

## DARWIN'S SHADOW: CONTEXT AND RECEPTION IN THE MUSLIM WORLD

*Muzaffar Iqbal*

This second article in a series of three examines Darwin's reception in the Muslim world. Beginning with a broad description of the social and political milieu of the nineteenth century Muslim world, the article goes on to examine various responses to Darwin's ideas in the Muslim world. Part three will examine Darwinism and neo-Darwinism from an Islamic perspective.

**Keywords:** Darwin's reception in the Muslim world; science and imperialism; nineteenth-century science; biology; philosophy of science; science and religion.

---

### Introduction

Muslim responses to Darwinian and neo-Darwinian ideas fall in a broad acceptance-rejection continuum, with all possible shades in between—from unconditional acceptance to various versions of theistic evolution, and from . vociferous rejection to a view that sees it as a liberating scientific fact.<sup>1</sup> These positions are generally intimately connected to the respondent's prior commitments and understanding of the origin of species, which, in turn, emerge from one's beliefs, knowledge of scripture, and/or scientific and intellectual training. In addition to these personal considerations, which are common to responses to Darwin's ideas in other faith communities, Muslim responses have also been shaped by political and social conditions, especially those which existed at the time of their first encounter with Darwin around 1880—a time when most of the traditional Muslim lands were under colonial occupation. Since then, there has been a gradual emancipation from the colonial past, but there is a dearth of mature works which examine Darwinism from a well-informed Islamic

---

Muzaffar Iqbal is President of the Center for Islam and Science ([www.cis-ca.org/muzaffar](http://www.cis-ca.org/muzaffar)); Email: [muzaffar@cis-ca.org](mailto:muzaffar@cis-ca.org).

*Islam & Science*, Vol. 7 (Summer 2009) No. 1

© 2009 by the Center for Islam and Science  
ISSN 1703-7603 (Print); ISSN 1703-7602X (Online)

perspective rooted in a thoroughly integrated scriptural and scientific understanding of the origin of species. Most of the existing literature is either a product of scientism, which superimposes Darwinian ideas on the Qurʾān and the works of early Muslim scientists and philosophers, or, on the other extreme, that of a vociferous rejection perceiving Darwinism as an ‘ideology of the infidels’.

The reception of Darwin in the Muslim world has two distinct phases: the colonial era and the post-colonial era; these correspond to the two phases of Muslim attitudes toward Western science in general, as outlined in a previous work.<sup>2</sup> This article explores and categorizes a variety of Muslim responses to Darwin. Since it is not possible to cover works in all languages spoken in the Muslim world, the aim here is to focus on major categories of responses which have emerged during the last one hundred and fifty years through examining representative works by major thinkers. Since these works have been highly conditioned by the political and social conditions of the Muslim world, the article begins with a general note on these conditions.

### **The Political and Social Context of Darwin’s Reception in the Muslim World**

Not just Darwin but the very scientific, philosophical, and religious milieu which produced him was contemporaneous with one of the greatest changes in the social and political composition of the Muslim world. Hence, the political and social context of Darwin’s reception in the Muslim world is as important as the scientific and philosophical, because the former controlled the latter. A month after the reading of Darwin’s paper “On the Variation of Organic Beings in a state of Nature; on the Natural Means of Selection; on the Comparison of Domestic Races and true Species” at the meeting of the Linnean Society of London, the British Parliament passed an act which called for the liquidation of the British East India Company (which had up to that point been ruling a large part of India under the auspices of Parliament) and the transference of its functions to the British Crown.<sup>3</sup> The Government of India Act 1858—actually entitled “An Act for the Better Government of India”<sup>4</sup>—passed on August 2, 1858. This marked the formal end of the Mughal Empire (1526-1857) which, along with the Ottoman (1299-1923) and the Şafavī Empires (1501-1722), had been one of the three great empires of the Muslim world after the dismemberment of the ‘Abbasid Empire (750-1258).

The three empires were also in turn dismantled and nearly the entire

Muslim world was colonized; this, too, is intimately connected to the period of the emergence of modern science in Europe. Founded in 1600, the English East India Company shared its early years with the Scientific Revolution, and by 1662, when the Royal Society of London was founded, the Company had trading bases at a number of strategic places in India, including Surat, Madras and Masulipatam. It was then poised for a major territorial expansion that would lead to the subjugation of the vast subcontinent. The first volume of Buffon's *Histoire naturelle* (1749) is contemporaneous with the Company's triumph at Carnatic and Linnaeus' *Species plantarum* (1753) was published four years before the battle of Plassey opened the floodgates of British power in India. By the time the Geological Society of London was founded in 1807, British proxy power in India through the Company was already at its zenith and the first volume of Lyell's *Principles of Geology* was published three years before the Charter Act of 1833, which was promulgated in the background of the British Industrial Revolution and the consequent search for markets. Darwin's *Origin of Species* (1859) was published just when the British Indian Army was being reorganized and the universities of Bombay, Madras, and Calcutta (1860) were about to be founded.

On June 28, 1798, Napoleon, then only 28 years old, arrived in Egypt with a fleet of 400 ships carrying 36,000 men and ushered in a new era for the entire Muslim world. Although his occupation of Egypt lasted only three years (1798-1801), it established institutionalized procedures of occupation and destruction which are still operative in the Muslim world.<sup>5</sup> The French invasion of Algeria in 1830 (a 17-year process leading to total domination) began a gradual expansion of French colonial rule that would take over much of Northern, Western, and Central Africa by the turn of the century.<sup>6</sup> French rule was extended to the Islamic heartland after the First World War, when the French gained mandates over the territories of the Ottoman Empire that make up contemporary Syria and Lebanon. Similarly, by the time of Darwin's appearance, South East Asia was firmly under European control. Britain, Portugal, and France claimed for themselves vast areas of Africa; they were soon joined by Italy and Germany. The scramble for Africa became an organized activity when Bismarck (1815-98) invited the European powers to Berlin in 1885 to establish international guidelines for the acquisition of African territory. Between the Franco-Prussian War (1870-71) and the Great War (1914-19), European powers added approximately 23 million square kilometers—one-fifth of the land area of the globe—to their overseas colonial

possessions. The Ottoman Empire was crumbling.

All of this was not by accident. “Europeans had by 1800 reached a decisively higher level of *social power* than was to be found elsewhere,” as Marshall Hodgson notes.<sup>7</sup> The role played by science and technology in this ascendancy is too obvious to need elaboration here,<sup>8</sup> although it must be said that it was not merely the superiority of their arms that gave Europeans the power “to cast terror in the hearts of the natives by their sheer presence”, as Hodgson phrased it. There was indeed something more than the superiority of their arms and technological devices at work which allowed, in the case of India, less than a hundred thousand British soldiers and administrators to hold in thrall two hundred and fifty million Indians. At work was a distinct and fully-expressed belief of the superiority of the European race, a higher order of administrative control, a superior psychological presence, and above all, a shrewd political instinct that allowed Europeans to control vast territories in far flung corners of the world.

As a result, the colonized people not only lost control of their land; they also lost control of their social and political institutions, their culture, and even their history, which was rewritten by the colonizers. The financial control of new lands gave the colonizers the wherewithal to embark on their self-proclaimed mission of “civilization”,<sup>9</sup> which some saw as a mandate entrusted to them by none other than God; as George Curzon (1859-1925), Viceroy of India from 1899 to 1905—who is often criticized for having watched with contempt and disregard the major famine in India which coincided with his rule as viceroy and in which 6.1 to 9 million people died—once said: “I do not see how Englishmen, contrasting India as it is with what it was or might have been, can fail to see that we came here in obedience to what I call a decree of Providence, for the lasting benefit of millions of the human race.”<sup>10</sup>

The European ability to rule a very large part of the world rested on the skills of its well-trained administrators who could extract taxes from peasant farmers (who at best lived a hand-to-mouth existence), the self-regenerating system of infusion of raw materials extracted from the colonies into the large-scale industrial production of Europe, and the successful marketing of the finished products, which produced an abundance of material wealth.<sup>11</sup> Behind all of this political and economic dominance lay the European Scientific Revolution and the subsequent use of new scientific discoveries which produced new technologies, providing the colonizing armies with superior weapons and military hardware which, in

turn, contributed to their ability to “cast terror” by their sheer presence.<sup>12</sup> Not only did the Europeans see themselves as belonging to a superior race, but in time a large segment of the colonized people also submitted to their self-claimed superiority.<sup>13</sup> After a visit to England, Sayyid Ahmad Khan (1817-1898) wrote: “Without flattering the English, I can truly say that the natives of India, high and low, merchants and petty shopkeepers, educated and illiterate, when contrasted with the English in education, manners, and uprightness, are as like them as a dirty animal is to an able and handsome man.”<sup>14</sup>

In this social and political context, Darwin’s formulation of evolutionary theories in biology and their application to anthropology, sociology, and even history provided the perfect “scientific explanation” for the proclaimed superiority of the European race as compared to the colonized people. “By the early 1870s, most philosophical approaches to history with any widespread public impact in Europe had become associated with theories of biological evolution.<sup>15</sup> Scientism reigned supreme in the nineteenth-century Europe, but it was puny compared to its hold on the minds of the newly educated classes in the colonies who carried an additional psychological burden: they had little or no intellectual capacity to critically examine philosophical concepts handed down to them in a language they considered superior, by the people they considered superior, couched in a scientific terminology to which they bowed in submission.<sup>16</sup> By the time of Darwin’s appearance, the authority of science had already been established in Europe,<sup>17</sup> but for the colonies the very word “science” had a magical spell. This awe of science was doubly operative in those parts of the Muslim world where the intellectual elite among the colonized people had access to the language of their colonial masters. People of this class vied with each other to “civilize” their fellow men and women by translating or restating in their own words the latest, the most scientific, the most fashionable, the most modish topic of the various scientific, cultural, and the social organizations of the colonizing power. This activity, in turn, produced local versions of Darwin’s theory, which were then reacted against and refuted by those who had no direct access to the originals.

### **The Scientific Context of Darwin’s Reception in the Muslim World**

As opposed to the European milieu, Darwin’s reception in the Muslim world was marked by a vacuous scientific context: by the middle of the nineteenth century, there was nothing left of the centuries-old Islamic sci-

entific tradition and although there was the beginning of the emergence of modern science in certain parts of the Muslim world, this enterprise was controlled by the colonial rulers; there was hardly any scientist who could fully comprehend scientific aspects of Darwin's theories, let alone have the ability to examine the meta-scientific underpinnings of these theories on the basis of Islamic view of nature and creation. The Muslim world of the nineteenth century was a vast intellectual wasteland steeped, on the one hand, in a crumbling old order, and, on the other, stirring with the rumblings of a small, newly educated class which had received its intellectual nourishment from the institutions established by the colonizers—or else, as in the case of the Ottomans, from European sources under the gripping and all consuming realization of stagnation and imminent dissolution which characterized the mindset of the generation of the *Tanzīmāt* (reorganization) period (1839–1876). There were so-called reform efforts of all sorts, but all of these reforms were taking place under great internal and external pressure and amidst a political, social, and intellectual chaos. Societies were fragmenting. Stray ideas were freely floating among the reformers who were generally drawing their inspiration from European thinkers. In the Ottoman Empire, for instance, the Young Ottomans (Yeni Osmanlılar)—the group of Ottoman nationalist intellectuals formed in 1865, consisting mostly of disenchanted bureaucrats—were greatly influenced by European thinkers such as Montesquieu and Rousseau; leaders of the military coup of 1876, which forced Sultan Abdülaziz (1861–1876) to abdicate in favor of Murad V (who was, in turn, deposed within a few months), had no great plan for the transformation of the system and merely acted haphazardly and under compulsion; the declaration to establish of a constitutional monarchy (issued on November 23, 1876 by Sultan Abdülhamid II) had no serious intention of the reform of the political system<sup>18</sup> and was merely yet another effort to save the system. The emergence of the Young Turks<sup>19</sup> and their “revolution” of 1908 and the beginning of the Second Constitutional Era was motivated by a single, all-consuming realization: there is something wrong with our society; we need to do something to change our situation before it is too late, and that nebulous something must be sought in Europe. In other parts of the Muslim world, even the realization that something needed to be done was not being felt in a manner which would prompt serious reflection and thoughtful, careful action, even though the realization of being overrun by the European power was generally present.

An important component of this realization was related to European

science and technology. Since, among all the Muslim states of the nineteenth century, the Ottomans had the most direct links with Europe, their awareness of the new scientific and technological developments was the most acute, and even though they had started to become aware of the rise of modern science in Europe as early as the sixteenth century,<sup>20</sup> their complacency did not allow them to realize the extent of the change that the new science was to produce in the balance of world power. When they finally realized the enormous amount of wealth and military power generated by the applications of modern science, it was already too late. Furthermore, despite an attempt to claim local developments in science and technology,<sup>21</sup> there was no real scientific community in the Ottoman empire in the seventeenth and the eighteenth centuries; there was a growing awareness of the supremacy of the European science and technologies, but such awareness merely produced a frantic effort to import science while the Empire crumbled under European military pressure.<sup>22</sup>

Newly implemented Western science was pressed into the service of military expansion. In addition, missionaries came with the empire builders and led a two-pronged frontal attack on the local population and institutions: their conversion activity was integrally linked to the spread of a worldview informed by imperialism and its increasing reliance on science and technology to subdue the colonized world.

Darwin's ideas were, therefore, received in a scientific milieu predisposed to accepting anything coming from Europe—received, that is, by a mindset defined by a deep-seated inferiority complex; this was especially true of the so-called “educated” class. It is possible to discern a consistent pattern of behavior of this class all across the Muslim world. Members of this class were vying with each other to claim for their people the latest scientific idea to have appeared in Europe. This unabashed activity took place through forums such as the newly established scientific societies and journals, newspapers and popular magazines. Those who gained special importance in this race to spread Western ideas were both Muslims and Arab Christians, many of whom had been educated in the educational institutions established by the missionaries. Science was taken as a higher authority by these advocates of modernism, and presented to the masses as something new, objective, uncontestable, beneficial, and beyond doubt. Since there was no expertise by which to examine science scientifically and there was little grounding in the Islamic intellectual tradition, most Muslim leaders of the nineteenth century took everything coming from European science as firmly established truth and scrambled to find sup-

port for theories like those of Darwin in the religious and philosophical realms. In time, they were even found to be already present in the Qur'ān and already expounded by Muslim scientists of the previous centuries. This precursorism remains a hallmark of the Muslim attitude toward modern science to this day.

### **The Conduits**

Darwin's ideas were not initially directly transmitted to Muslims through his own works. The initial responses depended, to a large extent, on what was attributed to him by those who disseminated his ideas in a particular language, which, in turn, depended on the predisposition of the expositor. In many cases, the conduits were Europeans living in the colonized Muslim world, either as administrators, missionaries, or teachers at the missionary colleges. The most important channels of transmission were the missionary educational institutions, such as the Syrian Protestant College or the hundreds of missionary schools and colleges established in British occupied India by various Christian denominations that sometimes competed with each other to spread their version of Christianity<sup>23</sup> and sometimes joined hands.<sup>24</sup> There was also a very small number of Muslims and Arab Christians who had travelled to Europe and had encountered Darwinian ideas and debates about his ideas directly through their contact with European scientific and intellectual circles. In those parts of the Muslim world which were not directly colonized by the Europeans, the pattern of Darwin's reception outlined above remained more or less intact except for the involvement of administrators of the colonial empire. For instance, those who transmitted Darwinian ideas in the Turkish milieu were either foreign advisors or Turkish travelers to Europe. As already pointed out, Darwin was not received in a scientific milieu familiar with the new theories and ideas in biology and related sciences which informed his works or which, at any rate, form the inalienable historical link to his work; rather, Darwin was mainly received in the Muslim world as presenting a new theological concept which was then taken as a progressive or regressive idea, opposing or confirming the existing theological ideas on origins of life.

Furthermore, those who presented Darwin to the Muslim audience seemed to be vying with each other for the honor of being the first to know the latest scientific development in Europe, while their opponents seemed more interested in casting them as infidels or materialists than engaging with the ideas. This is understandable in the absence of any



understanding of the meta-scientific underpinnings of modern science. The role of Western missionaries or their local associates is key to understanding the way in which Darwin's ideas arrived in Muslim lands. These various groups of missionaries often fought each other for influence in the Muslim world. In mid-nineteenth century Syria, for instance, the American Protestants and French Jesuits were fierce rivals and established competing educational institutions. The Syrian Protestant College (SPC) and St. Joseph's College (established by the Jesuits), both in Beirut, became the two most important centers of Western education in the region. These were not merely educational institutions; the missionaries understood their vocation as the spreading of the gospel and enlightenment, and scientific education was, thus, part of the larger package.<sup>25</sup> The situation in India was similar. Many colleges established by missionaries during the nineteenth century became the sources of Western influence on education and science. These institutions also became centers of translation out of practical need. In order to teach, these colleges needed material unavailable in local languages. The staff had to create it; these teachers had proficiency in languages and they opted simply to translate existing French or English texts into local languages. This gave birth to secondary scientific works in languages spoken in the Muslim world. Books on various branches of science that appeared in Arabic, Hindi, or Urdu as a result of the missionary effort were at best of modest standard, but they served the purpose of spreading European scientific ideas in the Muslim world.

Let us also note that what eventually became known as Darwinism (along with its modified versions) arrived in the Muslim world in installments. It was seen as a phenomenon of singular importance, something novel, current, and interesting, but, nevertheless, not close at home, but far away, in another land. For all practical purposes, the real event of the emergence of Darwin was never in full view of the most nineteenth-century Muslim writers on Darwinism. Many based their views and responses on judgments of heresy and prior philosophical or faith commitments rather than on Darwin's ideas. Often they recycled what was being said in Europe for or against Darwin's ideas. Their responses to Darwinism were, therefore, shaped by a perceived view of Darwin's ideas, rather than his actual works. The translation of Darwin's own works into Arabic, Farsi, Urdu, and other languages spoken in the Muslim world were rather late in coming. The first Arabic translation of the first six chapters of the *Origin of Species* appeared only in 1918,<sup>26</sup> when the generation of Arab modernists and their opponents that first brought Darwin's ideas into Arabic had

nearly passed away. The Fārsī translation appeared in 1984,<sup>27</sup> and there is still no Urdu translation.

### **Darwin and the Arab World**

The earliest traceable mention of Darwin's theory in Arabic goes back to a series of three articles in the monthly enlightenment magazine *al-Muqata'af* ("anthology", "harvest", or "selection"), founded in Beirut in 1876 by Yaqub Sarruf and Faris Nimr.<sup>28</sup>

In the very first volume of *al-Muqata'af* (sic), there were three articles about the origin of man, all by Rizq-Allah al-Berbari, mentioning Lamarck and praising Charles Darwin, but refuting his theory on the basis of lack of convincing evidence (vol. 1, pp. 331, 342, 379). In Vol. 2, three more articles appeared, these by Bishara Zalzal Effendi...but these articles were rather anthropological in character.<sup>29</sup>

In 1879, Bishara Zalzal published a 368 page book, *Tanwīr al-adhhān* (*The Enlightenment of Minds*), from Alexandria, Egypt, which was dedicated in both prose and poetry to the Ottoman Sultan Abd al-Hamid, and which featured a handsome portrait of Lord Cromer as "a typical example of the Anglo-Saxon people[,] and praised him in two lines of Arabic verse".<sup>30</sup> Both the title of the book and the portrait of Cromer are telling signs of Zalzal's a priori commitments. Lord Cromer, let us recall, had arrived in Egypt to take charge of its finances shortly before the publication of the book, just after Britain and France forced the deposition of Khedive Ismail and installed a more compliant successor. Cromer was in Egypt for only six months, but his measures created unrest in the army, leading to the formation of a nationalist government in 1881. This, in turn, led to the occupation of Egypt by Britain and the return of Cromer to Egypt in 1883. He was to remain in Egypt until 1907 as Her and later His Majesty's Agent and Consul-General, purportedly as "adviser" to a nominally autonomous Egyptian government but in reality as the country's de facto ruler.

The so-called scientific journals<sup>31</sup> mushroomed in Egypt, Lebanon, and Syria between 1865 and 1929. The three most important were *al-Muqata'af* (1876–1952), *al-Ḥilāl* (*The Crescent*) (1892–1930), and *al-Mashriq* (*The East*) (1898–1930). The case of *al-Muqata'af* is representative: while its editors, and those who wrote for it, were predominantly Christians, they nevertheless managed to identify themselves with the Muslim community by urging all Arabs to follow the example of Western civilization. Arabs could progress, they argued, if they adopted the proper methods of edu-

cation. “The proper method” of education was Western education. Arab writers in *al-Muqtatāf* linked the idea of progress with that of evolution. It is, therefore, not surprising, that the magazine paid special attention to a prolonged discussion of different aspects of Darwinism.

In addition to the Christian writers of *al-Muqtatāf*, Darwin’s ideas were warmly received by the Lebanese Shī‘a scholar, Hussein al-Jisr (1845–1909),<sup>32</sup> who wrote more than twenty-five books, including *al-Risāla al-ḥamīdiyya fī ḥaqīqat al-dīana al-islāmiyya wa-ḥaqīqat al-sharī‘ia al-Muḥammadiyya*.<sup>33</sup> Al-Jisr’s views on Darwin are also formulated in the context of western materialism but he makes efforts to reconcile the theory of evolution with Qur’ānic teachings. He quotes Q. 21:30 (“*We made every living thing from water. Will they not then believe?*”) and then agreed with Darwin’s theory: “There is no evidence in the Qur’an,” he wrote, “to suggest whether all species, each of which exists by the grace of God, were created all at once or gradually.”<sup>34</sup>

The influence of these journals was not limited to the Arab world; they were widely circulated in the Indian subcontinent and the Ottoman empire through the centuries-old channels of intellectual, social, political, and economic exchanges which remained alive until the demise of the Ottoman empire. *Al-Muqtatāf*, for instance, was widely known in the Indian subcontinent and each new issue was eagerly awaited by its well-established readership. Certain Arabic translations of the Western scientific works published in the Arab journals of Lebanon and Egypt were translated into Urdu or Turkish from the Arabic versions.<sup>35</sup>

Jamāl al-Dīn al-Afghānī Asadabādī (1838-1897) wrote his polemic, *al-Radd ‘alā al-dahriyyīn (Refutation of Materialists)*, in 1881 while he was in British India, but it does not seem that he had sufficient knowledge of Darwin’s ideas.<sup>36</sup> Later he accepted the validity of the principle of selection, claiming that it had already been long known and used by Muslim scientists, but rejected the transition from Ape to Man due to the question of the soul. He asked Darwin to explain the causes of variations of trees and plants of Indian forests. “Darwin would crumble,” he wrote, “flabbergasted. He could not have raised his head from the sea of perplexity, had he been asked to explain the variation among the animals of different forms that live in one zone and whose existence in other zones would be difficult”.<sup>37</sup> He cites Darwin’s illustration of how the continuous cutting of dogs’ tails for centuries would produce a new variety of dogs without tails and asks rhetorically: “Is this wretch deaf to the fact that the Arabs and Jews for several thousand years have practiced circumcision,

and despite this until now not a single one of them has been born circumcised?”<sup>38</sup> Despite such rhetoric, al-Afghānī was willing to accept evolution as the mechanism through which God created life forms. Al-Afghānī’s influence may have been short lived, except for the fact that his ideas attracted young Muḥammad ‘Abduh (ca. 1850-1905),<sup>39</sup> the influential Egyptian Qur’ān commentator who pioneered Muslim modernism in the Arab world. ‘Abduh, in turn, influenced Muḥammad Rashīd Riḍā (1865-1935), and together they wrote the influential *Tafsir al-manār*.<sup>40</sup>

The so-called “Manār School of Thought” was to influence Muslims all over the world. The basic thrust of this school of thought is on the harmonization of modern science and the Qur’ān in a manner that tries to reinterpret the Qur’ān in the light of modern science, which, in turn, is taken unquestionably as *the* criteria for truth regarding the physical world. Since the Qur’ān calls itself *al-Furqān* (the Criterion), and Muslim scientists and scholars have always interpreted scientifically observable phenomena in the light of revelation, this reversal of epistemological roles led to the denial of supra-rational events and entities and a reinterpretation of certain injunctions which modern Western thought considered unacceptable.

It is important to note that most Muslim responses to Darwinism were borrowed versions of the Christian responses to Darwinism. These responses have been categorized as (i) Christian Anti-Darwinism; (ii) Christian Darwinisticism; and (iii) Christian Darwinism by James Moor in his influential *The Post-Darwinian Controversies*.<sup>41</sup> In Moor’s description, “Christian Anti-Darwinism” denoted the conflict between Darwinian doctrines and certain fundamental philosophical, rather than specifically Christian, beliefs: namely, the perennial belief that full and final certainty can be obtained through inductive inference and must be obtained for a scientific theory to be thoroughly credible; and the belief, lately indebted to the Neo-Platonism of German Romantic philosophy, that every form of life is essentially fixed by the divine will. If a “Darwinian revolution” occurred at all it was these beliefs about certainty and fixity that were primarily overthrown. Moore used the term “Christian Darwinisticism” to denote reconciliations of Darwinism and Christian doctrine that embodied non-Darwinian evolutionary theories. They came into conflict with Darwinism because they believed that God’s purposes are manifested in the world and that these purposes disclose God’s omnipotent and beneficent character: more precisely, they believed in a God whose purposes could not have been realized through evolution as Darwin conceived it.

Moore calls “Christian Darwinism” a contradiction in terms, and notes that it was used as early as 1867 and its representatives on both sides of the Atlantic were among the ablest and most orthodox of the post-Darwinian controversialists.<sup>42</sup>

All of these attitudes can be found in the Muslim responses to Darwinism. Thus Darwin arrived in the Muslim world along with his Christian critiques. The work of Abu al-Majid Muhammad Rida al-Isfahani, a Shī‘a theologian from Karbala, Iraq, is a good example of such pattern. His two-part book, *Naqd Falsafa Darwin (Critique of Darwin’s Philosophy)*, published in 1941, argued for a theistic version of evolution and counted Lamarck, Wallace, Huxley, Spencer, and Darwin among those who believed in God. Indiscriminately using such heterogeneous sources as the works of Imām Ja‘far bin Muḥammad al-Ṣādiq (especially his *Kitāb al-Tawḥīd*) and those of the Ikhwān al-Ṣafā’ to point out anatomical similarities found in humans and apes, al-Isfahani claimed that Darwin could never provide full treatment of these similarities as well as the Ikhwān, but he disputed the embryological similarities between man and other animals. He affirmed that the structural unity of living organisms was a result of heavenly wisdom and not a consequence of blind chance in nature; he also demanded identification of first causes.<sup>43</sup> All that Darwin did, this attitude claimed, was restate what Muslims have already said. This precursorism was to spread rapidly in the Muslim world in the decades to come and continues to be one of the most prevalent attitudes even today: all that modern science has discovered is already present in the Qur’ān and/or in the Islamic scientific tradition. Darwin was thus merely reiterating what al-Bīrūnī (973-1048),<sup>44</sup> Ibn Miskawya (932-1030),<sup>45</sup> or al-Jāḥiẓ (781-868) had proclaimed earlier.<sup>46</sup>

In 1924, Ernst Haeckel’s popular book, *The History of Creation*,<sup>47</sup> was translated into Arabic by Hassan Hussein, an Egyptian Muslim scholar, as *Faṣl al-Maqal fī Falsafāt al-Nushū wa-l-Irtiqā’ (On the Philosophy of Evolution and Progress)*. In his 72-page introduction Hussein agreed with some of Haeckel’s ideas, but refuted his anti-religious views, and tried to reconcile Islam and evolution. He insisted on a non-literal reading of the six days verses in the Qur’ān and claimed that what Darwin was saying was heavenly wisdom (*ḥikmah Ilāhiyya*). Four years after the publication of Hussein’s book, Ismail Mazhar (1891-1962) translated the first five chapters of Darwin’s *The Origin of Species* into Arabic, adding four more chapters in 1928. The complete translation was published in 1964. He had already himself written a book on evolution in 1924. Mazhar is one of the

many secularist Arabs of this time who saw nothing of value in their own civilization. He advocated adoption of the scientific method not only in education but also in life. He also published a journal, *al-‘Uṣūr*, which had as its motto the phrase *ḥarrir fikrak*, “Liberate your thought.” He claimed that Islamic Law may have been suitable for the Arabs of the seventh century but was totally incompatible with modern society. He was an ardent follower of Mustafa Kemal of Turkey.

Subsequent developments in the Arabic-speaking part of the Muslim world remained firmly rooted in the same mould and fall into the continuum which has the uncritical, unreserved total acceptance of Darwinism on the one side and its total rejection on the other, with an Islamic theistic version of acceptance in between.

#### **Darwin’s Reception in Modern Turkey**

Turkey is a special case because of its particular history. Higher education in the Ottoman Empire was controlled by the ‘ulamā’ through the religious institutions; the head of all such institutions was the *shaykh al-Islām*. By the nineteenth century, most of these educational institutions, which used to be the hallmark of Islamic learning, had become fossilized structures which had run out of creative energy. They were abolished along with the Ottoman Caliphate in 1923, when Mustapha Kemal solidified his power and became the president of the new Turkish Republic. In that defining year, Turkey became a country defined by deep contradictions: a secular Muslim state whose constitution forbade religious laws from having any role in the state and society.<sup>48</sup> During the initial fervor of Kemalism, the ruling junta tried to purge all expression of religion from public life: the Arabic alphabet was replaced with the Roman alphabet, Islam and its study was taken out of the educational curriculum, prayers which had always been recited in Arabic were translated into Turkish, religious education in traditional *ṭarūq* was banned, a new legal system, based on the European model, was adopted and most important for our study, the theory of evolution was introduced as an important part of biology curriculum. By the time Mustapha Kemal died in 1938, Turkey had been transformed into a secular state run by men and women who were fiercely against Islam as a way of life. Islam remained the religion of the majority of Turks, yet the elimination of Arabic from public life, the forced removal of Islamic studies from educational institutions, the ban on traditional dress, and the prohibition of other practices and norms of an Islamic society increasingly affected the role of the Islamic worldview in

understanding modern science. The dominant voices were those of the secular, westernized minority who accepted everything coming from the West as true, especially if it were labeled as science.

This is not to say that there was no resistance to this secularism. In spite of the state violence and its anti-religious policies, there remained, at all levels of society, Islamic organizations which tried to preserve lifestyles, education, values, and ethics based on Islam.<sup>49</sup> During the rise of the Welfare party (from 7.2% votes in 1987 to 21.4% in 1995) and especially during its coalition government (with the secular True Path Party) in 1996, its leader and Prime Minister of Turkey Necmettin Erbakan introduced certain reforms in the curricula. But for the last twenty-five years, pro- and anti-evolutionists have remained locked in a fierce battle. Anti-evolutionists have established the Science Research Foundation (known in Turkey with its Turkish initials as BAV), and the pro-evolutionists operate from various platforms. Pro-evolutionists depict BAV as a fundamentalist organization. Harun Yahya, whose identity is questioned by pro-evolutionists,<sup>50</sup> has written a large number of books against evolution.<sup>51</sup> His website, in forty-three languages, also has a wide range of material against evolution.<sup>52</sup> The opponents of BAV also accuse it of having an active alliance with the Institute of Creation Research (ICR) in the United States. They trace the history of these links and of the establishment of BAV to the report on Darwinism that was commissioned by the Minister of Education, Vehbi Dincerler, in 1985. Adem Tatli wrote the report and it was distributed to various educational institutions as a “working paper”. In a recent article, Arthur M. Shapiro, Professor of Evolution and Ecology at the University of California, Davis and a member of National Center for Science Education (NCSE), accused Vehbi of making a phone call to ICR in San Diego and asking for material on creationism that would be suitable “for translation and distribution in Turkey”.<sup>53</sup>

He also says that the report by Tatli “reproduced the ICR’s arguments, but omitted all Christian fundamentalist hobbyhorses as the age of the earth. Predictably, it concluded that evolution had been falsified by scientists and was still being taught only because of its ideological value to Marxists. Soon afterwards, Tatli’s effort was amplified into a booklet called *Evolution, a Bankrupt Theory*, widely distributed by the political Islamists.”<sup>54</sup>

Shapiro also points out that American creationists were invited to BAV conferences. He says the BAV held three international conferences in 1998 with “star speakers recruited from ICR and other American sources...

between August 1998 and May 1999, BAV staged local meetings and rallies in some 60 Turkish cities.”<sup>55</sup> The Americans who attended BAV conferences are John Morris, Duane Gish, Carl Fliermans, David Menton, Edouard Boudreaux, Michael Girouard and Kenneth Cummings.

In response to such activities of BAV, the Turkish Academy of Sciences (TUBA)<sup>56</sup> issued a declaration on September 17, 1998.<sup>57</sup> It opens with a quote from Mustafa Kemal, which states: “I do not leave any scripture, any dogma, any frozen and ossified rule as my legacy in ideas. My legacy is science and reason.” It goes on to state:

In the past few years an organized campaign against modern science and science education has been started in our country. These efforts, which especially manifest themselves through attacks on scientific theories concerning the origin and development of the universe and of life, are furthered by the collaboration of certain religious groups from within the country and from abroad. In reality, the concepts these groups proposed are nothing but opinions that various Christian organizations have tried to spread for many years but which have been wholly rejected in scientifically advanced countries....

The true purpose of these attacks on accumulated scientific tradition, which is centuries old, is to bring up unthinking, unquestioning and uncritical individuals who do not test ideas and who accept dogmatic and incorrect information exactly as they are given to them. It is obvious that those circles who conduct an open or covert war against secular government, freedom in education, and advancement in science and technology in our country do not desire independent-thinking civilized people. These segments of society initially work towards including non-scientific beliefs along with scientific ideas in educational curricula, and in the long term they have the goal of totally eliminating the theory of evolution from textbooks. Such primitive enterprises have been rejected years ago in countries with a high and established tradition of science and removed from the agenda.

### **The Indian Sub-Continent**

India, the Jewel of the British Crown, came under direct control of the British monarch on August 2, 1858, a year before the publication of Darwin’s *Origin of Species* and fourteen months after the last armed resistance against the British East India Company,<sup>58</sup> which by then had an army of its own in the country where it had arrived as a trading company, begging for concessions from the then mighty Mughals. Various known as “India’s First War of Independence”, “the Great Rebellion”, “the Indian



Mutiny”, “the Revolt of 1857”, “the Uprising of 1857”, and the “Sepoy Mutiny”—each title betraying the historian’s bias—began on Sunday, May 10, 1857, in the town of Meerut, and soon spread to other regions in an unorganized manner. Crushed with full force, the last armed resistance against the occupation of India came to an end on of June 20, 1858, when Gwalior fell. A reign of terror followed. Men were tied to the mouths of cannons and blown to pieces.<sup>59</sup> A note from General Montgomery to Captain Hudson, known to the Indians as the “butcher of Delhi”, and to the English as the conqueror of Delhi, exposes how the British military high command approved cold blooded massacre of general populace of Delhi, reminiscent of Halagu Khan’s massacre of the residents of Baghdad in 1258: “All honour to you for catching the king and slaying his sons. I hope you will bag many more!”<sup>60</sup> A policy of “no prisoners” was adopted, and whole villages were wiped out on the flimsiest rumors of sympathy for the local soldiers. An estimated ten million Indians lost their lives.<sup>61</sup> Back in England, the accounts of atrocities of the British “Army of Retribution” were generally considered justified in the wake of exaggerated press accounts of Indian “savagery” against the “Europeans and Christians”.<sup>62</sup> A short description of a picture published in a British paper during the War, is indicative of the mood: “a recent number of *Punch* has a large picture, in which the state of feeling in England towards India is forcibly represented by a fierce lion springing upon a Bengal tiger, which is crouching upon a woman and her infant child. The lion is England, the tiger is rebel India, and the woman and child the Anglo-Indian subjects who have been sacrificed by the cruel Sepoys... the roar of the British lion will soon strike terror into the heart of the Bengal tiger.”<sup>63</sup>

Bahādur Shah Zafar, the last Mughul King, was tried for treason and a military commission assembled at Delhi ordered him to be exiled to Rangoon where he died in 1862, bringing an end to the Mughal dynasty. Muslims were especially targeted because they were perceived as a major threat to the Company’s occupation of India, even though men and women from all religions participated in the ill-fated attempt against English control of their land and resources. During this year of terror, and for a long time to come, India went through a gigantic transformation which must be considered as one of the largest and most cruel experiment in social reengineering in modern history. First the Company and later the British Crown, through its representative in India, the Viceroy, attempted to remake India in their own image. The society was entirely remodeled. Memoirs, chronicles, letters,<sup>64</sup> and personal accounts of the

time cataclysmic events. Thousands were killed, imprisoned, or sent into exile; aristocratic families of old were ruined; a whole new administrative was imposed; new institutions were implanted which changed everything from the judiciary to the education system of the vast subcontinent.

This massive transformation had its affects on all aspects of life and society. The implantation of new scientific institutions that had no connection with the Islamic scientific tradition soon obliterated any alternate mode of study of the natural world, and the resulting supremacy of an ultra-rational, materialistic worldview began to assert itself in various newly-‘disciplinary’ fields from education to the interpretation of the Qur’ān. The epistemological shift produced by the reigning scientism of the nineteenth century not only affected individual thinkers, it also affected fields which had remained insulated from such influences for the preceding centuries. The emergence of a hitherto unknown genre of *tafsīr*, *al-tafsīr al-‘ilmī* (the scientific exegesis), in the nineteenth century is intimately related to the political and social events, the implantation of Western institutions, and the scientism that pervaded the minds of many influential Muslim thinkers of that time. It is important to note that this genre did not emerge during the centuries when the Islamic scientific tradition was the most advanced enterprise of science anywhere in the world; it emerged only when there was nothing left of that naturally grown and organically nourished tradition which was rooted in the Qur’ānic worldview and which shared a common universe of discourse with the Divine revelation. At that time, there was never any need to read back into the “Word of God” any scientific discovery or explanation of the “Work of God”; the emergence of these two entities in the Islamic tradition was purely under an influence which came from external sources. And this happened only when that traditional universe of discourse was rent asunder and when Muslims found themselves overwhelmed by the power of modern science. It is precisely at that time of their history that Muslims sought such consonances. Ironic as it may sound, most of those who pursued this new agenda had very little understanding of science, and no scientific training in any of the major sciences. Most of them also lacked formal training in the long-established tradition of Qur’ānic exegesis. But as a number of influential intellectual and religious leaders of the nineteenth century started to find Qur’ānic descriptions of the natural world in modern science, the trend developed into a formal discipline, which continues to thrive.

### Finding Darwinism in the Qurʾān

Attempts to find support for Darwinian and neo-Darwinian theories in the Qurʾān are intimately connected with the broader effort of finding modern science in the Qurʾān and the resultant development of the genre of scientific tafsīr. These efforts began with the publication of *The unveiling of the luminous secrets of the Qurʾān in which are discussed celestial bodies, the earth, animals, plants and minerals* in 1880 by the Egyptian physician Muḥammad ibn Aḥmad al-Iskandrānī, who was one of the early proponents of reform predominantly based on urging Muslims to acquire modern science. Al-Iskandrānī published another book in 1883 that dealt with the “Divine Secrets in the world of vegetation and minerals and in the characteristics of animals”. Al-Iskandrānī repeatedly construed his explanations of the Qurʾānic verses to prove the presence of specific European inventions and discoveries in the verses of the Qurʾān. In the Indian subcontinent, Sayyid Ahmad Khan started to write a modernistic scientific *tafsīr* in 1879, but it was left unfinished at the time of his death in 1898. This was not yet a full expression, for Khan was restricted in his knowledge of Western science to identify specific examples of discoveries and inventions but, nevertheless, his main intent was to motivate Muslims to acquire modern science. By the beginning of the twentieth century, the scientific exegesis had become a fully differentiated discipline to the extent that subsequent books on Qurʾānic exegesis have devoted special attention to this genre. Thus, al-Dhahabi, whose seminal work, *Tafsīr waʾl-Mufasssīrūn (Exegesis and Exegetes)*, is one of the most important twentieth-century surveys of the field, devotes a full chapter to *al-tafsīr al-ʿilmī*. In addition, J. M. S. Baljon, Muḥammad ʿIffat al-Sharqāwī, and J. J. G. Janse, have all paid attention to this genre. In the Arab world, in addition to al-Iskandarānī, early partisans of scientific exegesis include ʿAbd Allāh Bāshā Fikrī, Sayyid ʿAbd al-Raḥmān al-Kawkabī, and the physician Muḥammad Tawfīq Sidqī, all of whom either wrote exegeses or works supporting scientific explanations of the verses of the Qurʾān. By the end of the nineteenth century, scientific exegesis had established itself as an independent discipline, though it still lacked the general acceptance granted other kinds of exegesis such as *tafsīr fiqhī* and *tafsīr lughāwī*. This trend reached a high point in 1931 with the publication of the twenty-six volume *tafsīr* of Ṭanṭawī Jawharī (1870-1940), *al-Jawāhir fī tafsīr al-Qurʾān al-Karīm*, illustrated with drawings, photographs, and tables.

The Darwinian explanation of the origin of species, and especially his views expressed in the *Descent of Man*, pose specific problems for those

who wish to reinterpret the Qurʾān scientifically, for the Qurʾān is rather very specific about the origin of life and the creation of the first human being, who is given a specific name, Ādam, and whose creation and subsequent life story has intimate links with the essential and fundamental aspects of the entire belief system in Islam. A way around this difficulty was sought by modernist writers, such as Ghulam Ahmad Pervez (1903-1985), by interpreting the Qurʾānic verses metaphorically. This radical reconstruction of the creation narrative of the Qurʾān takes the following form:

From the various details of the story of Ādam in the Qurʾān, it seems that the Ādam who was expelled from paradise was not a specific person, but a metaphorical representative of humanity. In other words, the story of Ādam is not the story of a specific person (or couple), but the story of ‘Man’ himself, which the Qurʾān has presented metaphorically. It begins at a time when, evolving from his primitive state, he began to live a social life—even the word *adama* indicates this sociality—hence, *Ādamiyat* is the name of that state of human life where human beings started to life together.

This was already the view of Sayyid Ahmad Khan, who declared that Iblīs and angels are not external entities, but merely innate human abilities. He called angels *quwwāʾ-e malkūti*, the angelic powers, and Iblīs, *quwwāʾ-e bahīmī*, animal powers, and the entire story of Ādam “an interesting and fine narration of human innate nature (*fiṭra*), and “because ordinary people are unable to understand its secret, therefore God cast it in the form of an interesting story which everyone can understand. A similar interpretation is offered more recently by Muhammad Asad (1900-1992), whose evolutionary perspective makes the story of Adam “allegorical”, and the angels and jinn “psychological forces”. ‘Abduh considered Q. 2:3. an ambiguous (*mutashābih*) verse and then tried to interpret it allegorically.

This trend did not remain unchecked for long. In fact, its critical examination is contemporaneous with its emergence. In time, it took the form of a well-constructed and organized critique and Muslim scholars described the reasons behind the emergence of scientific exegesis, pointed out its flaws and internal inconsistencies and the psychological factors behind its emergence. Maḥmūd Shaltūt (1893-1963), for instance, remarked drily of those who interpret the Qurʾān according to scientific theories:

If they come to a verse which mentions the rain, or describes

the clouds or talks about thunder or lightening, they rejoice and say: “see! The Qur’ān is addressing the scientists”. Shaltūt observes that such people may think they are they are serving the Qur’ān, but on the contrary, they may do much harm by associating the text of the Qur’ān with specific theories; if and when those theories are invalidated in the light of further scientific discovery, the Qur’ān would be open to the charge of containing errors. Moreover, the Qur’ān was not revealed as a handbook on scientific theory—its references to the natural phenomena are only intended to provoke thought and reflection, and to increase people’s faith.

### **Muslim Darwinists of the Indian Subcontinent**

Muhammad Iqbal (1876-1938) has two oblique references to Darwin in his *Reconstruction of Religious Thought in Islam*. but his entire outlook is shaped by an evolutionary perspective. He calls the Qur’ān’s account of the Fall “a legend” and compares it with other “legends” of creation and falls to conclude:

Thus we see that the Quranic (*sic*) legend of the Fall has nothing to do with the first appearance of man on this planet. Its purpose is rather to indicate man’s rise from a primitive state of instinctive appetite to the conscious possession of a free self, capable of doubt and disobedience. The Fall does not mean any moral depravity; it is man’s transition from simple consciousness to the first flash of self-consciousness, a kind of waking from the dream of nature with a throb of personal causality in one’s own being.

His comments on Q. 20:120-2. embed the Darwinian notion of the survival of the fittest into the Qur’ān:

The central idea here is to suggest life’s irresistible desire for a lasting dominion, an infinite career as a concrete individual. As a temporal being, fearing the termination of its career by death, the only course open to it is to achieve a kind of collective immortality by self-multiplication. The eating of the forbidden fruit of the tree of eternity is life’s resort to sex-differentiation by which it multiplies itself with a view to circumvent total extinction. It is as if life says to death: ‘If you sweep away one generation of living things, I will produce another’.

In his insightful but overstretched critique of Iqbal, Maroof Shah has placed the Iqbalian position on evolution within the broader context of Muslim modernists. “Iqbal is not unique in acceptance of evolution. Several of the contemporary modernists—Sir Syed, Abduhu, Abul Kalam Azad, Inayatullah Mashriqi, G[h]ulam Ahmed Pervaiz—to name but a few

have accepted it.. Yet, as Shah notes,

Iqbal's is the most sophisticated appropriation of the theory. It is integrally connected to his philosophy and his overall interpretation of Islam. The theory of evolution seems to have permeated deep into his thought. The modernist humanist framework that he more or less subscribes to demands this. His personalist philosophy, his idea of the perfect man, his views on immortality and hereafter, his philosophy of time, his interpretation of the finality of prophethood, his meliorism, his belief in a growing universe, his demythologizing approach (especially with regard to the legend of the Fall), his theodicy, his critique of Sufism, his critique of the Ash'arite doctrine of destiny, his interpretation of *Iblis*, the very project of reconstruction, his inductionist empiricist approach, his critique of Nietzsche and all cyclic theories of time, his critique of the theory of relativity, [his] deed and action centred interpretation of Islam, his pantheism and links with the process philosophy, his plea for absolute *Ijtihad* and dynamism, his praise for innovation, his condoning attitude towards Kemalist project, his conception of man as copartner of God in creatorship, his seeing nothing wrong in Islam's movement towards the West, his epistemology, his interpretation of history, his critical attitude towards traditions and praise for Abu Hanifa [Abū Ḥanīfa] for largely ignoring them, his privileging of becoming over being, his defense of what he calls intellectual evil and many more dimensions and aspects of his thought reveal a clear direct or indirect impact of evolution and evolutionism. Iqbal is perhaps the only great Muslim intellectual who took evolution so seriously that his whole philosophy is colored by it.

Iqbal was perhaps the first Muslim scholar to link evolution so intimately to Qur'ānic verses through such analogies. He is also one of the first modernists of the nineteenth century to deny resurrection as it had been understood in Islamic thought and to instead consider it as an event *within* the ego: "The resurrection, therefore, is not an external event. It is the consummation of a life-process within the ego. Whether individual or universal it is nothing more than a kind of stock-taking of the ego's past achievements and his future possibilities." His radical reinterpretation of the Qur'ā. is indicative of his own preferences rather than having any textual basis.

He asks: "How did man first emerge?" and responds, building into his narrative one of the most far-fetched linkages between evolution and Rūmī's poetry—a construction that has remained in vogue ever since:

It was [al-] Jāḥi. (d. 255 A.H.) who first hinted at the changes in

animal life caused by migrations and environment generally. The association known as the 'Brethren of Purity' further amplified the views of [al-]Jāhiz. Ibn Maskawaih (d. 421 A.H.), however, was the first Muslim thinker to give a clear and in many respects thoroughly modern theory of the origin of man. It was only natural and perfectly consistent with the spirit of the Qur'an, that Rūmī regarded the question of immortality as one of biological evolution, and not a problem to be decided by arguments of purely metaphysical nature, as some philosophers of Islam had thought. The theory of evolution, however, has brought despair and anxiety, instead of hope and enthusiasm for life, to the modern world. The reason is to be found in the unwarranted modern assumption that man's present structure, mental as well as physiological, is the last word in biological evolution, and that death, regarded as a biological event, has no constructive meaning. The world of today needs a Rūmī to create an attitude of hope, and to kindle the fire of enthusiasm for life. His inimitable lines may be quoted here:

First man appeared in the class of inorganic things,  
Next he passed there from into that of plants.  
For years he lived as one of the plants,  
Remembering naught of his inorganic state so different;  
And when he passed from the vegetative to the animal state  
He had no remembrance of his state as a plant,  
Except the inclination he felt to the world of plants,  
Especially at the time of spring and sweet flowers.  
Like the inclination of infants towards their mothers,  
Which know not the cause of their inclination to the breast.  
Again the great Creator, as you know,  
Drew man out of the animal into the human state.  
Thus man passed from one order of nature to another,  
Till he became wise and knowing and strong as he is now.  
Of his first souls he has now no remembrance.  
And he will be again changed from his present soul.

Muhammad Hamidullah (1908-2002), perhaps the best known Muslim scholar of the twentieth century to write in French, was to point out these alleged links between Darwin's theory and Muslim thinkers of the past more forcefully in a series of twelve lectures delivered at the Islamia University Bahawalpur, Pakistan, in March 1980. The lectures, delivered without even the help of notes, covered a vast range of areas, ranging from the history of the Qur'an to the educational system in Islam and they truly reflect the depth and breadth of a unique scholar who has devoted his life to solitary pursuit of scholarship. Each lecture was fol-

lowed by a question-answer session. During the question-answered session that followed the lecture on “Religion”, someone asked Hamidullah: “If Darwin’s theory of evolution is correct from the scientific point of view, there is conflict between science and Islam. Kindly explain.”

Hamidullah’s answer is astonishing. He said:

It has been presumed that Darwin’s theory has been rejected by Islam. It appears to create complications for us because we presume that Darwin was an atheist, although he believed in God. When he completed his medical education and entered his family profession, Darwin went through a metamorphosis. Being sick of the world he became interested in God. He studied Christianity in the Faculty of Religion at the University of Cambridge. Comparative Religion was one of the subjects taught in the University. Darwin also learned Arabic in order to understand Islam. In the collection of his letters that have been published, a number of them are addressed to his Arabic teacher. They are couched in extremely reverent and respectful language.

This is indeed an amazing statement that belies all known facts about Darwin. The authoritative tone of the statement is remarkable. Hamidullah continues:

Among the text books prescribed for Arabic studies at that time were selections either from *The Epistles* of Ikhwan al-Safa’ [Brethren of Purity] or *al-Fawz al-Asghar* of Ibn Maskawayh. Both the books mention the theory of evolution. Nobody ever criticized their Muslim authors on this account nor were they dubbed as unbelievers. The books in question belong to the third or fourth century of the Hijrah.

It is inconceivable that Hamidullah did not know the numerous critiques of the *Epistles* of the Brethren of Purity, including the well-known arguments of al-Ghazālī, who states in his *al-Munqidh mina’l-dalāl*:

...the substance of what he mentioned was a bit of the feeble philosophy of Pythagoras. The latter was one of the early ancients, and his doctrine is the feeblest of all philosophical doctrines. Aristotle had already refuted him and had even regarded his teaching as weak and contemptible. Yet this is what is followed in the book of the Brethren of Purity, and it is really the refuse of philosophy. One can only marvel at a man who spends a weary lifetime in the quest for knowledge and then is content with such flaccid and thin stuff! Yet he thinks he has attained the utmost reaches of knowledge!

Hamidullah then elucidates the theory contained in “these books”



which, according to him,

state that God first created matter and invested it with energy for development. Matter, therefore, adopted the form of vapour which assumed the shape of water in due time. The next stage of development was mineral life. Different kinds of stones developed in course of time. Their highest form being mirjan (coral). It is a stone which has in it branches like those of a tree. After mineral life evolves vegetation. The evolution of vegetation culminates with a tree which bears the qualities of an animal. This is the date-palm. It has male and female genders. It does not wither if all its branches are chopped but it dies when the head is cut off. The date-palm is therefore considered the highest among the trees and resembles the lowest among animals. Then is born the lowest of animals. It evolves into an ape. This is not the statement of Darwin. This is what Ibn Maskawayh states and this is precisely what is written in the Epistles of Ikhwan al-Safa. The Muslim thinkers state that ape then evolved into a lower kind of a barbarian man. He then became a superior human being. Man becomes a saint, a prophet. He evolves into a higher stage and becomes an angel. The one higher to angels is indeed none but God. Everything begins from Him and everything returns to Him.

This statement, which even does not state the thesis propounded by the Ikhwān, as we will see shortly, is revealing for it shows how certain Muslim thinkers can “Islamize Darwinism”. But what follows is even more revealing of this attitude.

Hamidullah states that

when all this has been stated by Muslim thinkers and no Muslim scholar ever took them to task for making such statements, one should pause and ponder over these facts. In the Qur’an it is stated that God made man out of clay. Our concept of the creation of man is that God, like a potter, molded clay into shape and breathed His spirit into it and Adam was thus created. Possibly this was the process but what does one do with verses 18:37, 22:5, 35:11, 40:67 which state time and again that God created man from clay and sperm? It is obvious that clay does not create sperm; it comes from an animal and a human being. It means that the mention of all intermediary stages of evolution has been omitted and attention is drawn to the original source which is clay. The last cause is the sperm of man which stays in the womb of a woman.

But perhaps the most extreme example of this attitude is the definition of evolution that he ‘produced’ from the Qur’an: “Take yet another

verse of the Qur'an (71:14): 'He created you in stages'. The word *lawr* is the basis of *alawwur* which means evolution.. This is then further defended: "This can also mean that God created man as a mineral in the first instance. Minerals developed into vegetation which developed into animal life. There is no contradiction."

### **Muslim Critique of Darwinism: Some Important Works**

In conclusion we mention some important works which critique Darwinism on the basis of meta-scientific assumptions built into the theory. These have received much more attention from Muslim scholars than the scientific aspects. In his *Ancient Beliefs and Modern Superstitions*, Martin Lings has examined some of these assumptions of the theory of evolution. He returned to this subject in much greater detail in his *The Eleventh Hour*. Lings likens the theory of evolution to the concept of progress: the "two cards that are placed leaning one against the other at the 'foundation' of a card house. If they did not support each other, both would fall flat, and the whole edifice, that is, the outlook that dominates the modern world, would collapse". He argued that

Every process of development known to modern science is subject to a waxing and waning analogous to the phases of man's life. Even civilizations, as history can testify, have their dawn, their noon, their late afternoon, and their twilight. If the evolutionist outlook were genuinely 'scientist', in the modern sense, it would be assumed that the evolution of the human race was a phase of waxing that would necessarily be followed by the complementary waning phase of devolution; and the question of whether or not man was already on the downward phase would be a major feature of all evolutionist literature. The fact that the question is never put, and that if evolutionists could be made to face up to it most of them would drop their theory as one drops a hot coal, does not say much for their objectivity.

Sayyid Hossen Nasr has called the theory of evolution "a metaphysical absurdity" in his *Man and Nature: The Spiritual Crisis of Modern Man*. Elsewhere, he has discussed evolution in much more detail, including the fraught social dynamics that now structure discussions of evolution:

There are different kinds of scientific theories. For example, you have string theory in physics and cosmology and you have quantum mechanics. Now, if someone were to oppose prevalent theories in these fields, no one would expel that person from his or her university; no one would have his or her promotion denied because of his or her saying "I do not accept this theory." Evolution, on the contrary, is a totally different matter, because it

is an ideology, it is not ordinary science; if you are a professor of biology at a university, especially in the Anglo-Saxon world—less so in Italy, France, and Germany—and if you oppose the theory of evolution on purely scientific grounds, you are rejected and even ejected from your position, your colleagues think you are insane, you do not receive promotions, and so on.

Nasr states his disagreement with Muslims who

succumbed to this pressure and have developed what you might call an Islamic version of theistic evolutionism or evolution. First of all, this is worse than the Darwinian idea of evolution because it is no longer even scientific and would not satisfy the agnostic or atheistic biologists. Secondly, it ties the Hands of God through a process that we believe we know, but we really do not know. And that is even worse. So Muslims have to look upon this issue from the point of view of our own spiritual and intellectual positions—from what the Qurʾān and Ḥadīth say, what our intellectual tradition has said. There are major issues involved, which the modern mindset glosses over, leaving evolution as the only explanation of the scientific data.

One of them is the question of form and the finality of form. A triangle is a triangle, and nothing evolves into a triangle; until a triangle becomes a triangle, it is not a triangle. So if we have three loose lines that gradually meet, even if there is one micron of separation, that is not a triangle. Only a triangle is a triangle. And life forms also have a finality of their own. The famous French biologist L. Bounoure opposed evolution on the basis of this reality of the finality of forms, as well as other considerations.

Nasr sums up three basic objections to the theory of evolution: (i) the destruction of forms in the ultimate sense; (ii) the reduction of causality to the horizontal plane—that is to say, the denial of Vertical Causality and therefore of Divine Causality; and (iii) the horizontalization of the vertical chain of Being.

Nasr, however, does not deny the possibility of micro-evolution, because

micro-evolution is still within the possibilities of the archetype or form of a particular being in the philosophical sense, in the same way that you and I are human beings, and the Chinese and the Japanese are also human beings. (...) But we are all within the possibilities of the human form. That kind of micro-evolution is possible. Flies can become a bit bigger and when there is a certain kind of light, plants can do this and that, and this is mistaken by some for change of species. That is not change of species; that

is “evolution” within a single species. Each species has a width, a range, a reality greater than a particular individual in that species. And so other individuals can appear in that species with other characteristics and even change according to environmental conditions, without one species becoming another.

In one of the few detailed and well-reasoned critiques of the theory of evolution to be found in Urdu, Mawlānā Muḥammad Shihāb al-Dīn Nadwī has examined it from the perspective of the Qur’ānic metaphysics. Using the well-known argument of Muslim scholars which construes the theory as an ideology, Nadwī places the creation narrative of the Qur’ān within the context of creation narratives of the pre-Qur’ānic revelations, examines the metaphysical implications of the theory of evolution and rejects it on the basis of well-referenced scriptural and Prophetic accounts of the creation of Ādam. More importantly, he examines and critiques the views of some influential Muslim apologists for Darwinism.

Nuh Ha Mim Keller has succinctly presented Islamic views on the theory of evolution in a letter in response to a question from a Muslim biologist who indicated that he is “convinced by the evidence which supports the theory of evolution”, and who wanted to know “whether the Qur’ānic account of Creation [was] incompatible with man having evolved”. In response, Keller examines the theory of evolution for its coherence, logicity, and applicability to humans and other species and concludes:

Allah alone is Master of Existence. He alone causes all that is to be and not to be. Causes are without effect in themselves, but rather both cause and effect are created by Him. The causes and the effects of all processes, including those through which plant and animal species are individuated, are His work alone. To ascribe efficacy to anything but His action, whether believing that causes (a) bring about effects in and of themselves; or (b) bring about effects in and of themselves through a capacity Allah has placed in them, is to ascribe associates to Allah (*shirk*). Such beliefs seem to be entailed in the literal understanding of “natural selection” and “random mutation,” and other evolutionary concepts, unless we understand these processes as figurative causes, while realizing that Allah alone is the agent. This is apart from the consideration of whether they are true or not.

As for claim that man has evolved from a non-human species, this is unbelief (*kufir*) no matter if we ascribe the process to Allah or to “nature,” because it negates the truth of Adam’s special creation that Allah has revealed in the Qur’an. Man is of special origin, attested to not only by revelation, but also by the divine secret within him, the capacity for *ma’rifā* or knowledge of the Divine

that he alone of all things possesses. By his God-given nature, man stands before a door opening onto infinitude that no other creature in the universe can aspire to. Man is something else.

### Conclusion

Muslim responses to Darwinism and neo-Darwinism range from an unconditional acceptance to various versions of theistic evolution, and from a vociferous rejection to a view that sees it as a liberating scientific fact. These responses have parallels in Christian responses to Darwinism. There has been almost no original scientific research by any Muslim scientist which can serve as an alternate to Darwinism and neo-Darwinism. This is unlike the Christian tradition which has produced a broad range of scientific literature in response to Darwinism.

The third part of this series will examine, in more detail, specific claims of Darwinism and neo-Darwinism from Islamic perspectives. These claims, beliefs, ideas, and interpretation of scientific data will be examined against the central belief structure of Islam based on Islam's two primary sources—the Qurʾān and Ḥadīth.

*Waʾl-lāhuʾl-mustaʿān, wa mā taʾwfiqī illā biʾ-llāh.*

---

### End Notes

1. For early Muslim responses in the Arab world, see Adel A. Ziadat, *Western Science in the Arab World: The Impact of Darwinism, 1860-1930* (London: Macmillan, 1986), 94 and hereinafter Ziadat; Osman Bakar (ed.), *Critique of Evolutionary Theory: A Collection of Essays* (Kuala Lumpur: The Islamic Academy, 1987) is a collection of articles, mostly by Muslims, which examines the theory of evolution from various aspects; for an incomplete and cursory survey in Urdu, see the third chapter of Mawlānā Muḥammad Shihāb al-Dīn Nadwī, *Takhliq-e Ādam aur nazriya-e irtiqā: Qurʾāni ḥaqāʾiq-o-maʿārif aur dadīd science iktashafāt kā ek jāʾiza* [*The Creation of Ādam and Theory of Evolution: A Survey of Qurʾānic Data and Gnosis and Modern Scientific Discoveries*] (Karachi: Majlis-e Nashriyāt-e Islam, n.d.); hereinafter *Takhliq-e Ādam*.
2. See Muzaffar Iqbal, *Science and Islam* (Westport: Greenwood Press, 2007).
3. Lord Palmerston, then-Prime Minister of the United Kingdom, introduced the bill for the transfer of control of the Government of India from the East India Company to the Crown, referring to the

- grave defects in the existing system of the government of India.
4. For the text of the Government of India Act, 1858 (21 & 22 Vict. c. 106), see A. Berriedale Keith (ed.), *Speeches and Documents on Indian Policy, 1750-1921*, Vol. 1 (London: Humphrey Milford, Oxford University Press, 1922), 370-382.
  5. This epoch-marking occupation of Egypt has been chronicled in minute detail by the French themselves in the massive *Description de l'Égypte*, the handiwork of the large contingent of scholars who accompanied Napoleon. Published over twenty years between 1809 and 1829, and consisting of ten albums of plates, nine volumes of text, and three volumes of atlases and maps, the *Description* is a monumental work that launched the field of Egyptology. It is also the most detailed account available of a Muslim society on the eve of its encounter with the modern West. We also have numerous other accounts of the French experience in Egypt, written by the invaders and occupiers, including the Memoirs of Antoine Fauvelet de Bourrienne, a schoolmate of Napoleon at the military school at Brienne le Chateau in the early 1780s, who was his private secretary at the time of the invasion of Egypt. But the true measure of this event can be understood neither from the scholarly *Description de l'Égypte* nor from the eyewitness account of Bourrienne; rather, it is to be found in a now forgotten text written by 'Abd al-Rahmān al-Jabartī, the most illustrious Muslim historian of the eighteenth century, who wrote in the grand tradition of al-Ṭabarī and Ibn Khaldūn. He describes how when the population of Cairo rose against the occupiers on October 21-22, 1798, Napoleon ordered his army to use brutal force to subdue the "uprising" within 36 hours. Al Jabartī's first book, *Ta'rikh muddat al faransis bi miṣr* (*The History of the Era of the French in Egypt*), is now available in an English translation by Shmuel Moreh, an Israeli Arabist (Leiden: E. J. Brill, 1975). Written at the time of the French invasion and covering a little over six months, this chronicle of the early days of the French occupation is of immense importance in understanding the patterns of occupation as they were emerging: Napoleon's efforts to curry favor with the local population; his proclamations of sympathy with Islam and the Prophet, his proclamation that he has come to free Egyptians from the tyranny of the Ottomans—all provide insights into multiple Muslim failures. Al-Jabartī was to write two more books: *Mazhar al-taqdis bi zarwal dawlat al-Faransis* (*The Sacred Aspects of the Fall of the French*) and *'Ajā'ib al-athār fi-l tarājim wa-l akhbār* (*The Wondrous Vestiges in Biographies and History*). The first chronicles the events leading to the departure of the French from Egypt; the latter is a monumental work of Egyptian history from 1688 to 1821.
  6. Including the modern nations of Mauritania, Senegal, Guinea, Mali,

Côte d'Ivoire, Benin, Niger, Chad, Central African Republic, Republic of Congo, and the east African coastal enclave of Djibouti. A hallmark of the French colonial project in the late 19th century and early 20th Century was the civilizing mission (*mission civilisatrice*), the self-appointed task to bring “civilization to benighted peoples”.

7. Marshall G. S. Hodgson, *The Venture of Islam: Conscience and History in a World Civilization*, 3 vols. (Chicago: University of Chicago Press, 1974), vol. 3, 178.
8. For a general study, see George N. Vlahakis et al, *Imperialism and Science: Social Impact and Interaction* (Santa Barbara: ABC-CLIO, 2006), which has chapters on British and French colonial rule as well as a chapter on the Ottoman world; for a more detailed study of the role of science and technology in the building and maintenance of the British Indian Empire, see Satpal Sangwan, *Science, Technology and Colonisation: An Indian Experience 1757-1857* (Delhi: National Institute of Science, Technology and Development Studies, 1991); Zaheer Baber, *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule in India* (Albany: State University of New York Press, 1996); John Gascoigne, *Science in the Service of Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution* (Cambridge: Cambridge University Press, 1998); and David Arnold, *The New Cambridge History of India: Science, Technology and Medicine in Colonial India* (Cambridge: Cambridge University Press, 2000). For a review article on six works dealing with the French colonial empire, see Daniel J. Sherman, “The Arts and Sciences of Colonialism,” *French Historical Studies* 23 (2000) 4, 707-729. [The books reviewed in this article include: Frederick Cooper and Ann Laura Stoler (eds.), *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley: University of California Press, 1997); Alice L. Conklin, *A Mission to Civilize: The Republican Idea of Empire in France and West Africa, 1895–1930* (Stanford: Stanford University Press, 1997); Todd Porterfield, *The Allure of Empire: Art in the Service of French Imperialism, 1798–1836* (Princeton: Princeton University Press, 1998); Michael A. Osborne, *Nature, the Exotic, and the Science of French Colonialism* (Bloomington: Indiana University Press, 1994); Patricia M. E. Lorcin, *Imperial Identities: Stereotyping, Prejudice, and Race in Colonial Algeria* (London: I.B. Tauris, 1995); Zeynep Çelik, *Urban Forms and Colonial Confrontations: Algiers under French Rule* (Berkeley: University of California Press, 1997); Panivong Norindr, *Phantasmatic Indochina: French Colonial Ideology in Architecture, Film, and Literature* (Durham: Duke University Press, 1996); Tom Conley (ed.), *Identity Papers: Contested Nationhood in Twentieth-Century France* (Minneapolis: University of Minnesota Press, 1996).]
9. “By mid [nineteenth] century ABCFM [the American Board of Com-

missioners for Foreign Missions] had established numerous missionary outposts across the Mediterranean, Asia, Africa and the Americas. "Through various channels of influence", wrote the Reverend James Dennis, an early member of the station at Beirut, 'missions are pouring vitalizing forces into the social, national, commercial and religious life of foreign peoples'. The aim was to create 'new men' abroad or, as Dennis wrote, 'the embryonic norms of a new society and a new life'. Hoping to mould 'new national lives and characters', American evangelists promoted spiritual and worldly reform in foreign lands through an ambitious amalgam of pedagogy, philanthropy and politics that critics have since referred to as 'colonial evangelism'. Marwa Elshakry, "The Gospel of Science and American Evangelism in Late Ottoman Beirut," in *Past and Present*, no. 196 (August 2007), 174.

10. S. Gopal, *British Policy in India* (Cambridge: Cambridge University Press, 1965), 224.
11. For instance, by 1916, 60 percent of all Indian imports came from Britain and it had absorbed £380 million in British capital, one tenth of all the country's overseas investments. James Lawrence, *The Rise and Fall of the British Empire* (New York: St. Martin's Press, 1994), 219.
12. Although this was generally true of a large part of the Muslim world, there were parts of the Muslim world, such as the land of the fierce Afghans and the Pathans, who never accepted any foreigner as their ruler.
13. For a broad description of the major factors which transformed the Muslim world, see Muzaffar Iqbal, *Islam and Science* (Aldershot: Ashgate, 2002), especially chapter seven, "Winds of Change", 201-212.
14. Shaykh Muḥammad Isma'īl Pānipatī (ed.), *Musāfirān-e London [Travelers to London]* (Lahore: Majlis Taraqi-e Adab, 1961), 184.
15. Richard G. Olson, *Science and Scientism in Nineteenth-Century Europe* (Urbana: University of Illinois Press, 2008), 213.
16. For a survey of India Muslim perceptions of the West in the Eighteenth century, see, Gulfishan Khan, *Indian Muslim Perceptions of the West During the Eighteenth Century* (Karachi: Oxford University Press, 1998); for a more specific account, see David Lelyveld, *Aligarh's First Generation: Muslim Solidarity in British India* (Delhi: Oxford University Press, 1996)
17. *Ibid.*, 208 and *passim*.
18. The parliament survived for only two years and though not abolished, it remained suspended until he was forced to reconvene it in 1876.
19. Whose very Turkish name (Jön Türkler) from the French 'Jeunes Turcs' indicates the direction from which their initial inspiration came, although some of these young Turks returned to Islam for



- inspiration and guidance in their later years.
20. For an account of the translation of European scientific knowledge into Turkish in the sixteenth and the seventeenth centuries, see Feza Günergun, "Ottoman encounters with translations into Turkish" in Peter Burke and R. Po-Chia Hsia (eds.), *Cultural Translation in Early Modern Europe* (Cambridge: Cambridge University Press, 2007).
  21. For a more general account of science in the Ottoman empire, see Ekmeleddin Ihsanoglu, *Science, Technology and Learning in the Ottoman Empire: Western Influence, Local Institutions, and the Transfer of Knowledge* (Aldershot: Ashgate-Variorum, 2004).
  22. It is not accidental that the dissolution of the Ottoman Empire took place at the same time as the fruits of the European scientific and technological revolution produced better navigational and war machines. Although Egypt had become virtually autonomous before the 1882 British invasion, it was the British invasion which produced the actual severance of ties. Crete revolted in 1896, receiving aid from the Greeks. The dissolution of the Ottoman Empire was a slow and steady process. In 1603 Richard Knolles, the English historian, described the Ottomans as "the present terror of the world", but by the mid-nineteenth century, Tsar Nicholas II of Russia was to call it "the sick man of Europe". The rulers in both Turkey and Egypt were obsessed with the idea of modernizing their armies and to bring them to European standards. For instance, because of its alignment with France during the early part of the 19th century, the Sultan requested aid from the Directory to rebuild his military; Baron de Tott was sent as an advisor. He succeeded in having a new foundry built to make artillery and directed the construction of a new naval base, but this had very little impact on the overall strength and capability of the Ottoman army.
  23. For an overview, see Steve Bishop, "Protestant Missionary Education in British India," *Evangelical Quarterly* 69 (1997) 3, 245-266.
  24. For instance, see the Calcutta Corresponding Committee Minutes (1820-1879) of the Church Missionary Society, covering the years 1817-1880, consisting of letters, journals and reports of bishops and missionaries with a large section also covering the Calcutta, Simla, and Himalaya Corresponding Committee minutes (1820-1879). Included in this insightful record are many conference reports, papers on education, finance and local CMS associations. The whole collection is now available digitally through <[http://www.ampltd.co.uk/collections\\_az/CMS-6-05/description.aspx](http://www.ampltd.co.uk/collections_az/CMS-6-05/description.aspx)>, accessed April 30, 2009.
  25. For an interesting event showing the complex interplay between the local politics of the missionaries, the spread of Western ideas and practices, and the kind of controversy which could arise from one's

- position on Darwinism, see Donald M. Leavitt, "Darwinism in the Arab world: the Lewis affair at the Syrian Protestant College," *Muslim World* 71 (1981) 2, 85-98. Also see Marwa Elshakry, "The Gospel of Science and American Evangelism in Late Ottoman Beirut," *Past and Present*, no. 196 (August 2007).
26. Adel A. Ziadet, *Western Science in the Arab World: The Impact of Darwinism, 1860-1930* (London: Macmillan, 1986), 27.
  27. I am thankful to Mahdi Golshani for these references: *Origins of Species* was translated by Nūr al-Dīn Farīkhta as *Bunyād anwāʿ* (Arūmia: Anzālī, 1363); Muḥammad Taqī Jaʿfarī, *Afrīnash-e Insān* (Tehran: Muʿassa tadwīn-wa-nashr āthār asnād Allāma Muḥammad Taqī Jaʿfarī, 1386); Jaʿfar Subḥānī, *Darwinism bā takāmīl anwāʿ* (Qum: Intashārāt tawḥīd, n.d.); MadʿLlāh Suḥānī, *Khalqat-e Insān* (Tehran: Shirkat-e Sahāmī Intashār, 1351); various references to Darwinism in Muḥammad Ḥussain Ṭabāṭabāʾī, *Tafsīr al-Mizān* (Qum: Jāmiʿah Mudarsīn ḥawzah ʿilmiyyah Qum: Daftar Intisharāt Islāmī, 1386), especially see: vol. 4, p. 153, vol. 9, p. 8, vol. 16, p. 269; Aḥmad Fārmuz Qarāmalki, *Mawḍaʿ ʿilm wa dīn dar khalaqat-e insān* (Tehran: Ārāya, 1373); Muḥammad Taqī Miṣbāḥ Yazdī, *Muʿārif Qurʾān* (Qum: Muʿassah dar Rah-e ḥaq, 1367); Murtaḍā Muṭaharī, ʿillal grāʾish bih mādi garī (Tehran: Ṣadrā, 1356); Murtaḍā Muṭaharī, *Majmūʿa āthār* (Tehran: Ṣadrā, n.d.), vol. 1, 4, 13 and 16; Murtaḍā Muṭaharī, *Maqālāt falsafī* (Tehran: Ḥikmat, 1369).
  28. A. H. Melmy Mohammad, "Notes on the Reception of Darwinism in Some Islamic Countries" in Ekmeleddin Ihsanoglu (ed.), *Science in Islamic Civilization* (Istanbul: IRCICA, 2000), 245-255.
  29. *Ibid.*, 247.
  30. *Ibid.*, 246-47.
  31. 'So-called' because they were not really scientific journals in the sense this term is now understood, but were rather magazines which had some content on science written for a general readership.
  32. Al-Jisr was born in Tripoli, Lebanon and was the teacher of many prominent Arabs, including Rashīd Riḍā, the editor of influential journal *al-Manār*.
  33. *A Ḥamīdian Essay on the Truthfulness of Islamic Religion and the Truthfulness of Islamic Law* (Beirut: 1887); 'Hamid' in the title refers to al-Jisr's patron Sultan ʿAbd al-Hamid, quoted from Ziadet, 94.
  34. Al-Jisr, *Risāla*, 298, quoted from Ziadet, 94.
  35. For a summary account of some of the works translated into Urdu from Arab journals and for a description of the emergence of certain newspapers and journals in the Indian subcontinent around the turn of the twentieth century, see the autobiography of Abū-I Kalām Azād, *Azād kī kahānī khud Azād kī zabānī*, lit. *Azād's story in Azād's words* (Lahore: Maktaba Khalil, n.d), which he dictated to one of his disci-

ples, Malih Abadi, while both were together in a jail in 1921. Born in Makkah in 1888, Azad was an influential religious, intellectual, and political figure of the Indian subcontinent during a very crucial period of Indian history. His autobiography, which remained incomplete, provides an inside account of numerous cultural and intellectual currents of an era now irrecoverably lost. The vivid account of his father's life, which fills more than half of the published version, is also an important source of information for understanding the religious and intellectual milieu of the Muslim world at a time of fundamental transformations. The autobiography ends at a point in Azad's life when he loses faith in God. He was later to reconcile with Islam, but his spiritual crisis never seemed to have completely healed. He was deeply influenced by Sayyid Ahmad Khan (see below for more details) and he remained an ardent supporter of secularism in politics and modernism in religious thought until the end of his life in February 1958. He wrote articles on Darwin in his newspaper, *al-Halal*, and in his commentary on the Qur'an, *Tarjman al-Qur'an*, he accepts Darwinism as an established fact.

36. *Al-radd 'ala-l-dahriyyin (Refutation of the Materialists)*, 1st edition (Beirut: n., 1886); *Magalat Jamdliyyah* (in Persian) ed. Lutf Allah Asad Abadi (Teheran, n. n.d); *al-Urwat al-wulhga* (with the collaboration of Mubammad 'Abduh), latest edition, Cairo, 1958; *al-Qada' wal-Qadar* (On Predestination) (al-Manar Printing Press: Cairo, 1923).
37. *Ziadat*, 86.
38. *Ziadat*, 87.
39. Born shortly before 1850, 'Abduh went through various distinct stages in his intellectual development which are all reflected in his work. See M.A. Zaki Badawi, *The Reformers of Egypt* (London: Croom Helm, 1976, 1978), where the second chapter is devoted to 'Abduh and his work, also see Elie Kedourie, *Afghani and 'Abduh: An Essay on Religious Unbelief and Political Activism in Modern Islam* (London: Frank Cass & Co., 1966) which mostly deals with Afhani's influence on 'Abduh.
40. The actual title of this work is *Tafsir al-Qur'an al-Hakim*, but since it was serialized in the periodical *Al-Manar*, it is commonly called *Tafsir al-manar*. Many print and online editions exist of this famous work. All references are to (Cairo: Dar al-manar, 2nd ed., 1366/1947); hereinafter *al-Manar*.
41. James R. Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870-1900* (Cambridge: Cambridge University Press, 1979), especially chapters 9-12.
42. All three descriptions are from Moor's aforementioned work. In commemoration of the 200th anniversary of Charles Darwin's birth. Yale Divinity School Library set up an exhibit (February-June 2009)

on the topic of Christian Responses to Charles Darwin (1870-1900). The exhibit displayed works which have indirect relevance to Muslim responses to Darwinism because of the borrowing that took place from the Christianity. The representative works at the exhibit were arranged in Moor's aforementioned three categories. For Anti-Christian Darwinism, the exhibit included: E. F. Burr, *Pater mundi, or, Doctrine of Evolution: Being in Substance Lectures Delivered in Various Colleges and Theological Seminaries* (New York: American Tract Society, 1873); Sir J. William Dawson, *Modern Ideas of Evolution* (originally published in 1890, reprinted as *Modern Ideas of Evolution* by Sir J. William Dawson, edited by William R. Shea and John F. Cornell, with a foreword by Conrad F. Harrington and a critical introduction by William R. Shea (New York: Prodist, 1977); Luther Tracy Townsend, *Evolution or Creation: a Critical Review of the Scientific and Scriptural Theories of Creation and Certain Related Subjects* (Baltimore: published by the author himself; reprinted, New York, Chicago [etc]: Fleming H. Revell Company, 1896, full text available online at <[http://www.archive.org/stream/evolutionorcreat00town/evolutionorcreat00town\\_djvu.txt](http://www.archive.org/stream/evolutionorcreat00town/evolutionorcreat00town_djvu.txt)>, accessed May 5, 2009. Works in the second category, "Christian Darwinisticism", included St. George Mivart, *On the Genesis of Species* (London: Macmillan, 1871); Henry Ward Beecher, *Evolution and Religion* (New York: Fords, Howard, & Hulbert, 1885); Joseph Le Conte, *Evolution: its Nature, its Evidences, and its Relation to Religious Thought* (New York: Appleton, 1899); Lyman Abbott, *Theology of an Evolutionist* (New York: Outlook, 1925, originally published 1897); Minot J. Savage, *The Irrepressible Conflict between Two World-theories* (Boston: Arena Publishing, 1892); and James McCosh, *Christianity and Positivism: a Series of Lectures to the Times on Natural Theology and Apologetics* (New York: Robert Carter and Brothers, 1871). The works representing the third category, Christian Darwinism, included: James Iverach, *Theism in the Light of Present Science and Philosophy* (New York: published for New York University by the Macmillan Co., 1899); Aubrey L. Moore, *Science and the Faith: Essays on Apologetic Subjects* (London: K Paul, Trench, Trubner, 1892); Asa Gray, *Natural Science and Religion: Two Lectures Delivered to the Theological School of Yale College* (New York: Charles Scribner's Sons, 1880); and G. Fredrick Write, *Studies in Science and Religion* (Andover: Warren F. Draper, 1882). See <<http://www.library.yale.edu/div/exhibits/Darwin.htm>>, accessed May 5, 2009.

43. Ibid.
44. Abū Rayḥān Muḥammad ibn Aḥmad al-Bīrūnī (973-1048), an encyclopedist scholar and scientist, one of the first exponents of the experimental scientific method, who changed the fields of mechanics, mineralogy, astronomy, physics, and geography with his inno-

vative methods. He wrote on comparative sociology, experimental psychology, and was the first to conduct elaborate experiments alone as well as in association with other scientists of his times. The crater Al-Biruni on the Moon is named after him. Tashkent Technical University is also named after him.

45. Abu ‘Alī Aḥmad ibn Muḥammad ibn Ya‘qūb Ibn Miskawayh (932-1030), the Persian philosopher, scientist, poet and historian from Ray, Iran, the author of the *Tadhīb al-akhlāq (Ethical Instruction)*, focusing on practical ethics, conduct, and refinement of character.
46. Abū ‘Uthmān ‘Amr ibn Baḥr al-Kinānī al-Fuḡaymī al-Baṣrī (ca. 781–868), son of a Zanji slave, master of Arabic prose, and the author of the celebrated *Kitāb al-Ḥayawān*.
47. The original German work, entitled *Natürliche Schöpfungsgeschichte*, was published in Berlin in 1868, the English version appeared in 1876 and was frequently reprinted until 1926. Haeckel elaborated on Darwin’s ideas and argued that human evolution consisted of precisely 22 phases, the 21st—the “missing link”—being a halfway step between apes and humans. He named this missing link *Pithecanthropus alalus* (“ape man without speech”).
48. Article 2 of the Turkish Constitution, revised in 1982.
49. In the political arena, there has been a long tradition of declaring Islam-oriented parties illegal. The Progressive Republican Party, the Free Republican Party and the National Party were all banned before 1955. The National Order Party was outlawed in 1971. The National Salvation Party (NSP) became popular in the 1970s but on September 12, 1980 a military coup crushed it, its leaders were persecuted and imprisoned, and the military, which is the stronghold of Kemalists, tried to push the country into the secular state model. A recent example of this tradition of outlawing Islamic parties is the ban on the Welfare party on February 28, 1997.
50. His opponents claim that the person who writes with the pen-name of Harun Yahya is not a real person, but a group of writers working for BAV. They sometimes even claim that Harun Yahya is actually Necmettin Erbakan himself. Such attacks have forced “Harun Yahya” to post a biographical note, according to which he is Adnan Oktar, born in Ankara in 1956 and writing under the pen name of Harun Yahya. “He is a world-renowned man of ideas. Ever since his university years, he has dedicated his life to telling of the existence and oneness of Almighty Allah, to disseminating the moral values of the Qur’an, to the intellectual defeat of materialist and atheist ideologies, to propagating the real Atatürk way and to defending the permanence of the state and the unity of the nation. He has never wavered in the face of difficulties and despite oppression from materialist, Darwinist and separatist circles, still continues this intellectual

- struggle today exhibiting great patience and determination.” For further details on the life and ancestors of Adnan Oktar, see <<http://www.harunyahya.com/theauthor.php>>, accessed May 5, 2009.
51. Ümit Sayin and Aykut Kence, “Islamic Scientific Creationism: A New Challenge in Turkey”, *Reports of the National Center for Science Education*, Vol. 19 (1999) No. 6, 18-29. This issue of the *Reports* has extensive coverage on the fierce battle being fought in Turkey between the proponents and foes of evolution.
  52. See <<http://www.harunyahya.org>>, accessed May 5, 2005.
  53. *Reports*, op cit, 16.
  54. *Ibid.*, 16.
  55. *Ibid.*, 16.
  56. Turkish Academy of Science (TUBA) <<http://www.tuba.gov.tr>>, accessed May 5, 2009.
  57. The complete text of the declaration is available a. <<http://www.geocities.com/Athens/Cyprus/8732/tubabildiri.html>>.
  58. The company initially called the East India Trading Company, English East India Company, and finally the British East India Company, all names betraying deep connections with the purpose of the Company, was an early English joint-stock company, formed to pursue trade with the East Indies, but ended up trading with the Indian subcontinent and China. The East India Company traded mainly in cotton, silk, indigo dye, saltpetre, tea, and opium. However, it also came to rule large swathes of India, exercising military power and assuming administrative functions, to the exclusion, gradually, of its commercial pursuits. Company rule in India, which effectively began in 1757 after the Battle of Plassey, lasted until 1858, when, following the events of the last armed struggle against it, India was taken over by the British Crown through the Government of India Act 1858. The Company was finally dissolved on 1 January 1874, through the East India Stock Dividend Redemption Act. See the searchable online records of the Company at <<http://www.nationalarchives.gov.uk/a2a/>>, accessed May 10, 2009. Also see Sir George Birdwood MD KCIE (ed.), *The Register of Letters & C. of the Governour and the Company of Merchants of London Trading into East Indies 1600-1619* (London: Bernard Quaritch, Piccadilly London, Anno Domini MDCCCX-CIII), available online at <[http://books.google.com/books?id=sc0NAAAAIAAJ&printsec=titlepage&source=gbs\\_summary\\_r&cad=0](http://books.google.com/books?id=sc0NAAAAIAAJ&printsec=titlepage&source=gbs_summary_r&cad=0)>, accessed May 10, 2009.
  59. Richard Holmes, *Sahib: The British Soldier in India 1750-1914* (London: HarperCollins, 2005), 45.
  60. *Ibid.*
  61. Amaresh Misra, *War of Civilisations: India AD 1857* in two volumes separately entitled *The Road to Delhi* and *The Long Revolution* (Delhi,

- Rupa, 2008).
62. For general accounts, see Gautam Chakravarty, *The Indian Mutiny and the British Imagination* (Cambridge University Press, 2004); Christopher Herbert, *War of No Pity: The Indian Mutiny and Victorian Trauma* (Princeton University Press, 2008); and Denis Judd, *The Lion and the Tiger: The Rise and Fall of the British Raj, 1600-1947* (New York: Oxford University Press, 2004).
  63. *The New York Times*, September 9, 1857, online archive <<http://query.nytimes.com/mem/archive-free/pdf?res=9C00EFDA163CEE34BC4153DFBF66838C649FDE>>, accessed May 11, 2009. *Punch*, it should be noted, was normally cynical and dispassionate as compared to other jingoistic periodicals. This cartoon received considerable attention.
  64. “My dear sir, what shall I say about the destruction of houses and mosques! The builder of the city might not have exerted so much planned effort for building them as the owners of the country [meaning the English] have for their destruction. My! my! Almost all buildings from the times of Shah Jahan within the walls of the fort and most of these in the city were demolished painstakingly and where picks and shovels and other tools did not suffice, tunnels were made and explosives were used to demolish them.” Letter of poet Mirza Ghalib to Nawab Anwar al-Dawla, written on August 24, 1860. Mirza Asad Ullah Ghālib, *Ghālib key khatūṭ [Letters of Ghālib]* (Lahore: Mata-ba Meri Library, 1979), 34.
  65. For a more detailed survey of the ‘scientific tafsīr,’ see Muzaffar Iqbal, *Islam and Science* (Aldershot: Ashgate, 2001), chapter 10, “The Scientific Exegesis”.
  66. Muhammad b. Ahmad al-Iskandarāni (1297/1880), *Kashf al-Asrār ‘an al-Nurāniyya al-Qur’āniyya fi-mā yata‘allaqu bi’l-ajrām as-samāwiyya wa’l-ardiyya wa’l-hayawanāt wa’l-nabāt wa’l-jawāhir al-ma‘daniyya*, 3 vols. Maktaba al-Wahbiya, Cairo.
  67. Muhammad b. Ahmad al-Iskandarāni, *Tibyān al-Asrār al-Rabbāniyya fi’l-Nabāt wa’l-Ma‘ādīn wa’l-Khawāss al-Hawywanīyyah (The Demonstration of Divine Secrets in the vegetation and minerals and in the characteristics of animals)* (Damascus, 1300/1883); hereinafter *Tibyān*. The word *tibyān* (explanation) is taken from Q. 16:89.
  68. For example, Al-Iskandarāni, *Tibyān*, 5, 29, 132, etc.
  69. Muhammad Husayn al-Dhahabī, *al-Tafsīr wa’l-Mufasssīrūn*, 2 vols., 4<sup>th</sup> ed., (Maktaba al-Wahbiya, 1985). This work has been posthumously reprinted in three volumes by Shirkah Dār’l-Arqam bin abī al-arqam, n.d.; in a short note at the beginning of the third volume, the publisher states that this volume is based upon Dhahabī’s lectures which he delivered at the University of Baghdad between 1960-63 and they can serve as a prologue to many discussions of *al-Tafsīr wa’l-Mufasssīrūn*. All references are from this expanded edition, hence-

- forth Dhahabī (new edition).
70. J. M. S. Baljon, *Modern Muslim Koran Interpretation, 1880-1960* (Leiden: E. J. Brill, 1961).
  71. Muḥammad ‘Iffat al-Sharqāwī, *Ittijāhāt al-tafsīr fī l-Miṣr al-‘aṣr al-ḥadīth* (Cairo: Maṭba‘at al-Kilānī, 1972).
  72. J. J. G. Jansen, *The Interpretation of the Koran in Modern Egypt* (Leiden: E. J. Brill, 1974).
  73. Also see the brief survey in Kate Zebiri, *Maḥmūd Shaltūt and Islamic Modernism* (Oxford: Clarendon Press, 1993), chapter 7, “The Emergence of Modern *Tafsīr*”.
  74. Dhahabī (new edition), vol. 2, 348.
  75. That is, juristic and linguistic exegeses, so called because of their stress on the juristic or linguistic aspects of the Qur’ān; other distinct categories of traditional *tafsīr* include: *tafsīr riwā’i*, which makes transmitted report (*riwāya*) its mainstay; *tafsīr kalāmī*, which focuses on theological issues; *tafsīr nahwī*, which discusses issues of grammar; and *tafsīr adabī*, which treats matters of language and style. In many *tafsīr*, numerous aspects mentioned above are often combined.
  76. Ṭaṇṭāwī Jawharī, *al-Jawāhir fī tafsīr al-Qur’ān al-Karīm al-Mushtamil ‘alā ‘Ajā’b*, 26 vols. (Cairo: Muṣṭafā al-Babī al-Halabī, 1931).
  77. Ghulam Ahmad Pervez, *Lughāt al-Qur’ān* (Lahore: Adāra ṭulū‘-e Islam, 1960, 2<sup>nd</sup>, unchanged edition, 1984), 214-5.
  78. Shaykh Muḥammad Isma‘īl Pānipatī (ed.), *Maqalāt-e Sir Sayyid* (Lahore: Majlis Taraqi-e Adab, 14 vols., 1965), vol. 14, 8. Sayyid Ahmad’s biographer, Altāf Hussain Ḥālī, also confirms this opinion of Khan in his biography, *Ḥayāt-e Jāwaid* (Delhi: Taraqqi-e Urdu Board, 1979), 525.
  79. See Muhammad Asad, *The Message of the Qur’ān* (Gibraltar: Dar al-Andalus, 1980), especially, his translation and notes on 2:30-34 and 7:11.
  80. *And when your Sustainer said to the angels: ‘behold, I am going to establish upon earth a khalīfā, they said: ‘will You place on it one who will spread corruption and shed blood, whereas as we extol Your limitless glory and extol Your holiness?’; He said: ‘verily, I know that which you do not.’*
  81. *Al-Manār*, vol. 1, 251.
  82. Zebiri, op. cit., 151.
  83. Muhammad Iqbal, *The Reconstruction of Religious Thought in Islam*, ed. M. Saeed Sheik (Lahore: Iqbal Academy, Pakistan and Institute of Islamic Culture, 1986), 33 and 154 [hereinafter *Reconstruction*]; of the two, only the first has a discussion on biology, while the second is merely a passing reference mentioned for the sake of pointing out Nietzsche’s failure “to grasp the spiritual aspects of Reality”.
  84. *Reconstruction*, 68.
  85. *But Satan whispered him (Adam) and said: ‘O Adam! shall I show thee the*



*tree of Eternity and the Kingdom that faileth not? And they both ate thereof, and their nakedness appeared to them, and they began to sew of the leaves of the garden to cover them, and Adam disobeyed his Lord, and went astray. Afterwards his Lord chose him for Himself, and was turned towards him, and guided him.*' This somewhat misleading and certainly clumsy translation is quoted from Iqbal's *Reconstruction* without modification.

86. *Reconstruction*, 69.
87. M. Maroof Shah, *Muslim Modernism and the Problem of Modern Science* (Delhi: Indian Publishers' Distributors, 2007), 136-57; hereinafter Shah.
88. *Ibid.*, 136-7.
89. *Ibid.*, 137.
90. Here Iqbal prefaces the Qur'ānic verses by stating: "The Qur'ān argues the phenomenon of re-emergence of the ego on the analogy of his first emergence, and then quotes Q. 19:66-67: 'Man saith: "What! After I am dead, shall I in the end be brought forth alive?" Doth not man bear in mind that We made him at first when he was nought?' (19:66-67) and 56:60-62: "It is We Who have decreed that death should be among you. Yet We are not thereby hindered from replacing you with others your likes, or from producing you in a form which ye know not! Ye have known the first creation: will you not reflect?" *Ibid.*, 96.
91. Iqbal has been criticized for these "quite heterodox and problematic" views, as Shah calls them, by critics of his thought. See Shah, 144-45.
92. *Ibid.*, 96-7.
93. These twelve lectures were first published in their original Urdu and later translated into English by Afzal Iqbal as *The Emergence of Islam, Lectures on the Development of Islamic World-view, Intellectual Tradition and Polity* (Islamabad: Islamic Research Institute, 1993).
94. *Emergence of Islam*, 143-144.
95. *Ibid.*, 144.
96. Abū Ḥāmid al-Ghazālī, *al-Munqidh mina'l-ḍalāl*, tr. by Richard Joseph McCarthy as *Freedom and Fulfillment* (Boston: Twayne Publishers, 1980), 89.
97. *Ibid.*, 144.
98. *Ibid.*, 144-145.
99. *Ibid.*, 145.
100. *Ibid.*, 145.
101. For a collection of selected articles which critically examine the theory of evolution from scientific, philosophical and religious perspectives, see Osman Bakar, *Critique of Evolutionary Theory* (Kuala Lumpur: Islamic Academy of Science-Nurin Enterprise, 1987).
102. Martin Lings, *Ancient Beliefs and Modern Superstitions* (London: Perennial Books, 1965), 4-7.

103. Martin Lings, *The Eleventh Hour* (Cambridge: Archetype, 1988).
104. Ibid., 20.
105. Ibid., 23-24.
106. Seyyed Hossein Nasr, *Man and Nature: The Spiritual Crisis of Modern Man* (Oakton, VA: Foundation for Traditional Studies, 1986), 124-129.
107. Seyyed Hossen Nasr and Muzaffar Iqbal, *Islam, Science, Muslims, and Technology: Seyyed Hossein Nasr in conversation with Muzaffar Iqbal* (Sherwood Park, AB: Al-Qalam, 2007), 150.
108. Ibid., 151.
109. Ibid., 153.
110. Ibid., 154.
111. *Takhlīq-e Ādam*.
112. Nun Ha Mim Keller, "Islam and Evolution: a letter to Suleman Ali", <<http://www.masud.co.uk/ISLAM/nuh/evolve.htm>>, accessed May 20, 2009.
113. Notably the works written by individuals associated with the Intelligent Design (ID) Movement such as Stuart Burgess, Phillip E. Johnson, William Dembski, Stephen C. Meyer (all of whom are evangelical Protestants), and Michael Behe (a Roman Catholic).
114. The last and the third instalment will appear in the Winter 2009 issue of this journal, *bi'idhmi'Llāh*.