

CHAPTER IX – THE REALITY OF STRINGS IN THE UNIVERSE

In the Holy Name of God, the All-Compassionate, the All-Merciful,

With peace and blessings upon Seydina Muhammad ﷺ, upon his holy family, and upon his blessed Companions.

"To delve into the spiritual understanding of the Big Bang
is to penetrate something of the Muhammadan Reality."
Mawlana Shaykh Hisham Kabbani {QS}

I - The Macrocosmos and the String Network of Dark Matter

1- Revisiting the Reality of Dark Matter

In chapter five we talked about the spiritual significance of dark matter and how it relates to Light. Indeed, we saw that dark matter is a substance which does not reflect Light and because of this characteristic, dark matter could be viewed as a manifestation of everything that has no spiritual value. However, it is important to know that although Allah {SWT} created a substance that does not reflect Light, it does not mean that this substance has no value at *all* levels of understanding. Allah {SWT} does not bring forth a creation which has no value at all because all types of creation are signs of Divine Mercy (*Rahma*) at one level or another. That is, every creation must be beneficial to mankind at some level of spirituality.

As our meditation on a reality increases, so does our understanding of it. At a higher level, dark matter is a sign of the manifestation of the Ocean of Divine Power (*Barhul Qudra*). Indeed, dark matter is a veil covering the reality of the Ocean of Divine Power. This Ocean is the real origin of the reality of Seydina Abu Bakr as-Siddiq {RA}.

Consequently, at higher spiritual levels, dark matter is the door that hides the reality of Seydina Abu Bakr as-Siddiq {RA}.

Seydina Abu Bakr as-Siddiq {RA} was granted his special rank in the Cave of *Thaur* when he accompanied Prophet {SAW} during his historical migration from Makkah to Madinah. Naqshbandi Masters teach us that this cave of secrets is a manifestation of *Barhul Qudra*, the Ocean of Divine Power in itself. The reality of the cave, which symbolizes the reality of the human heart, is manifested in science as the unknown and invisible structure scientists call dark matter.

Dark matter is not visible matter. Regarding this reality, Allah {SWT} says in the 36th chapter of the Holy Quran:

"We have placed a barrier in front of them and barrier behind them,
and we have made their eyes unable to see."

Ya Sin, 36:9

Here the barrier is the entangled pattern of black matter in space and, as the Holy Verse implies, the human eyes cannot see through it. This Holy Verse is from the Chapter *Ya Sin* which is called the Heart of the Holy Quran. Since the heart is also a manifestation of the Ocean of Divine Power, the Holy Verse refers to the barrier that hides the reality of the Heart, or the Ocean of Divine Power.

Moreover, this Holy Verse is the 9th Verse of the chapter. The number nine points to the reality of the nine Points of the Heart; this reality is under the authority of the nine highest Naqshbandi Masters. Therefore, the Holy Verse refers to the barrier of dark matter that hides the reality coming from Seydina Abu Bakr as-Siddiq {RA}.

This Holy Verse was recited by Prophet {SAW} when he was stepping out from his home in Makkah in order to migrate to the city of Madinah. Therefore, he {SAW} was on his way to the Cave of *Thaur*. This is a sign that the reality of this Verse becomes manifest on the way that leads to the reality of Seydina Abu Bakr as-Siddiq {RA}. As

we search for this reality (i.e., on our way to the Cave of *Thaur*), we encounter the reality of the barrier which prevents us from seeing through.

2- Understanding Gravity

Scientists said that dark matter is not detectable at all. However we know that it exists because of its pulling effects on stars and galaxies. This effect is what we know as gravity. Therefore, spiritually speaking, gravity is a sign that confirms the existence of the Unknown Reality which cannot be seen.

The gravitational effect of dark matter on planets and galaxies is enormous. Indeed celestial bodies such as galaxies are held together by the gravity supplied by dark matter. This gravitational effect teaches us a lot about the spiritual nature of dark matter: dark matter, which hides the reality of the Cave or the Ocean of Divine Power, cannot be seen but its existence can be detected by the way it holds each material body at its place.

This particular nature of dark matter is revealed in the 7th Chapter of the Holy Quran. At the 143rd Verse of this chapter, Allah {SWT} says:

"You cannot see Me. But look at the Mountain, if its stays at its place you may see Me."

Holy Quran, 7:143

Here the Mountain is the system of all material and celestial bodies in the spatial plane. Allah {SWT} is saying that we cannot see His Reality which is manifested as the Heart of the Believer. However, although we cannot "see Him", we may know about His Existence by witnessing and understanding how the material bodies are maintained at their designated places. Since planets and celestial objects are maintained at their designated orbits through the gravitational force exerted by dark matter, one may conclude that dark matter is the door that leads to the reality of the Heart.

3 – String Network Pattern

The way dark matter is distributed in space is interesting both from a spiritual perspective and a scientific one. Recently, scientists discovered that dark matter is entangled in a giant cosmic web resembling that of a spider. This web is made up of filaments or strings that intersect at thick and opaque nodes. These strings are known in Arabic as *hubuk*. *Hubuk* is a term derived from the verb root *habaka* which means to wind threads into string, to weave or to knit.

Mawlana Shaykh Hisham {QS} talked about the filamentary structure of dark matter in his book *The Approach of Armageddon*:

The Qur'an mentions the skies (and space) with their strings and consequently knots (51:7-8). With the aid of powerful technology, an understanding of the physical universe has emerged that seems to explain this verse. According to astronomers, the large scale structure of the universe's visible matter follows a filamentous pattern. This web of cosmological strings is evident in both the visible universe and in what astronomers call "dark matter".

It shows not only that the galaxies we see lie within larger dark matter clumps, but that these clumps are connected by "cosmic filaments" - bridges of dark matter that connect the clusters. The existence of these filaments has long been a prediction of the theory of dark matter- that an intricate network of clumps and filaments, the so-called cosmic web, pervades the universe.

The "Big Bang" happened with all pieces of the universe blasting away from a colossal explosion at tremendous speeds. Somehow all these particles were stopped and held in place, becoming precisely ordered planets and galaxies. Allah {SWT} caused the contents of the universe to be ordered by a network of strings woven together like a net keeping all the heavenly bodies in their assigned positions.

The Approach of Armageddon: p.73-74

Spiritually speaking, the filamentary structure of dark matter is a manifestation of the spirituality of Seydina Ali {AS}, who was often sent into space in the time of the Prophet {SAW} to make his spirituality manifest in the cosmos. We can see part of this manifestation as the entangled filaments known as *hubuks* in Arabic.

The cosmic web covering black matter is also a representation of the spider web that was covering the entrance of the cave of *Thaur* where Seydina Abu Bakr as-Siddiq {RA} and

Prophet {SAW} were staying. Mawlana Shaykh Hisham {QS} said in one of his spiritual discussions that this web which was covering the entrance of the cave was a manifestation of the spirituality of Seydina Ali {AS} who represents the Door of the Presence of Prophet {SAW}. Similarly, the string pattern of dark matter is a net covering the entrance of the reality of the cave. Behind this net or web lies the reality of Seydina Abu Bakr as-Siddiq {RA}.

4 - The four Fundamental Forces and the Arabic Letter *Nun*

As we saw earlier, the gravity supplied by dark matter holds the planets and galaxies together. Without it, the system of celestial bodies would fall apart. In *The Approach of Armageddon*, Mawlana Shaykh Hisham {QS} equated gravity to a manifestation of the Arabic Letter *Nun*. As the Shaykh {QS} said, creation came to be from the Utterance of the Divine Order *Kun* which is made up of two Arabic letters: *Kaf* and *Nun*. When the *Kaf* was pronounced, creation appears from *Barhul Qudra*, the ocean of the Attribute of Divine Power. This creation flew apart at an extremely high speed because of the intensity of the explosion. Then, when the *Nun* was pronounced, the material bodies were stopped instantly and thereof maintain at their rightful orbits. Thus the *Nun* is the moderating force which keeps all planets at their designated levels and which prevents them from flying apart.

This *Nun* is manifested in our world as the four fundamental forces of the universe: gravity, the strong force, the weak force and the electromagnetic forces. These four forces are all different ways of expressing the same moderating force: gravity holds the planets and galaxies together despite their tendencies to fly apart due to the energy generated by the continuous explosion taking place at the center the Big-Bang. The strong force holds the components of the atomic nucleus (proton and neutrons) together. The weak force is responsible for the burning of the sun. This force acts on quarks by allowing quark transformation which converts protons into neutrons. The quark transformation process allows solar fusion to take place. As for the electromagnetic force which acts on photons, it is responsible for holding atoms and molecules together.

Therefore, it is also a moderating force because photons are manifestations of the Light of Prophet {SAW} and one of the Prophet {SAW}'s main abilities is to moderate the Divine Energy coming from the Ocean of *Barhul Qudra* to a level that may accommodate creation. This is the reality of Einstein's mass-energy equation $E=mc^2$.

Recently scientists discovered that at the highest possible temperatures, the electromagnetic force and the weak force merge together to form a single force called the electro-weak force. If the temperatures are increased sufficiently, this hybrid force will then merge with the strong force to form a new single force. Scientists call this state the Grand Unified Theory (GUT). Because of current limitations on technology, it is not possible to increase the temperature in such a way that the hybrid force merges with the force of gravity. However, scientists predict such unification at higher temperatures. This theory is called the Theory of Everything (TOE) because it unites all four forces into one single force.

The GUT as well as the TOE scientifically prove that gravity, along with the three other forces of nature, are all manifestations of the same reality: that of the Arabic letter *Nun*. The three other forces of nature (strong, weak and electromagnetic) are in fact different ways of expressing light: the strong force is concerned with the light in the nucleus, the weak force with the light of the sun, and the electromagnetic one with the photonic light. Therefore, all forces of the universe are manifestations of either gravity or light.

The reality of *Nun* is coming from beyond the realm of the known universe. It is originally emitted from the higher dimensions; then it travels down to reach the physical realm as one of the four fundamental forces governing it. In *The Approach of Armageddon*, Mawlana Shaykh Hisham {QS} quotes scientist Dr. Michio Kaku who talks about light and gravity being interpreted as manifestations of a higher-dimensional force reaching down to our tri-dimensional world:

"Today, many physicists believe that we are [like] a carp swimming in our tiny pond, blissfully unaware of invisible, unseen universes hovering just above us in hyperspace. We spend our life in three dimensions, confident that what we can see with our telescopes is all there is, ignorant of the possibility of 10

dimensional hyperspace. Although these higher dimensions are invisible, their "ripples" can clearly be seen and felt. We call these ripples gravity and light."

The Approach of Armageddon, p.77

The four fundamental forces of nature are manifestations of the four lights of the Representatives of the Prophet {SAW}. Because the lights of all four Representatives of Prophet {SAW} are coming from the same origin (the Muhammadan Light), their physical manifestations as fundamental forces of nature are also coming from the same origin: the Big-Bang. At the time of the Big-Bang (that is, in the presence of the Prophet {SAW} who is the center of the Big Bang), all four forces were united. Scientists call this period the Quantum Gravity Era because at that time gravity was unified with the three forces. It was only after the cosmic temperature cooled off that the four forces separated one by one to become distinct manifestations. Similarly, it is only when the physical Presence of the Prophet {SAW} left the earth that his four Representatives assumed their individualities by ascending to the throne of Guidance one by one.

5 – Black Holes and the Ocean of Divine Power

Besides the reality of dark matter, the Ocean of Divine Power is also manifested in the universe as the reality of black holes. A black hole is a region of space made up of a concentration of mass great enough to prevent matter, light and information from escaping its gravitational pull. The surface of a black hole delimits a two-dimensional region inside of which matter and information travel at a speed greater than the speed of light. This region is called the event horizon. The center of the black hole is known as the singularity. The singularity is a point of infinite spacetime curvature. At that single point, which is similar to the mathematical notion of the origin, the gravitational force becomes infinitely strong. Spiritually speaking, the singularity is the center of the reality of the Prophet {SAW} (*haqiqah Muhammadiya*).

The black hole is a manifestation of the heart of the perfect Saint of God. There are five different levels of spiritual hearts: *Qalb*, *Sirr*, *Sirr as-Sirr*, *Khafa* and *Akhfa*. These five

stations are different reflections of the heart of the Prophet {SAW} whose blessed Light was placed in the Ocean of Divine Power by Allah {SWT} before creation came to be.

A black hole possesses several characteristics that make it unique:

- Because anything inside the event horizon travels faster than the speed of light, no information, not even light, can escape this region. Thus, the information located inside the event horizon of the black hole cannot be detected by an observer located outside of it.
- As soon as some particles reach the event horizon, they are inexorably bound to hit the singularity. This fate is due to the fact that the particles can only move closer and closer to the singularity because the event horizon is moving at the speed of light. The only way to escape from it would be to travel at a speed greater than light which is impossible. Consequently, reaching the singularity is in every inside particle's future.

These characteristics can be interpreted spiritually in the following way. The realities and spiritual secrets that are contained in the heart of the perfect Saint of God do not belong to the created world of *dunya*, the material universe. These secrets and realities are from the spirituality of the Light of Prophet {SAW}. The nature of this type of secrets and realities is clearly beyond the grasp of creation. This is the reason why the information contained within the event horizon of a black hole travels at a speed greater than the speed of light. The speed of light represents the face of the Prophet {SAW} that is turned towards creation. In that aspect, it is a symbol of creation itself. Therefore, anything traveling faster than the speed of light is related to the Heavens and to the spiritual dimension of life. There are indeed speeds that are faster than the speed of light. For instance, the speed of thought and the speed of the human heart are both considerably greater than the velocity of light. These speeds are beyond the level of the created world. The speed of thought is related to the spirit and the speed of the human heart is related to the Divine Presence. These speeds are controlled by *Awliya* although they do not have permission to reveal them.

Moreover, the fact that an external observer cannot detect any information once it has crossed the event horizon is a manifestation of the secret and silent knowledge that is contained within the heart of the Perfect Saint of God. Indeed, people cannot grasp the knowledge that is generated and that is evolving in the heart of a real Saint of God.

Finally, the future of a particle that is in the event horizon of a black hole is a manifestation of the future of any soul that is being remembered in the heart of a perfect Saint. Indeed, the particles entering the region of the event horizon are inexorably bound to reach the singularity of the black hole. Similarly, the souls of those who “enter” the heart of a perfect Saint will be remembered by this Saint who will then inexorably lead them to the presence of the Prophet {SAW}. This future meeting cannot be prevented because the Saint is connected to the Prophet {SAW} and this connection guarantees the Prophet {SAW}'s intercession for the souls that are remembered by the Saint. Similarly, the *Awliya* that are remembered in the blessed heart of the Prophet {SAW} are bound to reach the prophetic singularity, which is the Divine Presence. This is the reason why Sufi people of all spiritual orders often supplicate to Prophet {SAW} by saying “*unzur aleyna ya Rasul Allah!*” (“Please look upon us, oh Messenger of God!”). Indeed, if the Prophet {SAW} remembers a soul through the heart of his Representatives, that soul can be assured of its meeting with him {SAW} the same way the particle entering the event horizon of a black hole is assured of its meeting with the singularity.

Understanding Wormholes

Recently, a new black hole theory has emerged. Some contemporary scientists believe that black holes are not mere concentrations of dense mass, but rather, shortcuts or bridges connecting different regions of space or even different dimensions. These types of black holes are called Einstein-Rosen bridges or, more commonly, wormholes. A typical wormhole is made up of a black hole that is connected to a white hole. The black hole acts as a point of entry for the particles while the white hole represents the exit point. The two holes (black and white) may be separated by extremely great distances; they may even be located in different universes. Thus, a particle would enter the wormhole

through the black hole and travel at a speed greater than the velocity of light in order to exit the wormhole through the white hole.

Although wormholes are mathematically viable concepts, they are yet to be discovered. However, GrandShaykh Nazim {QS} once said in a spiritual dimension that black holes and white holes do exist. Moreover, Mawlana Shaykh Hisham {QS} talked about white holes in *The Approach of Armageddon* in those terms:

“There is a new understanding derived from string theory that black holes are not voids but actually connections to other parts of the universe, what theoretical physicists call “worm holes”.

The Approach of Armageddon, p.79

As we saw earlier, black holes are manifestations of the heart of the perfect Saint of God. This heart, which holds the secret of the reality of the Light of Prophet {SAW}, appears through five different levels (*Qalb, Sirr, Sirr as-Sirr, Khafa* and *Akhfa*). In that aspect, white holes are also manifestations of the heart of the perfect Saint of God, although different ones.

Consequently, the connection that exists between a black hole and a white hole must be the reflection of some type of connection existing between two different stations of the heart of the perfect Saint of God. More precisely, there must be a station of the heart that is connected to another station from a different reality in a way that all the information contained in one station could travel freely to the other station located in a different spiritual reality.

The Prophet {SAW} talked about this secret connection between two different levels of the heart in the following *hadith*:

“Everything that Allah {SWT} pours into my heart, I pour in the heart of Abu Bakr as-Siddiq.”

Hadith

Naqshbandi Masters teach us that the heart of Seydina Abu Bakr as-Siddiq {RA} is manifested as the third station known as *Sirr as-Sirr* (the Secret of the Secret) while the

Prophet {SAW} has authority on the 5th station known as *Akhfa* (the Most Hidden). According to the above-mentioned *hadith*, the knowledge and information that Allah {SWT} pours in the heart of the Prophet {SAW} (the *Akhfa* station) is automatically poured in the heart of Seydina Abu Bakr as-Siddiq {RA} (the *Sirr as-Sirr* station) by permission of Prophet {SAW}. Therefore, the two stations are intrinsically linked, as if there was a hidden path connecting them in the same way a black hole and a white hole are connected together. Interestingly enough, the *Sirr as-Sirr* station is known in spiritual milieus as the White station of the heart because of the nature of its spirituality and the *Akhfa* station is referred to as the Black station.

The Black station, which is a manifestation of the heart of the Prophet {SAW}, is the station that receives Divine Knowledge from Allah {SWT} as expressed in the *hadith* “Everything that Allah {SWT} pours down in my heart.” On the other hand, the White station is the station outpouring the Knowledge it receives from Prophet {SAW} to creation. Consequently, the White station is the exit station connected to creation. It is from this station that knowledge and spiritual secrets are disseminated in the universe. This is the reason why the *Siddiq Wali* is the *Wali* who is constantly connected to creation, as we saw in the Linear Algebra chapter. This connection is needed because the Siddiq Wali must inherit from the secret of the two holy faces of Prophet {SAW} (one face connected to God and one face connected to creation). Scientifically speaking the natures of the Black and White stations are verified by the wormhole concept: the black hole is indeed the point of entry of information and the white hole the point of exit.

[II - The Microcosmos and String Theory](#)

[1 - What is String Theory?](#)

We just saw how the macrocosmos is affected by the strings of dark matter pervading in space. Strings are also involved in the basic formation of the microcosmos. According to contemporary physicists, the universe as we know it is primarily composed of oscillating strings. Indeed, all the fundamental particles that make up the universe (atoms, electrons, quarks, etc) are in fact different manifestations of the same object: an

extremely minuscule loop of string of about 10^{-33} centimeters. This length is called the *Planck length*. String theory was born from the need to unify the force of gravity with the three other forces.

The tiny strings that make up the universe are either closed string loops or open string loops. Both types of strings are represented in the figure below.

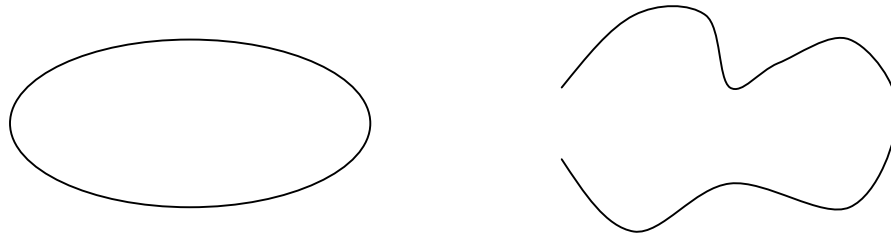


Figure 43:
A closed loop string (left) and an open loop string (right)

The fundamental strings possess interesting properties: they are always under tension or in excitation mode much like the strings of a guitar. Thus, the strings are constantly vibrating. The degree of oscillation of a string determines the properties of the particle it represents. Thus, a string vibrating a certain way will produce an electron whereas the particular oscillation of another string will produce a photon. Therefore, all components of matters only differ from each other in the way their inner strings vibrate.

The vibrations of the strings are similar to the musical notes of an instrument. Since each string oscillates at a precise note, one may think of the universe as a giant orchestra constantly performing a series of new musical tunes. Spiritually speaking, these musical notes are celebrations of the praises of God (*zikir*). The strings are indeed constantly engaged in chanting the divine attributes of God.

Regarding this assertion, Mawlana Shaykh Hisham Kabbani {QS} says in *The Approach of Armageddon*:

String theory (...) holds that sub-atomic particles are vibrations, or resonances, of minute strings. The vibrations of the strings are like musical notes of a violin with different strings producing different vibrations, or different notes. Al Allah {SWT} said in the Holy Quran:

“There is not a thing but celebrates His praise” (al-Isra 17:44).

The Approach of Armageddon, p. 76

2 – The 10-Dimensional Universe

It is commonly known that there are four spatial dimensions: width, height, depth and time. According to string theory, the strings require other higher spatial dimensions to exist. These extra dimensions are collapsed in an extremely minuscule ball associated with every single point of the universe. Because of this collapse, the higher dimensions are too small to observe directly. The number of extra dimensions varies from one string theory to another. However, the most popular string theory predicts the existence of six higher spatial dimensions, bringing the total number of dimensions to ten (six unknown dimensions + four known ones).

These six unknown dimensions hidden in each single point of the universe are reflections of the six unknown realities which are hidden in every single human heart and which are the keys to sainthood.

Scientists believe that at the instant of the Big Bang (during its high energy phase) the universe was fully 10-dimensional. The instant of the Big Bang is the instant of the manifestation of Nur Muhammad {s}, the Light of the Prophet {SAW}. During that particular moment, which is eternal and in constant manifestation, the Presence of the Prophet {SAW} makes the six unknown realities of the human heart completely manifest because any soul that reaches the Presence of the Prophet {SAW} becomes lifted to the rank of sainthood. It is only when the Light of the Prophet {SAW} veiled itself from a soul that the six realities hide themselves within the depth of the heart. Similarly, it is only *after* the instant of the Big Bang that the six dimensions collapsed and hid in a tiny ball.

3 - Supersymmetry

At some level, string theory requires the existence of what scientists call supersymmetry. Supersymmetry is a yet-to-be proven symmetry between the particles that transmit forces (called bosons) and the particles that make up matter (called fermions). According to the Standard Model of particle physics, all fundamental particles such as protons, photons, and gravitons can be broken down into two broad categories: bosons and fermions. Thus, this theory predicts that there is a *superpartner* associated with every boson and vice-versa.

Spiritually speaking, this theory is a reflection of an important heavenly principle: that there must be a recipient of Mercy (*marhum*) if there is a Grantor of Mercy (*Rahman*). Here the Grantor of Mercy is manifested as the element that transmits a force (the boson) and the recipient of mercy is the element that makes up matter (the fermion).

Transmitting a force means transmitting Divine Mercy to creation because, as we saw earlier, all forces represent either gravity or light and both are manifestations of the Arabic letter *Nun* at higher levels. On the other hand, receiving blessings and mercy is a characteristic of creation which is in constant need of support from the Heavens.

Moreover, creation lies within the delimited plane of *dunya*. Thus, it is a reflection of the fermion which makes up the material plane.

Therefore, supersymmetry is yet another proof that all scientific laws are nothing but manifestations of eternal and divine principles that are brought forth by the blessed heart of the Prophet {SAW}.