

Islam and Extraterrestrial Life

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1- Introduction

The search for extraterrestrial (ET) life has been considered by many as the next great venture facing Mankind. Indeed, in the words of C. Sagan, one of the most forceful proponents of this endeavor, it constitutes a search for "a cosmic context for the human species" and thus "a search for ourselves"¹. Such pronouncements might sound like overstatements, but one does not need much clairvoyance to realize that the impact of such a discovery on the course of human civilization will be far reaching and even radical!

The second reason why it could indeed be considered as a great adventure is that it may take decades or even centuries before such a search is successful. And this might still be an optimistic outlook! Today, except for some very local spots left to be explored in the Solar system (Mars, Europa, Titan...), the search is mainly carried out as a galactic signal/message-seeking venture, an acknowledgement of the poor state of the art of our transportation technology². However low the odds may be, the value of the objective is so high as to warrant our attention and interest.

Since humans are potentially faced with such a unique cultural shock of "dantesque" dimension, it is interesting to consider the attitudes of the various human-value systems and philosophies concerning this ET search and its impact on us. In this article, we will be dealing with the general Islamic vision, although we will quickly realize that there is no unified position in that tradition (classical and modern) on this topic. In particular, we shall review the major normative texts as interpreted by classical and contemporary scholars. We will also attempt to tentatively address our understanding of the "Islamic" reaction and response to an eventual discovery of an alien civilization: Will the Islamic message be relevant to those creatures? Will they be accountable for their deeds; will they be concerned by the retribution day, etc.?

We wish to immediately emphasize the unfortunate fact that few studies have been devoted to this subject, both during the classical Islamic era (10th to 14th centuries A.D.) and in contemporary times³. On the other hand, different interpretations have been given to religious texts related to the question, and this further complicates the discussion.

We will shortly confine our discussion to extraterrestrial intelligence per se, but we should make two important points before proceeding.

First, it must be stressed that most Muslim scholars and Quran commentators have shown little or no objection to the existence of other worlds in the cosmos. On this they rely on several verses that appear to make this argument rather clearly. A few examples will make the case: "*He who created the seven heavens and of the earth a similar number...*" (Quran 65:12), where it is often remarked that "seven" in ancient Arabic (and in the Quran) usually translates as "many"; "*Then praise be to Allah, Lord of the heavens and Lord of the earth, the Lord of the Worlds.*" (45:36), which is reminiscent of the very first verses of the Quran: "*In the name of Allah, the Beneficent, the Merciful. Praise be to Allah, Lord of the Worlds...*" (1:1-2). Indeed, the great philosopher-theologian Al-Razi (9th

– 10th c. AD) starts his 20+ volume commentary on the Quran with a paragraph expounding his views that this very first verse implies the existence of living creatures in the heavens...

Some commentators, especially during the classical period, often interpreted the “Worlds” as non physical ones (realms of angels⁴ or jinns⁵).

More recently the identification with heavenly worlds has often been made. Most explicitly, Yusuf Ali, a modern and well-known commentator of the Quran, wrote (1934): “Life is not confined to our one little Planet. It is a very old speculation to imagine some lifelike human life on the planet Mars... it is reasonable to suppose that Life in some form or other is scattered through some of the millions of heavenly bodies scattered through space.”⁶ Similarly, Maurice Bucaille writes in his popular book “The Bible, The Quran, and Science”: “...it comes as no small surprise to the reader of the Quran to find that earths such as our own may be found in the Universe...”

Secondly, it is also worth noting that the existence of extraterrestrial life of primitive form (e.g. plants) has not posed any kind of problem to Muslim thinkers in any era. In fact some have noted and emphasized the fact that some verses in the Quran mention the existence of plants in the heavens; for instance the verse “*Who [Allah] brings forth the hidden in the heavens and the earth*” (27:25) may be understood to refer to plants, because the original word in Arabic “*khab’a*” (rendered here as “hidden”) can mean both “plants” and “what is hidden”...

In any case, we will not in this work consider the impact of the discovery of primitive life forms since that would be of very little theological consequence.

2- Man's Place in the Universe According to Islam

Humanity’s conception of the Universe – and of its place in it – has changed and evolved very significantly since ancient times. The central idea has shifted from a simplistically geocentric and anthropocentric view to a “principle of mediocrity”, whereby humans are considered as nothing more than trivial specs in a vast natural cosmic landscape, and finally to either an anthropic model, where humans’ existence plays a central role in the characteristics and evolution of the (one) special Universe or to a multiverse model where ours is only one universe among innumerable ones that are almost all devoid of life and meaning.

The Islamic depiction of the place of Mankind in the Universe(s) is interestingly ambiguous: one can find verses in the Quran that seem to place us at the center of all existence as well as verses that tell that we are but one species among many others, some of whom are apparently intelligent and morally accountable.

Some of the verses that seem to make Mankind the central axis around which everything revolves (so to speak) include:

- *Don't you see that Allah has made subject to you (men) all that is on the earth, and the ships that sail through the sea by His Command? He withholds the sky (rain) from falling on the earth except by His leave: for Allah is Most Kind and Most Merciful to man. (22:65)*

- *And He hath made subject to you the sun and the moon, both diligently pursuing their courses; and the night and the day hath he (also) made subject. (14:33)*

- *Do ye not see that Allah has subjected to your (use) all things in the heavens and on earth, and has made his bounties flow to you in exceeding measure, (both) seen and unseen? Yet there are among men those who dispute about Allah, without knowledge and without guidance, and without a Book to enlighten them! (31:20)*

But other verses reduce the importance of humans in the Universe: “Assuredly the creation of the heavens and the earth is a greater (matter) than the creation of men; yet most men understand not” (40:57). Yusuf Ali comments: “Man is himself a tiny part of creation; why should he be so egocentric?”

Furthermore, other references make the position of Mankind in the cosmic ladder somewhat more relative. In 17:70 we read:

“Verily We have honored the children of Adam... and preferred them above many of those whom We created, with a marked preferment.”

Here one must note the expression “*many of those whom We created*”, thus implying the existence of other creatures that have received a certain distinction too, but one must also note the “marked preferment” of humans.

This debate about the importance or central place of Mankind in the Universe in the Islamic worldview has continued to take place in the Muslim tradition and culture for many centuries, especially among thinkers and philosophers, if not often among the theologians. Biruni (one of the most distinguished scientists of the Islamic golden era), for instance, considered the Universe as the “best of all worlds” and Man as its goal. Ibn Rushd (Averroes, the most important philosopher in the history of Islam), on the other hand, believed that the Universe was created to host Man, but not everything was created for man!

3- Non-Human Life and the Quran: “Dabba” as sentient corporeal beings

The Quran, the sacred scripture of Islam taken by the faithful to be the unaltered words of God, seems to contain various indications pertaining to extraterrestrial intelligent life. Such indications are usually found within verses discoursing on the various marvels that God has created.

Some scholars have interpreted them as unambiguous pointers to the existence of extraterrestrial life (ETI), while others more cautiously have interpreted them as merely indicating its plausibility, but conceding usually that in any case this possibility is not against any Islamic dogma.

Let us review some of these verses. The clearest indication concerning ETI is usually seen in the following Quranic verse:

And among His Signs is the creation of the heavens and the earth, and the living creatures that He has scattered through them: and He has power to gather them together when He wills. (42:29)

where the original (and crucial) Arabic term “dabba” has here been rendered as “living creatures”. Yusuf Ali a well know contemporary Muslim scholar commented (in 1934) that “dabba” means “beasts, living crawling creatures of all kinds”; other commentators describe the term as meaning: “any sentient, corporeal being capable of spontaneous movement”, as opposed to non-corporeal spiritual beings like angels. The same term was used in another important Quranic verse: “*And God has created every ‘animal’ (dabba) from water; of them are some that creep on their bellies, some that walk on two legs, and some that walk on four; God creates what He wills...*” (24:45). Commenting on the 42:29 verse, the Muslim scholar Shabbir Ahmad Usmani⁷ states: “From the verse it appears that like on the earth there are some kinds of animals – living creatures – in the heavens also”⁸...

Another significant verse, which alludes to the existence of creatures in the heavens and to the sovereignty of God over them all, is the following one:

Not one of the beings in the heavens and the earth but must come to (Allah) Most Gracious as a servant.” (19:93)⁹

which is followed by: “He does take an account of them (all), and hath numbered them (all) exactly. And every one of them will come to Him singly on the Day of Judgment” (19:94-95), signifying that these creatures have moral responsibility, making them accountable for their works and deeds; these must therefore be organisms with developed brains and conscious systems.

Those verses and others have been interpreted by many scholars as implying the existence of other kinds of life outside Earth.

We note also that Ibn Abbas, the close “companion” of the Prophet of Islam, and perhaps the greatest scholar on the Quran of the early period of Islam, has interpreted the afore-mentioned verse 65:12 (“*Allah is He Who created seven heavens, and of the earth the like thereof..*”) as implying that there are many other earths inhabited by intelligent beings like us, and who too have Prophets like Noah, Jesus, and Muhammad. This is however an extreme opinion that no other Muslim scholar has held, to our knowledge. Yet, the fact that he is one of the much-respected companions of the Prophet and the prominence of Ibn Abbas among the early Muslim scholars (he was called “the learned man of this *ummah*”, the Muslim Nation, by the companions of the Prophet themselves), make his opinion of special interest.

The Quranic verse 42:29 (“*And among His Signs is the creation of the heavens and the earth, and the living creatures that He has scattered through them: and He has power to gather them together when He wills*”) has elicited much discussion and analysis regarding its apparent reference to extraterrestrial life and intelligence. Few of the early commentators saw in it a clear reference to the existence of *physical* creatures outside of earth. Al-Farra’¹⁰, for instance, ignored the pronoun “them” and restricted the existence of creatures to Earth. Other classical commentaries of the Quran, e.g. Tabari’s¹¹ and Qurtubi’s¹², similarly restrained the reference to life on Earth, whereas Ibn Kathir¹³ generalized the reference to humans, angels, jinns, and all animals, and thus all these are logically scattered throughout the heavens and the Earth.

In another kind of interpretation, Mujahed¹⁴ speculated that the creatures referred to in the verse could simply be humans (on Earth) and angels (in heavens). On the other hand, Ibn al-Munir¹⁵ insisted that the term “dabba” (here translated as “living creatures”) does not in normal Arabic usage refer to either people or angels, so he concluded that the meaning of the verse should be limited to creatures on Earth. Moreover, it was noted that in another verse (“*And whatever creature that is in the heavens and that is in the earth makes obedience to Allah (only), and the angels (too) and they do not show pride.*” 16:49), angels were explicitly distinguished from the “dabba” creatures. Furthermore, Al-Alussi¹⁶ emphasized the reference to the heavens and concluded that the verse clearly implied the existence of creatures in the cosmos.

More recently, commentators have not only stressed the extraterrestrial interpretation of the verse(s) mentioned above, they have sometimes also emphasized another phrase therein, namely the “*He has power to gather them together when He wills*”, which seems to imply a possible meeting between humans and these creatures...

4- What message would Islam have to those ETI?

Assuming that an unambiguous message from some extraterrestrial intelligence is received in the future, what would be the Muslims’ reaction and attitude toward those creatures? For reasons delineated above, this discovery, although it would certainly

constitute a cultural shock of first magnitude, would not cause a major theological problem in Islam. Even the Muslim scholars who are cautiously interpreting the various Quranic verses related to the subject are prone to accept this readily as totally consistent with God's power and wisdom. Of course, the attitude towards those aliens will much depend on the specifics of their being: their level of "intelligence", their degree of likeness to us, and above all, their attitude toward us¹⁷.

One must recognize that those who have considered such encounters haven't realized the enormous spectrum of physiologies, morphologies and mental structures that can potentially be found out there if we are not alone¹⁸. They usually seem to assume that both the aliens' morphology and psychology would be somehow akin to ours and that we would be dealing with something like an extended member of the human family as it were, not far on the human phylum. The fact that a direct encounter would certainly be fatal to us, as we would most probably appear to them as just emerging from technological prehistory, has very rarely been correctly appreciated.

In any case, if we assume that communications will be confined, for a long time after the first contact, to intersidereal messages and that there will be no direct meetings, what will matter at that stage will be only their intelligence and their psychology (Are they warmongers or peaceful beings? What kind of logic are they using? What is their altruistic inclination?) and not their morphology or physiognomy (Are they bag-shaped, poly-legged, jelly-made? Do they have eyes like ours and how many? How do they communicate?) So we certainly will have plenty of time to consider such "interaction" issues and to psychologically adjust to what will most likely be seen by common human standard as "monsters".

Now, if the mental development of those we entered in contact with was too remote from ours, it is obvious that no meaningful communication could be established. Thus, if they are much developed, they would be like godlike creatures with respect to us, displaying such a huge gap in intellectual capacity that it would be like the communication between us and the ants¹⁹. Assuming the other way around is not much relevant since in addition to the above-mentioned objection working the other way around, we could not have made contact with them in the first place. Thus, the mere establishment of a *meaningful* contact will introduce a selection effect that will naturally restrict the spectrum of ETI we would have to deal with to those having basically the same degree of mental sophistication and a thought system congruent to ours.

On the other hand, the existing ETI may well turn out to be, for some reasons of natural (evolutionary) development, closely related to us as far as their morphology and, more to the point, their mental and moral maturity. Perhaps the huge assortment of intelligent life forms as imagined by science fiction writers is just that: science fiction. And maybe there is a cosmic law that forces such a unity of development²⁰. This possibility will certainly comfort the shivery ones in the religious camp.

Let us take one step further and suppose that we did establish contact with an extraterrestrial civilization, that we found that species not too different from us mentally and having a kind of theistic belief system with a central all-powerful creator-entity (what we call God or Allah in our parlance), whose existence was made known through some revelations brought about by some messengers from their own stock. The Muslim reaction will most likely be to suspect that out of the 124 000 prophets sent by God for guidance to the World, as mentioned in the prophetic tradition, quite a few might have been sent to our non-human brethren, and we will thus likely try to search for common elements between Islam and the aliens' belief system. After all, as emphasized by many Muslim authors, God is described in many places in the Quran as the Lord of the Worlds (plural). We may

surmise that debate and even proselytism will follow suit, encouraged by the fact that according to the Quran, all the living creatures will be accountable before God for their deeds on Judgment Day²¹.

Another possibility could be contemplated, namely that such creatures would have arrived at the belief in an omnipotent creator without having received any revelation, i.e. either through rational analysis or irrational belief. But in a religious perspective it would be holding quite a low opinion of the Lordship of God to suppose that He would provide guidance to an intelligent species in some corner of the Universe (like our corner!) and not to the others.

Then what principle will guide humans' attitude with regard to these creatures? If the life purpose of humans on Earth is, as mentioned in the Quran:

*Seek by means of what God has granted to you the Last Abode (heaven), but do not forget your rightful share of this world, and do good unto others as God has been good to you, and seek not to spread corruption on earth, for verily, God does not love the spreaders of evil*²²

then, that certainly must apply to all the intelligent creatures.

5- Islam and Altruism

Let us now detail the various Islamic principles relating to altruism and which may be relevant in the eventuality of a human-ET contact. We shall present these principles in a decreasing order of generality, starting from the principle of brotherhood of all men and generalized so as to encompass the various purported galactic brethren, to the weakest one of mere tolerance. Their applicability will certainly depend upon the general dispositions and the responsiveness of the other party. Some of those principles are quite connected, but disentangling them from each other is neither practical nor even needed, so we shall allow for some overlap.

The brotherhood of Man

The principle of the brotherhood of mankind is so central to Islam²³ that it could reasonably be generalized to include our non human galactic brethren if it happens that they are mentally close enough to us. The closer the species is to ours, the more this generalization will be seen as adequate.

On the other hand, no amount of human compassion could make these creatures eligible for that extended brotherhood if it happens to be of a scavenging or a warmongering kind (we mean more than the human species!), as we would be in a "prey and predator" logic. Even in that case, if this type of systematic hostile behavior is culturally based and not genetically based, these unruly species could in an optimistic perspective be amenable to a new ethics of relations, especially if it can be shown to them that it may be in their own best interest to do so. This hypothetical interstellar pedagogy could take the form of threats if the other side happens to be of lower technological capacity than us at the time we establish contact with them. Is this not the method we practice with various degrees of success with our kids in an early stage of life? Now since messages may likely take centuries to be exchanged, one should be wary of technological leapfrogs from their side, as threats can backfire...

We can also imagine the case where the gap between them and us is so wide that even the intelligibility of the message cannot be guaranteed either way, then so little knowledge of the other can filter that even channels for expressing brotherhood would be closed. The

communication may possibly proceed through the use of some universal laws of nature, but might then be very limited in their depth.

Kindness to others

This general Islamic principle, closely related to the previous one, is also of great relevance to our discussion, especially when discussing a direct encounter with our galactic brethren.

This kindness to others starts with the neighbors, where you are to assist them and care for their needs. You are indeed supposed to know your neighbors well enough so as to be able to help them with their problems. The Prophet of Islam taught us the following: “Gabriel (The archangel) kept recommending me about treating kindly the neighbors, so much so that I thought he would order me to make them among my heirs.” Their wellbeing is our responsibility and it even turns into a matter of faith: “No one is a real believer who eats his fill while his neighbor goes without food.”

These teachings as we see, go much beyond “reciprocal altruism”, they are rather built on selfless, love-based altruism.

This care to one’s neighbor is extended to the wayfarer and the stranger for whom the believer is duty-bound to assist and offer hospitality. Indeed this hospitality, engrained in the Bedouin’s ethos of the Arabian Peninsula, was elevated by Islam to a moral religious principle. Is there not here some symbolism to be drawn between the duty of hospitality applied to wayfarers in deserts who might have strayed away from their route, and galactic visitors who might end up on Earth casually or out of need? Furthermore, this Islamic kindness to others, which also extends to animals²⁴, can expectantly be extended to non humans!

Peaceful dealing with others

Like all the other religions, Islam upholds the principle of peaceful dealing with others as a religious duty. Islam put forth this universal rule forbidding shedding blood:

“... whosoever killed a human being unless it be for murder or for spreading mischief in the land it shall be as if he had killed all mankind, and whoso saved the life of one, it shall be as if he had saved the life of all mankind”. (Quran 5:32)

The Prophet of Islam emphatically stated: “*Blood and property (of everyone) are a sacred trust*”.

The much-debated principle of Jihad, which is often incorrectly translated as “Muslim Holy war”, stands much misunderstood. War in Islam is considered legitimate only for people facing aggression, and even then, the response must be “appropriate” and graded...

Cooperating for the common good

In case of an encounter with an ETI, if normal interaction with them could not be carried out to the full extent due to deep cultural incompatibility, or obstacles of physical or biological nature, yet cooperation for the common good could still be set up in domains such like trading or even cultural exchanges. It is stated in the Quran:

Cooperate in furthering virtue and piety, and do not cooperate in furthering evil and enmity.

Tolerance towards others’ ways

This may be the weakest form of altruism. In its simplest expression, it consists just of not mingling with someone else's affairs. In its stronger form, it consists of accepting the other's presence, and respecting his particular beliefs, behavior, dress habits, etc...

Yet, even if taken for granted in today's world, tolerance toward others' ways in practice is by no mean guaranteed. Intolerance may take various forms, and fighting it must be carried on a continuous basis. Islam upholds the principle of freedom of beliefs. We thus find in the Quran (2:256):

Let there be no coercion in religion, truth stands out clearly from falsehood.

6- Conclusion

There is no doubt that a confirmed contact with an extraterrestrial intelligence will have a tremendous impact on humans, their view of the cosmos, their role and place in it, the place and form of the religions they subscribe to, and even their relation to God. In his book discussing the scientific and philosophical issues surrounding the search for alien intelligences ("Are We Alone?"), Paul Davies writes poignantly: "it is hard to see how the world's great religions could continue in anything like their present form should an alien message be received."²⁵ Indeed he argues that (highly) intelligent ETs, by means of their own stand with respect to religion and by way of their likely vastly superior technology, will necessarily have an important influence on our own views of religion. If they will have long discarded any religious beliefs and forever regarded them as primitive superstitions, then we might be impressed into adopting such a stand, after all they are highly intelligent and superior, so why should we be right and they wrong on this issue? If, conversely, they had retained some degree and form of spiritual belief or even some religious life, it will likely be of a different type that will probably look to us as "more advanced" than our own systems of beliefs, in which case we would again feel naturally compelled to "convert" to it. In all cases, our religious systems, if not our belief principles and our definitions of God, the Hereafter, the Judgment Day, and other staples of religion will most likely be strongly affected.

So how do Muslim thinkers and theologians contemplate such a possible encounter? What is the current "Islamic paradigm" regarding the existence of intelligent extraterrestrial species and (in principle) our relationship with them?

Muslim theologians, especially in modern times, appear to be totally tied to the sacred texts and their apparent meanings and make too little attempt to extrapolate from the principles and stay away from broadminded liberal interpretations of the verses. Muslim thinkers, however, tend to adopt one of two differing positions: 1) "the principle of the full realization of God's omnipotence"; 2) "the full realization of the 'anthropic principle'." The first principle implies the existence of a multitude of worlds and peoples completing the full grandeur of the creation; the second principle implies the existence of no other intelligent species in our universe, thereby making humans the true heirs or "God's vicegerents" on Earth.

Both camps uphold the same Islamic principle: God has created everything – whether vast or small – with a purpose, even though this purpose may not always be fully known to Mankind. But the two camps arrive at two very different conclusions and conceptions of the relation between God, Man, and the Cosmos: a relation that is either unique/special in many regards, or one that is "infinite in all directions" (to borrow the title of one of Freeman Dyson's books). The search of ETI then becomes a search for that relation, a test for the two above conceptions.

¹ C. Sagan, *Cosmic Search*, Vol. 1 & 2, May 1978

² Among the many good books on the subject, we mention, *Is Anyone Out There? The Scientific Search for Extra-Terrestrial Intelligence*, F. D. Drake and D. Sobel, NY, Delacorte Press, 1992; *Intelligences Extra-Terrestres*, J. Heidmann, Paris, Edition Odile Jacob, 1996.

³ A few of the recent attempts to address this topic include: “*Aliens in the Quran*”, S. K. Munir, <http://www.geocities.com/CapeCanaveral/7906>; “The Quran and Extraterrestrial Life”, Khalid Yunus, <http://www.islamonline.net/Arabic/Science/2001/03/Article5.shtml>.

⁴ As in the other Abrahamic faiths, angels are spiritual beings, described in the Islamic tradition as being made of “pure light”, fully obedient to God and thus with no autonomy. They are believed to intervene in two basic ways: i) shadowing every human being and recording his deeds; and ii) intervening in the physical world to carry out God's commands. Some modern Muslim thinkers have gone to the point of assimilating them with the forces of nature, brushing aside the popular description with their extended human like bodies with wings, as purely allegorical and coming from the inadequacy of the human intellect to grasp concepts so removed from the human realm. Angels are therefore not described as material beings, but only as spiritual ones, necessarily concealed from our senses; consequently they do not qualify, except in very metaphoric ways, to the “living creatures” we are discussing as part of our understanding of what could constitute extraterrestrial beings.

⁵ Jinns are creatures mentioned in many places in the Quran. They are held to live on Earth like humans, except that they are usually not perceptible to us, except perhaps in their “suggestive” power. In opposition to demonic depiction in Arabian folklore, jinns are depicted in the Quran as autonomous beings capable of doing good or evil, and as such, the Islamic message does concern them. M. Asad, in his translation and commentary of the Quran, “*The Message of the Quran*” (London, 1980), which is widely held to be the best one available in English, summarizes the status of these creatures, as agreed upon by classical commentators, as “certain sentient organisms of so fine a nature and of a physiological composition so different from our own that they are usually not accessible to our sense-perception.”

For completeness, let us mention that the material substratum of the jinns is considered to be different from that of ordinary matter; we find in the Quran expressions like “*the fire of scorching wind*” (“Nar al-samoum”), “*jumble of fire*”, “*smokeless flame*”. Some have gone into far-fetched speculations and interpreted it to be another state of matter like plasma, or another matter altogether, ether like, or even dark-matter like.

⁶ Yusuf Ali: *The Holy Quran. Text, Translation and Commentary*. Amana Corp. Maryland, 1983 edition. Note 4569 on 42:29

⁷ Pakistani scholar of the (mid) twentieth century.

⁸ “*The Nobel Quran*”, Tafseer-e-Usmani, Note 43 on 42:29, quoted in “*Aliens in the Quran*”, S. K. Munir, <http://www.geocities.com/CapeCanaveral/7906>.

⁹ Other verses indicate the same idea: “Say: None in the heavens or on earth, except God, knows what is hidden; nor can they perceive when they shall be raised up (for Judgment)” (27:65); “For before God prostrates all that is in the heavens and all that is on earth, every living creature that moves, and the angels...” (16:29); more verses mentions to living beings outside the realm of the Earth are found in the following Quranic verses: 24:41, 27:25, 19:93-96, 29:30...

¹⁰ Classical Quran commentator, 9th – 10th century.

¹¹ Leading classical Islamic historian and Quran commentator, 9th – 10th century.

¹² Important classical Quran commentator, 14th century.

¹³ Probably the most famous commentator of the Quran, 15th century.

¹⁴ One of the earliest classical Quran commentators, 7th century.

¹⁵ Classical Quran commentator, 14th century.

¹⁶ Modern Quran commentator, 19th century.

¹⁷ We may quote here a sample of the confident and assertive attitude of Muslims in this regard. It is the comment made, certainly in a joking mood, by Yusuf Islam, the former pop singer Cat Stevens and now prominent member of the British Muslim community, when the issue of life on Mars was raised in 1996: “*The Prophet Mohammad was sent as a mercy to all the worlds*” quoting from the Quran, “*Islam is for the whole universe, not just for this Earth. We could start preaching on Mars as soon as we get the visa.*”

¹⁸ This possibility must of course be balanced with the one held by the “SETI skeptics”, like E. Fermi, F. Tipler, E. Mayr, J.S.Gould and others, who conclude from the aliens’ “Great Invisibility” as well as from biological considerations that the development of life is a formidable enterprise that has probably happened

only once due to extraordinary circumstances. See also “*Rare Earth: Why Complex Life is Uncommon in the Universe*”, by Peter Douglas Ward, Donald Brownlee – Copernicus Books, 2000.

¹⁹ A. C. Clark put it nicely: “*Any sufficiently advanced technology is indistinguishable from magic*”.

²⁰ The biologist S. L. Bonting was led to a similar conclusion: “*I would expect these creatures to have brains and neuronal systems resembling ours, and thus to have similar thought processes*”. Quoted in: *Encoding Altruism*, C.D.Ringwald.

²¹ Quran 27:65, 19:93-96

²² Quran, 28:77

²³ Two well-known sayings of the Prophet of Islam are worth quoting in that context:

“There is no advantage for an Arab over a non-Arab or a white person over a black one except by the measure of their piety”.

“All mankind are God’s people, and the one loved most by God is he who serves His people in the best way.”

²⁴ Islam requires the believers to be kind to animals. In one occasion, the people asked, “O Allah's Apostle! Is there a reward for us in serving the animals?” He said, “Indeed, there is a reward for helping any animate (living being).” Furthermore, it specifically forbids killing them purposelessly. In a famous story, a woman who willfully let her cat die of thirst by not allowing it to drink was to be cast in hell. The only lawful reason for killing them is if it is a nuisance or for hunting purpose, and even then, killing them must be carried out in a merciful and respectful fashion.

²⁵ Paul Davies, “Are We Alone? Philosophical Implications of the Discovery of Extraterrestrial Life”, Basic Books, 1995, p. 54.