## Adventures of an Amazing Concept: Some Wanderings of "Miracles" in the Discourse on Islam and Science

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Miracles play a vital role in world religions. The fascination and expectations exerted by miraculous events, as well as the heated debates on their authenticity are well-known. However, miracles have never been uniformly or univocally defined, either to defend or to reject their credibility. Their ambiguity and openness in theology and philosophy is rooted in the very ambiguity and openness of the lexicon of the different sacred scriptures. Furthermore, in religious discourse miracles are sometimes referred to in the context of scriptural narratives, sometimes in extra-scriptural ones. In order to reconstruct the meaning of "miracle" we can begin with a survey of "miracles" as they are narrated in the sacred scriptures and then move on to theological and philosophical debates.

Miracles in the Old Testament are usually performed by or through Prophets, in order to confirm their power and affect the course of history. The most well-known miracles are connected to Moses and the Exodus: e.g., Moses' staff (or his brother Aaron's) turns into a snake (Exod. 4:3), the waters of the Red Sea are divided (Exod. 14:21), manna feeds the Hebrews in the desert (Exod. 16:12). In Biblical Hebrew there is no single word for "miracle," but different terms: (1) *oth*, "sign" (e.g.: Exod. 7:3; Dt. 4:34; 6:22; 7:19, 34:11); (2) *mophet*, "portent" (e.g.: Ps. 71:7); (3) *niphlaot*, "wonders" (e.g.: Ps 107:24); (4) *geburah*, "act of power" (e.g. Dt. 3:24); (5) *nes*, "signal" (occurring only once: Num. 26:10 yet later largely employed in the Talmudic literature). In the New Testament wonders are worked and signs are given mostly by Jesus but also by his apostles and later followers, for instance Paul. Different terms occur in the New Testament as well: (1) *dynamis*, "power," or "mighty work" (e.g.: Mt. 11:20 ff.; Mk. 6:2); (2) *ergon*, "work" (e.g.: Jn. 9:3); (3) *semeion*, "sign" (e.g.: Jn. 2:11; 4:54); (4) *teras*, "portent," "prodigy" (combined with the preceding in the expression *semeia kai terata*, e.g.: Acts 2:43); (5) *thaumasia*, "wonders" (e.g Mt. 21:15); (6) *paradoxa*, "paradoxical events" (e.g.: Lk. 5:26).

When Greeks and Romans used expressions equivalent to the modern "laws of nature" these were related to moral principles and therefore had nothing to do with any discussion of miracles. (Grant 1952: 19 ff.). However, the classical world developed a debate on the unlikelihood of the extraordinary facts reported by mythological and poetic discourse and miracles were perceived as a challenge to credibility even before connecting them with the concept of natural laws and the debate thereupon. We can here briefly recall Tertullian (c. 160-220) and Origen (c. 185-283) who chose different strategies for dealing with the interpretation of miracles. The former denied the value of philosophy and took miracles literally; the latter preferred an allegorical interpretation (Grant 1952: 193 ff.). Augustine (c. 354-430) represented a turn. He experienced the social relevance of miracles, which in his times began to be attributed to contemporary figures of saints and therefore to play an important role in leading pagans to conversion. He elaborated an articulated definition of miracle, seen as an extraordinary fact, which apparently surpasses the hope or the capacity of the beholder, and goes against the known course of nature (Bron 1979(2): 14). However, the current official doctrine of the Catholic Church is mainly based on Thomas Aguinas' (1225-1274) Summa contra gentiles (3.99.9 ff.). Aquinas defines a miracle as an event that stretches beyond the natural power of any created thing to produce and something of which only God could be the principal cause; he develops a refined classification of miraculous events as well: miracles supra, contra, praeter naturam (see Bron 1979(2): 15-16; Swinburne 1989: 19-22).

The concept of miracle is nowadays still central in Catholic doctrine, especially as related to the praxis of canonization, whereas Protestant theology from its very beginning has denied the miracles of the saints and emphasized the scriptural ones (Monden 1960: 295 ff.). The idea of the miraculous has challenged important contemporary theologians, in that the supernatural aspect is difficult to conceptualize or accept. Amongst the most important contemporary interpretations, we can briefly recall that of R. Bultmann (1884-1976) who advocated a "demythologization" of the biblical narratives, a demand allegedly dictated by scientific development (Bultmann 1984). Similarly, P. Tillich (1886-1965) tried to drive attention away from the supernatural aspect towards that of the religious significance, assumed to be the defining trait of miracles (Tillich 1951: 115-118).

Miracles can be said to have concerned almost every major personality of modern Western philosophy, even if their respective positions did not always develop into articulated, autonomous theories. Original perspectives can be found for instance in B. Spinoza (1632-1677), Th. Hobbes (1588-1679), J. Locke (1632-1704), G. W. von Leibniz (1646-1716) and I. Kant (1724-1804). Whereas such positions nowadays tend to be discussed against the background of the respective philosophies, as part of historical criticism of those very philosophers, the most important and still vital contribution within modern philosophy is that of D. Hume (1711-1776) and is to be found in the tenth chapter of his *Enquiry Concerning Human Understanding* (1748). The core of Hume's interpretation of miracles is represented by the following passage:

"A miracle is a violation of the laws of nature; and as a firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can possibly be imagined. [...] No testimony is sufficient to establish a miracle, unless the testimony be of such a kind, that its falsehood would be more miraculous, than the fact, which it endeavours to establish" (quoted in Swinburne 1989: 27-28)

Hume did not focus on the religious significance of specific biblical miracles; rather, he discussed some miracles that had allegedly occurred in a Jansenist community and elaborated such interpretation along the lines of his theory of knowledge. He interpreted the concept along that of "law of nature" and implicitly outlined a method for the evaluation of the credibility of miracles (that in fact does not seem to leave much room for belief in them). All this set the agenda for the contemporary analytical debate.

Miracles are discussed within contemporary analytical philosophy to a considerable extent, sometimes under the appearance of a mere commentary to Hume (see for instance Fogelin 2003). Some philosophers have even *specialized* in miracles and dedicated to them extensive works, discussing preceding positions and developing original views. Such is the case of R. Swinburne (Swinburne 1970; Swinburne 1989) and A. H. Larmer (Larmer 1985; Larmer 1988; Larmer 2003;

<sup>&</sup>lt;sup>1</sup> For historical surveys and systematic discussions of single contributions see Bron 1979(2), Burns 1981, Brown 1984. See also Corner, D. 2007; Corner M. 2005; Twelftree 2011.

Larmer 2004). The former defines a miracle as "an event of extraordinary kind, brought about by a god, and of religious significance" (Swinburne 1970: 1). According to the latter, a miracle is rather "an unusual and religiously significant event beyond the power of nature to produce and caused by an agent which transcends nature" (Larmer 1988: 14). Both specify at length, in analytical style, the various elements of their definitions, and eventually defend them from respective adversaries (Overall 1985; Overall 2003).

The Muslim debate displays a similar variety of meanings and positions. Let us begin once again with a survey of scriptural miracles. The Qur'an itself as the descent of a revelation conforming to a heavenly archetype is "the" miracle of Islam, with its amazing uniqueness and inimitability being ultimate proof of its divine origin. This meaning is nevertheless not the only one. Firstly, Qur'anic passages have been interpreted as relating to deeds or episodes of the Prophet whose character might be judged, by modern standards, supernatural or miraculous; for instance, when a spider conceals the Prophet and his fellow Abu Bakr by weaving its net at the entrance of a cavern where they have taken refuge (Q 9:40); the Prophet's instantaneous journey to Jerusalem overnight (Q 17:1); the splitting of the Moon (Q 54:1); and when two angels open the young Prophet's breast, take out the heart, purify it with snow, then replace it (Q 94:1).<sup>2</sup> Secondly, the Qur'an refers to the supernatural deeds concerning Prophets that we encounter in the Old Testament as well: for instance when Abraham cannot speak after being told of his wife's pregnancy at an old age (Q 3:41); when Moses performs his prodigies in front of the Pharaoh and the Hebrews (Q 7:106–108, 133; Q 20:80); when Solomon commands the winds (Q 21:81; Q 34:12; Q 38:36). Thirdly, such deeds and episodes are often defined with the term aya (pl. ayat) "sign." The attribute related to aya, bayyina, or "clear," becomes itself a synonym of "sign" within Qur'anic lexicon, and such terms are also used with reference to what we could define as two different classes of phenomena. The first class is constituted of natural processes and their creation; e.g. fruit ripening (Q 6:99); the growth of plants (Q 13:4); rain (Q 16:65); brewing (Q 16:67); the alternation of night and day (27:86). The second class is that of historical or past events: for instance, when God sends a sacred

<sup>2</sup> This is in fact only one possible interpretation of the verse at stake, and one generally *not* accepted by Shia, since the Prophet is considered sinless from birth. Analogous considerations hold for other narratives touched upon here, such as the opening of the Prophet's breast or the night journey to Jerusalem. However, they seem worth mentioning in a reconstruction that, rather than focusing on specific theological doctrines, tries to provide the reader with an overview of Qur'anic passages or of narratives connected to such passages, that *might* be *prima facie* judged by any reader, Muslim and non-Muslim alike, as supernatural.

she-camel to the people of Thamud (Q 7:73; Q 11:64; Q 17:59; Q 26:154–158) or when a violent wind is raised against the Adites (Q 41:15–16). In addition, the very term *aya* describes the verses themselves of the Qur'an (Q 26:2; Q 27:1; Q 31:2). Furthermore, we find in the Qur'an reference to deeds and episodes that display supernatural character without being directly described as *aya*; for example when slain birds are resurrected for Abraham (Q 2:260) or when Abraham is protected from fire (Q 21:69). It should be noted that the Qur'an also explicitly suggests de-emphasizing the importance of miracles and extraordinary events.<sup>3</sup> Other miraculous narratives flourished around the ascetic figures known as Sufi. The corpus of the tales relating their wondrous deeds constitutes an extremely rich literature (see Schimmel 1975: 284–302; Gramlich 1987; Woodward 2001: 206–230).

Muslim theologians reacted to Qur'anic and extra-Qur'anic narratives by developing extremely fine-grained definitions and classifications of miracles. In particular, a further terminological and conceptual distinction was made between *mujizat*, miracles of the prophets, meant to confirm God's power rather than the prophets' powers (thus similar to the Greek *dynameis*) and *karamat* (similar to the Greek *charisma*), basically denoting the favored condition conceded by God to the saints, which implies the capacity of performing supernatural deeds as well, sometimes kept secret by the saint (see Gramlich 1987: 1618; Schimmel 1994: 187; Geoffroy 2000; Radtke 2000).

In Islamic philosophy, the problem of the extraordinary was particularly connected with that of causation; its discussion was suggested by the Greek philosophical texts preserved, transmitted and interpreted by Arabic scholars. For instance, Al-Ghazali (1058–1111) defended the idea that miracles, meant as divinely operated interruptions in the usual course of nature which prove the truthfulness of a prophet, are logically possible along with a literal reading of miracle stories in the

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<sup>&</sup>lt;sup>3</sup> Q 6:7–10: "(7) If we had sent unto thee a written message on parchment, so that they could touch it with their hands, the unbelievers would have been sure to say 'This is nothing but obvious magic!' (8) They say, 'Why is not an angel sent down to him?' If We did send down an angel, the matter would be settled at once, and no respite would be granted them. (9) If We had made it an angel, We should have sent him as a man, and We should certainly have caused them confusion in a matter which they have already covered with confusion. (10) Mocked were many apostles before thee; but their scoffers were hemmed in by the thing they mocked." Remarkably, also Jesus in the Gospel refused to perform miracles on demand (see Mt. 12:38–40: 38. "Then some of the Pharisees and teachers of the law said to him, 'Teacher, we want to see a sign from you.' 39 He answered, 'A wicked and adulterous generation asks for a sign! But none will be given it except the sign of the prophet Jonah. 40 For as Jonah was three days and three nights in the belly of a huge fish, so the Son of Man will be three days and three nights in the heart of the earth."' NIV).

Qur'an. Averroes (or Ibn-Rushd, 1126–1198) rather defended the centrality of the miracle of the Qur'an and claimed that admitting a disruption of the order of nature is tantamount to denying the difference between certain and conjectural knowledge. However, he also admitted that miraculous stories had edifying value.<sup>4</sup>

Clearly, there is neither a single word for "miracle," nor a clearly specific feature of all scriptural narratives that are or can be defined as "miraculous," nor any univocal definition in philosophy and theology, this being valid for all Abrahamic religions and their respective theologico-philosophical traditions. However, miracles can be assumed in a broad sense as a guiding thread for the exploration of a specific debate. We can namely explore how "miracles," *both* meant as specific philosophical characterizations *and* events narrated in religious texts that can be intuitively thought of as miraculous, are characterized by specific authors. We can, in other words, let the specific meanings of "miracle" emerge from the respective authors' usage of that very term, including reference to specific passages of the sacred scriptures and to other authors' conceptualization and discussions. This is the methodological stance adopted here while focusing on some Muslim authors who, in different ways, hold that natural science and Islamic beliefs do not contradict each other.

The first author we focus upon is Sir Seyyed Ahmed Khan (1817-1898), the Indian reformer who developed a renewed theology for Islam that comprised a strong appreciation of science and technology. He wrote, *inter alia*, a long commentary to the Qur'an and a rendition of the Prophet's life. Curiously (and perhaps not very consistently) he seemed to deny the presence of *any* supernatural elements in the Qur'an, and buttressed his rejection of supranaturalism as follows: the laws of nature are like promises of God, therefore advocating their interruption is tantamount to advocating God's unfairness.<sup>5</sup> Sir Seyyed Ahmad Khan gives us from the very *Preface and Introduction* a definition of nature:

<sup>&</sup>lt;sup>4</sup> Al-Ghazali, *The Incoherence of the Philosophers, Introduction* to the *Second Part* and *Seventeenth Discussion* (al-Ghazali 2000: 161–178) and Averroes, *The Incoherence of the Incoherence*, 509–515 (Averroè [Averroes] 2006: 471–477). For comparative analyses see Kogan 1981 and Yazicioglu 2011.

<sup>&</sup>lt;sup>5</sup> For a reconstruction and criticism of such discussion see Ahmed 2003/2004.

"Again, what is Nature? It is law, in conformity to which all objects around us, whether material or immaterial, receive their existence, and which determines the relation which they bear to each other. This law exists in the objects themselves. We say *Nature* (...) that is, God, that supreme and perfect Being upon whom the existence of all other beings originally depends (...)" (Khan 2008: 9).

Throughout his treatise, that he conceived for "(...) the use of those Muhammedan youths who are pursuing their English studies (...)" (Khan 2008: 17) Sir Seyyed Ahmad Khan takes great pains to present his version of the life of the Prophet in such a way that will be faithful to standards of rationality and science while at the same time saving the extraordinary character of the Prophet's life itself. For example, as to the strange events which, according to several traditions, accompanied the birth of Muhammad such as the sudden drying up of the lake of Sala, he assures his readers that they are unreliable tales that "(...) evidently appear to have been borrowed from the poets, who make use of the figure synecdoche [sic]" (Khan 2008: 194). In another passage Sir Seyyed Ahmad Khan subscribes to the tradition according to which the Prophet was miraculously born circumcised, but he immediately specifies that, "This, however, is by no means to be considered a marvel, or miracle, being merely a lusus naturae" (Khan 2008: 200). Similarly, the episode of Muhammad's night journey to Jerusalem is explained by Sir Seyyed Ahmad Khan as a dream, something that, "(...) never occurred in the body, but was purely imaginary" (Khan 2008: 206; cf. also 329 ff). Furthermore, he rejects the explanation of the episodes of revelation as epileptic attacks (then popular among Christian critics of Islam); to his refusal of such a "pathologizing" explanation he adds nevertheless that there was nothing like a supernatural miracle involved, although divine agency was (Khan 2008: 209-210). Against those Christians who question the credibility of extraordinary tales concerning the Prophet, he objects in turn to the belief in such extraordinary events as Jesus' multiplication of loaves and fishes (Khan 2008: 212-213).6

An important interpretive trend, which had a precursor in the Egyptian Tantawi Jawhari (1862-1940), author of the *Jewels in the Interpretation of the Qur'an* (26 vols., 1923-1935) is the so called "scientific exegesis of the Qur'an" or *tafsir ilmiy* (Wielandt 2002; Rippin 2005(3): 238-241; Dallal

<sup>&</sup>lt;sup>6</sup> Khan's polemical target is mainly the Scottish author Sir William Muir, with his *Life of Mahomet* (1858-1861). See also Khan 2008: 337.

2010: 169-172). According to this line of exegesis, Qur'anic passages contain extremely accurate references to natural phenomena. The supposed accuracy of such descriptions is taken as proof of divine revelation: who could have known those phenomena in depth? Certainly not the Prophet, if even the most learned men of his time were unaware of them. This approach was given unprecedented visibility by a French surgeon and (supposed) convert, Maurice Bucaille (1920-1998) with his 1976 book *The Bible, the Koran, and Science.*<sup>7</sup> The "scientific interpretation" of the Qur'an, which already in the 1980s-90s inspired a flood of books and booklets is currently flourishing in the "new media." There even exists a Committee of Scientific Notions in the Qur'an, a section of the Egyptian Ministry of Endowments, currently chaired by the Egyptian professor of geology, Zaghloul El-Naggar (b. 1933), a TV star of the "scientific interpretation" (Nkrumah 2008). El-Naggar recommends approaching the Qur'an with philological accuracy and scientific competence (El-Naggar 2008: 17-23). However, when it comes to the episode of the splitting of the Moon mentioned in the opening of Sura 54, El-Naggar first advocates a strictly literal interpretation of its meaning: the verse refers to something that has actually happened, a miraculous and supernatural event beyond scientific comprehension. At the same time El-Naggar propagates the popular (pseudoscientific) narrative according to which NASA astronauts, in one of their explorations of the lunar surface, discovered the signs of the Moon's fracture (El-Naggar 2010: 69-73). The discourse on "scientific miracles" as El-Naggar develops it is therefore twofold: on the one hand "miracle" is defined with reference to the traditional concept of i jaz (the Qur'an's inimitability) but its meaning is reformulated insofar as such inimitability coincides with the presence of notions unknown at the time of the Prophet; on the other hand, when it comes to supernatural proper, a strictly literal reading is prescribed by El-Naggar; in the case of the splitting of the Moon we even have an intersection of the two strategies since it is claimed that a (supposedly) *scientific* discovery confirms the fact that the *supernatural* event took place.

An influential Qur'anic commentary was written, in a different time and a different cultural milieu, by the Turkish religious reformer "Bediüzzaman" (the "wonder of his time") Said Nursi (1878-1960). The *Risale-i-Nur* or *Epistle of Light*, consisting of fourteen books, was written by Nursi in order to explain the content of the Qur'an to large audiences. Nursi's work is characterized by a

<sup>&</sup>lt;sup>7</sup> For a critical discussion of Bucaille's ideas see Bigliardi 2011; for a biographical and intellectual profile of Bucaille see Bigliardi 2012a.

peculiarly convoluted and repetitive style. This is explained by various factors: Nursi was born in the village of Nurs, province of Bitlis, where Kurdish and Armenian were the languages of the local population and Turkish was the language of authorities and bureaucracy that he learnt after the age of twenty. Moreover, he was influenced by works which displayed an elliptic style, for instance by the mystic Ibn al-Arabi. Finally, the blending of religion, poetry, and mythology was common in his cultural milieu, which was still largely characterized by morality (Mardin 1989: 36-37; 171; 176-177). Nursi faced the challenge of revivifying the Qur'an in a world that had just begun to be disenchanted (Mardin 1989: 37). A major challenge was posed by Ottoman positivism of the end of the 19<sup>th</sup> century, with its conception of nature as dominated by impersonal forces (Mardin 1989: 39). Moreover Nursi, who had traveled through Petersburg, Warsaw, Berlin, Vienna, and Switzerland (Mardin 1989: 89), knew and cherished the scientific-technological advancement of the "West," and he urged Muslims to adopt it (Mardin 1989: 87). In his writings, he presents nature as a theophany, the display of God's signs, therefore reversing a materialistic discourse that he found in the Turkish philosophical debates of his times (Mardin 1989: 93).

When it comes to supernatural events, Nursi subscribes to the traditional doctrine according to which they were given to the Prophet, as well as to other prophets and saints, to corroborate their claims (Nursi 2006: 1-19; 25-30 and *passim*). However, Nursi adds to this another interesting doctrine. As T. Edis observes, Nursi

"(...) was not completely naïve about finding modern wonders in the Qur'an. He argued that the miracles in the Qur'an were described in obscure terms, to excite the curiosity of Muslims, to make it clear that wondrous feats were possible so that the believers would figure out how to realize these feats. In other words, Nursi combined the modernist tendency to naturalize scriptural miracle stories with the more traditional theme of locating all knowledge in the Qur'an" (Edis 2007: 92-93)<sup>10</sup>

<sup>&</sup>lt;sup>8</sup> The *Risale-i-Nur* is still very influential for the *Nurculus movement* that emerged in Western Turkey in the 1920s. I will not pursue here the political aspects of Nursi's thought and influence. The commentary is not available in full in English, but single volumes are in circulation, such as Nursi 2006.

<sup>&</sup>lt;sup>9</sup> Nursi was also aware of the importance of technology for religious proselytization; for instance, he compared the radio to a Qur'an reader with "a million tongues" (Mardin 1989: 38).

<sup>&</sup>lt;sup>10</sup> Mardin states that, in Nursi's "hybrid metaphors," "technology is made to serve the ends of religion" (Mardin 1989: 82).

It is to be remarked that wondrous, supernatural events were ascribed to Nursi himself in his lifetime, but he refused the role of miracle-maker (Mardin 1989: 75 and 188).

We can now make a leap forward in time and linger on the doctrines of the Iranian-American scholar Seyyed Hossein Nasr (b. 1933). Nasr's theories are expressed and defended in an impressive corpus, based on extensive philosophical knowledge of Muslim and Christian/Western sources alike, and incorporate Sufi mysticism. World religions, according to Nasr, are all ultimately based on a primordial doctrine of unity; each and every revelation that substantiated them functioned as a "vertical" link between human affairs and divinity. Each world religion encapsulates a teaching, whose core Nasr describes as *scientia sacra*, which reminds human beings of the transcendental unity of phenomena and of their divine source, which can be grasped by a human and at the same time divine faculty that Nasr calls *Intellect*. The main distinction and shortcoming of science as it has been practiced at first in post-Renaissance Europe and later worldwide is, according to Nasr, the missing appreciation of *Intellect* in favor of purely quantitative reasoning. Science has thus been "desacralized," and knowledge has been highly compartmentalized. The implementation of desacralized science results, according to Nasr, among other things in contemporary ecological catastrophes. The solution, according to Nasr's vision, can only be a return to the traditional *scientia sacra*.<sup>11</sup>

An important historical stage in the gradual loss of awareness of the sacred, according to Nasr, was marked by Christian theological reflection; since Christian thinkers were trying to differentiate themselves from Greek rampant naturalistic doctrines and they "...drew an excessively tight boundary between the supernatural and the natural, leading to an impoverished view of nature..." (Nasr 1981: 35). Due to such separation, together with the constant emphasis on Christ's miraculous birth and life, according to Nasr, "...the evidence of religion seemed to many a European mind to rely upon the miracle which breaks the regularity of the laws observed in nature, whereas the regularity itself is no less evidence of ...the Wisdom of God reflected in His creation" (Nasr 1981: 193).

<sup>11</sup> For a general reconstruction of Nasr's views see Stenberg 1996, Chapter 2 as well as the so far unparalleled monograph on Traditionalism: Sedgwick 2004.

Through Qur'anic concepts, according to Nasr, we can properly see the cosmos as *theophany*; in this perspective, "... the fact that the sun does rise every morning is ... as much cause for wonder as if it were to rise from the West tomorrow" (Nasr 1981: 195). Nasr emphasizes namely the fact that in the Qur'an, the same term, *ayat* or "signs" which is used for supernatural phenomena, refers as well to natural ones and to the verses of the Qur'an itself (Nasr 1981: 192). "The Qur'an", in Nasr's words, "addresses not only men and women but the whole of the cosmos ... [and] does not draw a clear line of demarcation between the natural and the supernatural, nor between the world of man and that of nature" (Nasr 1993: 130). Once *scientia sacra* is restored, religion and science can be said to be fully in harmony.

Furthermore, Nasr links the erroneous emphasis on the miraculous to another misled and misleading theoretical presupposition that he identifies in modern science and labels "uniformitarianism"; it means "...belief in the uniformity of 'laws of nature' over long periods of time and expanses of space." According to Nasr, such extrapolation is just another expression (and cause) of the ignorance of "multiple levels of existence" (Nasr 1981: 209). Miracles, in fact, point at the existence of other levels: namely, they "... mark an eruption of the Eternal order in the temporal..."; "In the occurrence of miracles," Nasr observes, "not only are the ordinary laws of physical existence penetrated by laws belonging to higher orders of reality, but the ordinary rapport between time and Eternity is drastically changed" (Nasr 1993: 34). Once uniformitarianism is abandoned, according to Nasr, one can understand how "in days of old" one can have walked on water and such a narrative is not perceived anymore as something that can be "explained away" (Nasr 1993: 161).

The contemporary debate on Islam and science has witnessed the emergence of Muslim scientists who are especially engaged in the religion-science dialogue and, notwithstanding different ideas and nuances regarding the interpretation of specific matters, share some substantial traits. Among those common traits relevant for the present essay I shall list their competence in contemporary physics, their rejection of the "scientific interpretation" of the Qur'an, their theistic outlook, their full acceptance of science (even including Darwinian evolution) as methodologically independent, and the openness to other monotheistic religious traditions, considered by them equally able to

establish an harmonious relationship with natural sciences. Such authors include the Iranian M. Golshani (b. 1939), the Iraqi M. B. Altaie (b. 1952), the French B. Guiderdoni (b. 1958), and the Algerian N. Guessoum (b. 1960).<sup>12</sup>

Golshani is open towards the existence of miracles nowadays; he interprets them by drawing on an argumentation elaborated by the Iranian cleric and thinker M. Motahhari (1920-1979), and along a line of thought that is not extraneous to analytical philosophy of science: miracles are events obeying laws of nature of which the witnesses of those very events are not aware. Such laws might cancel out the effect of known laws so as to give an impression of the suspension the known laws themselves; this is not a supernatural suspension, though, but a natural one according to unknown principles. 13 Golshani is also open to a metaphorical interpretation of Qur'anic verses describing supernatural phenomena. Similar principles hold for Altaie, who invites us to be aware of how extraordinary the events described by quantum physics are: Moses' staff turning into a snake might have been a perfectly natural if quantum event. The emphasis is put on the extraordinary rather than on the supernatural; however, Altaie does not exclude a metaphorical interpretation of such narratives either. 14 Guiderdoni sketches a threefold classification of miracles: the miracle par excellence, according to the traditional doctrine, is the Qur'anic revelation; then miracles in a second sense can be extraordinary coincidences, fully explainable in physical terms; finally, miracles can be supernatural narratives, such as the splitting of the Moon. In this last case Guiderdoni is more inclined to embrace a spiritual, that is metaphorical, interpretation; he points out the amazing fact that the laws of nature are constantly at work but at the same time he does not rule out the possibility of the supernatural. One feature of miracles he is particularly eager to emphasize is their uniqueness, which renders them unverifiable.<sup>15</sup> Guessoum also presents a nuanced interpretation. On the one hand he embraces Golshani's theory, but he points out that in the case described by his Iranian colleague what we are talking about does not legitimately bear the label "supernatural" any more: the existence of unknown laws is indeed constantly accepted as a possibility in the scientists' thought. On the other hand, Guessoum also invites us not to push

<sup>&</sup>lt;sup>12</sup> See their respective (partial) bibliographies as well as Bigliardi 2012b, Bigliardi 2014a, and Bigliardi 2014b. While reporting "personal communication" I refer to material acquired during one-on-one interviews later included in Bigliardi 2014b.

<sup>&</sup>lt;sup>13</sup> Personal communication. See also Golshani 2003: 310-311.

<sup>&</sup>lt;sup>14</sup> Personal communication.

<sup>&</sup>lt;sup>15</sup> Personal communication.

Altaie's analogy with quantum physics too far: Moses' staff turning into a snake cannot be explained in quantum terms. "Supernatural" meant as the *suspension* of the laws of nature is rejected by Guessoum: in this sense, he cannot accept the literal reading of the splitting of the Moon since it would entail phenomena that would not even be explainable by appealing to unknown laws – they would simply be against the laws and in fact they did not leave detectable traces. Guessoum is rather inclined to save the expression "miracle," or "miraculous" for extraordinary events, and, in a Muslim context, first and foremost for the Qur'an's inexhaustible openness to new interpretations. <sup>16</sup>

The Turkish scholar U. I. Yazicioglu (b. 1978) puts forth an interesting conceptual blend. She takes into account miracles as miraculous stories (considered as encapsulated in the Qur'anic text, not actually witnessed by the readers of the Qur'an), and points to two finely intertwined tensions. The first tension is between miracles considered as interruptions of the course of nature and the regularity of nature itself, a concept on which a consistent philosophy of science can be built. The second tension is between the presence of miraculous narratives in the Qur'an, up to an extent which cannot be easily dismissed, and the fact that the Qur'an itself de-emphasizes miracles (e.g. Q 6: 8-10). In order to harmonize all these aspects, Yazicioglu develops a theory that mainly relies on the doctrines of four thinkers: Al-Ghazali and Ibn-Rushd (Averroes), together with the contemporaries Nursi and Ch. S. Peirce (1839-1914). She begins by pointing out that Al-Ghazali seemingly held contradictory views, since on the one hand he defended the "logical possibility of miracles" and a "literal reading of miracles stories in the Qur'an," while on the other hand he claimed that "miracles are almost useless for faith formation." The seeming contradiction can be solved, Yazicioglu argues, if we take into account Al-Ghazali's overall philosophy of nature, according to which "(...) the natural order is not a logical given, but a continuously re-enacted Divine gift." In this sense miracles, rather than inviting us to disbelieve regularity, confirm it and unveil their divine origin (Yazicioglu 2011 § A). Yazicioglu points out as well that a seemingly puzzling tension can be detected in Ibn-Rushd, since he denied the existence of exceptions in the course of nature as destructive of knowledge, but also showed an appreciation of the edifying value of miracle stories for non-sophisticated believers, that he as a philosopher did not want to destroy (Yazicioglu 2011 § B). A superior synthesis of all these ideas is envisaged by Yazicioglu in

<sup>&</sup>lt;sup>16</sup> Personal communication. See also Guessoum 2011: 329-333.

Peirce's pragmatic method, whose gist she summarizes as follows: "(...) if a concept has any meaning, it should be translatable into a certain attitude or action that can be experienced by us." Yazicioglu emphasizes that Peirce himself recognized the spirit of his method in Jesus' saying "Ye shall know them by their fruits" (Mt. 7:16). Consequently, miracle narratives according to her should be interpreted in the light of the question whether they "...suggest a general tendency or habit for the reader," which she considers even more important than the possibility of documenting the historicity of miracles themselves. Yazicioglu specifically discusses the case of Jesus' birth (Q 19: 17 ff.). Is such a narrative meant to induce a change in our general attitude towards pregnancy? Not at all, Yazicioglu argues: they are meant instead to "...break...[the] inattentiveness to the very order [of nature] itself." This first pragmatic aspect, following Yazicioglu, was precisely the "edifying value" of miraculous narratives that Ibn-Rushd appreciated and respected, and that can be better elucidated in Peircean terms. But there is another contribution of the past that can be similarly read in pragmatic key: Nursi identified in miraculous narratives a stimulus and an invitation to the readers to achieve the very same results through the means of technology: "Read from this perspective," Yazicioglu argues, "the virgin birth can be taken as hinting at the horizons of reproductive technology..." (Yazicioglu 2009).

As I have pointed out, a direct examination of the sacred scriptures seems not conducive to one univocal concept. There is no such thing as "the" Veterotestamentarian/ Neotestamentarian/ Qur'anic concept of miracle. "The" concept of miracle is not a definite description at all, and therefore there seems to be no such thing as *the Christian/Muslim* concept of miracle. What emerges in the first place after a recapitulation of "miracles" in the sacred scriptures and of different conceptualizations of "miracle," is rather the fact that the discussion on a theoretical level originally depends on a specific conceptual selection of scriptural passages; and such selection seems to be only partly conscious as well as culturally determined.

In other words, those authors who engage in the philosophical analysis of (what they perceive as) the concept of miracle in fact focus on a specific array of notions (for instance "exception to a law of nature") within which the definition of miracles is formulated, and they accordingly try to assess the joint tenability of such concepts in the light of criteria of logical consistency. However, there appears to be a latent circularity at work that renders any attempt at "analyzing" miracles (i.e.

pinning them down to a certain definition) irreparably *biased*: in fact, any definition is usually buttressed with specific narrative examples (scriptural or extra-scriptural) and those examples in turn are selected according to pre-existing (perhaps not completely conscious) assumptions on what is ordinary/extraordinary, natural/supernatural and so on.

We can however ask whether there is a common feature to the different theories examined. I am inclined to identify it as the *feeling of amazement with which miracles are associated together with their extraordinariness*. Independently on whether they end up accepting or rejecting miracles, and on the specific, respective definitions, all the authors examined seem indeed to be converging on one point: *a miracle, whatever it is, is something anomalous and hence amazing*. What we observe if we follow the wanderings of miracles in the discourse on Islam and science, *is in fact a constant negotiation over the boundaries of amazement, that are in their turn influenced by each author's conception of science and of the prestige it exerts on their readership. Let us elaborate further on this point.* 

Sir Seyyed Ahmad Khan wants to stick to science as an absolute and therefore walks a tightrope in trying to explain all extraordinary Qur'anic events as exceptional but not as defying science: hence he uses for instance a category like that of *lusus naturae* in order to keep together, for the same event, extraordinariness/amazement and natural character. He wants, at the same time, to avoid all those explanations that, while being "scientific" in character, might discredit religious narratives such as reducing the very revelation to a series of episodes of epilepsy. The result is a somewhat elusive language game in which "scientific" references are mixed with the religious narrative itself (and the narratives he mentions as examples are accurately selected). Of course, a critic might say of him that he divests religious narratives of any supernatural trait, and that he passes over in silence specific passages of the scriptures that at least *prima facie* exhibit supernatural character.

<sup>&</sup>lt;sup>17</sup> It should be noted that I am not making the concept of amazement coincide with that of miracle, and thus I am not slipping back into an essentialist, definite-description based explanation: amazement is indeed a feeling, whose causes are culturally and individually determined. For instance, I am not amazed anymore at sliding doors as I was some thirty years ago upon first seeing one as a child. Or consider this: it can be assumed that even a genius like Leonardo Da Vinci would have run away in panic if suddenly confronted with a plasma TV.

A similar, latent negotiation is at work in the "scientific interpretation" of the Qur'an. In the discourse on the tafsir ilmiy the emphasis shifts from the supernatural to the natural; however, the role of the scientific notions that are supposedly described with accuracy in the Qur'an is analogous to that of supernatural narratives. Both a supernatural event and the presence of a scientific notion in the revelation are indeed *amazing* and *unexplainable if not referred to the work of the divinity*, whose existence and power they confirm. One can philosophically, philologically and scientifically disagree with such a trend of course, however, on a cultural level, it should be agreed that it expresses a remarkable conceptual turn: two birds are killed with the same stone when the preexisting doctrine of the inimitability of the Qur'an hijacks the prestige of modern science, and perceived Western/foreign character of science is bypassed or neutralized. This might be explained in relation to the fact that the first authors who extensively embarked in this kind of exegesis worked and communicated in a colonial context, in which science was perceived as culturally foreign and as an instrument of oppression. Nursi, who although not in a colonial context was likewise amazed by Western science and technology, similarly tries to maintain the prestige of science (at least on a rhetorical level) while treating miracles, but his discussion is enriched by a pragmatic or didactical nuance: miracles are not just a source of amazement, they are to be reproduced by the means of technology.

In more recent times, El-Naggar, as we have seen, tries to keep together both the way of reasoning typical of the scientific interpretation of the Qur'an *and* the supernatural, when he appeals to staunch literalism, to the inexplicability of supernatural events in scientific terms, and to "scientific" confirmation. He thus expresses a sort of *compartmentalization of thought* (or, if we want to express this in even less benign terms, a *double standard*). His reader is invited to interpret the Qur'anic references to the natural world overemphasizing their supposed accuracy so to demonstrate the scripture's harmony with science, while just accepting, at the same time, miraculous/supernatural narratives as reporting a real event and as not open to any metaphorical interpretation. This may represent a rather reassuring discourse for a readership that is looking for a way to consolidate or keep their faith in a modern world dominated by technology, while feeling that science and technology enjoy an original and superior connection to their religion and without questioning the supernatural.

The function of miracles in Nasr, who has his own strong ideas on how science should be (re)shaped, is deeply different from those we have analyzed so far, but likewise dependent on his specific conception of science. On the one hand Nasr invites his readers not to over-emphasize the role of miracles; on the other hand, he assumes the existence of supernatural events as proof that the laws of physics as they are formulated within "de-sacralized" science are not what physics itself really is, or should be, all about. Miracles in his case are still associated with amazement, but they are used *against* science (in the meaning of the term that Nasr criticizes). Therefore, the way Nasr uses miracles is somewhat the reverse of the one we have seen (latently) at work in Sir Seyyed Ahmad Khan: it is critical and non-conformist *vis-à-vis* science. In other words, it does not get absorbed by scientific concepts, but is rather used to unhinge them. One might of course disagree with Nasr, but undoubtedly his treatment of the concept of miracle proves consistent with his idiosyncratic treatment of science.

Analogously the four physicists whose theories we have shortly recapitulated hold interpretations of miracles that display a similar dependence on their conception of science. Rather than try to seduce a semi-educated (and/or scientifically illiterate) audience, the four natural scientists aim at a public that is scientifically and philosophically well informed. Moreover, they are willing to set up a dialogue with academics engaged in similar scientific and philosophical enterprises within other religious traditions, especially within the other two religions of the Book. Golshani formulates a definition of miracles that keeps together science and the exceptionality of religious events without impairing the credibility of religion vis-à-vis science. Altaie adopts a similar line when he invites us to understand that what physics describes is no less extraordinary than supernatural events (and that perhaps the latter can, as far as certain episodes are concerned, be explained through the laws governing the former). Guiderdoni elaborates an all-encompassing classification of miracles, with some emphasis on the natural and the *spiritual* meaning of miracle; he does indeed absorb the rich variety of interpretations emerged within Muslim debates, rooted in the polysemy of the term aya, and at the same time he sidesteps staunch literalism. Guessoum strongly rejects the concept of supernatural as well as the idea of "scientific miracle" and associates the feeling of amazement once again with the formal and semantic traits of the Qur'an. 18

<sup>18</sup> I suggest that the Algerian physicist embarks in an exegetical enterprise that runs risks analogous to those faced by Sir Seyyed Ahmad Khan: someone might indeed embrace his criticism of the "scientific miraculousness" of the Qur'an and still hold against him that he renders the Qur'an "all too human," with an emphasis on a kind of

Finally, I. Yacizoglu's philosophical theory represents a sophisticated synthesis in which modern science, classical Muslim authorities and a contemporary Western philosopher all converge in a conceptualization of miracles that keeps the pragmatic aspect of the concept in the footprints of Nursi; at the same time Nursi's very position, that might sound too unsophisticated to a contemporary reader, is updated through the appeal to Peirce's concepts, and the supernatural is not completely ruled out. In sum, Yacizoglu's approach results in appealing to a highly educated, philosophically informed, and intercultural audience.

My conclusion is also to suggest a line of investigation capable of being applied to other theological and philosophical contributions, Muslim and Christian alike. The discussion of "miracles" seems to act as a prism that deconstrues ideas on science and its power and appeal, as held by specific authors, to an extent perhaps unclear to the authors themselves. It can help us to explore the boundaries between science, philosophy, and theology, as well as the definition of science as advocated by very different authors.

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<sup>&</sup>quot;miraculousness" that rather reminds one of the openness ascribed by contemporary semiotics to all classical texts, if not to all texts *tout court*. If that is the case, where is the divine?

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