** (5) important developments in transportation and communication, including the steam locomotive, steamship, automobile, airplane, telegraph, and radio, and (6) the increasing application of science to industry. These technological changes made possible a tremendously increased use of natural resources and the mass production of manufactured goods.

(Underlined emphasis is mine) I quoted these texts from the encyclopaedia article to contrast the production methods and outputs before the revolution with those after its adoption.

Though not comprehensively stated here one can easily see that industrialisation reduced costs and increased output significantly over the older handcraft and village based production system. Adam Smith, the Scottish philosopher and political economist, in his famous book '*Wealth of Nations'*, to extol the benefits of division of labour, described the manufacture of pins in a pin factory. I don't have the exact quote from the book but I will give a paraphrased quotation from page 123 of Tim Flannery's book *'Here on Earth - A Natural History of the Planet'* (2010):

A pin, he says, may be a simple object, but its manufacture requires up to eighteen separate operations - cutting the wire, pointing the pin, fixing the head to it and so forth - and in a large pin factory each operation is performed by a specialist who does nothing else. Smith doubted that a person working alone and performing all eighteen operations could make twenty pins in a day. Yet he found that ten men specialising in just one or two operations could make forty-eight thousand pins per day. This near miraculous increase in output Smith saw as the ultimate source of the prosperity of advanced nations.



Having read that quotation you now know what division of labour during the industrial revolution did first for European economic expansion and later for global economic and social development. Before the industrial revolution production was stagnated by village handcraft methods of production.

Now I am going to say something I have not read in any book and it is, as far as I know, my own original thought: There was a time in the ancient world when science and philosophical thought was done in a kind of *'village fashion'*. In the earliest of times there was also too much of mythology in many regions of the world that hindered the development of a high level academic class in multiple self developed societies simultaneously that then could exchange their researches and learning with each other. It took many years and centuries of social evolution to proceed from isolated inventors, theorists and philosophers in some villages and towns to institutionalised academic centres and for a long time when one nation had reached the level of building libraries and colleges another was just beginning to learn baseline mathematics and written language. Thus, the levels of internal social organisation in the different nations and tribes had not substantially reached a uniform baseline in

multiple regions simultaneously. There was some trans-national exchange of knowledge progressively over years and centuries but because of the volatility of regional politics and the intermittent wars fought between nations, international infrastructure for the support of academia could not be developed.

To borrow from the analogy of the industrial revolution there was no industrialised large scale production of literature (prose, verse, fiction, encyclopaedic reference material, etc), science (math astronomy, medicine, geography, meta physics philosophy, etc), art (music, painting, sculpture, etc), engineering feats (water clocks, flight testing, self playing [automated] musical instruments, etc), and botanical and zoological exploration of near and distant lands and climes and waters.

Any kind of large scale international nuclearization of science and technology would have to be patronised by the very deep pockets of rulers firmly established across multiple regions. This might have been achieved by the Greeks after the spectacular victories of Alexander The Great against the vast Persian empire and his subsequent expeditions into Asia. His empire stretched from Greece to northern India, occupying Egypt, the Levant and all of Persia, but his untimely death at the young age of 33 without naming an able bodied heir to his vast empire saw a quick and bloody breakup of his Euro-Asian empire.

Ptolemy, one of his generals, established a dynasty in Egypt and in the Egyptian city of Alexandria he built one of the largest libraries of the ancient world housed in an academic complex called the Muaseum. Learning in Alexandria did attract a large number of scholars chiefly from within the Mediterranean world. At a time and age when written works were not in bound book form but written on papyrus scrolls the library was said to house over 400 000 scrolls. The library served as a copy centre and repository of knowledge and it flourished for approximately 300 years until about 48 BC when the army of Julius Caesar was besieged in the city, a fire that started elsewhere spread to the library and a substantial portion of the literature was lost in the flames.

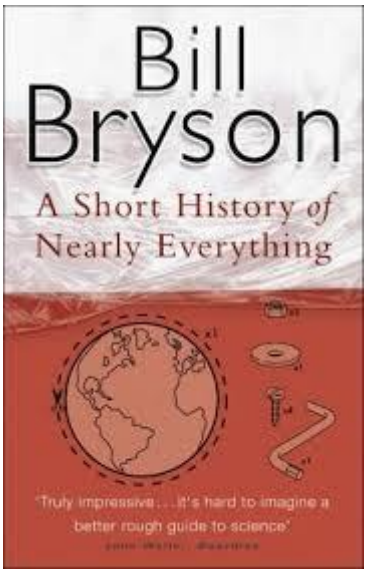
The greatness of the library could not be matched by the rulers who patronised it. The Ptolemaic Kingdom was small, limited to Egypt and the Levant and could not support a multiregional industrial scale production of science and technology that was supported by a monetary economy which would create demand for big science projects and hundreds and thousands of smaller individual science and literature projects that would evolve into its own thriving industry over and beyond the function of a central library, such as the one in Alexandria.

After the death of Cleopatra and Mark Anthony the Romans supplanted the Greeks as masters of the Mediterranean world but they were constantly kept in check by barbarian invasions from Western Europe and the opposing Persian Empire in the east. And their thirst for knowledge was not as great as the Greeks before them. Thus, without having any other relevant regional history to report about an unsuspecting reader could easily be lead to a narrative of Europe's Intellectual ascendency beginning at the start of the Renaissance. Such a narrative can be read in the opening paragraph of an essay about Sufism from a South African professor and published in the late 1990s. The essay's title is *'Turning to the Core: The rise of Sufism?'* and its author is professor Abdul Kader Tayob from the University of Cape Town. The opening paragraph prefaces Tayob's report on the state of Sufism in South Africa at the time. He has written the following:

> The broad story of Europe is familiar to us. With the rise of science, rationalism and industrialization, the Church lost its undisputed authority in society. From the time that the sixteenth-century Polish student Copernicus demonstrated a competing theory of the earth and the solar system, the Church had to give way to other systems of truth. This did not, as it is popularly believed, lead to

the immediate elimination of religion. Rather, religion was redefined as a private and personal matter. With the progressive secularization of society, moreover, some Europeans and Americans turned increasingly to the mystical and spiritual foundations of religions, particularly eastern religions.

Although the first two sentences are a concise summary of Europe's scientific renaissance, for most ordinary readers and quite possibly Tayob himself, though I won't accuse it bluntly, it rings true in their minds that Europeans were the first large scale producers of science and technology creating intellectual highways from Moscow to Berlin, Paris and London. And when you read a fat and beautifully narrated book like Bill Bryson's *'A Short History of Nearly Everything'* (2004) you imagine an intellectual nuclearization and the triumph of materialism and the establishment of modern sciences that includes electricity, computers, satellites, nuclear power, flying aircrafts, telephonic communication, organ transplant, space travel, etc and a society that progressed through Darwinism, atheism, feminism, and modern democracy.



If you read from Britannica's Encyclopaedia article on the *Renaissance* its two opening paragraphs reads as follows:

Literally "rebirth," the period in European civilization immediately following the Middle Ages, conventionally held to have been characterized by a surge of interest in classical learning and values. The Renaissance also witnessed the discovery and exploration of new continents, the substitution of the Copernican for the Ptolemaic system of astronomy, the decline of the feudal system and the growth of commerce, and the invention or application of such potentially powerful innovations as paper, printing, the mariner's compass, and gunpowder. To the scholars and thinkers of the day, however, it was primarily a time of the revival of classical learning and wisdom after a long period of cultural decline and stagnation.

The term Middle Ages was coined by scholars in the 15th century to designate the interval between the downfall of the classical world of Greece and Rome and its rediscovery at the beginning of their own century, a revival in which they felt they were participating.

Indeed, the notion of a long period of cultural darkness had been expressed by Petrarch even earlier. Events at the end of the Middle Ages, particularly beginning in the 12th century, set in motion a series of social, political, and intellectual transformations that culminated in the Renaissance. These included the increasing failure of the Roman Catholic Church and the Holy Roman Empire to provide a stable and unifying framework for the organization of spiritual and material life, the rise in importance of city-states and national monarchies, the development of national languages, and the breakup of the old feudal structures.

Nowhere in the entire article will find the word Islam or Muslim even mentioned once. Therefore when Tayob wrote in his second sentence: 'From the time that the sixteenth-century Polish student Copernicus demonstrated a competing theory of the earth and the solar system, the Church had to give way to other systems of truth.', if you didn't know any better, you imagined the brave and bold Europeans standing up independently to light a torch over Europe and to lead the rest of the world into the modern scientific age and you imagine men like Copernicus, Galileo and Newton as intellectual fathers initiated only by their own boldness and zeal for knowledge from every aspect of the natural world and the universe at large. If you imagined it thus then you drank the Eurocentric cool-aid and got bluffed with the propaganda. In other words, you blindly bought into the Eurocentric indoctrination. Tayob's broad and familiar story of Europe is a sham. Europe's real and true eye opening to science, Greek philosophy, trigonometry, algebra, diverse universities, structured hospitals and advanced engineering began centuries before the birth of Copernicus, beginning initially with Greek philosophy and academia such as the library of Alexandria but after the fall of the Roman Empire learning, especially in northern Europe, was reborn from the Arabic universities in Spanish Andalusia and received its greatest impetus with the hellish savagery of the first crusade, when as Syed Amir Ali states on page 325-327 of his Book *'A Short History of Saracens'* (1927 edition):

From Nice the Crusaders marched to Antioch. Slaughter, rapine and outrage marked their progress though Asia. The siege of Antioch lasted nine months. Provisions became scarce and the **soldiers of the cross actually resorted to cannibalism**. "Carrion was openly dressed," say Mills, "and **human flesh was eaten** in secret.

Mutilation of the dead was indulged in as a sport....

Antioch at last fell by treachery...a gate was then opened, and the whole army poured into the city shouting "Dieu le veut" and then commenced a frightful butchery.

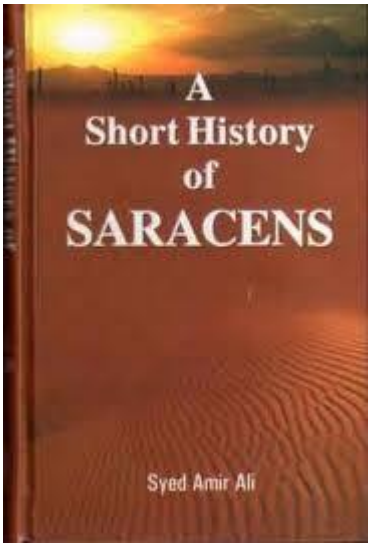
After butchering the Saracens, the invaders abandoned themselves to the worst excesses. From Antioch they proceeded to Marra't un-Noman, one of the most populous and flourishing cities of Syria, which they captured. Here they slaughtered one hundred thousand people.

"The streets ran with blood until ferocity was tired out."

From Marra the soldiers of the cross marched upon Jerusalem, which they took by storm.

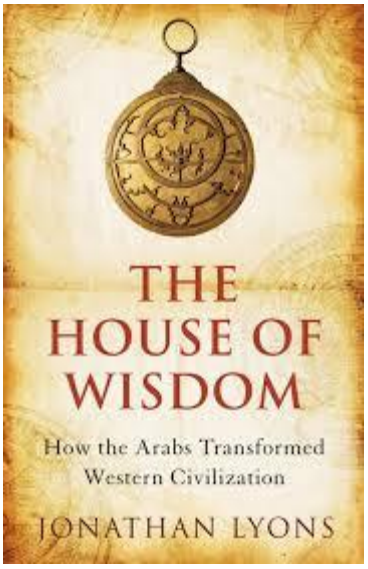
Michaud gives a graphic account of the massacre. "The Saracens were massacred in the streets and in the houses. Jerusalem had no refuge

for the vanquished....Raymond d'Agiles, who was an eye witness, says, 'that under portico of the mosque, the blood was knee deep, and reached the horses' bridles.'"



Again, to quote more of the crusader savagery from a different author who in, addition to mirroring the sanguine and savage depictions written by Syed Amir Ali, rightly depicts the intellectual context and contrast between Muslims in the Middle East and invading Christians from Europe. It is just a single paragraph from page 20 of Australian author Jonathan Lyon's book *'The House of Wisdom'*(2010):

The Christian reliance on trial by ordeal offended the sensibilities of the Muslims, with their highly evolved system of legal disputation and formal schools of religious law. Western notions of medicine were based largely on superstition and exorcism, in sharp contrast to the Arabs' advanced clinical training and understanding of surgery, pharmacology and epidemiology. The newcomers lacked any real knowledge of hygiene and sanitation, a deep affront to Muslims who performed ritual ablutions before each of the five daily prayers. Muslims observers thought very little of what they saw of Frankish culture. From their perspective, the Ifranj had no understanding of even basic technology, except perhaps for the engines of war, no proper science, medicine, or mathematics, and no real philosophical inquiry. Moreover, the crusaders' reputation for cruelty was sealed by **an outbreak of cannibalism** after the sack of the Syrian town of Mara in the winter of 1098. "Our troops boiled pagan adults whole in cooking pots; **they impaled children on spits** and devoured them grilled" writes Radulph of Caen, a witness to the atrocities of Mara. Fellow chronicler Albert of Aix captures the full horror of the incident in a single banal aside: ''Not only did our troops not shrink from **eating dead Turks and Saracens**, they also ate dogs."

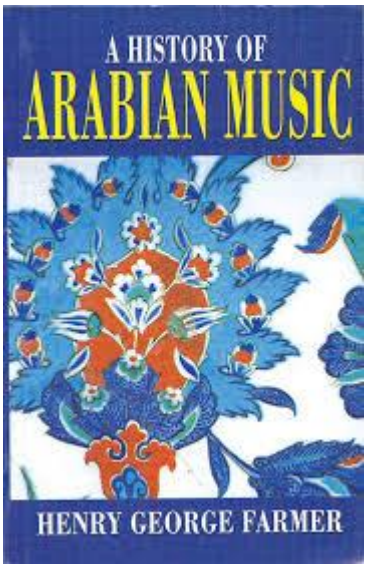


Thus, was the state of the Muslim's sciences at the time of the crusades, when al- Ghazali was reading and writing philosophy to rebuke philosophy and also conducting himself in the heretical spiritual exercises of Sufism. This is when large groups of European's eyes popped open to see the beautiful woman in rich brocaded dresses, the silks, the gems, the radiant skin from taking a bath everyday which Europeans learnt from the Muslims, the tens of thousands of books (literally and without exaggeration), the universities, the specialisation into integrated branches of science, global cartography, algebra, trigonometry, medical care and hospitals, the large market places (souks), trans-Asian trade from along the silk route and from India, China and other Far East entrepots and the diversity of goods, wares including spices, perfumes, and varieties of agrarian produces, such as sugar-cane, from local and neighbouring Muslim cities, provinces, states and foreign lands ingrained in the imagination of the recently savage Europeans colossal multinational, multiregional agro-industrial and manufacturing economic sectors. They wanted it all. They wanted the monetary economy and vast industries that money financed. And there was only one way to have it: scholarship. Here began the intellectual hunger of Europe for knowledge. That is why the crusades were for Europe the largest book bonanza of antiquity and I will discuss this better further down in this essay. Read the whole book *'The House of Wisdom'* by Jonathan Lyons. The sub-title is *'How the Arabs transformed western civilization'*. The unfamiliar truth you learn in this book and others like it is that the parent civilization of Western civilization (If you can accept 1492 CE as the start of Western Civilization) is the Muslim civilization founded by the Arab Muslims and that Greek and Roman Civilizations are like grandparents in Europe's intellectual evolution - remote, distant and occasional visitors and not direct influencers, moralisers and educators. Centuries before Tayob's European hero, Copernicus, began a protracted intellectual Islamisation of Europe, which many of them (the Europeans) won't admit because that would bring them closer to converting to Islam. A consequence of not admitting their Islamisation, they don't give credit to the Arabs who began humanity's earlier great age of science and academia from whose continuity and dependence Europeans reached the great intellectual epoch of a Scientific Revolution.

But this period, during the crusades, was a later period long after the golden age of Islam centuries ago when the highways of mankind's earlier great age of science and academia was being built from Samarkand to Andalusia converging at the cosmopolitan Muslim metropolis of Baghdad amidst the fabulous wealth, splendour and opulence of the Abbasid Caliphate in the days of Harun al Rashid and his son Mamun from the 760s to the 830s, more than 250 years before the crusades, and around the time when Sufis like Bastami and Hallaj were circling the drainpipes and gutters of Muslim society. Henry George Farmer in his book *'A History of Arabian Music'* (1929) states on pages 99-100:

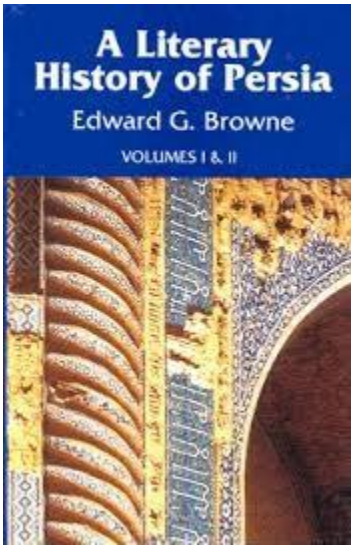
The wealth of the khalifs, nobility and merchants was almost fabulous. Al Mahdi spent six million pieces of gold on a single pilgrimage!" Harun, richer still, was able to give away two and a half million at one time, whilst at his death the treasury showed nine hundred million sterling. The magnificence of the palaces, mosques, college, and official residences, the luxurious appointments and furnishings of the interiors, the gorgeous retinues and equipages, the sumptuous fetes, banquets and other gatherings, together with the splendour of social life, not only in the capital, but in all the great cities from Cordova to Samarqand, surpasses anything of its kind in history.

Yet one may ask, "What has all this to do with music?" A great deal. Everywhere we see culture progress dependent upon economic and political forces, and side by side with this material luxury and political grandeur we find intellectual weal and aesthetic splendour. It has been called "The Augustine Age of Arabian literature," for not only belles lettres, but science (including the science and theory of music) and philosophy were patronized with zeal. Colleges were opened, libraries founded, observatories, hospitals and laboratories built, and "all this brilliance of literary and scientific attainment is contemporary with Charlemagne, in other words when the whole of Christian Europe was submerged in a barbarism very insufficiently tempered by the educational reform which he initiated"



Edward G. Browne, at the end of the 19th century, began the first of his four volume treatise of *'A Literary History of Persia'*(1902). The first volume covers the pre- Islamic era and continues through the Arab Invasion of Persia under Caliph Umar in the 630s and 640s until the year 1000 CE. In chapter 7 *'The General Characteristics of the Golden Age of Islam'* from paragraph 2 of page 271 to the end of the chapter on page 278 you can peruse through to learn about the flourishing of Arabic literature and the listing, beginning on the second paragraph of page 275, of 45 of the most important writers of this period, and ending on page 278 with the last paragraph of which begins with the sentence:

Other names might be added, but for our present purposes these are sufficient, since they serve to indicate how large a proportion (thirteen out of forty-five) of the most celebrated contributors to "classical" Arabic literature were of Persian extraction.



Chapters 24 and 25 from the previously referenced book *'A Short History of Saracens'* by Syed Amir Ali are called Retrospect, written to describe, in broad strokes, the stratification, diversity and sophistication of the Abbasid era. The topics in these two chapters include: The Caliphate, Political Machinery, Secret Agents, Administration, The title of Sultan, The Vizier, Departments of State, Postal Department, The Police, Local, Self Government, Agriculture, Manufactures, Taxation , Military Organisation, The army, Field Hospitals, Military Feudal System, Military formation, Military Tactics, The Navy, Baghdad, The Palaces, The Colleges of Baghdad, Receptions, Dress, The position of Women, Social Reunions, Commercial Activity, Intellectual Development, Rationalism, The final Collapse. As you can see from these topic headings the Abbasids governed over a colossal agro-industrial, manufacturing, financial and military complex centred at Baghdad that the noses of invading crusaders were sniffing 875 kilometres away in Jerusalem.

Coming back to The *House of Wisdom* book by Jonathan Lyons, on page 148 he explains how the geographer Ibn Hawqal visited Cordoba, in Spain, in 948 CE and observed that the city has surpassed all of the cities in the Magrib region and most cities in Egypt, Syria and Mesopotamia. He estimates its population to be over 100 thousand, which is estimated to be on par with that of Constantinople and greatly surpassing any city of Europe. Other chroniclers of the time estimated that the royal library of the Andalucian Caliph had a **catalogue which spanned 44 large volumes**. This tells me that the numbers of books were in the hundreds of thousands. When it was time to expand the library into new buildings it took five days just to transport the books on poetry alone. The city's streets had lamps, the roads were paved and its civic amenities were abounding which was certainly not the case in cities like London. Medicine was advanced enough that surgeons performed precision cataract operations using fish bones. From Muslim Spain's wealth, splendour and technological advances the Christian Europeans in the north now had a benchmark to compare and contrast their Dark Age of social regression and technological backwardness.

The success of the first crusade opened up the Middle East to Europe and in its wake numerous adventurers, explorers and knowledge seekers went east in search of their fortune and fame. One of the earliest and successful of European scholars to go east was Adelard of Bath. In the book *The House of Wisdom* Jonathon Lyons, on page 103, in chapter 5, discusses his learning. He spent approximately 7 years in the lands of the crusaders and in that time became fluent in Arabic. He

sought learned men of science and was fortunate enough to be tutored by an advanced medical research expert. He learned advanced dissection techniques including a water based method that placed a deceased human's body in running water in a controlled way that facilitated the softening and wearing away of the human flesh in a way that revealed the layers of intricate blood vessels and nerves.

One of the crusader lands at which Adelard deposited himself at was Antioch, for which Jonathan Lyons describes on page 104 of his book *'The House of Wisdom'* that during the Crusades Antioch became increasingly important for the translation of Arabic texts into Latin, especially concerning medicine where the Muslims were most prominent and leaders in this academic field of inquiry. From the Italian city state of Pisa, its traders, who had earlier on facilitated transportation for Europe's Christian crusaders across the Mediterranean, now operating from Antioch, became rich in the trans Mediterranean trade and with the city now recognized as a bustling commercial hub which attracted travellers, numerous books of science seized under the crusaders adventuring in the Muslim Levant were collected and sold in the city's book bazaars.

Britannica Encyclopaedia tells us that:
Adelard translated into Latin an Arabic version of Euclid's Elements, which for centuries served as the chief geometry textbook in the West....His Quaestiones naturales (76 discussions of human nature, meteorology, astronomy, botany, and zoology) are based on Arabic science. His other writings include works on the abacus and the astrolabe and a translation of an Arabic astronomical table.

Wikipedia Encyclopaedia states in their article on Adelard of Bath:
He is known as one of the first to introduce the Hindu–Arabic numeral system* to Europe. He stands at the convergence of three intellectual schools: the traditional learning of French schools, the Greek culture of Southern Italy, and the Arabic science of the East.

* The Hindu-Arabic numeral system is this: 1 2 3 4 5 6 7 8 9 and don't forget the zero (0).

Further on the Wikipedia article states:
Adelard also travelled extensively throughout the "lands of the Crusades": Greece, West Asia, Sicily, Spain, and potentially Palestine. The time spent in these areas would help explain his fascination with mathematics and his access to Arabic scholars....Adelard's non-discriminatory scholarly work inspired him to **bring back to England** many ancient texts and new questions that would **later give rise to an English Renaissance.**

You can read more about Adelard of Bath in chapter 5 of *The House of Wisdom* where in the title Jonathan Lyons fittingly calls him *'The First Man of Science'*. Further on, on page 142, Chapter 7 opens with this paragraph:

Fired by the examples of Adelard of Bath, Stephen of Pisa, and other pioneers of the studia Arabum, adventurous Western scholars soon began to fan out across the former Muslim lands of Spain, Sicily and southern Italy, and the so called Latin east in pursuit of newly available works of philosophy and the arts and sciences that accompanied them. Christian conquest and, to a far lesser extent, trade began to open up the vast Arab Libraries to Western eyes,

particularly in Spanish territory once held by the Muslims. Plenty of eager readers stepped forward. Centuries before the region's final Arab Stronghold, the kingdom of Granada, fell to the armies of Ferdinand and Isabella in 1492, the Latins were busy poring over the invaluable works left behind as the Muslims were forced to withdraw gradually from the Iberian Peninsula. In what amounted to an **intellectual gold rush**, young scholars hurried into the unknown to discover Arabic texts and then render them into Latin before someone else could beat them to it.

This is how the European renaissance built its foundation approximately 400 years before Copernicus. It was a gradual assimilation of Arabic sciences and Muslim civilization, or to state it differently a gradual Islamisation of Europe that is not admitted and it is greater than their Hellenization and Romanization that they readily admit.

Believe me when I say that the fierce competitive spirit of the first men of science of Europe is still alive today because they want the advancing successes and to be the best of nations and the church fathers are keenly aware of the power of science and have ungrudgingly stepped back and have prevented themselves from stirring the masses against science and technology, even at the expense of refuting the Bible because if they don't the Muslims could step in and take away the light of humanity (science and technology) to Muslim lands who will then be better equipped to Islamise Europe and the rest of the world.

Now I turn to Western scholars and discuss what in their minds the Scientific Revolution is. Encarta Encyclopaedia (2005 edition) has an article titled *Scientific Revolution*. Its opening paragraph states:

Scientific Revolution, name commonly used to denote the period of history during which the conceptual, methodological, and institutional foundations of modern science were laid down in Western Europe. Taking place roughly between 1500 and 1700, it should not be seen as a revolution in science, since there was nothing like science in the modern sense in existence before this time. Rather, it was a period when separate traditions of mathematical studies, craft techniques, natural magic, and other occult ideas, were brought closer to, and amalgamated with, the traditional natural philosophy which had developed in the Western European university system throughout the Middle Ages. The resulting change of intellectual disciplinary boundaries gave rise for the first time to something recognizably like modern science.

In this opening paragraph from Encarta is the conceit of Western historians. The offending sentence is the one nearly at the end that reads: '. . .the traditional natural philosophy which had developed in the Western European university system throughout the Middle Ages.' Oh, but how I have laboured above to show the dependence toward their eastern Brethren, the Arabs and Muslims, to learn the natural philosophies during those middle ages.

Wikipedia also has a lengthy article titled *Scientific Revolution*. Its opening paragraph states:

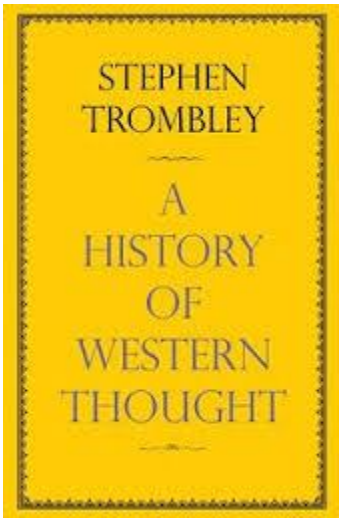
The Scientific Revolution was a series of events that marked the emergence of modern science during the early modern period, when developments in mathematics, physics, astronomy, biology (including human anatomy) and chemistry transformed the views of society about

nature. The Scientific Revolution took place in Europe towards the end of the Renaissance period and continued through the late 18th century, influencing the intellectual social movement known as the Enlightenment. While its dates are debated, the publication in 1543 of Nicolaus Copernicus's De revolutionibus orbium coelestium (On the Revolutions of the Heavenly Spheres) is often cited as marking the beginning of the Scientific Revolution.

You can now see from this Wikipedia quote that the beginning of the Scientific revolution correlates with Tayob's essay in which he stated 'From the time that the sixteenth-century Polish student Copernicus demonstrated a competing theory of the earth and the solar system…'. I now provide two exhibits to show dependence and continuity from the Arabs and Muslim sciences that will wobble and topple the Eurocentric perspective that Wikipedia and, seemingly, Tayob trod on.

1. The western proponents of Europe's Scientific Revolution tell us that Copernicus introduced the heliocentric model of the solar system. Stephen Trombley in his book *A History of Western Thought* (2012) writes on page 67:

Scholars of the House of Wisdom did more than render faithful translations of ancient texts. They were also philosophers in their own right, combining their knowledge of ancient Greece with the medical and mathematical advances of India to create a locus of intellectual activity that was radical in its thinking and **international in character**. In addition to his work as a translator [Thabit] Ibn Qurra argued that **the Earth revolved around the sun, and not vice versa, six centuries before Nicholas Copernicus (1473 – 1543)**. He also determined that the length of time it took the earth to orbit the sun is 365 days, six hours, nine minutes and twelve seconds. (Contemporary calculations using computers show he was off by only two seconds.'



Note: Ibn Qurra is reported not to be a Muslim. Yet he worked in Arab society, Baghdad, in the 9th century and made important contributions to Astronomy, Mathematics and physics. In Baghdad he was seen to be of suitable scholarly standing by the Banu Musa who then employed him into their circle of scholars. He was born in 826 CE, which is considered to be the Golden Age of the Abbasid Caliphate, whose seat of government was Baghdad, and it was also the central place of learning in

the world at that time. Hence Thabit's scholarship, though he was born a Sabian, is categorised as being part of the Golden Islamic Era. His works are, of course, part of Baghdad's intellectual heritage. [Wikipedia]

2. Encarta Encyclopaedias article on *Scientific Revolution* states in a subsection titled *Immediate Impact*:

These **four factors*** interacted with one another and were historically dependent upon one another. In combination their impact on European culture was phenomenal. To begin with, it rapidly became apparent that the traditional Aristotelian natural philosophy was completely wrong. Aristotelian teaching was so encyclopedic in its scope, however, providing a ready explanation for all phenomena, that it could not simply be abandoned. The new innovations and theories were independently arrived at and chipped away at Aristotelian teaching, but did not hang together to provide an alternative system. What was required was a completely new philosophy of nature that could incorporate Copernican astronomy, Galileo's new theory of motion, Harvey's new physiology, and show how they and all the other new discoveries depended upon, or followed from, certain basic assumptions. This ambition began to be realized in the early 17th century with the development of the so-called mechanical philosophy. There were a number of slightly different versions of this new philosophy, but the earliest and most influential was **the system developed by René Descartes**.

* The first sentence in the above quote mentions the four factors. The four factors, that, in their view, shaped the Scientific Revolution, were discussed in the body of the article before the above quoted subsection, and they are:

A. Development of Experimental Method
B. Mathematization of Nature
C. Practical Uses of Scientific Knowledge
D. Development of Scientific Institutions

To this praising discourse directed at Rene Descartes from Encarta, Wikipedia states about him (Descartes) in its article on *Scientific Revolution*:

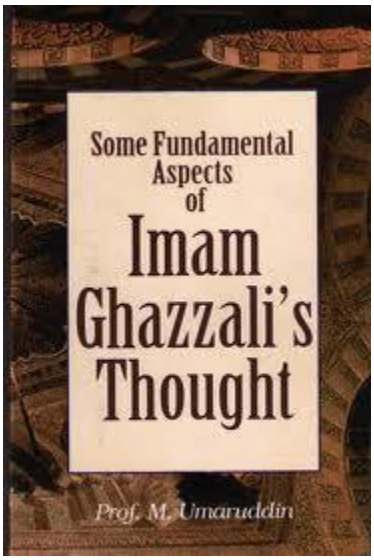
René Descartes (1596–1650) published his **Discourse on the Method** in 1637, which helped to establish the scientific method.

Now I shall quote from a book titled *Some Fundamental Aspects of Imam Ghazali's Thought* by Prof. M. Umaruddin. Of this book the first paragraph of the introduction states:

The book in hand comprises of a number of research papers read before different sessions of the All India Philosophical Congress and in other learned societies and published in well known journals of the country.

The last section of the book is Appendix IV and on page 155, in this appendix, is written the following:

Ghazali in his book Deliverer from Error anticipates Descartes in the Method of Doubt and passed through all the stages of doubt, discarding all authority and disbelieving even his senses. But Ghazali went further than Descartes and seriously questioned the validity of thought as an instrument of knowledge. He finds certainty only in the 'will to believe', inspired by Divine Will. It is 'Volo Ergo Sum' with Ghazali, whereas with Descartes it is 'Cogito Ergo Sum.' About his other book Revival of Sciences, in which Ghazali discussed at length the fundamental principles of his ethical and philosophical doctrines, a European writer observes: "This work, probably owing to its originality, was never translated into Latin during the Middle Ages, and remained a closed book to all but Arabian Scholars. It bears so remarkable a resemblance to the **Discourse on Method** of Descartes that had any translation of it existed in the days of Descartes, **every one would have cried out against the plagiarism**"



These quotations are provided as exhibits to draw out the hidden and mostly unspoken histories which portray continuities between an earlier great age of Muslims sciences and those of the West centuries later.

Wikipedia's article on the Scientific Revolution does admit to an 'ancient and medieval background' but it is a brusque admission that does not include the kind of evidence as shown in the above two exhibits. At the end of the subsection titled *'Ancient and Medieval Background'* the second last paragraph and the first sentence of the last paragraph states:

It is also true that many of the important figures of the Scientific Revolution shared in the general Renaissance **respect for ancient learning** and cited ancient pedigrees for their innovations. Nicolaus Copernicus (1473–1543), Galileo Galilei (1564–1642), Kepler (1571–1630) and Newton (1642–1727), all traced different ancient and medieval ancestries for the heliocentric system. In the Axioms Scholium of his Principia, Newton said its axiomatic three laws of motion were already accepted by mathematicians such as Huygens (1629–1695), Wallace, Wren and others. While preparing a revised edition of his Principia, **Newton attributed his law of gravity and his first law of motion to a range of historical figures.**

Despite these qualifications, the standard theory of the history of the Scientific Revolution claims that the 17th century was a period of revolutionary scientific changes.

Bravo. I don't have a problem admitting this scientific revolution that happened in the 16th or 17th century. What I want to show is that there was an earlier great age of science and academia that many western scholars don't admit and it began over 700 years before in the Muslim Metropolis of Baghdad.

In the above referenced encyclopaedia articles on Scientific Revolution are views that give no credit to the Muslim's as intellectual giants for the establishment of international academic exchanges, which resulted in vast agro-industrial and manufacturing economic sectors and sprawling metropolises that housed numerous social institutions from the sheer diversity and integration of sciences. The only mention of Islam or Muslims is when they fleetingly mention the sciences of medieval Muslims. When they omit the Arabs and Muslims from their Eurocentric histories what is left is that they see themselves as independent revolutionaries. But they not independent and they are not first revolutionaries. Indeed, I would not shrink from admitting the outstanding accomplishments of Western sciences and technologies and that there was a nuclearization of science and technology after the renaissance that was far greater than what the Arabs and Muslims achieved before them but it was secondary and followed as a continuity after the Arabs and Muslims earlier great age of science and academia at a time when Europe was in its dark ages. The new western civilization arising from Europe's scientific triumphs was a child civilisation that far out performed their parent civilization, the Arabs and Muslims.

How is it that Europeans regard Europe as a continent? It is not a separate geographical land mass. What is at play here? Is it that Europeans want to be seen as the world and as world rulers and leaders. The system of longitudes has its home value of zero degrees set to Greenwich in England and maps are drawn in latitudinal translation showing England at or close to the centre of the page, when shown on 2 dimensions. Yet it could have been drawn with Bagdad having zero degrees. It is to align the nations of the world subconscious to see Europeans as the central people in world affairs, as a way of portraying 'We are the world' without actually saying it?

Ask lay people what the Dark Ages were? In my observation, the common belief is:

1. A period long ago when the world was in darkness and repression.
2. It ended when the renaissance ushered in an age of learning, science, and revival of arts and culture.

Look here below at a 1964 edition of Britannica which states the following about *Dark Ages*:

DARK AGES, a term formerly used to cover the whole period between the end of classical civilization and the revival of learning in the 15th century. The term implied an exclusive respect for classical standards in literature and art and a corresponding disparagement of all that was achieved between the decline of ancient culture and the work of ***Renaissance scholars****, writers and artists. With the progress of medieval studies in the 19th century it became impossible for historians to dismiss one of the great constructive periods in human activity with an epithet implying contempt for its achievements, and the phrase became obsolete. It remains nevertheless, the fact that the* ***six centuries*** *following the collapse of the Roman empire are in a special sense dark through the insufficiency of historical evidence. Even so, it is necessary to remember that intellectual work of the highest quality was done by exceptional individuals in ages when life was insecure and its environment discouraging to thought.*

The ages which form the prelude to medieval history are dark when compared with the time which followed, but the foundations of medieval civilization were laid in these obscure centuries.

Importantly, no geographical location is referenced to the term dark ages and written in this way it feeds into the narrative of 'we are the world', because for something so great to have ended by the **Renaissance**, and people equate the renaissance to Europeans and whites, then it implies a centrality of Europeans to have brought the light into the whole world. Stating that there was a period of **six centuries** that were especially dark because of the lack of historical evidence after the fall of the Roman Empire, focuses the reader's attention to Europe. It feels very worldly and very euro-centric.

Writings and omissions such as these leads some groups of people to adopt a supremacist stance over other peoples. The supremacist stance is not simple. It is sophisticated. You won't openly hear westerners say "We are the world", but its import of centrality in the world, particularly in science, inventions and research is implied in the literature penned by many westerners.

Look at Wikipedia's rendering of *Dark Ages*:

The "Dark Ages" is a historical periodization traditionally referring to the Early Middle Ages or Middle Ages, that asserts that a demographic, cultural, and economic deterioration occurred in Western Europe following the decline of the Roman Empire.

The term employs traditional light-versus-darkness imagery to contrast the era's "darkness" (lack of records) with earlier and later periods of "light" (abundance of records). The concept of a "Dark Age" originated in the 1330s with the Italian scholar Petrarch, who regarded the post-Roman centuries as "dark" compared to the "light" of classical antiquity. The phrase "Dark Age" itself derives from the Latin saeculum obscurum, originally applied by Caesar Baronius in 1602 to a tumultuous period in the 10th and 11th centuries. The concept thus came to characterize the entire Middle Ages as a time of intellectual darkness in Europe between the fall of Rome and the Renaissance; this became especially popular during the 18th-century Age of Enlightenment.

*As the accomplishments of the era came to be better understood in the 19th and 20th centuries, scholars began restricting the "Dark Ages" appellation to the Early Middle Ages (c. 5th–10th century), and now scholars also reject its usage in this period. The majority of modern scholars avoid the term altogether owing to its negative connotations, finding it misleading and inaccurate. Petrarch's pejorative meaning **remains in use, typically in popular culture** which often mischaracterises the Middle Ages as a time of violence and backwardness.*

The first paragraph does correctly state it to be a periodization applicable to western Europe but look at the second paragraph which shows how the term was in use in medieval times and during the enlightenment. There was no intellectual darkness in reading and translating Arabic texts on Medicine, Mathematics, Alchemy, Astronomy, philosophy, etc. These statements make the reader think that admissions of continuity and dependence to other peoples' (the Arabs and Muslims) is considered dark. Such an impression is deemed supremacist. Also focus on the retractions by western scholars. Nowhere are the retractions stated as arising from a euro-centric world view that narrowly imposes the plight of a relatively small region of the world on the entire peoples of the rest of the world.

The distinguishing feature of the Muslim sciences was the scale and pace of scientific output, which could only be achieved if the medium of transmitting knowledge had been boosted by the

introduction of new technology available to the Muslims. Muslim historians don't deny that paper making was invented in China first and then found its way into the lands of the Muslims, first in the city of Samarkand, in Central Asia, in what is today Uzbekistan. The Arabs adoption of paper making is described by Jonathon Lyons on page 57-58 of his book *The House of Wisdom*.

Lyons explains that Samarkand did become the leading place for paper making in the Muslim world but its industry was also copied in Yemen, Syria, North Africa and the city of Jativa in Islamic Spain. Jativa specialized in heavy, glazed sheets. In the imperial city of Baghdad, the earliest date obtained for a paper factory is 795 CE and later on a stationers' bazaar was opened and it featured hundreds of commercial stalls selling high quality products. It was called the Suq- al-Waraqin. Baghdad's paper industry was regionally famous enough for Byzantine texts to refer to its paper by the name *bagdatixon*. At that time, in stark contrast to the Muslim, world much of Europe still relied in animal skins that were scraped, dried and stretched for their writing materials. I do know that in the 7th century Arabia, when much of its population was in a semi-barbaric way of life with very few people being literate, the first writing materials for the verses and surahs of the Quran included parchment, dried skins and leaves. These crude ways of recording literature and any kind of learning was time consuming and involved greater labour. Thus, there wasn't a higher transmission of learning.

Europe is geographically the western end of the Eurasian land mass and its population in proportion to the Muslim lands from Asia Minor to Khorasan and Transoxiana in Central Asia is significantly smaller. In total the Muslim world's combined population exceeded Europe's combined population by several millions. Thus, the better paper making technologies and the lower labour input made paper making, literacy and higher education learning increase each other in a positive feedback loop, which produced dozens of universities and libraries that houses tens of thousands of books. Only centuries later, when the printing press was introduced in Europe did its spread begin to grow exponentially, lifting literacy rates and higher education in most European countries.

To understand the impetus of Arab and Muslim learning I call to record the teaching of Arabia's first statesman and the prophet of Islam, prophet Muhammad. From the beginning he taught a way to religion that gave every person equal access to all religious services because a priesthood was intentionally not established. Muslims have mosques and congressional prayers led by the Imam but the Imam is not a priest. Any person can be the Imam without passing through any ordination. This meant that access to religious knowledge was never authorised by any kind of religious hierarchy. The knowledge was open to all. So, years later when the fate of the young Muslim state expanded and the wealth of two neighbouring empires, Byzantium and the wholly conquered Persian Empire was flowing to Muslims, there were vast resources to propagate the religious knowledge in written form and it was also imperative to do so because future generations, if they wanted to retain the knowledge of the previous generations, had to record the knowledge in writing. Thus, when the time came to record reports of the prophet's life and what he spoke on various religious matters, there was only the reputation of the reporter, and not any religious ordination that furthered the process of recording. People of all social classes could contribute to the recording and they did in large numbers because there were thousands of witness reports and sayings of the prophet during his 23 tenure as Islamic prophet. Fame was attached to reports, which in Arabic is called a hadith. This exercise in which anyone with credibility could participate lasted for many decades and it was taking place more than 100 years after the prophet passed away. The synchronisation of the wealth apportioned to scholars for their efforts in preserving hadith, the large geographical expanse of the Muslim Empire, the largeness of Asian peoples that were reverting to Islam in the thousands, and importantly the egalitarian character of the religious services and religious knowledge planted a want and a desire in the general populous to value and respect knowledge because knowledge was seen as way of prosperity in a region of the world who for centuries mostly saw military conquest as the sole vehicle of prosperity. There were ranks in the reputations of hadith bearers and there were

ranks in reputation of hadith scholars that received the hadith from hadith bearers for written recording. Without a priesthood, another group of scholars, that had a recognised reputation, would write a treatise about the qualities a person must have to have a high degree of reputation. So, books began to be written about these matters and at each turn someone knowledgeable would seek moral recourse back the prophet on the matter. As the hadith were being recorded, openly in the public domain, so was the legal codification based on those hadith and here too there was no religious councils in which a priestly class was authoritative. Islamic jurisprudence was an academic pursuit open to anyone. Scholarship quickly became its own, for lack of a better term, industry open to the general public. When this 'industry' was firmly rooted in general society and was generously patronised by the wealthy there was a hunger to expand the knowledge industry beyond religious knowledge.

Beyond the field of religious knowledge, the earlier period of Arab Muslim higher learning was given a great push forward when the Abbasids overthrew the Umayyads and took over the caliphate at around 750 CE. Emissaries were sent to Byzantium, to India and elsewhere where it was known to have depositories of learning. The Arabs spent the next 150 years translating these foreign texts into Arabic (or sometimes Persian Farsi) but the endeavour in this period was not only translation and storage of knowledge. What was read was assimilated and beside the translations sprung up higher education centres or universities in the Muslim world, the central place being the Darul Hiqma or House of Wisdom in the circular city of Baghdad. Importantly, for the furtherance of Arabic study the Abbasid Caliphs were generous patrons of learning and they themselves and their immediate children were educated by some of the best scholars in the region. Large amounts of money were spent for grand science projects and for the translations of foreign texts. To secure future funding the caliphs even created endowments from which universities could become financially sustainable. The oldest running university in present times is the Al Azhar university in Cairo, Egypt. It was founded in 972. (Encarta Encyclopaedia).

Jonathan Lyons on pages 64-65 in his book *The House of Wisdom* explain that many scholars in the Muslims world travelled great distances to sit in classrooms of distinguished masters who were dotted throughout the vast Muslims lands stretching from places like Samarkand in Central Asia to Spain and Portugal in the west. Mention is made by the Arab biographer Yaqut about a Spanish Muslim scholar, having been born in 1147, travelled to Cairo, Mecca, Medina, Baghdad and then further east to the places of learning in Persia and Afghanistan and then passed his learning through Damascus, Aleppo and Mosul in Syria and then another round of visits to Mecca, Medina and Cairo, all over a period of 17 years and through it all accumulating a small treasure of scholarly books.

Scientific fields of study and branches of academia that were advanced by the Arabs and Muslims either because of new breakthroughs or sometimes because of the stupendous scale and/or expanded geographical dispersion of the existing science and technology and academic institutions include medical science, mathematics and astronomy, geography and cartography, alchemy, engineering, optics, philosophy, world and regional, poetry and literature, and much else.

Is not the scale of application of the Arabic-Hindu number system of: 0 1 2 3 4 5 6 7 8 and 9 exemplary as is the large general hospitals having specialised medical departments and the vastness of the Muslims libraries with the hundreds of thousands of books and the truly international spread of universities and colleges? The studies of alchemy as a precursor of chemistry, geography and cartography, world histories, Algebra from Al Khwarizmi's book *kitab* ***al-jabr*** *wa'l muqabala* , from whose name the word algorithm comes from and even the English word algebra comes from the first part of the recently reference Arabic book 'kitab **al-jabr**', the advancement of the 5 trigonometric functions after the first trigonometric function of sine was learn from Indians and the

encyclopaedias written are all great leaps forward to the building of highways for the rapid international spread of academia accomplished by Arabs and Muslims.

Wikipedia's article on *The History of Hospitals* states:

The United States National Library of Medicine credits the hospital as being a product of medieval Islamic civilization. Compared to contemporaneous Christian institutions, which were **poor and sick relief facilities** offered by some monasteries, the Islamic hospital was a more elaborate institution with a wider range of functions. In Islam, there was a moral imperative to treat the ill regardless of financial status. Islamic hospitals tended to be large, urban structures, and were largely secular institutions, many open to all, whether male or female, civilian or military, child or adult, rich or poor, Muslim or non-Muslim. The Islamic hospital served several purposes, as a center of medical treatment, a home for patients recovering from illness or accidents, an insane asylum, and a retirement home with basic maintenance needs for the aged and infirm.

The typical hospital was divided into departments such as systemic diseases, surgery and orthopedics with larger hospitals having more diverse specialties. "Systemic diseases" was the rough equivalent of today's internal medicine and was further divided into sections such as fever, infections and digestive issues. Every department had an officer-in-charge, a presiding officer and a supervising specialist. The hospitals also had lecture theaters and libraries. Hospitals staff included sanitary inspectors, who regulated cleanliness, and accountants and other administrative staff. The hospital in Baghdad employed twenty-five staff physicians. The hospitals were typically run by a three-man board comprising a non-medical administrator, the chief pharmacist, called the shaykh saydalani, who was equal in rank to the chief physician, who served as mutwalli (dean). Medical facilities traditionally closed each night, but by the 10th century laws were passed to keep hospitals open 24 hours a day.

Lyons discussion on the Arabs and Muslims breakthroughs in geography is written on pages 95 and 96 of his book *The House of Wisdom*. Here he explains how understanding of Africa and of the Indian ocean was important to Europeans eventual navigation around Africa and into the Indian Ocean. The old thinking, that the Indian ocean was land locked was replaced with Arabian and Muslim knowledge that Africa could be sailed around to reach the Indian ocean, from which India and other Asian trade Entrepots could be accessed directly by Europeans in their own sailing ships.

Lyons explains how Vasco Da Gama's voyage around the tip of Africa was accomplished with Muslim maps and possibly a Muslim pilot. According to a contemporary account, Da Gama and his officers were given brief access to a map which detailed the entire Indian coastline showing meridians and parallels. Afterwards, Arab writers criticised the blunder of allowing Europeans to thereby gain access to the Indian ocean and its vital trade routes. Cynically the Muslims quipped that the pilot must have been drunk to have divulged such lucrative trade secrets to the Europeans. Later on, Europeans gained access to more maps showing the spice islands in the east.

Lyons also discusses how Christopher Columbus benefited from the works of the Arabs in the form of a Latin translation, from the mid 12th century, of the Sabean Tables, which summarised the latest techniques of mathematical geography. Columbus sailed west to find a new route to India, in the

east, because he and several of his contemporaries had confidence in Arab and Hindu notions of a symmetrical and rounded world. Today there are also scholars that suggest that Muslims and Chinese may have even reached the Americas before Columbus.

From the above quotations and references I ask my reader how can they (the Eurocentric historians) not talk about continuity and dependence on the Arabs and Muslims and their great age of science and academia? The centuries long endeavours of the Arabs and Muslims that forever changed the depth, scope and scale of academia and science, and for which continuity has passed on to the Europeans who have wonderfully taken the torch of science from the Arabs and advanced its output to the outstanding inventions, innovations that we enjoy now in the 21st century, was truly exemplary and not unlike Europe's Industrial revolution of the 18th century. Afterwards came the crusades that opened Europeans to the Muslims sciences. Then was their period of Arabic translations, just as the Arabs before had translated the Greek texts of antiquity. Then came the renaissance and then the Europeans, having now had thousands of Arabic texts translated into Latin, began, just as the Arabs and Muslims before them, making breakthroughs in science, philosophy, mathematics, astronomy, geography, chemistry, physics and medical and life sciences and it reached a point of profound depth and realisation that gave rise to Western historians recording of a Scientific Revolution that began in the 16th century with Copernicus' Heliocentric solar system model. This is the perspective for which I have laboured in these pages; to admit the European Scientific Revolution but only as secondary and coming as a continuity after the earlier Arab and Muslim great age of science and academia. Both European and Arab and Muslim Scientific accomplishments are admitted but they were qualitatively different. With the Arabs the focus was to get off the mark and create a nuclearization of science and academia and to build transnational highways of academia the world had never seen before and to fasten the pace and output of scientific and academic inquiry. They achieved it and in time the torch of science and academia passed to Europe and a Scientific Revolution took place that was profound for its scientific depth. Here now the character of science was transformed and the reductive depth of scientific breakthroughs was truly revolutionary. Indeed, I cannot deny the Europeans won a great prize. It was achieved with hard work and steadfastness. Bravo. I just wish the Western encyclopaedias and some western historians to admit it like this and not as they usually do, to deny substantiation of Arab and Muslim sciences from their history books.

Islam is a fully integrated rational and philosophical religion that, though we credit prophet and scripture, is also universal to the point that it is independent of prophet and scripture but arrives at the same core teachings embodied in scripture, so as to exclude religious pluralism of the kind that is intrinsically contradictory and false. Thus, for Europeans to acknowledge Arabs and Muslims advances in science and technology which are founded on reason, rationality and causality implies admission of the axiomatic tenets of Philosophical Islamic religion*, which are also founded on reason, rationality and causality, which then becomes an implicit validation and endorsement of Islam to the detriment of Trinitarian Christianity which was the national religion of all European countries, except Muslim Spain. To avoid this embarrassment the Christian Europeans high wire act was to assimilate the reason, rationality and causality treatises of the Falsafa (the philosophical Muslim scholars) and to use it to assimilate and advance the science and technology they learnt from the Arabs and Muslims and simultaneously, but also shrewdly, not admit scientific and academic continuity and dependence to Arabs and Muslims.

* Read my essay *Philosophical Belief in God* to better understand Philosophical Islam. The essay can be read on my website at:

https://ziadcassim.com/wp-content/uploads/2026/07/Philosophical-belief-in-God.pdf

The Opposition to Muslim Sciences from within and the Rise of Sufism:

From the earliest times at the core of Mohammedan Islamic religious teachings is a belief of life after death and of the soul that lives on after death. All good Muslims, including those that pursued any form of science or materiality, shared these beliefs. Since we were going to have two lives: one from birth and one from resurrection, in our minds life had two aspects: A material aspect and a spiritual aspect. This world that we are born into with a body made of atoms and molecules is the material aspect of life and the life that begins with resurrection is not of this world. To the ignorant mind of our ancestors who knew nothing of genetics and cloning and attributed all unexplained phenomena to the supernatural such as miracles and magic the unfamiliarity of a resurrection and its connection to the invisible soul rendered it spiritual. Since Muslims are taught to prefer the life of the resurrection, which if you were a believer was to be perfected in a place called Paradise where its pleasures and happiness were eternal. The spiritual life of the soul and of life after death was deemed superior to the material life of birth, growth and death. Thus, any knowledge toward success in the life of resurrection was deemed superior to the so called mundane knowledge of the material world and its material limitations on life.

Success in the life after death hinged on correctness of belief. You were told that you would lose everything and be sent to hell if you did not correctly believe in God. Therefore, any new learning and knowledge systems that contradicted and threatened the core teachings of Islam and its teachings of the correctness of belief was deemed treasonable to the soul and to Muslim society in general. The theologians stepped in as the intellectual defenders of the society of believers. Central to their defences was to keep religious knowledge and its pursuits above and superior to all else. Since they and the following Muslims were living on the earth and had to work in this world and then had to have religious beliefs that were important for another life after death their approach, to ensure the preferred success of the eternal life after death, was to separate religious from earthly pursuits. Religion being based on divine revelation, which many theologians believed was uncreated in itself, and its holy prophet, who was deemed sinless and unordinary, was viewed as spiritual, and earthly endeavours of wealth, fame and entertainment were material pursuits whose over indulgence and attachment would make them forget God and abandon religion. Thus, material pursuits, including the study of nature, was to be separated from religion and to be checked for compatibility with religion.

After the death of the prophet in 632 CE as the empire of the Muslims spread to North Africa, Europe and Persia new ideas came in from both east and west. Muslims were introduced to the Greek philosophies including the works of Plato and Aristotle. With the teachings of Aristotle came readings and discussions of metaphysics that stood at odds with the Muslim orthodox beliefs about God and his relation to creation. A new perspective entered into Muslim intellectual thought, one that broadened the scope of religion from the narrowness of dogma, in which blind submission to scripture was commonplace, and was open to formulating rationalist and process driven knowledge of God and his creations that was independent of revelation and prophet. The new theories developed and proposed by its proponents opened up a new and invigorating debate for the supremacy of authority. Beneath the feet of the kings and princes was meant to be an intellectual foundation laid down by revelation of the Quran and the teachings of the prophet or philosophy based on reason and logic or a mix of both. When the Greek and other eastern texts were being translated into Arabic the theologians, in their established orthodoxy were beginning to see, from the diverse sciences pursued by the rationalist Muslims, that there were some theories that proved challenging in respect of religious compatibility.

It was during the Caliphate of al-Mamum in the 9th century, the son of Harun al-Rashid, that the rationalist Mutazilites had gained the upper hand over the theologians. It was in these times that lines began to be drawn in the sand between reason and dogma. Edward G. Browne in his volume one of *A Literary History of Persia*, on pages 283-284 writes:

It was, however, under the earlier Abbasid Caliphs notably in the reign of the Caliph al-Ma'mun (A.D. 813-833) and his son al-Wathiq (A.D. 842-847) that the Mutazilite school was most powerful. It had taken possession of these Caliphs and their Courts, had enriched its stores of argument and methods of dialectic by the study of Greek Philosophy, and, supported thus by its internal strength and the external favour of the governing classes, bade fair to extinguish the orthodox party, towards whom, in spite of its generally liberal and tolerant attitude, it showed itself irreconcilably hostile. The orthodox doctrine that the Quran was uncreated they held in particular detestation.

The theologians were adamant that the Quran was uncreated and co-eternal with God. Their reasoning was that the Quran was the word of God and therefore Divine with God's being. Reducing the status of the Quran to being created, something that was the product of the rationalist Mutazilites ideology, was unacceptable.

After the death of Caliph Wathiq began a period of intellectual decline with the ascension of the next Caliph Al-Mutawakkil who is described in Syed Amir Ali's book *A Short History of the Saracens*. Ali writes on page 288:

This **"Nero of the Arabs"** ruled for fifteen years, and under him commenced the decline of the empire. Sunk in Debauchery and habitually drunk, he allowed the government to drift to ruin. Nonetheless he was keen for the restoration of the Orthodoxy. A rescript was issued placing rationalism under the ban, and proclaiming the re-establishment of the old doctrines in their fullest rigour. The rationalists were expelled from public offices, and lectures on science and philosophy were interdicted. Kazi Abu Duwad and his son, prominent Mutazilites, were thrown into prison, and their property was confiscated

Of Mutawakkil Henry George Farmer writes on page 139 of his book *A History of Arabian Music*:

Al Mutawakkil (847-61), the first Khalif of the decline, opened his reign with an official return to orthodoxy, and Ahmed ibn Hanbal, the founder of the narrowest and least spiritual of the four **orthodox sects**, became the chief theologian. There began the terrors of an inquisition, details of which may be read in Al-Tabari and Ibn al-Athir. The philosopher and music theorist, al-Kindi, had his library confiscated, whilst the renowned physician Bukht-Yishu, was despoiled of his possessions and banished.

Note: In the above quotation from Farmer the term '***orthodox sects***' is used and being a non-Muslim his choice of words is somewhat wanting. In that era there were four leading schools of jurisprudence and each was named after its founder. What emerged from each of these judicatory scholars were parallel legal systems and all co-existed in the same lands of the Muslims. They were not sects in the fullest sense.

New Arabic Term: Several paragraphs below is the new term **sunna**. Sunna is an Arabic word and before explaining the term I want to say that sunna can be broadly and technically described and discussed in many paragraphs but for the purpose of this essay a terse and succinct description suffices. Encarta Encyclopaedia's article on Shariah Law states the following:

According to Muslim belief, the prophet Muhammad, by virtue of his ideal practice or Sunna, was model and exemplar for his community. When he died in 632 he left the Koran as a primary source of law, together with his Sunna, which was passed on from generation to generation in the form of anecdotes (the **Hadith**).

To add a legal dimension to the term sunna Encarta dictionary defines the word sunna:

part of Islamic law: one of the basic sources of Islamic law based on Muhammad's words and deeds as recorded in the **Hadith**. The Sunna complements and often explains the Koran.

Second new Arabic term: **Hadith** is an Arabic word and it means report. Hadith as an Islamic religious term refers to reports about the life, sayings and actions of prophet Muhammad as seen, heard and witnessed by the first generation of Arab Muslims in the 7th century. The hadith were first transmitted orally to convey important religious knowledge between Muslims in contemporary and succeeding generations. Then they started writing the hadith in book collections but by then it was already 100 and 200 years after the death of Muhammad. Hadith reporting and publication became its own academic industry and alongside the true hadith scholars there were specious people that started fabricating hadith for money and fame. The hadith collections had to be sorted out. Three broad categories emerged: Sound, good and weak. Sound, or *Sahih* in Arabic, was the highest and most authentic category. In this essay most of the hadith are from the collection of Imam Bukhari or Imam Muslim. Both these scholars compiled collections of only Sahih hadith. These two particular scholars have the highest ranking amongst hadith scholars. After Sahih there are categories of good and weak. These hadith are also recorded and they are sometimes referenced. Importantly, they are properly referenced as good or as weak and in that way readers can assess how much reliance to put in them. Because of the production of fake hadith a fourth category called *maudi* was created and there are records that correctly classify hadith as fake and untrue or unreliable. With the first three categories, sub categories arose, because, say, within Good hadith, some hadith were very close to being Sahih, but for an aspect, usually concerning the reputation of one of its transmitters (reporters), it is less than Sahih. Other good hadith can be on the lower end and may closer to being weak. With Sahih hadith some hadith have golden transmission, because all of the people that the hadith passed through are exemplars in Muslim society.

Besides the classification of hadith based on authenticity another classification is to do with sacredness of hadith. Sometimes the prophet said a thing but he said that it was God who actually said it and that he was only being a transmitter. Though the words are God's they still not part of the Quran but they classified as *Hadith-e-Qudsi*.

Now to continue with the discussion of the Mutazilites and the theologians...

Shortly after the death of al-Mutawakkil was born the man who would calcify the doctrines of the then orthodoxy. Edward G. Browne writes of him on page 291 in his volume one of his book *A Literary History of Persia*:

> Not till twelve years had elapsed after al-Mutawakkil's death was born (in A.H. 260 = A.D. 873-4) the man, who, having been trained in the Mutazilite school, renounced their doctrines in his fortieth year, and armed with the logical weapons with which they themselves had supplied him, deserted to the hostile camp, and, for the remainder of his life, carried on an energetic and successful campaign against their views. This was Abu'l Hasan al-Ashari, a descendent of that foolish Abu Musa al-Ashari to whose ineptitude Mu'awiya owed so much in the arbitration of Dawmatu'l-Jandal. His literary activity was enormous, and after he had broken with his teacher, the Mutazilite doctor al-Jubba'i, he produced polemical works on all manner of theological topics to the number of two or three hundred, of which Spitta enumerates the titles of one hundred.

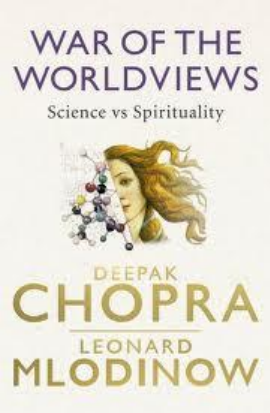
Belief in the supremacy of the Quran and supremacy of the prophet and **sunna** and the whole debate about the status of the Quran (created or uncreated with God) widened the gulf between revelation/dogma and reason. Reason, as promulgated by the philosophers, allowed scholars to peruse and learn and improve upon the texts of non-Muslims, even pagans as they regarded some ancients to be. The theologians were more ready to burn many good scientific books if it offended their self righteous sensibilities and sometimes just because they came from pagans irrespective of what the contents of those books were. Forward thinking rulers and scholars saw that too much knowledge was at risk of being lost. Closing the gulf between reason and revelation was necessary to scholars who wanted more intellectual room beyond the theologian's narrowness and necessary also because they saw great benefit for Muslim society in pursuing the reaches of reason. For them reason was a powerful ally in directing Muslims toward scientific pursuits and to overcome many strictures of literal readings of the Quran by the narrow minded theologians who saw no greater authority than revelation and no fraternity other themselves better equipped to establish the supremacy of revelation. The Muslims philosophers were correct to call upon the works of Greek philosophers such as Aristotle and Plato. To the rescue of the Mutazilite scientists and philosophers, despite the onslaught of the theologians, came the intellectual society known as the Ikhwanu's-Safa. Of them Edward G. Browne expresses, on page 292 in volume one of his book *A Literary History of Persia*:

> For our knowledge of this remarkable society or fraternity of Encyclopaedists and Philosophers we are chiefly indebted to Flugel and Dieterici, especially the latter, who has summarised and elucidated their teachings in a series of mastery monographs. Favoured by the liberal ideas of the Persian Shi'ite House of Buwayh, who displacing for a time the Turkish element, became practically supreme at Baghdad about the middle of the tenth century (A.D. 945), this somewhat mysterious society carried on the work of the Mutazilites, aiming especially at the reconciliation of Science and Religion, the harmonising of the Law of Islam with Greek Philosophy, and the synthesis of all knowledge in encyclopaedic form. The results of their labours, comprising some fifty separate treatises, were published, according to Flugel, about A.D. 970, and supply us with an admirable mirror of the ideas which prevailed at this time in the most enlightened circles of the metropolis of the Abbasid Caliphs

In numerous Muslim communities over many centuries there was a long standing and established separation between religious studies and worldly studies. The debate reached a climax in the person of al-Ghazali in the 11th century. Al-Ghazali was vehemently opposed to certain philosophical teachings and he would use philosophical arguments to refute what he deemed were erroneous or

un-Islamic philosophies. Leonard Mlodinow, a renown physicist and author of several books including two co-authored with the late physicist Stephen Hawkings, in his debate book with Deepak Chopra – *The War of the Worldviews* (2011), on page 198, has written briefly about al-Ghazali's philosophical refutations, which actually, from a modern perspective, are scientific refutations:

In his book The Incoherence of the Philosophers, the eleventh century Sufi philosopher Abu Hamid al-Ghazali wrote that when fire is held to cotton, **the cotton is not burnt by the fire** but is burnt directly by God. According to this view, our expectation that the fire causes the cotton to burn arises because each time that we have placed cotton in fire, God has willed that the cotton burn; but the fire itself cannot dictate the burning because that would tie God's hands, and God is free to do whatever God wishes. More generally, al-Ghazali argued that the laws of nature are a kind of illusion we're come to believe in because God is rational and usually consistent (except in the case of miracles). The connection between cause and effect only seems to follow unalterable laws, with the true causes of events lying beyond our physical realm.



So here in Mlodinow's excerpt we have a reference to what is arguably the most famous of all debate books in Islamic intellectual history, the famous *Tahafat al-Falsafa* (or *Incoherence of the Philosophers*) and a scientifically damaging expose of Ghazalian thought - that Al-Ghazali entertained the thought that cause and effect are illusions, thereby implying that the entire edifice of science is baseless.

More directly, here below is a quotation from the 17th point of a translation of the above referenced *Tahafat*. The translation is by Sabih Ahmad Kamali and was first published in 1958. The first paragraph on page 185 begins:

In our view the connection between what are believed to be the cause and effect is not necessary. Take any two things. This is not That; nor That be This. The affirmation of the one does not imply the affirmation of the other; nor does its denial imply the denial of the other. The existence of the one is not necessitated by the existence of the other; nor its non-existence by the non-existence of the other. Take for instance any two things, such as the quenching of thirst and drinking; satisfaction of hunger and eating; burning and contact with fire; light and rise of the sun...They are connected as a result of the decree of God (holy by his Name, which preceded their existence. If one follows the other it is because He

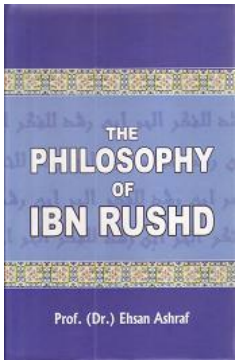
has created them in that fashion, not because the connection in itself is necessary and indissoluble...
The philosophers deny this possibility; indeed they assert its impossibility....Let us consider one example viz., the burning of a piece of cotton at the time of its contact with fire. We admit the possibility of a contact between the two which will not result in burning, as also we admit the possibility of the transformation of cotton into ashes without coming into contact with fire. And they reject this possibility.

...

...the opponent may claim that fire alone is the agent of burning, and that being an agent by nature (not by choice) it cannot refrain from doing what it is its nature to do – after it comes into contact with a subject which is receptive to it.
This is what we deny. We say that it is God who – through the intermediacy of angels, or directly – is the agent of the creation of blackness in cotton; of the disintegration of its parts, and of their transformation into a smouldering heap or ashes. **Fire**, which is an inanimate thing, **has no action**.

On this topic of causation professor Ehsan Ashraf of Patna University in India has written in his book *The philosophy of Ibn Rushd* (2010), on page 74:

In order to over emphasize the omnipotence of God & His miracles, al Ghazali rejected even the theory of causation as a necessary connection between cause and effect upon which the whole edifice of science...is standing.



This I regard as the great error of Al-Ghazali and it gave too much support for placing revelation above and superior to reason to the point that any sciences not in concert with the prevailing wisdom of the theologians was to be cut off from Muslim scholarship. That science and reason alone, without recourse to revelation, is the basis of what is acceptable science for Muslims to pursue, and consequently what will be productive and beneficial knowledge for society, was no longer acceptable in orthodox Muslim society. From here on the path of the Muslims in matters of science, discovery and exploration regressed.

From the same book referenced above Ehsan Ashraf accurately sums up the position of the Muslims and the Christians. On page 41 he concludes chapter one in these three sentences:

Al-Ghazali shut the door of science and philosophy among Muslims for the sake of faith. Ahmed Foud El-Ehwani writes, "The Muslim, unfortunately, followed Al-Ghazali's, 'The Authority of Islam' and neglected the study of sciences. **Their once great civilization faded**. On the other hand, Ibn Rushd defended science, and the medieval Europe followed the way prescribed by him."

The broader context of Al-Ghazali's debate with the philosophers is rooted in the doctrine of the eternity of the world, which was originally the teaching of Aristotle that was championed in academia, in both Christian and Muslim higher education centres by Muslims such as Ibn Sina (Avicenna) and Ibn Rush (Averroes).

Though it not to necessary in this part of the essay to say anything of the stature of Avicenna but for the title of this essay which states the dependency of the scientific revolution to Muslims consider what is written of his (Avicenna) profundity. He was born in 980 and died in 1037 in a time which was more than 200 years before Dominican Friar Thomas Aquinas began reading his philosophical works in the 13th century. Known famously for his Kitab al Shifa book which is about healing and medicine. Avicenna also wrote on topics such as metaphysics, philosophy and creation. [Britannica] More than 100 of his manuscripts were translated into Latin after 1250 CE. [House of Wisdom, page 176] His thoughts on the natural world were influenced by Aristotle and in his writings he attempted to reconcile the eternity of the world to its creation from nothing, which Muslim theologists could not abandon. The way he attempted to do this was to say that God would not be God if he did not create the universe instantaneously – imagining the notion that it is an eternal Universe but also one that is created because it relies on the first cause which is God. [House of Wisdom, page 178].

Averroes was born approximately 90 years after the death of Avicenna and 15 years after the death of Ghazali. He championed the thesis of a philosophical belief in God but he too like Avicenna adopted the view of the Eternity of the world. Averroes fame and popularity in European academia was catapulted by the very learned Michael Scotus, who, early in 13th century, under the patronage of King Frederick II of Sicily, began translating the Aristotelian commentaries of Averroes from Arabic into Latin. The Italian poet who wrote the Divine Comedy Alighieri Dante acknowledges him as the one who made the great commentary of Aristotle's philosophy, and Rafael, the Italian renaissance painter's fresco The School of Athens immortalises him. Averroes was far more revered in Latin Europe than he was in Muslim universities. [House of Wisdom, page 173-174]

After Ghazali's *Tahafat al-Falsafa* he (Ghazali) turned increasingly toward Sufism and he saw it superior to any other system of knowledge and religious awareness but he knew of the discontinuities between the Sufi doctrines and orthodox Islam of his time. For him, a personal achievement was to show compatibility between Sufism and the Orthodox theology.

Wikipedia's article on Ghazali states:

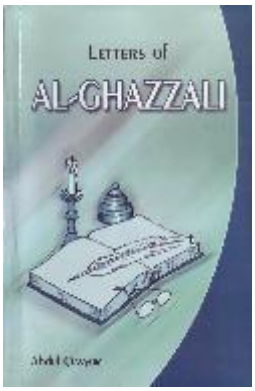
The Ihya* became the most frequently recited Islamic text after the Qur'an and the hadith. Its great achievement was to bring orthodox Sunni theology and Sufi mysticism together in a useful, comprehensive guide to every aspect of Muslim life and death. The book was well received by Islamic scholars such as Nawawi who stated that: "Were the books of Islam all to be lost, excepting only the Ihya', it would suffice to replace them all."

* This 'Ihya' is an abridged title. The full title is *Ihya'e U-lum-ed'Deen* and it was written by Al-Ghazali.

Islamic theology and Sufism were regarded as spiritual partners, which had recourse to Quran and the hadith literature whereas philosophy and other related sciences were material and had recourse to metaphysics and the natural world. God and prophet was always deemed superior to all else and the associations of God and prophet to Quran and hadith meant that those studies were superior to philosophy, science and its foundations of rationalism and causation, the latter of which, was denied by Ghazali. The denial of causation deepened the separation of spirituality from materiality. Ghazali's Sufism became an added bulwark to the already impregnable mindset of the theologians. The recurrent rejections of philosophical thought and the parochial ways in which Quran and hadith came in to rescue and defend against the erring philosophies had the effect of founding all of religion from revelation and the teachings of the prophet. It was unthinkable of religion without revelation or the messenger that brought it. Supremacy of Quran and Prophet followed by the separation between spiritual religion and material world made the science to be the inferior and subordinate handmaiden of Islamic theology.

Al-Ghazali's fame was so great that following the denunciation of the philosophers, when he adopted Sufism and began validating and promoting its teachings in his writings, that were widely read in the Muslim world, it fast became the intellectual substitution of philosophical and material scientific research because he made Sufism's inner spiritual practices more acceptable with the formal outer religious practice of the theologians who had the greatest sway over the Muslim public.

Ghazali's Sufism is not unlike the Sufism of past Sufi masters such as Hallaj, Bastami and Abdul Kader Jilani. Ghazali's writing's which expose his pantheistic interpretations in respect of believing in God's oneness can be found in a collection of letters that were translated by Abdul Qayyum. Qayyum states in the preface on page ix "The most important collection of his letters is obtainable in a Persian book...I have throughout translated the full text of every letter as given..." Below is the cover of the book.



Twenty six letters penned by Al Ghazali are published in Abdul Qayyum's translation. The 8th letter was written to His Excellency Shihab-ul-Islam. About half way into the letter (referenced to the 5th paragraph on page 51 of the book) Ghazali states: 'One cannot achieve **Tauhid** by simply saying that Allah is One.' He then opens the 6th paragraph with the words: 'Mystical unity (tauhid) and the path (Tariqat) consist of acquired virtues (maqamat) and mystical states (ahwal).'

New term: At the end of the previous paragraph you read the word **Tauhid** (also spelt Tawhid). Wikipedia's definition of Tawhid is succinct:

'Tawhid (Arabic: توحيد tawḥīd, meaning "oneness [of God]" also romanized as tawheed, touheed or tevhid) is the indivisible oneness

concept of monotheism in Islam. Tawhid is the religion's central and single-most important concept, upon which a Muslim's entire faith rests. It unequivocally holds that God is One (Al-ʾAḥad) and Single (Al-Wāḥid), therefore the Islamic belief in God is considered Unitarian."

Tawhid constitutes the foremost article of the Muslim profession of faith. The first part of the shahada (the Islamic declaration of faith) is the declaration of belief in the oneness of God.'

Now to continue with the discussion of al-Ghazali's letters and his beliefs about God...

These words from Al-Ghazali reveal that his understanding of Tauhid is different from how true Muslims understand Islamic monotheism, which is the exclusive belief in the oneness of God. Both Muslims and erring Sufis like Ghazali use the same word of Tauhid, but while the true Muslim attaches Islamic monotheism to tauhid, Al Ghazali attaches mystical union to Tauhid and it is this mystical union that crosses the barrier from Belief (Iman) to disbelief (kufr).

The clear cut pantheistic kufr is revealed in the 19th letter of Al Ghazali, which was written to Khwaja Imam 'Abbasi (referenced to pages 95-96 of the book). Although this is a different letter to a different person al Ghazali was fond of conveying his Sufi beliefs to people. Ghazali opens the letter with a hadith:

Someone asked the Prophet: "Inform me, in the matter of Islam, so that I may have no occasion to ask others about it". He replied: "Say, I believe in God, after which firmly obey the commands and abandon the things forbidden".

This hadith is unreferenced. Nevertheless, Ghazali explains in the next paragraph (paragraph 2), what to believe in God means and how to achieve that belief. He writes*:* 'To believe in God means that God and the spiritual world are ever present realities in the routine of our daily life'. Further on in the paragraph he explains how to achieve this reality. He writes: 'We reduce our cognitive faculties to zero, to absolute inaction'. In other words, Ghazali is explaining that a Sufi must stop thinking in his state of tauhid. He continues: 'and in this sacred silence contemplate things divine, by union not in ourselves, but by going out of ourselves entirely and becoming wholly God. The universe has flowed out from Him. It is a divine emanation and there is also a cosmic process of "return" back to the eternal one.'

Thus, al Ghazali admits that the mystical union is **WITH** God and he states clearly how he understands this union. When he says in the very next sentence that the universe is a divine emanation it immediately means that the union is NOT metaphorical but physical, because emanation means to send out from someone or something. In other words, that God and creation are made of the same stuff and because he understands it this way he then stated that 'there is also a cosmic process of "return" back to the eternal one.' The clear cut kufr part is the first part when he states *'going out of ourselves and becoming wholly God.'* In other words, people merge with God and become part of God and that means that Godhead is a partnership and ascribing partners with God is polytheism, whose worst form is this very pantheism that al Ghazali has written. To use the Arabic word, it is SHIRK (association to God.) and a clear violation of Islamic monotheism but Al Ghazali would have you believe that it is the true Tauhid.

What a neat trick this is from Satan to actually use the word Tauhid to spread disbelief? It is the destruction of concept to corrupt Iman into kufr.

Note: I have written previously of Ghazali's Sufism in a critique of Sufism that I self-published on my website www.ziadcassim.com. The title is *'The Core Rejection of Sufism'* and it can read online at:

https://ziadcassim.com/wp-content/uploads/2026/06/The-Core-Rejection-of-Sufism.pdf

As time passed the tide of Sufism could not be stemmed and a few years after the death of Ibn Rushd in 1198, Ibn- Al-Arabi, a very prominent and influential Sufi from the Southeast of Spain, who was born in 1165, which is 54 years after the death of al-Ghazali, began his most famous work: *'al-Futuhat al-Makiyya'*. In it he portrays the diminished status of reason in his cosmology. The quotation which follows is taken from an English rendering of Miguel Asin's thesis on Dante's Divine Comedy titled *Islam and The Divine Comedy*, for which he attributes its inspiration to the writings of medieval Muslims and the Spanish Sufi Ibn Arabi. Here below, quoted from Asin's above referenced book, from page 158, is the text from Ibn Arabi's Al Futuhat which describes the 3 grades of believers in their closeness to God:

To sum up, the three aspects which God presents to the elect correspond to the different ways in which a knowledge of Him was gained on earth; and he who acquired that knowledge in all three ways will witness three Divine manifestations in the same instant. The visions of the elect in these three categories are graded thus: the prophets who received supernatural inspiration from God excel those saints who followed their teaching; while those who were neither prophets nor their disciples but simply saints and friends of God will, if they achieved the desired end by rational contemplation, be inferior in the Beatific Vision to the mystics, because reason, like a veil will intervene between them and the Divine truth, and their efforts to raise it will be of no avail. In like manner the followers of the prophets will be unable to raise the veil of prophetic revelation. And so it is that the Beatific Vision, pure and unalloyed, will be the heritage exclusively of the prophets and those mystics who, like the prophets, received Divine inspiration on earth.

With thinking like this from Ibn Arabi it is no wonder that the previous centuries of Islamic civilization that was constantly expanding and advancing its industries and economies from new sciences and technologies and intensified international trade was, latterly, imploding from within in slow-motion. The Muslims lost their way in the sciences and related technologies and we never cared about it and many of us still don't care and we say to ourselves and scoff at the non-Muslims that this material world is theirs but for a short while and we, the Muslims, will have eternities of pleasure in Paradise but I tell you now that we chose the lower path of religion in separating religion from world.

The science and philosophy that Sufis like Al-Ghazali and other theologians sought to discredit was the intellectual crown jewel of the Muslim civilization and when the Sufis and theologians turned their backs to it and replaced it with their Sufi spiritual inwardness and their narrow ordering of Muslim society around a stagnated interpretation of Quran and hadith it became the prize and trophy of Christian Europe.

Under the spread of Sufism, the power grab of the theologians tightened because Sufism gave them the intellectual springboard in their religious proof that religion and world are separate spheres and

that pursuit of the former was superior. All around them the Muslims saw that their prosperity was in the technological advancement but the core traditional teachings of Islam exhorted more about the afterlife in paradise as the supreme achievement that was to be strived for with worship and piety. Citing many hadith and Quran verses which portray the present world as transitory and distractive, the theologians used the support of the Sufi argument to supress the sciences of the material world.

The Muslim Holocaust:

As scientific advancement from within slowly withered, a few decades after Salahudin recaptured Jerusalem, a new external threat emerged in the east. Nothing in the Muslims glorious past of conquest informed them of what was to come from the horse cultured Mongols lead by Genghis Khan. Many historians have written about the Mongol invasions into the lands of the Muslims. I only know of one historian (Syed Amir Ali) who rightfully called it for what it truly was - a holocaust. It started early in the 13th century and over the next few decades of destructive wars almost all of Asia from Baghdad in Iraq to Beijing, in China was put under sword and fire. The horrors which I will describe below made me sick in my stomach. These descriptions will help to understand how intellectual scientific inquiry was drowned in bloodshed in the millions of lives slaughtered and the rotting pyramids of skulls erected as displays of abysmal rage that extinguished mercy and prosperity and made the scores of survivors become ghoulish slaves of demonic rage. There was no respect for knowledge and learning in these years. In all it took the known world nearly 300 years to settle and by then the entire character of the Muslim lands was changed because the old foundations which were the universities and other centres of learning, with the tens of thousands of books were destroyed. Syed Amir Ali in his book *A Short History of Saracens* writes at the bottom of page 398 into page 399:

With the destruction of Baghdad the gloom of night settled on Western Asia. The Arab and Persian authors speak in harrowing strains of the havoc and ruin caused by the myriads of savages and heathens who swept over the Islamic world in the middle of the thirteenth century, and none but a fanatic can help shedding a tear over the fearful loss of human life and the destruction of intellectual treasure or the carnage and atrocities committed by the Mongols. "The invasion of the Tartars", says Ibn ul-Athir, "was one of the greatest calamities and the most terrible of visitations which fell upon the world in general and the Moslems in particular, the like of which succeeding ages have failed to bring forth, for if one were to say that the world, since God created it to the present time, was never so afflicted, one would speak truly, for history has nothing which approaches it." Abdul Latif calls the Mongol eruption a misfortune that reduces to insignificance all other misfortunes." Juwaini, the author of the Jahan Kusha, who was in the service of Chengiz* (Genghis) *about this time, says, "the revolution which has overwhelmed the world, has destroyed learning and the learned, especially in Khorasan, which was the focus of light and the rendezvous of the learned. The men of learning have become the victims of the sword.* ***This is a period of famine for science and virtue****."*

* The Mongol are also called by the name Tartar but in truth the Tartars are a separate Turkic people that are related to Mongols. Tartar soldiers did make up the ranks of the Mongol armies.[Britannica, 2009]

Khan's rise to power was complete by 1206 CE. In that year, from his given name Temujin, he was given the title Genghis Khan. It started in 1218 CE, at least on the face of public discourse, from a trade dispute wherein a group of traders from Mongolia were arrested, their goods taken, and then killed for allegedly being spies. The Mongols demanded the head of the governor of that province in the Country called Khwarism. [Pg 391, A short History of Saracens, Syed Amir Ali] The king refused and there erupted the Mongol army, one million strong, into the lands of the Muslims.

Ali writes on page 391 to the bottom of page 393:
It was in the year 615 AH [1218 CE] that the storm burst. At the time of the Mongol eruption, in spite of the frequent wars of which the plains of Transoxiana, Khorasan and Persia had been the theatre, these countries were most flourishing; the people were prosperous; literature, arts, and crafts of every kind were cultivated, encouraged and patronised; the cities were populous and embellished with fine public and private structures, the outcome of centuries of prosperity and civilization. Herat and Balkh ***each had a population of a million****; in Bokhara* and Samarkand it far exceeded that number.*

* Bokhara, which was studded with palaces, parks and gardens, stretched for miles on both sides of the river Soghd, which traversed its suburbs.

The forces of Khwarism Shah were simply swept away as by a torrent. Leaving out the minor cities and towns, it is enough to describe what happened in the principal centres of civilization and trade. Khojand was raised to the ground, and its inhabitants passed under the sword. Bokhara was reduced to ashes. Ibn ul-Athir's account of the sack of this seat of learning depicts in vivid terms the terrible cruelties inflicted by the savages upon the helpless inhabitants…Advancing along the beautiful valley of the Soghd, "The Scourge of God" arrived at Samarkand, which was not only the capital of Transoxiana, but also one of the greatest entrepots of commerce in the world. It was three miles in circumference, and surrounded by a wall pierced by twelve iron gates, with castles at intervals. It garrison consisted of 110,000 men, of whom 60,000 were Turkomans and Kankalis and 50,000 Tajiks or Persians. The three armies that had overrun Northern Transoxiana now converged upon the doomed town, and an immense body of men invested it. The Turkish mercenaries, who thought they would be treated as compatriots by the Mongols, deserted in a body with their families and goods, and were immediately put to death. Upon this the Imams and the notables issued and offered to surrender. In spite of their submission the city was sacked and an immense number of people were killed; 30,000 artisans were assigned by Chengiz (Genghiz) *as slaves to his several sons; an equal number were set aside for military works, transport service, etc. Of its million inhabitants, 50,000 alone remained to tell the fate of the ruined city. Warned by the fate of Bokhara and Samarkand, the citizens of Balkh sent him presents and offered their submission, but he was afraid to leave it behind him. On pretence of counting its inhabitants, he enticed them out of the city, and then slaughtered them; the town itself was reduced to ashes. In May 1220 A.C the savage horde captured Uranj (old Khiva), after a desperate fight, which was followed by a general massacre. They then* ***destroyed the city by opening the dykes of the Oxus****. At Nessa they made a hecatomb of over 70,000 people; men, women, and children were told to lie down side by side, they were then tied by chords and destroyed by arrows. Nishapur, the capital of the Tahirides, and the Persian Seljukides, was destroyed in April 1221 A.C. It was raised to the ground, and its site was sown with barley; only 400 artisans escaped, and they were transported to the north. According to Mirkhond 1,747,000 men lost their lives in the massacre at Nishapur and the surrounding districts. In Herat and its environs, they killed, burnt, and destroyed for a week, and it is said that 1,600,000 people were killed; the place was entirely depopulated, and the neighbourhood turned into a desert. Rai, Dinawat and Hamadan were sacked and a large portion of the population put to the sword.*

Ali's lifeless descriptions continue at the bottom of page 394:

In Transoxiana and Khorasan the civilization of centuries was completely destroyed, and the people were plunged into a depth of barbarism in which the remembrance of their former greatness and their whole future were alike engulfed. The great high-roads of Central Asia, by which the products of China and India were conveyed to Western Asia, and to Europe, were deserted; the tracts well known for their fertility lay barren and neglected, or finally destroyed; the arts and manufactures, so

celebrated throughout Islam, decayed for ever. The towns were in ruins, the peasants either murdered or compulsorily enrolled in the Mongolian army, and the artisans sent off by thousands to the farthest east to adorn and beautify the home of the barbarian conqueror.
The Mongolian eruption ***put an end to the intellectual life of Central Asia****, for although Persia and the west gradually recovered from their misfortune, Bokhara and Samarkand never regained their former mental activity, and* ***their intellectual labours were henceforth entirely devoted to casuistry and mysticism****.*

In 1258 CE the grandson of Genghiz, Hulagu, surrounded the city of Baghdad with a huge army. All of the schemes that its inhabitants enacted to save their city and themselves fell through to the day when Hulagu issued the command to sack the city and put to sword its inhabitants. Ali writes on page 398:

The women and children who came out of their houses with the Koran in their hands, imploring quarter, were trampled to death. Delicately nurtured ladies who had never brave the sight of crowds were dragged into the open streets and subjected to the grossest brutalities...For three days the streets ran with blood, and the waters of the Tigris was dyed red for miles along its course. The horrors of rapine, slaughter, and outraged humanity lasted for six weeks. The palaces, mosques, mausolea were destroyed by fire or levelled to the earth for their golden domes. The patients in the hospitals and the students and professors in the colleges, were put to the sword. In the mausoleum the mortal remains of the Shaikhs and pious Imam, and in in the academies the immortal works of great and learned men, were consumed to ashes; books were thrown into the fire, or, where the Tigris was near, buried in its waters. The accumulated treasures of five centuries were thus for ever lost to humanity, and the flower of the nation was completely destroyed.

The disrespect of life in general and of social etiquette and prosperity was beneath the most primitive human standards. Everything that life and prosperity cherished was put into a advancing engine of destruction, burning deep into the psyche of the conquered and which ultimately, drove the depressed survivors and their future generations to lose hope in the sciences achieved by past generations. Consider this segment which Edward G. Browne writes on pages 433-434 in his book *A Literary History of Persia, Volume Two* about the mercilessness of the Mongol terror machine:

…though they held life so cheaply, the Mongols rarely had recourse to courage where falsehood and deceit could enable them to gain their ends. If death was the punishment of resistance, it was also in most cases the consequences of surrender. If they spared any of the inhabitants of a town which had surrendered to or been reduced by them; it was either ***to profit by their skill and craftsmanship*** *or to employ* ***them against their countrymen and co-religionists*** *in the vanguard of their next assault. Droves of wretched and outraged captives accompanied the advancing hordes, and, employed to* ***erect the engines of the besiegers****, then driven forward at the point of the sword to the breaches effected in the city walls to* ***fill with their bodies moat and trench****, and were finally, if they still escaped death, put to the sword to give place to a new batch of victims drawn from the prisoners yielded by the fresh conquest. The cruelty of the Mongols was calculated and deliberate, designed to strike with a paralysis of terror those whom they proposed next to attack. While they deemed it safer to leave behind their advancing hosts smoking ruins and a reeking charnel-house rather than risk any movement of revolt on the part of the miserable survivors of their assault.*

Browne continues on the bottom of page 438 into page 439:

The bloodthirsty ferocity of the Mongols seems to have increased in proportion to their successes, and seldom indeed, from this time onwards, do we hear of any mercy shown by the Tartars to the

inhabitants of the towns which they subdued. At Balkh, Nusrat-Kuh, at Nasa, at Nishapur, at Merv, and elsewhere, the same atrocious massacres invariably followed the capture or surrender of the town. Those slain at Merv alone are computed by Ibnu'l-Athir at 700,000, but the author of the Jahan-gusha raises their number to the enormous total of 1,300,000 "not counting those whose corpses remained hidden in obscure retreats." At Nishapur the heads of the slain were cut off, lest any living creature might be overlooked amongst them, and built into pyramids, the heads of men, women and children being kept apart. Herat fared somewhat better, but Baniyan, where a Mongol prince was slain in the attack, was utterly destroyed, not even spoils of war being taken, so that for a hundred years it remained a desert void of inhabitants. That nothing might be wanting to complete the ruin which they had wrought, the Mongols frequently destroyed all the grain which they did not need, and often, a few days after they had retired from a town which they sacked, used to send a detachment to revisit its ruins and kill such poor wretches as had emerged from the hiding-places which had sheltered them from the first massacre. This happened at Merv, where 5,000 survivors of the terrible slaughter mentioned above were thus destroyed. Torture was freely used to make the vanquished disclose hidden treasure, and, as might be expected of those who held human life so cheaply, ***the treasures of literature and art preserved in these ancient cities were ruthlessly destroyed****.*

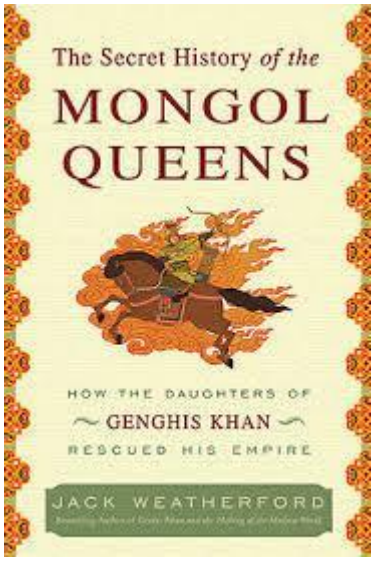
Afterwards, from the bottom of page 439 into page 440 Browne writes:

It was the terror of the Mongol deed which lent such deadly meaning to their stereotyped summons to surrender which they addressed to the inhabitants of each doomed city:-"If you do not submit, how will we tell what will happen? God only knows what will happen!"

In 1237, in the reign of Genghis's son Ogodei sexual terrorism was used against his own noble womenfolk. Jack Weatherford, an American historian states on page 89 of his book *The Secret History of the Mongol Queens* (2010):

The nearly unbearable horror was committed not against enemies, but against the nation's daughters.

His soldiers assembled four thousand Oirat girls above the age of seven together with their male relatives on an open field. The soldiers separated out the girls from the noble families and hauled them to the front of the throng. They stripped the noble girls naked, and one by one the soldiers came forward to rape them. As one soldier finished with a screaming girl, another mounted her. "Their fathers, brothers, husbands, and relatives stood watching," according to the Persian report, "no one daring to speak." At the end two of the girls lay dead from the ordeal, and soldiers divvied out the survivors for later use.



Note: Oirat is a major sub branch of the Mongol nation.

On the next page (Page 90) Weatherford states that when Ogodei's soldiers of 25 000 defeated a Chinese army of 100 000:

The Mongol commander, according to the Muslims, permitted the mass sodomizing of the defeated soldiers. "Because they had jeered at the Mongols, speaking big words and expressing evil thoughts, it was commanded that they should commit the act of the people of Lot…"

Another atrocity setup by the Mongols occurred when Genghis's sons Jochi and Chaghatai conquered the Capital city of Urgench in Central Asia, in the year 1221. The reporting of this incident is attributed to the chronicler Abu-Umar-I-Usman. After seizing all the women they wanted for themselves they gathered all the remaining women outside the city in an open plain. There they divided them into two groups and stripped them naked. Then they ordered the women in the groups to attack each other. The women, started to think that if they won and defeated the others, they themselves would be allowed to live. The fighting became murderous and the Mongol soldiers cheered and jeered until they tired of it and then killed all the remaining women.
[Page 110-111 of Jack Weatherford's book The Secret History of the Mongol Queens]

The conquests of the Mongol came in generational waves. First was the period of the Great Khans, Genghis, his son Ogodei and two grandsons who conquered from 1206 to just before the fall of Bagdhad in 1257 (Bagdhad fell the next year). The second wave began with Hulagu's western expansion culminating in the conquest and sacking of Baghdad. In the East his brother Qubilay marched eastward and subdued China. Hulagu and Qubilay were grandsons of Genghis. [A Literary History of Persia, Vol. 2, Pages 444 to 453] After these conquerors, historians note that the iron rod of ferocity passed to a Turko-Mongol conqueror. To Europeans he was called Tamerlane, a name which is actually a corruption of the term 'Timur the lame', and he was lame from being disabled on his left side (Tamerlane, Encarta, 2005).

Edward G Browne, on page 181, in *Volume 3 of A Literary History of Persia* states the following in respect of Timur's disrespect of life:

…mention may be made of his massacre of the people of Sistan in 785/1383-4, when he caused some two thousand people to be built up in a wall; his cold blooded slaughter of a hundred thousand captive Indians near Dilhi in 801 (December 1398); his burying alive of four thousand Armenians in

*803/1400-1, and the **twenty towers of skulls** erected by him at Aleppo and Damascus in the same year; and his massacre of 70 000 of the inhabitants of Isfahan in 789 (November 1387)…*

Note: Dates such as *785/1383-4* taken from the first sentence of the above quotation express the Islamic lunar year date followed by the Gregorian solar date, separated by the forward slash / or written in parenthesis.

At Sistan in addition to compacting the bodies of the slain, which were used in the building of the wall he also erected more minarets of heads from the 5000 defenders of the city. Then he proceeded to capture fortresses in the area and built more skull pyramids from the slain and then moved on to invade Qandahar. [A Literary History of Persia, Vol.3, Page 186-187].

In his Indian campaign having already slaughtered the 100 000 on his approach to Delhi, Wikipedia states:

After Delhi fell to Timur's army, uprisings by its citizens against the Turko-Mongols began to occur, causing a retaliatory bloody massacre within the city walls. After three days of citizens uprising within Delhi, it was said that the city reeked of the decomposing bodies of its citizens with their heads being erected like structures and the bodies left as food for the birds of Timur's soldiers. Timur's invasion and destruction of Delhi continued the chaos that was still consuming India, and the city would not be able to recover from the great loss it suffered for almost a century.

Concluding this section on the Muslim Holocaust, Edward G. Browne opines that:

In Europe it (the Mongol Invasions) *was **a cause, if not the chief cause, of the renaissance**, for it thrust the Ottoman Turks out of the obscurity of Khurasan into the prominence of Constantinople, and was thus Ultimately responsible for the destruction of the Byzantine Empire and the dispersion of the Greeks and their treasures into Europe.* [A Literary History of Persia, Vol. 2, Page 442]

Ibn Arabi, who was mentioned in the previous section was a prominent Sufi and he lived till the year 1240 CE, over twenty years of counting since the start of the destructive reign of the Mongols into Muslim Lands in 1218 CE. Twenty-three years after Salahudin recaptured Jerusalem and a year after Genghiz Khan consolidated his power, in the year 1207 was born the most charismatic Sufi mystic and poet of his time and even now. He is Jalaludin Rumi. He would live till the year 1273 CE. In the years that the Muslims were being destroyed in a holocaust this Sufi was rising in prominence. Before him, in the west, Ibn Arabi's treatises on mysticism began taking shape in peoples' minds. In India, in the year 1143 CE was born Mu-in al din Chisti, a prominent Sufi mystic and the founder of the Chisti Sufi Order. He lived till 9 years after the demise of Genghis Khan.

Having read about the Muslim Holocaust it is now clear top see that as Muslims were being butchered in the millions, their cities reduced to ashes, and their learning and trade extinguished the Sufis were marching out to occupy the vacuum left by science. It was a synchronisation. A rotting cancer from within and a fire from without, temporally executed like the pincer military strategy that Mongolian cavalry was infamous for.

The Heights and Depths of European Dependence on Muslims Beyond the World:

Who stole my hell? You did? You?

Having thus presented the great age of science and academia of the Muslims and then showed how Europeans envied and competed for the Muslims sciences which lead to greater Intellectual assimilation and Islamisation of Europe it would leave, in the imagination of the reader, the state of desperation of the church to stem the tide of Islamisation. From a historical and cultural perspective, admittedly, the church was central to shaping European civilization during the middle ages and in modern times. A closer examination reveals that Islamisation also penetrated Christian Europe's religious aspirations of Heaven, Paradise and deliverance from Hell. To begin the discussion, I ask the reader to produce biblical descriptions of the architecture of Heaven and Paradise and the joys and pleasures of the Christians that will dwell in the Heaven and Paradise. You will find in your search that there is a dearth of direct biblical descriptions of Heaven's and Paradise's architecture and of the finer details of how life will be lived in these places. All of this also applies to the architecture of the Christian Hell and Purgatory and the treatments that will be applied to its inmates. This is in stark contrast to Islam's Quran and the sayings of Prophet Muhammad written down in hadith books by scribes, which have copious descriptions of Paradise and Hell.

In describing the Muslim Paradise here below is a sample quoted from the Quran:

55:46 But for he who has feared the position of his Lord are **two gardens** -
55:48 Having [spreading] branches.
55:50 In both of them are **two springs**, flowing.
55:52 In both of them are of **every fruit**, **two kinds**.
55:54 [They are] **reclining on beds** whose **linings are of silk brocade**, and the fruit of the two gardens is hanging low.
55:56 In them are **women limiting [their] glances**, **untouched before them by man or jinni** -
55:58 As if they were rubies and coral.
55:60 Is the reward for good [anything] but good?

55:62 And below them both [in excellence] are **two [other] gardens** -
55:64 Dark green [in color].
55:66 In both of them are **two springs**, spouting.
55:68 In both of them are **fruit and palm trees and pomegranates**.
55:70 In them are good and **beautiful women** -
55:72 Fair ones reserved in pavilions -
55:74 **Untouched before them by man or jinni** -
55:76 **Reclining on green cushions** and **beautiful fine carpets**.

Firstly, I will discuss the structure of these quoted verses. As you will easily see these verses come from the 55th Chapter of the Quran. The name of the chapter is Rahman. Rahman is one of 99 names of God/Allah which means 'The Most Merciful' or 'The Entirely Merciful'. There are 16 verses quoted in total but closer examination will reveal that the verses are only the even numbered ones from 46 to 76. The reason for omitting the odd numbered verses such as 47, 49, 51, 53 and so on until verse 75 is that all of these odd numbered verses are all exactly the same repetition: 'So which of the favours of your Lord will you deny.' The structure of these verses is like musical metre where the odd numbered verses are the refrain sung out as a chorus. As for the contents of these descriptions of Paradise it is self evident that the Islamic Paradise is dualistic and

symmetrical which is why I inserted a blank line after verse 60. In this delineation you will appreciate that even the super structures of the Gardens themselves are in pair and symmetrical. Follow the colour coding of the verse segments and find the matching paired aspects.

If you have an interest in this playful and colourful exercise then perhaps you should read my book *Intelligent Design Symmetries & the Future of Islam* wherein I explain how this pattern making of the verses applies to real events in the here and now of our lives and I give more examples and case studies from topics such as aviation and maritime disasters, the rise and fall of empires, recent and ancient wars, the inclusion of this pattern making in some billion dollar Hollywood film franchises, grand histories involving human epochs and regional civilizations, how it is related to CG Jung's hypothesis of Synchronicity, the possibility of becoming a science in the mysterious phenomenon of quantum entanglement, and most importantly the basis of the book's title theme of Intelligent Design par excellence. This book can be read online at the following website:

https://ziadcassim.com/wp-content/uploads/2026/06/Intelligent-Design-Symmetries-The-Future-of-Islam.pdf

Now here below is a long hadith (prophetic report) which is descriptive of a dream the prophet Muhammad had. In the dream the prophet was escorted by two persons (assumed to be angels) and taken to see places in hell where people were being punished and a place in Paradise that would be his own dwelling after he died. This hadith is from the collection of the scholar commonly known as Imam Bukhari. The hadith is over 1000 words long and if you want to read the direct translation refer to the following book collection:

Sahih al Bukhari, Volume 9, Book 87, hadith number 171. You can read this online at:

https://quranx.com/hadith/Bukhari/USC-MSA/Volume-9/Book-87/Hadith-171/

Here now I will paraphrase the story of the prophet's dream. In all, the prophet saw 8 wonders (his word) of the afterlife. The first 4 are torments in hell, following by visitations upon two persons, then his sees the 5th of the torments in the dream and lastly, he sees his own palatial abode in the afterlife. As he proceeds in this tour, after each he asked about why this is taking place or who such people are and the angel companions beckoned him to proceed on and when the 8th wonder is seen the angels then explain the reasons for the torments and in the case of the 5th torment how forgiveness by God was effected. The wonders are as follows:

1st Wonder:
A man is lying down and another beside him picks up a large rock and hurls it on the lying man's head inflicting injury upon him. The rock rolls away and the standing man retrieves it and by that time the lying man's head is repaired and then the standing man hurls the rock down upon him again and on this continues.

This wonder is a symbol of a man that studies the Quran but does not recite or act on its instructions and remains neglectful.

2nd Wonder:
A man is seen lying down on his back and another man comes to his face with a hook and pierces his mouth from one side with the hook and pulls the hook backward in a tearing motion. The same is done starting from the nostril on that side of the face. A third piercing and tearing starts with the eye on that side of the face. Then the tormenting man goes to the other side and starts with that side of

the mouth, piercing with the hook and tearing to the back of his head. He follows this tearing motion again starting with the nostril and then the eye and he hardly finishes it but the other side of the face that was first torn is repaired. Upon finishing the second side of the face he now goes back to the repaired first side of the face and begins the torment anew.

This wonder is the symbol of a man that goes out of his house and spreads so many lies till it spreads around the world.

3rd Wonder:
There is a large oven and the prophet hears noises and screams coming from inside this oven. When he looked inside it he saw that there were naked men and women and beneath them was a fire that reached up to them and as they burnt in the fire they screamed.

These naked people in this wonder are the adulterers.

4th Wonder:
A man is seen swimming in a river red like blood and another man is on the bank of the river collecting stones. As the swimmer comes closer to the other man he hurls a stone into his mouth and makes him return to swimming. That's how the prophet is reported to have said it and I think it means that that the swimmer drowned from the stone being hurled into his mouth and was revived and then the swimming is repeated and then the man on the bank hurls another stone and it repeats again.

The swimming man given a stone to swallow is he who consumes interest.

5th Wonder:
The prophet sees a very repulsive man and beside him is a fire. The man stokes the fire and walks around it.

The man in this wonder is Malik, the gatekeeper of Hell.

6th Wonder:
The prophet sees a lush green garden with beautiful spring colours. In this garden is a very tall man. So tall the prophet could not see his face and around him were numerous children.

The tall man in the garden is prophet Abraham and the children around him are those young children that die in the state of Islamic purity called Fitrah.

Note: Fitrah is the state of purity that all humans are born in before being initiated into the family religion of their parents. It is for this reason Muslims, when referring to a person entering the fold of Islam from outside it (not being born in a Muslim home) are said to be **re**verts and not converts. **Re** because they are **re**turning to their original state.

7th Wonder:
The prophet sees a huge garden that was the best he had ever seen and in this garden is a city built with gold and silver bricks. He enters the city and in it he sees the most beautiful people from one side of the body and the other side of the body is extremely ugly. He then sees a river passing through the city and it is a pure river like the whiteness of milk. The half beautiful, half ugly people go down and bath in the river and afterwards the ugly half side of their bodies is transformed to match their beautiful side and in that they are all fully restored.

The half beautiful and half ugly people in the city are those that had mixed an act of good with that which is bad. They were restored to full beauty because God eventually forgave them.

8th Wonder:
The prophet sees a garden which the angel companions say is the Eden paradise and that it his abode to be. In this paradise is a palace like a white cloud. He asks to enter it and is told that he will not be permitted but that one day in he will.

Outside of the bible there is a great deal of Christian literature about Heaven and Paradise, Hell and Purgatory but because there are no biblical architectural descriptions of Heaven, Paradise, Hell and Purgatory and a dearth of vivid biblical descriptions of happiness and punishment in the afterlife you will find that the bulk of Christian literature about these afterlife places is more preceptive than descriptive. Encyclopaedia articles generally follow this trend and in addition to the written material they will contain pictures of medieval art that depict scenes of the afterlife and because these works of art don't have reference to the bible the artists are free to apply their own imagination or to borrow from older descriptive sources, whether they be legends, folklore, prose or verse. Searching deeper into this sub-genre of literature that is descriptive of the afterlife realms one of the most famous writers is Dante Alighieri. Wikipedia's article on him states in its opening section:

Durante degli Alighieri... commonly Dante Alighieri, or simply called Dante... c. 1265 – 1321), was a major Italian poet of the Late Middle Ages. His **Divine Comedy**, originally called Comedìa (modern Italian: Commedia) and later christened Divina by Boccaccio, is widely considered the **most important poem** of the Middle Ages and the **greatest literary work** in the Italian language.
...
Dante was instrumental in establishing the literature of Italy, and his depictions of Hell, Purgatory, and Heaven provided **inspiration for the larger body of Western art**. He is cited as an influence on John Milton, Geoffrey Chaucer and Alfred Tennyson, among many others.

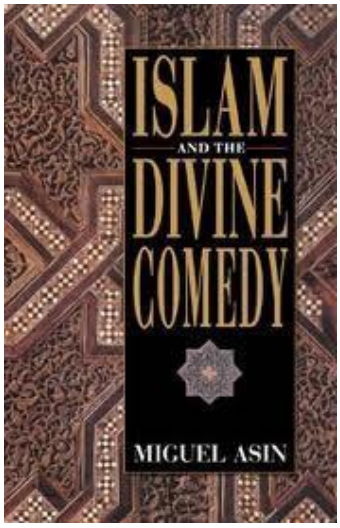
Encyclopaedia Britannica's (2009 edition) article on the Divine Comedy gives a concise account of its contents:

Long narrative poem written c. 1308–21 by Dante. It is usually held to be one of the world's great works of literature. Divided into three major sections—Inferno, Purgatorio, and Paradiso the narrative traces the journey of Dante from darkness and error to the revelation of the divine light, culminating in the Beatific Vision of God. Dante is guided by the Roman poet Virgil, who represents the epitome of human knowledge, from the dark wood through the descending circles of the pit of Hell (Inferno). Passing Lucifer at the pit's bottom, at the dead-centre of the world, Dante and Virgil emerge on the beach of the island mountain of Purgatory. At the summit of Purgatory, where repentant sinners are purged of their sins, Virgil departs, having led Dante as far as human knowledge is able, to the threshold of Paradise. There Dante is met by Beatrice, embodying the knowledge of divine mysteries bestowed by Grace, who leads him through the successive ascending levels of heaven to the Empyrean, where he is allowed to glimpse, for a moment, the glory of God.

And to put into perspective the praise, influence, inspiration and admiration that the Divine Comedy has received over the last few centuries I now quote from Encarta Encyclopaedia's article on Dante:

By the 15th century many Italian cities had established professorships for the study of The Divine Comedy; in the centuries following the invention of printing, almost 400 Italian editions were published. The poem has always inspired artists. Editions have appeared illustrated by the Italian masters Sandro Botticelli and Michelangelo, the English artists John Flaxman and William Blake, and the French illustrator Gustave Doré. The Italian composer Gioacchino Antonio Rossini and the German composer Robert Schumann set parts of the poem to music, and it formed the subject of a symphonic poem by the Hungarian composer Franz Liszt. It has been translated into more than 25 languages. Among the many notable translations into English are verse renditions by the American poet Henry Wadsworth Longfellow (1867), and, in the 20th century, by the English writer Dorothy L. Sayers and the American poet and critic John Ciardi.

You won't find anything in these encyclopaedia articles about Islam or Muslims and the unsuspecting reader will be confounded by any calls for reference to Islam and Muslims. Unless of course if you have a copy of a book written in 1919 by Miguel Asin Palacios, a Spanish Catholic Priest and professor of Arabic at the University of Madrid. The title of his research book is '*La Escatología musulmana en la Divina Comedia*'. The book was written in Spanish and it is a lengthy book but a few years later an abridged English translation was rendered by Harold L. Sunderland with the English title *Islam and the Divine Comedy*.



The introduction to this English abridgment was written by The Duke of Alba in 1925 and in the second paragraph he writes:

Asin has devoted over twenty five years of his life to the investigation of philosophical and religious thought of Medieval Islam – The Islam of the Orient as well as that of Spain – and its influence on the culture of Christian Europe. His training in Arabic philology and his mastery of medieval scholastics had enabled him several years before to make important discoveries regarding the influence in theology of Averroes [ibn Rushd] on St. Thomas Aquinas, of Ibn Arabi of Murcia on Raymond Lull, and of the Ikwan as-safa on

Fr. Anselmo de Turmeda, and so forth. His most important discovery, however, and the one on which his fame is chiefly based, was his discovery of Islamic models the influence of which on the Divine Comedy of Dante forms the subject of the present work....The book at once became the subject of lively and passionate controversy. Over a hundred articles and pamphlets have been written and lectures delivered in favour of, or against, the thesis propounded by Asin Palacois. The principle reviews devoted to literature and literary history, those both of a general and special character, have published articles from the pens of Dantists and Romance and Arabic scholars of note in Europe and America, expounding or criticising the thesis.

The duke then proceeds to quote from various European reviews, penned by Dantists, academic professors and romance scholars. Three such reviews are quoted hereunder:

Nallino, Professor of Arabic at the University of Rome, stated in the Rivista degli studi oriental that the book was "of great value as a contribution to medieval studies in general, as proving the hitherto unsuspected infiltration of Islamic conceptions of the after-life into popular beliefs of Western Christendom; and, especially, as one of the most important works on the religion of Islam that have appeared of late."

The review Analecta Bollundiana states: "The author of this book is universally known. There is scarcely any example of a work on Oriental philology having attracted so great attention. The audacity of the thesis could not fail to rouse the most lively interest in all who are initiated in the problems of literary history. The analogies shown by the author to exist between the Divine Comedy and Islam are so numerous and of such a nature as to be disquieting to the mind of the reader, who is forced to picture to himself the great epic of Christianity as enthroned in the world of Moslem mysticism, as if in a mosque that were closed to Islam and consecrated to Christian worship. At all events, there will always remain to the author of this book the honour of having started one of the most memorable debates in the history of universal literature."

Caballera, Professor of Ecclesiastical History at Toulouse, although disagreeing with the thesis admits in the Bulletin ed Litterature ecclesiastuque that "the reader is bewildered by the prodigious learning of the author, his logic, his talent for argument, which are nothing less than astounding; the clearness of his statements makes a profound impression."

Islam and the Divine Comedy is divided into 4 parts and each part has a varying number of sections. These sectional divisions are like chapters of other books. If now, you the reader would want to know the specifics of the similarities between the Muslim texts of the afterlife which were the primary sources of Dante's Divine comedy a sample can be read in section 8 of part one which begins on page 67. This section 8 is still divided further into 8 subsections. A 2 paragraph quotation of the first subsection will be given followed by a count of the similarities between Islamic texts on the descriptions of Hell and Paradise in subsections 2 to 6:

In the preceding chapters an attempt has been made to outline the story of the origin and evolution, within the world of Islam, of the religious legend describing the Nocturnal Journey and ascension of Mahomet to the realms of the afterlife. The different versions of the legend have been minutely examined and compared with Dante's poem; and the features of resemblance between the two tales have been demonstrated. It would, then, be as well here to sum up the points that have thus been established.

Around a verselet in the Koran alluding to a miraculous journey of Mahomet to the realms beyond the grave, popular fancy wove a multiplicity of versions of one and the same legend. The myth found expression in the tales of the traditionists, who with a wealth of detail describe the two main parts of the journey – the visit to hell and the ascension to paradise. All these versions had become popular throughout Islam as early as the ninth century of our era; and even in some earlier versions the two parts of the legend are fused to form, as in the Divine Comedy, a single dramatic action.

Asin's summary description in the above two paragraphs are, in my opinion, unflattering but he does not flinch from telling the truth when he sees it. In subsections (s-s) 2 to 6 set out on pages 68 to the top of page 75 are, from my counting, no fewer than **59** similarities between the Muslim's texts of Muhammad's nocturnal journey to hell and paradise and Dante's Divine Comedy set out as follows:

- s-s 2 has **21**
- s-s 3 has **5**
- s-s 4 has **26**
- s-s 5 has **4**
- s-s 6 has **3**

21 + 5 + 26 + 4 + 3 = **59**

I will hereunder give just one sample from the first 4 of the above 5 sub sections:
In s-s 2, from page 69:

The usurers, like the souls in Dante who have been guilty of crimes of violence, swim in a lake of blood, guarded by fiends who hurl fiery stones at them

This description corresponds to the 4th wonder of Muhammad's dream vision as recorded in Sahih al Bukhari and which I have explained in pages above.

In s-s 3, from page 70:

At the gates of Paradise the Moslem traveller is met by a comely maid, who receives him kindly, and together they walk through the gardens of paradise, until in amazement he beholds the houris on the bank of a stream forming a court of beauty around the beloved of the poet Imru-l-Qays. Dante, when he enters the earthly paradise, also meets a fair maiden, Matilda, and is walking by her side through fields rich with flowers, when on the banks of a stream he sees the marvellous procession of old men and maidens who accompany Beatrice, his beloved as she descends from heaven to meet him.

In s-s 4, from page 72:

In the heaven of Saturn Dante beholds a golden ladder that leads upwards to the last sphere. He sees the spirits of the blessed descending by this ladder and, at the instance of Beatrice, he and his guide ascend by it **in less time than "it takes to withdraw the hand from fire."** Mahomet, in his ascension, sees a ladder rising from Jerusalem to the highest heaven; angels stand on either side, and by its rungs of silver, gold and emerald the souls ascend; led by Gabriel, the Prophet rises by it "**in less than the twinkling of an eye.**"

In s-s 5, from page 74:

The moral meaning that Dante sought to convey in his Divine Comedy had previously been imparted by the Sufis, and particularly by the Murcian Ibn Arabi. The **Moslem mystics**, like Dante, made use of a dramatic story – which was alleged to be true – of a journey of a man, Mahomet, to the nether regions and his ascension to the heavens, in order to symbolise the regeneration of the soul by faith and the practise of the theological virtues.

Staying with the last comparison of sub-section 5 that is sourced to **"Moslem mystics"** (these are the Sufis) such as Ibn Arabi, I will hereunder re-quote from encyclopaedia Britannica:

At the summit of Purgatory, where repentant sinners are purged of their sins, Virgil departs, having led Dante **as far as human knowledge is able**, to the threshold of Paradise. There Dante is met by **Beatrice, embodying the knowledge of divine mysteries** bestowed by Grace, who leads him through the successive ascending levels of heaven to the Empyrean, where he is allowed to **glimpse, for a moment, the glory of God**.

Now Compare the contents of the above quotation from Britannica to the following, attributed to the Spanish Suif Ibn Arabi, from page 158 of Asin's book:

"...those who were neither prophets nor their disciples but simply saints and friends of God will, if they achieved the desired end by rational contemplation, be inferior in the Beatific Vision to the mystics, because **reason, like a veil will intervene between them and the Divine truth**, and their efforts to raise it will be of no avail. In like manner the followers of the prophets will be unable to raise the veil of prophetic revelation. And so it is that the **Beatific Vision, pure and unalloyed**, will be the heritage **exclusively of the prophets and those mystics** who, like the prophets, received Divine inspiration on earth."

As can be seen the lowliness of knowledge (as described in Britannica) corresponds to the inferior Beatific Vision of the rational scholars from Ibn Arabi. In Britannica Beatrice who is the embodiment of "knowledge of divine mysteries bestowed by Grace" corresponds to the mystics whose vision will be "pure and unalloyed" from Ibn Arabi.

End Comments:

From small candle light vigils in towns, villages and city states it was the Muslims that raised a torch of reason and learning onto the whole world. It was the Muslims that gave the world the first empire of learning and academia, not a small city state or a confederation states of academia, but a transnational, international empire of learning and academia, that for the first time in mankind's history showed the world that learning and academia could be a prosperous industry in itself to promote prosperity itself.

Terrestrial political and conquering empires crash and collide and destroy one another in orgies of bloodshed. The Persians supplanted the Egyptians in Empire over two thousand years ago. Persia invaded Europe but Greece fought back and eventually Greece supplanted Persia and forged the vast Euro-Asian Empire of Alexander the Great. A few centuries later the Romans toppled the Greek Ptolemaic dynasty in Egypt, North Africa and Palestine. Then the Arabs pushed back the Eastern Roman Empire and ended the Persian Empire and then a few centuries later the Mongols vanquished the Arab Dynasty seated at Baghdad. War itself as an enterprise thrived through all these terrestrial empires forged in fire and bloodshed. War itself became the empire of mind with international outreach and enterprise. Was this empire of mind ever challenged? See it. See it from what I am narrating to you - that learning and academia, in becoming international and enterprising, became an empire of mind that challenged not any nation or people but war itself. See all this from Satan's eye. It is the empire of learning and academia that even today challenges the war machine as a vehicle of prosperity to be far more productive and sustainable than war. War, as a vehicle of conquest can generate wealth for its victor but it is far inferior to learning and academia.

international trade itself was an enterprise long before warring conquest. In trade we did exchanges ideas and technology. But not being the academic intellectual pursuit as we characterise and, importantly, intentionally recognise, as being apart from, trade and government for that matter, it actually made conquest alluring because it made the city state alluring. Secondly, I will say this idea of establishing academia and learning as a world spanning enterprise by itself was thought up before the Muslims by a single man. But sadly, being a conqueror himself, his generals never saw his vision after his untimely early demise. It was Alexander the Great who had this dream in him. As he conquered he built his Alexandrias to be future places of learning. There were several in western Asia one in Egypt and it was this last mentioned one in Egypt that survived the conquering eras between his succeeding generals and other regional potentates. The Muslims accomplished the Dream of Alexandria but when they did it they were not remembering Alexander's dream and vision. They accomplished academia as a transnational enterprise from wanting to preserve and spread the Islamic religious knowledge and the key and succeeding quality of the Muslims was that prophet Muhammed did not institute a priesthood. He intended Islam to be an Everyman and Everywoman religion and indeed it remains so till today. We have Imams but an imam is not a priest. Islam has no clergy. Even when some imams call themselves Muslim clerics they can't actually give reference to an ordained priesthood. They are respected as scholars. Many of them are attached to mosques and perform religious rituals, leading the congregation of worshippers. So it looks like they are priests but they are not meant to be autocratic and they were never ordained as such. As you read in paragraphs above you read how the comparative situation in Europe, even more than 500 years after the emergence of Islam in Arabia, was stymied and stagnated by the religious Christian clergy.

Though the Muslims have been burnt in their homelands, their international empire of learning and academia continues and it has expanded and taken up occupancy in Western Europe where it has broken the authority of Rome and founded a great philosophical nation in the United States of America, whose founding fathers are believers synonymous with the Hanif Islam of prophet Abraham.

One day the prophet Muhammad turned his face toward the **east** and said: 'Behold, turmoil would appear from this side, from where the **horns of Satan** would appear.' [Sahih Muslim, Book 41, Hadith no. 6938]. In the book by Jack Weatherford, *The Secret History of the Mongol Queens*, the fourth sentence on the first paragraph of page seven states:

By contrast, men wore a small clump of bangs in the middle of the forehead directly above the nose. Aside from the bangs, men shaved most of the head except for two large clumps just above each ear. They never cut these tufts, but instead braided them into "**horns**" that hung down to the shoulders and often grew so long that they had to be looped back over the ear.

Mongolian coiffure for warriors was these two separate clumps of hair above each ear and they resembled horns. I imagine they did not just droop down but it was tightened upwards like horns sticking out and then when it got too long it fell down to the shoulders.

Satan wanted the empire of learning and academia extinguished and he planned a destructive invasion that could destroy the industries and highways of leaning and academia out of Muslims lands. We paid some 10 million or more lives in our holocaust but the empire endures in other nations stewardship and if they turn away from advancing the mission of the empire God can replace them. We cannot assume that the lives murdered in the holocaust were for nothing. The mission is learning itself that will be a vehicle for growth in religion - to use the mirror of God to bring in the light of the heavens above and then to travel into the cosmic verse of God. This is not the Frankenstein effort to have data driven Artificial Intelligence replace human learning. Human learning and advancement is to thrive away and independent from the prison that Satan is caged in and away and independent from the sway and manipulation of Satan in all spheres of living and of glorifying the creator.

I will end this essay by re-enacting the first directive given to prophet Muhammad at the start of his tenure as prophet and which has since become the global *adhan* of learning and academia. In the dead of night, in a cave, on the outskirts of Mecca, the archangel Gabriel came to Muhammad and began the divine revelation and mission of the prophet with the word

iqra (read).

Note: All English translations of the Quran in this essay are from the translators at Saheeh International.

Document History:

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2. 19 July 2022 – correction of spelling and grammatical errors, and minor editing and improvement of text:
    - Edited last sentence from 3rd paragraph on page 2.
    - Added new closing comments on page 45
3. 29 March 2026 – Added a new 3rd paragraph to the End Comments section on page 45