

# The Rise and Fall of the Islamic Sciences

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**Abstract:** It was the rise of Muslims in the field of practical science that introduced new arts and sciences to the world. The modern-day scientific discoveries and inventions could not have been made possible without contributions of the early Muslim scientists. However, the crucial question here is that despite this clear superiority, why did modern science arise, or rather advanced, in Western Europe, and not in the Islamic world? This paper aims at analyzing rise and fall in Islamic sciences.

**Keywords:** Islamic Sciences, Islamic Arts, Modern Sciences, Skepticism, materialism.

## 1. Introduction

It is said that the Roman Empire was in utter disorder as early as in the second century A.D. An Empire that had the skills in administration, engineering, and military strategy due to which it subdued at least three continents fell pray to the absolutist monarchy. The Vandals, Goths, and Huns penetrated it because the Roman emperors were weak and ineffective. The Goths sacked major Greek cities in 268, and plundered Rome in 410. In 476 they deposed the last Western Roman Emperor. All these developments led to the loss of significant portion of classical Greek science, including Ptolemy's astronomy, Euclid's mathematics, Galen's anatomy, and Aristotle's naturalistic writings. This period came to be known as the "Dark Ages". When monasteries came up in the sixth century, they only provided religious training. However, literacy improved because instruction depended on readings from the Bible, commentaries, and works of the church Fathers. When all this was going on, the Arabic-Islamic science was rising to tremendous heights. It led the world in mathematics, physics, optics, astronomy, and medicine. Wealth was coming in because Islam was conquering the world outside Arab during the seventh and eighth centuries. Higher learning was being patronized. In 762, al-Mansur made Baghdad his new capital, and "cultivated a religious climate that was relatively intellectual, secularized, and tolerant" (Lindberg, 1992, p. 168). Over the next few generations, Arab scholars enhanced their own knowledge with medicine from Persia, mathematics from India and China, and the classical Greek heritage preserved in Byzantium. Crucial to the development of Arabic science was a massive translation program begun by Hunayn ibn Ishaq (808-73), a member of the Nestorian Christian sect. Arabs filled their numerous libraries with hundreds of thousands of books, whereas the Sorbonne in Paris could boast of a paltry two thousand, even as late as in the fourteenth century (Huff, 1993).

## 2. The Rise and Fall of the Islamic Sciences

The Islamic world, or the Muslims, in fact, could not sustain their intellectual excellence in the wake of their political downfall in the medieval period, and they gradually disappeared from the scientific horizon. The abrupt disappearance of the Muslims from the realm of science lead to the birth of skepticism and materialism, and the modern arts and sciences passed into the hands of the materialists. Some Muslim leaders, like some of their counterparts in early medieval Europe, had a low regard for the study of nature. Academic pursuits were tolerated, but learning was divided into traditional studies based on the Qur'an, and "foreign" studies based on knowledge obtained from the Greeks. Although there were some Arabic rationalists also, but there were those who saw in this rationalism a threat to the authority of the holy writings. A conservative reaction in the late tenth century, together with a decline in peace and prosperity, impeded further scientific advance in the Muslim world (Lindberg, 1992, pp. 180-181). According to the emerging

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Islamic orthodoxy, man was not a fully rational creature, and no room was allowed for a purely rational investigation of God's creation (Huff, 1993, pp. 100,115).

It was in this very early period of decline that the baton of science began to pass gradually into the hands of the Europeans, especially those who came into contact with the wealth of Islamic knowledge in Spain. Toledo fell in 1085. Important Arabic and classical works preserved in its vast library were translated into Latin. Within a century, these translations got transferred to almost all the major centers of learning throughout Europe. This was the time when some scholars, including Anselm (1033-1109) were reviving the role of reason in faith. And, this was also the time when the status of the university in Europe was being developed and acknowledged as legal entity with political and intellectual autonomy (Huff, 1993, p. 335).

There was no institution of such caliber and status in the Muslim world, even as late as twentieth century. This was partly due to the orthodox Muslim concept of nature and reason. Its not that such religious constraints were not there in the medieval European world, but an academic world, committed to the biblical views of man's rationality and freedom of choice, provided a fertile ground for the rise of modern science.

Today, the West is holding the flags of science and technology, but their rise in these fields is not all of the sudden. It is the result of a prolonged historical process in which, apart from many nations of the world, the Muslims have contributed substantially. A review of the past history with an unprejudiced mind, shows it quite vividly that in the Middle Ages, it were the Muslims who sowed the seeds of modern applied sciences through empirical and experimental processes spread over centuries. It is on these foundations that the modern science of the West stands today. Before the dawn of Islam, the realms of Greek, Roman, Chaldean, Babylonian and Indian sciences were confined to a collection of mere hypotheses, theories and views based on imagination and conjecture. But it were the Muslims who laid the foundation of applied sciences, particularly in the fields of algebra, arithmetic, physics, geography, medicine, botany, zoology, astronomy, chemistry et al. This fact is recognized even by many open-minded Western authorities in these sciences.

The decline of the Muslims in the material sciences led to the bifurcation of the religion and the world, and consequently Islam shrank to a mere compilation of some spiritual phenomena. This had a negative impact on the society, and particularly the youth was afflicted by defeatism, skepticism and irreligiosity. They were, in turn, inspired by the extrinsic beauty of the West and its philosophies and they took pride in adopting the Western culture. And, today, this imposturous culture is ready to swallow the entire humanity including the Islamic world.

Another consequence of lacking behind in the realm of material sciences has been that the Islamic world is faced with twin losses: in religious arena as well as in the worldly affairs. And this loss manifests in both the intellectual and material realms. The fact is that Islam never restrained the Muslims from progress in the material sciences. On the contrary, it vehemently called upon them to ponder deep into every object of the universe, to explore the different natural systems in force in them and to exploit the material benefits embedded in them. The Muslims ought to heed the Divine Call anew and try to salvage their lost legacy. This is the only way to come out of the present mess they are already into.

Spiritualism and materialism should go hand in hand. The people or a nation which dreams of progress in life, bifurcating materialism from spiritualism, shall always fail in its endeavors. Further, it shall always fall prey to the machinations of the big powers. The present-day affairs of the world testify to this contention amply. Solving the problems of life amicably and eradicating the inequities in the society equitably, calls for setting up of a balance between spiritualism and materialism. This is also the essence of Islam. It is, therefore, necessary for the learned Muslims to adopt a pragmatic approach and guide the masses vis-à-vis the modern materialistic thought and philosophies. In meeting this end, it is necessary to promote modern science in the Muslim society so that it doesn't consider the material world aloof from religion. A path other than this might just instigate the masses to revolt against religion. The present world situation is a lesson for one and all, and one must learn from it.

As far as the Muslim states and governments are concerned, they have to progress in the realm of science and technology for obtaining the twin purpose of attaining self-sufficiency in military and civilian fields, and escaping the trap of the developed world, as a nation which survives on the support of others would never be capable of defending itself.

It is also necessary for the Muslim world to equip itself on the scholastic and intellectual plane, without which it will never be able to effectively counter the materialistic and misleading philosophies of the West. Since the philosophies of the present-day world base their argumentation on science, the knowledge of science is necessary to counter them. It is for these reasons that the glorious Qur'an has called upon man to reflect upon the natural phenomena, so that intellectual facts and signs of the Divine sustenance, which could corroborate divinity and refute apostasy and materialism, are brought to light. It is obligatory upon the **Ulama**, therefore, to excel in the field of science and perform this obligation in the light of the holy Qur'an, so that apostasy and irreligiosity, which is the biggest evils of the modern times, stands refuted. This is the right response to the contemporary challenge. In this context, the **Ulama** carry on their shoulders a very great responsibility in recognizing their standing and status in the society. They should discharge their divine obligations so that the darkness of apostasy ultimately gives way to the dawn of Divinity and Islam, once again.

### 3. Conclusion

Renaissance and reawakening of the **Ummah**, today, demands steady progress both in the practical as well as intellectual fields. It should be kept in mind that the material sciences enjoy perfect correlation with the Divine religion, and this relation cannot be disregarded at any cost.

### 4. References

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