

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ
Qur'an and Science
Perspectives of a NASA Scientist
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What is Science?

- Empirical science is a rigorous method and a process, based upon observation, measurement and reason. Its objective is to find the Truth
- To simplify the process, the scientific method makes certain assumptions about the nature of things
- What science finds is relative Truth which is “good enough” for civilizational advancement

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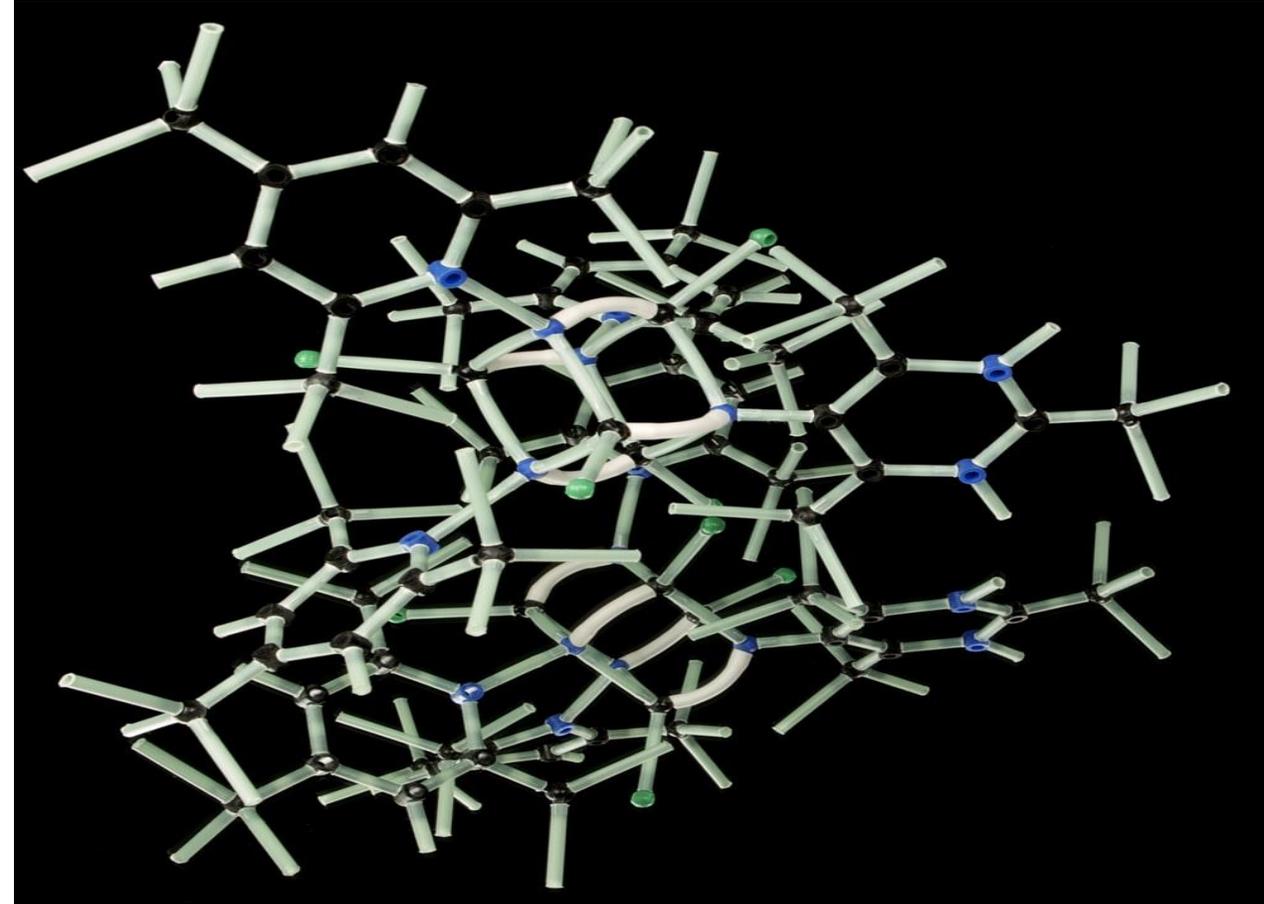


The goal of science is to find the Truth

- On more than one occasion, Muslim ulema have opposed natural science because they did not understand it. What they did not understand, they suspected and denounced.
- God reveals himself externally in nature (*al ilm uz Zahir*). Every atom and every electron is a Sign for His presence. Science attempts to find Him through His magnificent attributes reflected in nature.
- The philosopher, the mathematician, the physicist, the chemist, the biologist and the man of religion are all in search of the Truth. A person of wisdom (*al Hakim*) learns from each of these disciplines.

Science is the Shariah of Nature

- Reason (Aql) is the key to nature
- Thinking (Fikr) is its process
- Wisdom (Hikmah) is its essence
- Aql, Fikr, Hikmah are the elements of a culture of science
- Culture means how we relate to each other
- Science is a method and a process based on measurement and validated by reason to understand nature. Assumptions are inherent in science.



The pursuit of science is a command ordained by God

- Empirical science became “secular” when it arrived in Europe from the Islamic world in the 12th century. The Latin West fell into the same trap that the Mutazalites had fallen five hundred years earlier when they tried to apply reason to theology. Unable to do so, the medieval Latin scholars decided to separate church and state. Thomas Aquinas was a chief proponent of this view.
- In the Qur’anic view, nature is not “secular”. It is animated by the spirit and becomes the Sign for divine presence. The laws of nature are thus the Shariah of God as manifest in the cosmos.

Science brings you closer to Allah

- Discover the Shariah (the Laws) of Nature
- Discover the Attributes (properties) of things
- There are Signs for Al Haqq (the Truth) in the Laws of nature and in the Laws of History
- Discover the subtle works of Allah in nature
- Witness His majesty and His beauty (His jalal and jamal)
- Benefit from the knowledge
- Serve Allah and His creation

Science brings you closer to Allah

- Science in Islam is not secular; it is a spiritual pursuit.
- It is an obligation on the faithful to witness, study, document, measure, understand the laws of nature (the Signs in nature) and apply them to “know” the attributes of God and to serve Him and His creation.
- Everything in the heavens and the earth sings His glory.
- The question is how? That is science.

Science brings you closer to Allah

- Study how the laws of nature (the Shariah of nature) act upon material “things” and bring out the attributes inherent in them.
- With each discovery, you say “*Subhanallah*” (Glorified be Allah) and you keep marching towards His presence with the *tajalli* (manifestation) of new physical discoveries just as a Sufi Shaikh seeks to ascend to His presence with tazkiyah of the heart and spiritual discoveries.
- The physical and the spiritual are two parallel paths but their goal is the same, namely, to find the Truth.

Man is the *khalifa* on earth and uniquely qualified to “know” the heavenly attributes

- General attributes of the human
 - The Senses
 - The Mind
 - The Heart
 - The Nafs (The soul)
 - The Ruh
- Unique Attributes of the human
 - *Ruh e Insani* (The Spirit)
 - Awareness and knowledge of Asma ul Husna
 - Intent
 - Will
 - Action

The Human is created to ask and to know

- The human is endowed with unique attributes of awareness, will, intent and action. He is a “knower” and he “knows” the Asma ul Husna. Most significant, he is infused with the Spirit from God which is the life force of the universe.
- Armed with these capabilities he seeks to pierce the heavens. He searches and asks and his search is awarded with further insights.
- Science is that unceasing process of interrogating the cosmos, measuring and confirming the answers and building the enormous tree of knowledge which distinguishes the human from all other beings. Where there is no science. there is no progress.

Kismet is not predestination. It is discovery

- Allah's will is beyond space-time. It encapsulates space-time many times over
- The human acts in space-time
- There is reason and logic in space-time
- The correct attitude is not "It is the will of God." It is: "What is the will of God?"
- The human is responsible for his intent, will and action.
- The outcome of an action is a moment of divine grace. It is hidden in the womb of the future.
- *Kismet* is a discovery of the outcome of an action.
- A man's *Kismet* is wrapped around his own neck.

What is Kismet?

- We live in space-time. We also know that the notion of space-time may be only a convenience or a habitual way of relating to God's creation.
- In celestial mechanics space-time is bent and curved and takes on strange shapes. In quantum mechanics space-time does not make any sense.
- “Qadr” is the will of God that transcends space-time. “Qada” is when Qadr intersects with space-time and makes things happen.
- Kismet is not predestination. It is discovery of the intersection of Qada and Qadr. Man proposes. God disposes. Man is responsible for his intent and his action. The outcome is the will of God.

Allah's command is to travel and observe

- Say: “Travel through the earth,
And observe what was the fate of
those
Who gave the lie (to Our
Signs).”

Qur'an: 6:11

قُلْ سِيرُوا فِي الْأَرْضِ ثُمَّ انظُرُوا
كَيْفَ كَانَ عَاقِبَةُ الْمُكْذِبِينَ
(الأنعام: 11).

Travel, witness, reflect and learn

- History is a Sign from Allah. The human is commanded to travel, observe and learn from the errors of past civilizations.
- A civilization prospers when it is just. When it violates justice, it shrivels and disappears. It is a law of civilization.
- Laws that govern the rise and fall of civilizations are the laws of Allah clearly enunciated in the Qur'an. They form the foundation for a Science of History. Surah al-Asr (Surah 103) confirms this observation.
- Empirical history is based on the Qur'an. In the Qur'anic terminology "Signs on the horizon" connote Signs in nature and Signs from history.
- Muslims in the classical era traveled, observed, learned about the lands and people they visited and documented what they learned. Ibn Batuta and Ibn Khaldun offer outstanding examples of scholars in this category.

Learn from Empirical History

• أَلَمْ يَرَوْا كَمْ أَهْلَكْنَا قَبْلَهُمْ مِنَ الْقُرُونِ
أَنَّهُمْ إِلَيْهِمْ لَا يَرْجِعُونَ (يس: 31).

- Have they not observed,
How many settlements (civilizations)
We destroyed before them
So that they cannot return (to their
former status). Quran, 36:31



The Scientific Method applied to History

- The scientific method is applicable not just to the natural sciences, it is applicable to history and spiritual sciences as well.
- Allah commands us to travel, observe other cultures and contemplate how civilizations from the past have disappeared.
- The mighty Pharaohs ruled Egypt for centuries. They became oppressive and brought about their own ruin.
- What is the law of civilization? The Qur'an answers it thus:
“Throughout time, humankind is at a loss, except those who have faith and do righteous deeds and work together with patience and perseverance to uphold justice.”

Justice is the fulcrum that arbitrates the rise and fall of civilizations

And behold! We destroyed
Communities (civilizations) before you,
When they became violators of justice!
And there came to them
Messengers with clear Signs,
But they did not believe.
That is how we recompense
A people who are violators (of justice)!

Qur'an, 10:13

وَلَقَدْ أَهْلَكْنَا الْقُرُونََ مِنْ قَبْلِكُمْ لَمَّا
ظَلَمُوا وَجَاءَتْهُمْ رُسُلُهُمْ بِالْبَيِّنَاتِ وَمَا
كَانُوا لِيُؤْمِنُوا كَذَلِكَ نَجْزِي الْقَوْمَ
الْمُجْرِمِينَ (يونس: 13).

Civilizations regress and die out when they violate justice

- Faith, contract and community are the principal drivers in the rise of civilizations.
- Civilizations die out for natural or man-made reasons.
- When a civilization exceeds its bounds and violates justice, it withers and dies out. Examples: overcultivation of land, environmental abuse, social fragmentation, internal or external war.
- Justice is the law of the universe. It applies to nature as well as to history. The Qur'an reminds us again and again not to violate justice.
- Justice as applied to history includes social justice, economic justice, environmental justice, ethics and spiritual balance.

Oppressors destroy themselves- this is a law of history

Lo! Your Rabb does not destroy townships (civilizations) Until a Messenger has been sent to their principal township, And he recites to them Our Signs. And We do not destroy townships (civilizations), Unless their inhabitants do indeed become oppressors.

Qur'an, 28:59

وَمَا كَانَ رَبُّكَ مُهْلِكَ الْقُرَى حَتَّى يَبْعَثَ فِي أُمَّهَاتِ رُسُلًا يَتْلُوا عَلَيْهِمْ آيَاتِنَا وَمَا كُنَّا مُهْلِكِي الْقُرَى إِلَّا وَأَهْلُهَا ظَالِمُونَ
(القصص: 59)

Oppressors destroy themselves

- What is the Shariah (the laws) of history? The Qur'an invites us again and again to use the scientific method of deduce the Shariah of history. That method is to travel, observe, study, measure, ask, verify, draw conclusions and learn from them.
- Allah is just and He loves those who are just. He does not love the unjust. What He does not love is ultimately destroyed.
- Oppression is against the Shariah of history. Oppressors destroy others and they destroy themselves.
- In summary: History is not just a compendium of dates and events. It is a Sign from Allah. The scientific method which includes observation, measurement and confirmation must be applied to history so that we can learn from it and avoid the errors of civilizations bygone.

Learn the spiritual sciences

The descent (*Tanzeel*) of Divine Grace according to Shaikh Shihabuddin

- Allam e *Ha Hoot*
 - Alam e *Ya Hoot*
 - Alam e *La Hoot*
 - Alam e *Jabrut*
 - Alam e *Malakut*
 - Alam e *Qadr*
 - Alame e *Nasut*
- (Alam ul Mulk – the Sciences)



Signs within the Nafs (the Self)

- “Soon shall We show them our Signs on the horizon and within their own Selves...” declares the Qur’an. The Signs within constitute the spirituality of man.
- The Signs within are those that are perceived by the heart and the soul. The heart is the “container” of the divine Names. The soul is the mirror of the invisible world.
- The Qur’an invites the human to aspire to heavenly presence through Signs in nature, in history and within the human soul. Each of these is a domain of scientific study.
- The evidence for natural science is external. It can be measured directly. The evidence for spiritual science is internal. It has to be measured indirectly by its fruit, namely, the spiritual and ethical transformation of individuals and societies.

Learn the Spiritual Sciences -The Ascent (Uruj) of the human according to Imam Tirmidhi

- Faith
- Shariah (The laws of Allah)
- Ehsan (Excellence in good deeds)
- Mua'rifah (Inner knowledge)
- Mohibbah (Love)
- Khushwa (Awe and wonder)
- Faqar (Poverty before divine majesty)
- Fana (Annihilation before divine presence)
- Baqa (Resurrection at a higher plane of consciousness)



The Fruit of the Spiritual Sciences

- The fruit of the natural sciences is a better understanding of the physical. The fruit of the spiritual sciences is a higher consciousness of the Self and a transformation of character.
- The luminaries of the spiritual sciences have charted out the paths (suluks and tareeqas) for a seeker to discover the sublime vistas of spirituality and to “know” the Self.
- For a thousand years, Muslim scholars led the world in the development of natural sciences as well as historical and spiritual sciences.
- Science in Islam is supported on three pillars: natural sciences, historical sciences, spiritual sciences.

Work together in scientific disciplines to discover the Truth

By (the Sign that is the passage of) time,
Verily, humankind is indeed at a loss,
Except those who have certainty of faith,
And perform righteous deeds,
And enjoin upon one another Justice (Truth),
And enjoin upon one another Patience (and
Perseverance). Qur'an, 103:1-3

وَالْعَصْرِ (العصر: 1).
إِنَّ الْإِنْسَانَ لَفِي خُسْرٍ (العصر: 2).
إِلَّا الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ
وَتَوَاصَوْا بِالْحَقِّ وَتَوَاصَوْا بِالصَّبْرِ
(العصر: 3).

Work together in scientific disciplines to discover the Truth

- Science is both an individual and a group endeavor.
- Individual pursuit is reinforced by the companionship of fellow seekers.
- One seeks out great teachers and sincere, capable fellow students in centers of learning and universities.
- Allah commands us to work together, patiently and with perseverance to discover the Truth.
- Allah loves those who patiently persevere.

Allah is al Haqq (the Truth)

- Allah is the Truth (al Haqq). Truth is the hidden treasure referred to in Hadith e Qudsi. Life is a journey to find the Truth.
- The Essence of the Truth is known only to Himself. He reveals His attributes through His creation so that the human may “know” Him.
- He created the cosmos in Truth. The cosmos is not secular; it is a Sign from Allah. It is spiritual.
- The Qur’an guides us to the Truth through Signs and affirms that these Signs are manifest in nature, in history and in the very Soul of the human.
- The pursuit of science thus takes on a spiritual character. It is a search to find Him through Ayahs (Signs) manifest on the horizon and within us.

The creation of man is a cosmic opportunity to witness the Truth

- And He it is who created the heavens
and the earth in Truth.

Quran 6:73

- Do you not see how Allah has created
The heavens and the earth

In truth (justice)?

If He so wills He will take you away

And bring forth a new creation

Qur'an, 14:19

وَهُوَ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ
بِالْحَقِّ (الأنعام: 73)

أَلَمْ تَرَ أَنَّ اللَّهَ خَلَقَ السَّمَاوَاتِ
وَالْأَرْضَ بِالْحَقِّ إِنَّ يَئُودُ يَدُكُمْ وَيَأْتِ
بِخَلْقٍ جَدِيدٍ (إبراهيم: 19).

The creation of the human is in accordance with the Divine Plan

- The creation of the human is not an accident. It is in consonance with the Divine Writ: “I was an unknown treasure. I willed that I be known. So I created.”
- Allah created the cosmos in Truth.
- He taught the human “all the Names”. The human has the inherent ability to know “the Names” (acquire knowledge) and to witness the Truth.
- He endowed the human with a body to sense, a mind animated by reason to penetrate the secrets of the heavens and the earth, a heart that is “large enough to contain the Name of God” and a soul which when polished becomes a mirror of the invisible world. Most important, the human is infused with the Ruh (the spirit) which is his connection to the Divine.
- The Qu’ran affirms that if the human fails in this mandate, God almighty will bring another genre that would know Him, serve Him and worship Him.

The Qur'an reveals Signs that are basic and Signs that are allegorical

He it is who has sent down the
Book to you;
There are Signs in it that are basic
And they form the foundation of
the Book,
And there are some (Signs)
That are allegorical (and open to
multiple explanations).

Qur'an, 3: 7

هُوَ الَّذِي أَنْزَلَ عَلَيْكَ الْكِتَابَ مِنْهُ آيَاتٌ
مُحْكَمَاتٌ هُنَّ أُمُّ الْكِتَابِ وَأُخَرُ مُتَشَابِهَاتٌ
(آل عمران: 7)

Some Signs are clear and some are similes to a higher truth

- Some Ayahs (Signs) from Allah are clear and some are similes and allegorical.
- Ayahs that are clear are the commandments of Allah. Examples: faith, prayer, fasting, charity, the Hajj.
- Ayahs that are similes and allegorical beckon the soul to soar to higher truths. In a spiritual sense, all creation is a simile and an allegory to a higher Truth. The food we eat, the plants we cherish, the rivers that make the land fertile, the mountains that rise high above the earth, the stars in the heavens are all allegorical before the majesty of God and His gifts in the hereafter. Science, in its essence, is transcendental and a continuous search for the “how”. So is history that captures the struggle of man on earth.

The Qur'an has explained the Signs clearly

- And that is how We explain Our Signs
So that they say that you have indeed
communicated them (in their entirety)
And so that We clarify them for a
people who are knowledgeable

Qur'an, 6:105

وَكَذَلِكَ نُصَرِّفُ الْآيَاتِ
وَلِيَقُولُوا دَرَسْتَ وَلِنُبَيِّنَهُ لِقَوْمٍ
يَعْلَمُونَ (الأنعام: 105).

The Qur'an has explained the Signs clearly

- There are more than five hundred Ayahs in the Qur'an that refer to natural phenomenon, history or the Self.
- Each Ayah stands on its own in the context in which it appears. It invites us to witness the magnificent creation of Allah and through it become a witness to Divine Names.
- To engage in the scientific pursuit is to follow the guidance of the Qur'an. The human is invited to ask "how", unlock the secrets of nature and know the inner meaning of "*subhanallah*" (glorified be Allah).
- There is no ambiguity in the guidance that the Ayahs provide. Each Ayah fits like a gem on a jewel-studded canvas extending from horizon to horizon.

Do not deny the Signs of Allah

- O people of the Book!
Why do you deny the Signs of Allah
When you yourselves are witness (to
the Truth)? (The Qur'an, 3:70)
- Say: "O people of the Book!
Why do you reject the Signs of Allah?
Indeed, Allah is witness to what you
do." Qur'an, 3:98

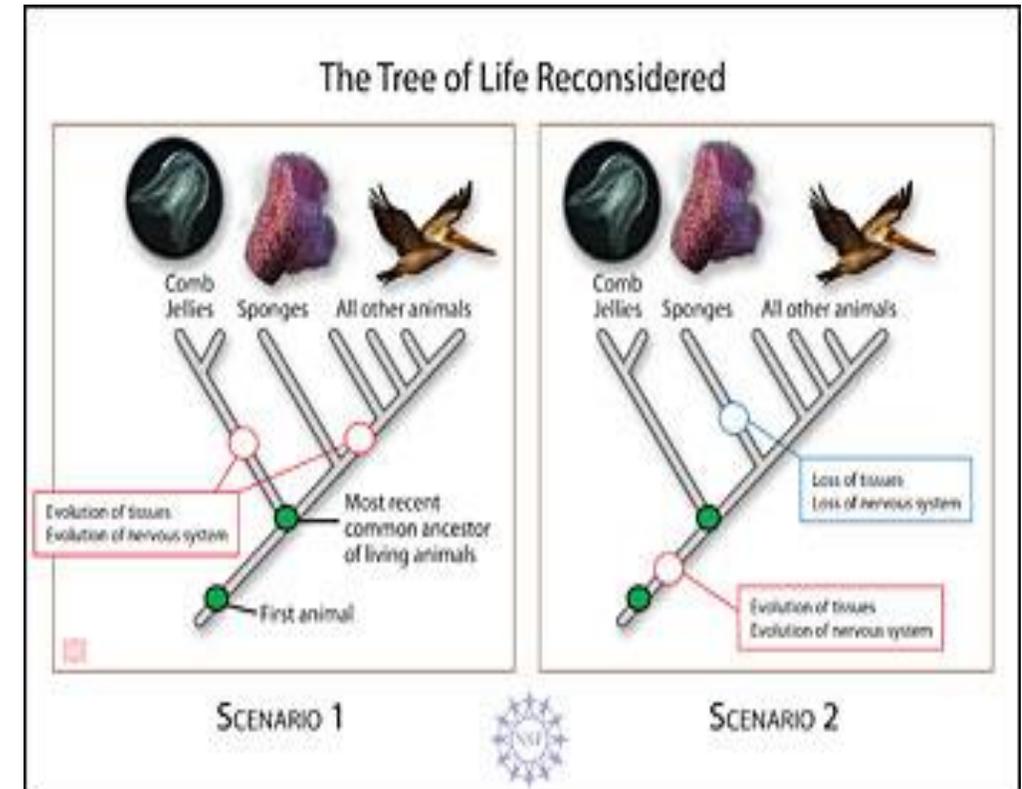


Do not deny the Signs of Allah

- Allah has made His Signs manifest in revelation, in the physical cosmos, in human history and the Nafs. To deny these Signs is to deny the commandments of Allah.
- A study of the Signs in physical phenomenon is natural science.
- A study of the Signs in history is empirical hystorography.
- A study of the Signs within the heart and the soul is tasawwuf.
- Islamic civilization stands on the Qur'anic sciences which are supported by a tripod of natural sciences, history and sciences of the soul.

Do not deny the empirical sciences

- Those who deny Our Signs are deaf and dumb and steeped in darkness upon darkness. Allah leads astray whom He will, And He brings whom He will to the straight path. Qur'an, 6:39



Those who deny the Signs of Allah are steeped in the darkness of ignorance

- Science is essential for the progress of the human. Indeed, it is essential for the survival of a civilization.
- Those who read the Signs of Allah receive the light of knowledge. Those who reject the Signs of Allah circle around in the darkness of ignorance.
- Empirical evidence from history supports the observations that nations that are advanced in science prosper and triumph over those that lag behind in science are condemned to poverty and oblivion.

Develop a culture of science

Aql (reason), Fikr (thought), Hikmah (wisdom)
are the elements of a culture of science

Where there is no science, there is no progress

Science is essential for the very survival of a civilization