CHAPTER VI

DISSOLUTION OF THE UNIVERSE
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The future of the universe has hotly been debated in the field of scientific knowledge. The supporters of Steady State Theory believe that the universe had never been a beginning and it will look always the same. This theory, therefore, suggests that the universe will never die and would continue for an infinite time. However, there are a few supporters of this theory.

On the other hand, supporters of widely acclaimed evolutionary theories are of the view that the universe had a beginning. They also state that the universe is still in a state of expansion. The issue whether the universe will go on expanding indefinitely or will it collapse in the converse of the Big Bang is still to be finally resolved by the scientists.

The scientists are of the view that the velocity of expansion has been progressively slowed down by gravitational pull right from the start. There is some doubt as to whether the mass of the universe is sufficient to generate gravitational pull that would stop the expansion and bring about
a collapse. At the gravitational collapse, space and time cease to exist just as they did before the Big Bang.

It has also been argued by the scientists that the future history of the universe depends upon its present density. If it exceeds the cosmological critical value, the universe will collapse. On the other hand, if the density is less than the cosmological critical value, the universe will expand for ever and the galaxies will ultimately disappear from view.

It has been a feeling in the scientific circles that the increase in mass and space cannot continue indefinitely. Like an oak tree, the universe may some day attain the peak of its growth and the limit of its life span which Dirac calls the universal age. As long as the universe is young, more mass is formed than is lost and it is growing. But there may come a time when the process will be reversed. The galaxies now flying apart will move closer together and will condense into a nuclear cloud. When the cloud becomes

1. The Human Mystery: p.24
2. Cosmic Evolution: p.262
charged to the point of explosion, the drama will be re-enacted i.e. new universe will emerge. This refers to the cyclic nature of universe.¹

According to Sandage certain spectral shifts of distant galaxies may indicate that the expansion of the universe is slowing down. If this is true, it will suggest that the universe would eventually expand to a certain limit, then contract again into a titanic mass of neutrons and energy and thus start a new explosion. As a result, the universe as a whole would have a cyclic nature.²

On the other hand, Wheeler states that "with gravitational collapse we come to the end of time. Never out of the equations of general relativity has one been able to find the slightest argument for a 're-expansion' or a 'cyclic universe' or anything other than an end.³

According to modern thermodynamics the underlying cause of all the varied animation in the world is energy. The first law of thermodynamics teaches that energy is indestructible,

¹ Design of the Universe : p. 172
³ The Human Mystery : p. 28
it may change about from one form to another, but its total amount remains unaltered through all these changes, so that the total energy of the universe remains always the same.

As the energy which is the cause of all the life of the universe is indestructible, it might be thought that this life could go on for ever undiminished in amount.

The second law of thermodynamics rules out any such possibility. Energy is indestructible as regards its amount, but it continually changes in form. Energy flows always in the same direction as water flows downhill. The transformation of energy from a more available to less available form is the running downhill of energy. Energy cannot run downhill for ever and it must touch bottom at last. And so the universe cannot go on for ever, sooner or later the time must come when its last erg of energy has reached the lowest rung on the ladder of descending availability and at this moment the active life of the universe must cease. The energy is there, but it has lost all capacity for change and we will be left with a dead, although possibly a warm universe— a 'heat-death'.
In view of above facts, there hardly remains any possibility of a cyclic universe.

From the facts stated above, we find that scientists are generally of the view that the universe is destined to perish after some astronomical time. Life on a cosmic scale cannot go on for ever. However, there are differences of opinion among the scientists about the cyclic nature of the universe.

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1. The Universe Around Us : p. 320
Vedic / Upanishadic View

The Vedic / Upanishadic seers are unanimous on the point that the universe had a beginning and it cannot go for ever. Sooner or later it will dissolve. A few examples from the Vedic / Upanishadic texts in this connection are given below:

"At the end He, the world spirit completely burns all existing things (dissolves the world), earth dissolves in water, water in fire, fire in air, air in ether, ether in senses, senses in the subtle elements, subtle elements in their subtle sources, the subtle sources in their principle of mahat, the principle of mahat in the principle of the unmanifested and the principle of the unmanifested in the imperishable, the imperishable in the darkness. The darkness becomes one with the transcendent (Brahma). Beyond the transcendent there is no other existence, nor non-existence nor both existence or non-existence."

(1)

"That from which these beings are born, that by which, when born they live, that into which (at the time of dissolution) they enter, they merge seek to know is Brahma."

(2)

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1. Subala Up. : 2.1
C.U. : VI.9-10

2. T.U. : III.1
C.U. : III.14.1
"Nothing really exists except the great spirit of self and the universe is nothing more than its manifestation, its body, which it draws from its own substance and again absorbs into it as the spider spin forth and draws back the thread of its web." (1)

"In the Lord of all things, the whole universe comes together at the beginning and dissolves at the end. At the dissolution the whole universe is rolled up like a piece of cloth." (2)

"The universe created by Brahma persists through an entire world (period) kalpa after which it enters into Brahma only to arise again from it." (3)

The above verses show that the universe is cycle in nature i.e. ever-rising and falling. The universe originates from God and at the end it merges into Him.

The origin and dissolution of the universe entirely depends upon the Divine Will of the God. Neither the time of origin, nor of dissolution of the universe is known to anybody.

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1. B. U. : II.2.2
2. Svet.U. : 6.4.11
   Subala Up. : 2
   Pangala Up. : 1.4
Biblical View

Christianity is of the view that the universe around us will not last long. It is destined to perish. How and when it will perish is known only to the Lord. A few examples from the Bible in this connection are given below:

"Thou Lord in the beginning hast laid the foundation of the earth and the heavens are the work of thy hands. They shall perish but thou remained and they all shall wax old as doth a garment, and as a vesture, shall thou fold them up, and they shall be changed, but thou art the same and thy years shall have no end." (1) Here the phrase 'shall be changed' refers to re-creation of the universe.

"As soon as the distress of these days has passed, the sun will be darkened, the moon will not give her light, the stars will fall from the sky, the celestial powers will be shaken. Then will appear in heaven the sign the heralds the son of Man." (2)

"The Heaven and Earth will pass away, my words will never pass away." (3)

"The Heavens shall pass away, but thou endurest, like clothes they shall all glow old." (4)

1. Psalms Book IV : 102.25-27
(Old Testament)
2. The Gospel of Matthew : 24,29
(The Bible)
3. Ibid : 24,35
4. The Letter of Paul to Hebrews (The Bible) : 1,11
"Thou shall fold them up like a cloak, yes they shall be changed like any garment. But thou art the same and thy years shall have no end." (1)

"But the day of Lord will come, it will come unexpected as a thief. On that day, the heavens will disappear with a great rushing sound, the elements will disintegrate in flames, and the earth with all that is in it will be laid bare (or) will be burnt up." (2)

"But about that day and hour none knows, not even the angels in heaven not even the son, only the father." (3)

"But according to His promise we wait for new heavens and a new earth in which righteous dwells." (4)

From the above verses of the Bible, it is found that whereas it refers to the dissolution of the universe, it also suggests that God will again create the universe. Therefore, the Biblical universe is also cyclic in nature.

1. The Letter of Paul to Hebrews--The Bible : 1,12
2. 2nd Letter of Peter--The Bible : 3,10
3. The Gospel of Matthew--The Bible : 24,36
4. 2nd Letter of Peter--the Bible : 3,13
The Quran also teaches us that Allah creates and dissolves the universe at His command. Neither the time of origin nor of dissolution of the universe is known to anyone else except Allah. The Quran says:

"The life of this world is like water that we send down from the clouds, then the vegetation of the earth, of which men and cattle eat, mingles with it and the earth is embellished and looks beautiful, and its owners believe they are complete masters, then by day or by night our command comes to it and we convert it into a mown-down field as if nothing had existed there the day before."

"He gives life and cause death. He is your Lord and the Lord of your fore-fathers. Yet they play about in doubt. Then watch for the day when a pall of smoke will appear in the sky and envelop the people."

"Be mindful of the day when we shall roll up the heavens like the rolling up of the scrolls by a scribe. As we began the first creation, so shall be repeat it."

"Know they not how Allah originates creation, then repeats it? That indeed is easy for Allah. Tell them. Travel in the earth, and observe how Allah originated the creation, then will He provide the second creation. Surely Allah has power to do all that He wills."

1. The Quran : 10.25
2. ibid : 44.3-17
3. ibid : 21.105
4. ibid : 29.20-21
"He revives the earth after its death." (1)

"The time will come when we shall turn all that is on it (earth) into a barren waste." (2)

"Behind them is a barrier until the day when they shall be raised up again (during the next creation)." (3)

The above verses of Quran clearly refer to the dissolution of the universe. The Quran also suggests that the universe is cyclic in nature.

1. The Quran: 30.51, 45.6
2. Ibid: 18.9
3. Ibid: 23.100
Nanak Bani View

65.1 Dissolution of the Universe

According to Nanak Bani, it is the law of nature that who-so-ever is born shall ultimately die:

"Who-so-ever is created, him death destroy." (1)

"He that is born, dies, if not to-day, then tomorrow he goes." (2)

The universe had been created by the Absolute Lord. As per 'Divine Law' postulated by Guru Nanak, it will face destruction sooner or later. He clarifies this viewpoint in the following verses of his bani:

"The entire world is subject to coming and going. The merciful Lord is alone permanent." (3)

"The sky and earth shall pass away- Ever stable is He alone." (4)

"The day and the sun shall depart, the night and the moon shall vanish and hundreds of thousands of stars shall dis-appear, He alone is permanent. Nanak tells the truth." (5)

"The creator is alone to be eternal. All others continue coming and going." (6)

1. G.G.S. : p.227
2. ibid : p.1429..M.9 )
3. ibid : p.64
4. ibid : p.64
5. ibid : p.64
6. ibid : p.54
"The entire world is bound by death." (1)

"Neither the solar and lunar regions nor seven continents, nor the oceans, corn and the wind, no one is stable." Thou alone art O Lord Thou alone art. " (2)

From the above verses of Nanak Bani, we find that except the Absolute Lord nothing is stable in the universe. The entire creation is destined to dissolution. Nobody knows the time of dissolution of the universe.

65.2 World as a false show

As the world is bound by death, Nanak Bani has compared it with a 'dream', 'wall of sand', 'fortress of paper', 'mansion of smoke', 'mimmickry of a buffon', 'dust', etc. A few verses of Nanak Bani in this respect are given below:

"And know thou that this world is but a dream." (3)

1. G. G. S. : p. 55
2. ibid : p. 144-45
3. ibid : p. 258
"The world stays not as it is like the wall of a sand." (1)

"This poor world together with its colour, form and cleverness is a fortress of paper. A little drop of water or a puff of wind mars its glory and in an instant, ends its existence." (2)

"The world is a mansion of smoke." (3)

"This world play is fashioned like the mimickry of a buffon. For a moment and trice one sees the show. It takes no time in dis-appearing." (4)

"This entire extension of dust, mingles with the dust in the end." (5)

Keeping in view the negative status of the universe, Nanak Bani has declared that the world is merely a false show:

"The world is false, know this O friend." (6)

"False is the king, false the subjects and false is the entire world." (7)

65.3 World as true

It may be submitted here that there are some verses in Nanak Bani which suggests that

2. ibid : p. 1274
3. ibid : p. 138
4. ibid : p. 422
5. ibid : p. 832
7. ibid : p. 468
the universe is true which are as under :-

" True are thou continents and true
Thine solar systems. True are thine
worlds and true thy creation. " (1)

" Yea, He the True Person pervades all.
True are His works- True is His
creation. He, the Lord is true-
True is His creation. " (2)

Conclusion

From the above facts of Nanak Bani, we find
that it presents the status of the universe both
' false ' as well as ' true '. How the world could
be ' true ' when time and again Nanak Bani propounds
the idea of its ' falseness ' ? One can, therefore,
be easily misled that it presents contradictory
thought about the status of the universe. But that
is not the true interpretation of Nanak Bani. Actually,
the world is ' false ' as well as ' true '.

When Nanak Bani sees the universe in its
present state, it looks ' true ' to it, not
because of the fact that it originated from
the true Lord but it looks' true ' because it has existence
and the true Lord pervades it. A thing which has
existence and the true Lord pervades it, can

1. G.G.S. : p. 463
2. ibid : p. 284, M.5
never be termed as 'false'. As soon as the true Lord withdraws His might from a thing, that thing loses its existence and then one will surely think that it was merely a false show. The existence (trueness) or non-existence (falseness) of a thing, therefore, depends upon the will of God. It is in this context, Nanak Bani says that the universe is 'true' as well as 'false'. Hence, there is no contradiction in the thought of Nanak Bani. In fact, it is the realistic approach of Nanak Bani which sees the things in their true perspective. However, the above mentioned thought of Nanak Bani does not affect its over-all concept that 'it is the God who is alone eternal or true and every thing else in the universe is bound to death and is, therefore, false.' That is why it has emphatically declared that:

"They who are born (the universe) and die, are the falsest of the false." (1)

1. G. G. S. : p. 463
6.5.5 Power behind dissolution

Nanak Bani states that the Absolute Lord not only creates the universe but He Himself also destroys it at His will. He takes the counsel of none. As to how He dissolves the universe, nobody knows:

"The Lord Himself sends and recalls the mortals. There is none else to counsel Him. He Himself demolishes, constructs and creates."

(1)

"God Himself creates and having established dis-establishes He."

(2)

"Who has fashioned and created, He shall destroy all."

(3)

"When He wills He creates the universe; And when He wills it merges again in Himself."

(4)

6.5.6 Last abode of the Universe

Nanak Bani states that the universe originated from the Absolute Lord. At the time of its destruction, it will lose its form and spirit and will then merge in the Absolute Lord:

"What-so-ever is seen shall merge thee in the end."

(5)

"All that springs from the profound Lord merges in Him."

(6)

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1. G.G.S. : p. 729
2. ibid : p. 413
3. ibid : p. 227
4. ibid : p. 292, 509 and 141
5. ibid : p. 1021
6. ibid : p. 1037
Cyclic nature of the universe

Nanak Bani advances the concept of cyclic nature of the universe. The play of creation—dissolution—creation is going on since eternity. It is all Lord's mysterious play. The present universe is not the first one. Many a times the universes were created and destroyed by the Absolute Lord. Nanak Bani says:

"Time after time was the expanse (universe) created." (1)

"All the world continues coming and going." (2)

"Illusion is this world. It perishes, is reborn, comes and goes." (3)

"In an instant he destroys and then builds again." (4)

Time of Re-creation

We find from Nanak Bani that the Absolute Lord does not re-create the universe immediately after its dissolution. According to it, the present universe was created by the Absolute Lord after thirty-six ages from the day the previous universe was dissolved as:

"For good many ages there was all-darkness and the Infinite and Immitable Lord was seated in trance." (5)

"In His will, the Lord spent thirty-six ages in seedless trance." (6)
6.6 Scientific and Metaphysical View: A synthesis

The vedic / upanishadic texts, the Bible, the Quran and Nanak Bani are basically in general agreement that the universe will ultimately dissolve at the Will of the Absolute Lord. None of them knows the time of dissolution. They also believe that after dissolution, the Absolute Lord will re-create the universe. Thus according to the scriptures, the universe is cyclic in nature.

Nanak Bani and other scriptures are totally against the Steady State Theory. They support the idea of the evolutionists that the universe had a beginning and will ultimately dissolve.

Nanak Bani says that the universe will dissolve at the Will of the Absolute Lord; the scientists have based the idea of dissolution of the universe on the following points:

a) that the universe will expand to a certain limit and then it will contract to the state from which it expanded;
b) that the universe will continue to expand and the time will come when the galaxies will disappear from sight; and
b) that the last erg of energy will lose its capacity to further change.
According to Nanak Bani as birth is followed by death, similarly expansion is followed by contraction. In this way Nanak Bani supports the idea of the scientists that the 'expanding universe will certainly contract sooner or later'. The relevant verse of Nanak Bani in support of this viewpoint is given below:

"If there is birth, there is also death;
if joy then also sadness;
if indulgence then also pain;
if greatness then also smallness;
if expansion then also contraction." (1)

As regards 'cyclic nature' of the universe is concerned, one group of scientists believes in the concept stating that after dissolution, the universe will again appear. On the other hand, scientists like Wheeler do not favour the idea of 'cyclic nature' of the universe. However, Nanak Bani agrees with the former group of scientists.

The scientists have estimated total age of the universe as 59 billion years out of which $10^{2}$ billion years have already passed. But Nanak Bani does not agree with this viewpoint stating that it is the Absolute Lord alone knows as to when the existence of the universe will come to an end.

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1. G.G.S. : p. 1354-1355 (M.5)
2. The Human Mystery. : p. 31
the religious sphere. The religion may examine such ideas seriously but biology and cosmology is not its basic object, its one and only one aim is to preach reign of God (God's Court).

Such like assertions of the esteemed Gurbani scholars about Guru Nanak Bani are far from truth. In fact, Nanak Bani is a magnificent mixture of scientific and religious concepts about the universe and life therein. Guru Granth Sahib containing Guru Nanak Bani is the only Granth in the history of the world's literature which not only gives a study of the nature of the universe in a scientific way but also teaches religion i.e. guides the soul for its onward journey to perfection.

1. English translation of Punjabi text:

Sikh Dharam Darshan(Punjabi) : p.181
A brief account of the cosmological and cosmogonical ideas of Nanak Bani comparing with the scientific view, is given in the following paragraphs :-

The scientists have not so far been able to decide finally even after centuries research work whether the universe is finite or infinite. They are of the view that 'if the expansion continues perpetually, the universe is open and infinite, if it will some day stop and reverse direction, the universe is closed and of finite extent'. It was Guru Nanak who more than five hundred years earlier had disclosed that the universe (macrocosm) is 'infinite'. He perceived countless universes (microcosms like our own), continents, solar systems, skies, earths, stars, suns, moons etc. In view of this, he has come to the conclusion that the universe is so vast that never a human being will be able to find out its boundaries.

The ground on which Guru Nanak determines the infiniteness of the universe is quite different from that of the scientists. According to him, the universe is 'infinite' because it is beyond human conception; whereas the scientists base their conception on the expansion state of the universe.
Guru Nanak has also been able to know that the celestial bodies are ever in motion. They all move within the Divine Order (Law of Nature) which was created by the Absolute Lord along with the universe. Everything in the universe is bound by this law.

Scientists proposed two types of cosmogonic theories such as the Steady State Theory and the Big Bang Theory.

The Steady State Theory does not postulate beginning and an end of the universe. To it, the universe was/will be the same all the times.

On the other hand, A.G. Lemaitre's hypothesis of 'primal atom', the basis of the Big Bang Theory, is dominating the field of scientific research so far as origin of the universe is concerned. Presently, the scientists believe that the 'primal atom' was like a 'fire-ball' of the size of our solar system. On its explosion, the fire-ball assumed the form of nebula (cloud of dust and gas) from which the stars, sun and planets were formed. The scientists believe that expansion of the universe began at a finite time in the past, in a state of enormous density and pressure. This seems to be merely an
intelligent speculation. They have also not been able to put forward an acceptable hypothesis about the origin of the solar system. The 'primal atom' refers to the initial state of the universe. The issues, such as its earlier state, from where and how it originated are still a mystery for them. Thus the Big-Bang Theory does not solve the problem of origin of the universe. It may be pertinent to add here that the theories of the evolution of the universe are facing a challenge from the observations made by the Infrared Astronomical Satellite put into orbit by NASA in 1983.

A student of science is disgusted to-day but he still hopes to see a new plausible hypothesis about the origin of the universe.

The cosmogonic hypothesis put forward by Guru Nanak in his bani resembles to some extent with the Big-Bang Theory. He has very clearly depicted the pre-creation state, initial state and present state of the universe. According to him, the pre-creation state of the universe was a state of total void. Nothing whatsoever existed then except the omnipotent force. It has been described variously by people such as Lord, Allah, God, Absolute Lord, Akal Purakh, Wahe-Guru etc. This omnipotent force is the cause and the universe is its effect. He is self-existent. He is not only indescribable but
unapproachable too. He willed to create the universe and created it of His own. Before beginning His creation work, Nanak Bani suggests that He must have formulated a plan of the universe like a superb architect. To start with, first of all He created the Divine Order (Law of Nature) under whose command everything in the universe performs its allotted functions. Then He created matter and the soul, the two basic units of the cosmos. Later on, He infused His light (divine power) into them and the wheel of the universe began to move. Thus, the play of matter, soul and divine power is going on since time immemorial within the Divine Order.

Being an Omnipotent and Absolute Authority, He created the matter and the soul out of His ownself.

In the beginning, the triad of matter, soul and divine power assumed the shape of an 'egg' or 'two mill-stones' under the command of the Divine Order as Guru Nanak says. This was the initial state of the universe. The 'egg' or 'two mill-stones' postulated by Guru Nanak can be identified with the 'fire-ball' of scientists.

Under the Divine Plan and Order, the initial 'egg' or the 'mill-stones' expanded to the present
state of the universe. The continents, spheres, solar systems etc. did not evolve of their own as the scientists feel, but were created by the Absolute Lord.

The universe of Nanak Bani is 'infinite'. The infinite nature of the universe suggests that the initial universe (the egg or the mill-stones) expanded uniformly and isotropically. The Upanishads have referred to gradual expansion of the universe.

Nanak Bani states that the Absolute Lord created the universe through the Divine Word which is also beyond the scope of time and space like Him. As at the time of creation of the Divine Order, matter and soul by the Absolute Lord, none of us was present there, therefore, we are unable to describe as to how He created the physical universe through the Word. That is why Guru Nanak has said that 'it is the Absolute Lord alone who knows as to how He had created the universe'. The chronological order of creation according to Nanak Bani, is therefore as under:

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Absolute Lord

Word

Universe
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From the above facts of Nanak Bani, we find that Guru Nanak has studied the story of the cosmic evolution from its early state to its perfection in a critical and scientific way. His cosmogonic hypothesis not only looks much appealing but believable too than the scientific hypotheses. A conscious seeker will, therefore, turn his wits from the 'glowing but seedless' cosmogonic hypotheses of the scientists in order to quench his thirst of knowledge to the holy verses of Guru Nanak which were created by him under the command of the Lord more than five centuries earlier and are presently preserved in Guru Granth Sahib.

As regards concept of life, the scientists believe that non-living matter itself evolved into living matter which is called 'protoplasm'. It is the protoplasm which assumes different forms of living organisms. However, the scientists have not been able to find any difference between the living and non-living matter. They have also failed to synthesize the non-living matter into living matter in the laboratory. They have identified 'life' with 'living organisms'. All organs of a living thing are made of cells. According to the latest biological achievement, it is the 'genes' inside the nucleus of the cell which controls the functioning of the cells of living organisms.
According to Nanak Bani, a living thing is a unit of three elements such as body of non-living matter, soul and prana. Prana is the vital force which makes the living organism to perform its natural functions. As soon as it is withdrawn, the living thing becomes dead. Thus according to Nanak Bani, Prana is the life of a living thing. 'Prana' too is under the control of the Absolute Lord. The Lord infuses it into the unit of body and soul and withdraws it from that unit at His will:

"The Lord installs power in the mortal and then resumes it." \(1\)

If we examine the statement of the scientists that 'genes' control the functioning of the cells of living organisms, we will have to identify genes with the Omnipotent Power. The 'genes' as well as the 'Absolute Lord' have, therefore, the same status so far as functioning of the cells as well as living things are concerned respectively. But so far as their own existence is concerned, genes have no comparison with the Absolute Lord. According to Nanak Bani the Absolute Lord is self-existent; whereas the scientists do not believe in the self-existent of things. However, in the

\(1\) G.G.S. : p. 144
case of genes, it can be inferred that either the genes have a creator immediately behind it or there could be many more stages in between the genes and the creator to which the scientists do not know. It may also be stated here that according to Nanak Bani, the matter of the universe is inanimate in nature. It can change its form but not its nature. Therefore, it cannot become 'living' as the scientists believe.

In view of the facts stated above, the concept of life put forward by Guru Nanak looks scientific; whereas that of scientists totally 'unscientific'.

So far as existence of life in the universe is concerned, the scientists have not been able to find out any sign of life in the universe other than our own earth even with the modern observational instruments; whereas Guru Nanak has been able to know and he has recorded in his bani that besides our own earth, life exists in so many other spheres of the universe.

Nanak Bani teaches us that by hearing, believing and contemplating on the true Name of God, one can cross over to the 'intuitive state' and attain the knowledge of all the spheres of the world. The 'intuitive state' means to become one with the nature of the universe. However, it is indescribable. This suggests that where
the scientific knowledge based on sense organs ends, there begins the state of intuitive knowledge. Thus, the knowledge based on sense organs (which includes scientific knowledge) is inferior to that of intuitive knowledge. Therefore, the hypothesis put forward by Guru Nanak that 'life exists throughout the universe' is believable.

The scientists have also not been able to solve the problem of origin of life. There are a number of scientific hypotheses but none of them has yet been considered as 'final'. The problem, therefore, still remains unsolved at the scientific level. Even the known hypothesis of 'organic evolution' is not free from criticism. The only achievement of the scientists about the nature of life is that 'like produces like'. It may be stated here that Guru Nanak had much earlier made a mention of this hypothesis in his bani:

"As the man sows, so reaps he and whatever he earns, that he eats." (1)

"Whatever man sows that alone grows. The soul realises it, when it eats the fruits of his deeds." (2)

"Sowing truthfulness, truthfulness wells up in man and he finds a seat in the Lord's Court." (3)

1. G.G.S. : p. 730
2. ibid : p. 1243
3. ibid : p. 1243
This shows that there is no 'originality' in the hypothesis of the scientists that 'like produces like'.

Guru Nanak has succeeded in solving the problem of origin of life through his theory of 'Special Creation' according to which each kind of living organism was created separately and independently by the Absolute Lord in the beginning.

According to him, the Absolute Lord specially planned, designed and created all the creatures in the universe separately and independently of each other at His own will. He not only creates but also controls and sustains them. In order to create the living things, He created matter, soul and prana from His ownself with His 'omnipotent power':

"Exercising His power, He is supporting the earth and the sky." (2)

"There is but one Creator, who has created the world; Without any pillar, He has supported the earth and the sky." (3)

1. For example, we may take up the creation of aeroplane by Orville & Wilbur Wright of U.S. in 1903 out of a large number of different kinds of things created by different persons. The aeroplane had no previous existence. The aeroplane was made by the Wright brothers after proper planning and design with the existing material.

2. G.G.S. : p.414
3. Ibid : p.1188
In order to confirm the creation of a thing by its creator, we must know the creator. Guru Nanak has confirmed his meeting with the Lord in his bani:

"The master summoned the minstrel to His True Court; He clothed me with the robe of His True honour and eulogy." (1)

He also says that like him, everybody can meet the Lord by following the 'Divine Path of Truth and contemplating on His name':

"Nanak, it is through the Name that union with God is effected and separation occurs no more." (2)

"He, whom the creator unites with His ownself, is not born again." (3)

"Nanak through the Guru's word, one easily meets with Lord, the Life of the world and honour." (4)

No doubt, Guru Nanak had met Him but the mechanism of the universe was not disclosed to him by the Absolute Lord. That is why he has said:

.....After creation of the aeroplane, they not only controlled its working but also maintained it properly. The act of the creator to create, control and maintain a thing can be called a 'natural phenomenon'. The aeroplane can be termed as a 'special creation of its creators'.

1. G. G.S. : p. 150
2. ibid : p. 56
3. ibid : p. 433
4. ibid : p. 1037
that ' except the Absolute Lord no one knows as to how He created the universe'.

Thus, origin of everything in the universe is covered by the hypothesis of 'Special Creation'. However, limitation of the human intellect should not be the basis of non-acceptance of Guru Nanak's hypothesis.

As regards future of the universe, scientists are generally of the view that 'it is destined to perish after some astronomical time'. Their conclusion is based on different hypotheses, such as, expanding state of the universe, loss of density, loss of capacity of energy for change etc. It may be stated here that as 'nobody can describe the circumstances of the death of a person except those who were present at the time of death of that person, similarly neither a scientist nor anyone else can describe as to how the universe will dissolve. Thus, the approach of the scientists is 'unscientific' and their hypotheses unbelievable.

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For example, the mechanism of the aeroplane was known only to the Wright brothers, the creators. Besides them, it was known only to whom they taught. Everybody does not have its knowledge.
While interpreting nature of the universe in his bani, Guru Nanak has all along refrained himself from submitting such vague ideas. He has declared that ' expansion must follow contraction ', but he does not go to pronounce as to how the universe will contract. According to him, it is the creator of the universe who alone knows as to how and when He will dissolve the universe. Thus, the approach of Guru Nanak in viewing the things in their true perspective is totally 'scientific'. He has vehemently proclaimed the universal truth that 'whatever is born must die sooner or later':

"Who-so-ever is created, him death destroys." (1)

"Who-so-ever is seen, he is subject to birth and death." (2)

"He that is born, dies, if not today then tomorrow he goes." (3)

The above proclamation of Guru Nanak applies to the universe, as well.

In Guru Nanak's view, the universe is 'cyclic in nature'. According to him, time after time, the universe was created.

1. G.G.S. : p. 227
2. ibid : p. 351
3. ibid : p. 1428-M.9
On the other hand, scientists are not unanimous in their approach about the 'cyclic nature of the universe'. Some of them favour this idea but others oppose it, on one ground or the other. For example, supporters of the Second Law of Thermodynamics oppose the idea of 'cycle universe'. According to them, energy is the cause of all the life of the universe. It continually changes in form and is running downhill. When the last erg of energy will reach the bottom, it will lose all capacity for change and the universe will become dead. Hence, there will be no possibility of a 'cyclic universe'. As and when, there was opposition to this idea in the field of science, they reacted as under:

"Many giving rein to their fancy, have speculated that this low-level heat-energy may in due course, reform itself into new electrons and protons. As the existing universe, dissolves away into radiation, their imagination sees new heavens and a new earth coming into being out of the ashes of the old. But science can give no support to such fancies."

1. The Universe Around Us. : p. 322
This Law however, suggests that the universe will diminish and not the energy. The energy will lose its capacity i.e. activity. That will, therefore, be a state of 'stillness' of energy. The last erg of energy will, therefore, be in the subtle form.

The downhill journey of energy can be described as 'journey from gross to subtle state'. Likewise, energy must journey from 'subtle to gross state'. The scientists do not seem to believe in such a hypothesis, otherwise the supporters of the Second Law of Thermodynamics would have changed their concept about the 'cyclic universe'.

Guru Nanak's hypothesis of 'cycle nature of the universe' suggests that 'journey of the energy is always from subtle to gross state and vice-versa'. This viewpoint becomes clear from the following verse of Nanak Bani.

"Through the word is the creation and the dissolution of the universe." (1)

1. G.G.S. P. 117- M.3
The idea of the above verse can be expressed in the following form:

**Origin of the universe**

- God (Subtle state)
- Word
- Universe (Gross state)

**Dissolution of the universe**

- Universe (Gross state)
- Word
- God (Subtle state)

The God, the creator of the universe actually is the 'Omnipotent Power or Energy', the nature of which is creative and directive. After dissolution of the universe, the 'Omnipotent Power' restarts His journey at His will and again the universe manifests.

The state of the last erg of energy can be identified with the state of stillness (non-creative) of the 'Omnipotent Power' before origin of the universe. On the analogy of the above hypothesis of Guru Nanak, the last erg of energy must restart its journey upward i.e. 'from subtle to gross state' in due course of time.
In view of the above facts, the hypothesis put forward by Guru Nanak in his bani that 'energy runs from subtle to gross state and vice-versa' seems to be a scientific one; whereas the conclusion of the supporters of the Second Law of Thermodynamics looks merely speculative.

The hypothesis of Nanak Bani that 'through the word is the creation and the dissolution of the universe' also applies to individual beings. All the living beings originated from the Absolute Lord and will then merge in Him:

"From thee they issue forth and in Thee they merge." (1)

Guru Nanak has time and again stated in his bani that coming and going of egocentric will not end and only the True ones will merge in the True Lord. By contemplating on the name (word) of God one becomes pure. This means only 'like merges in like'. Guru Nanak says:

"As a metal ultimately merges in metal, so does a praise-chanter get absorbed in the praise-worthy Lord." (2)

"Through truth, the truthful ones merge in the True Lord." (3)

1. G.G.S. : p. 1035
2. G.G.S. : p. 18
3. Ibid : p. 839
"The creatures emerge from truth and merge in truth as well. The pure one becomes and the same with the True Lord. The false ones come and find no place of rest. Through duality, they continue coming and going." (1)

Thus, Guru Nanak has also proclaimed the universal truth that 'like merges in like'.

In nutshell, the position of science so far as its knowledge of the universe and life therein, is concerned, is not up to date. The scientists have put forward 'seedless hypotheses' about the nature of the universe and life therein. They look like 'wise gossips'.

Sir E. Ray Lankester has rightly stated that:

"We cannot know or even can hope to know or conceive of the possibility of knowing whence the mechanism of nature has come, why it is there, whether it is going and what there may or may not be beyond and beside it which our senses are incapable of appreciating. These things are not explained by science and never can be. These are all 'speculations' of the scientists."

1. G.G.S.: p. 940
2. For example, water is a mixture of hydrogen and oxygen gases. However, both the gases retain their individual identity and can be desynthesized. Only oxygen can merge in oxygen and not hydrogen.
3. The Miracle of Life: p. 11
There is, therefore, scientific reason for believing in the existence of a creator and its directive power.

Guru Nanak has narrated the story of the cosmos from its pre-creation to dissolution state in a unique manner. The universal truths enshrined in his bani are truly scientific. A few of them are given below:

i) matter is inanimate in nature; it changes its form and not nature;
ii) like produces like;
iii) like merges in like;
iv) journey of energy from subtle to gross state and vice versa;
v) expansion is followed by contraction;
vii) which is born is destined to perish.

He also states that like everything else, the universe too has its creator—the Lord, who Himself is self-existent. He is the creative and the directive power. He is the cause of causes. He is the life of all life in the universe. He not only creates the universe but sustains and dissolves also. The universe is the body of matter which perishes and not the soul (individual as well as universal). The individual soul at last merges in the universal soul—the Lord; whereas He is eternal.
emerges from Him and in the end merges in Him. Time and again, He repeats this process. Everything in the universe is under His command.

The cosmos is nothing but His manifestation. He Himself is the air, water, fire, moon, sun, male, female etc.

He pervades the entire creation. There is the same inner consciousness amongst all the beings.

All the living beings from the micro-organisms to that of elephants wander from one existence to another according to their deeds till they merge in the Lord.

From the above ideas of Guru Nanak, we may conclude that his approach to life (the living things) is not speculative at all but he has studied the nature of the universe and life therein, in a critical and scientific manner. Nanak Bani could, therefore, be one of the most important guiding factors for the seekers of the knowledge of the universe and life in the cosmos.

To conclude, the COSMIC VIEW OF LIFE which Guru Nanak presents in his bani is summed up as under:

"All the living things in the universe are related to each other. They are like beads of a rosary. Substantially, One is All and All are One."

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