

When Prof. Stephen Hawking says “I don’t know”, Guru Nanak comes to Rescue

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Stephen Hawking is regarded as the most brilliant theoretical physicist since Einstein. He is the most widely read scientist of the day. His book ‘A Brief History of Time’ was on the London *Sunday Times* bestseller list for over four years, longer than any book so far. During one of my travels I bought the book. First page of the book started with Bertrand Russell describing how the earth orbits around the sun and how the sun, in turn, **orbits around the center of a vast collection of stars called our galaxy**. At the end of the lecture, a little old lady at the back of room got up and said: “What you have told us is rubbish. The world is really a flat plate supported on the back of a giant tortoise.” The scientist gave a superior smile before replying, “**What is the tortoise standing on?**” “You are very clever, young man, very clever,” said the old lady. “But it’s turtles all the way down!”

I was surprised. Guru Nanak (1469-1539), the first Guru of Sikhs faced this same question 500 years ago. He replied it very diligently. Similar to the tortoise story in Europe, the prevalent Indian myth was, ‘**The earth is on the horns of a bull**’. Guru Nanak’s reply was in question form, “If the earth is on the horns of a bull, where does the bull stand? Or, for that matter, how many earths support bulls or how many bulls support earths?” (Sri Guru Granth Sahib: p. 3)

As I read the first page further, I found this greatest scientist of the time caught in a web of questions. He had more questions than answers. First chapter was all questions: “What do we know about the universe and how do we know about it? Where did the universe come from and where is it going? Did the universe have a beginning, and if so, what happened before then? What is the nature of time? Will it ever come to an end?”

Had he read Guru Nanak, or Sri Guru Granth Sahib (SGGS), the holy scripture of the Sikhs, he would have not been confused. Answers to all his questions are available in SGGS. Guru Nanak wrote, “The limit of universe (Lord’s creation) is not discernable. (SGGS, p.5) No one knows the limit of the Creator. (SGGS, p. 1039) No one can enumerate Creator’s doings. Only one who can be as high as the Lord can know the Lofty Being”. (SGGS, p. 3,5) Only Lord is the Creator of the universe.” (SGGS, p.1) “When He so willed He created the universe” (SGGS, p. 1039) “All the universe came out of the secrecy (*shunya*) and will merge in the secrecy (*shunya*).” (SGGS, p. 1037) “He started creating the universe, solar systems and nether worlds from secrecy.” “No one knows what was the time, the moment, lunar day, week day, season or month when the world came into existence..... Only the Creator who created the world knows the time.” (SGGS, p.4) “**For countless ages, there was utter darkness. There was no earth and no sky but the Infinite Lord’s will alone was pervasive. There was neither day, nor night, nor moon, nor sun, but the Lord alone sat in profound trance...There was no hell, nor heaven, nor death, nor time.**” (SGGS, p.1035). “**Time originated from sun**” (SGGS, p.357). “The Lord creates and destroys, Himself remaining detached.” (SGGS, p.1033) “He Himself establishes and Himself de-establishes the universe.” (SGGS, p.1034) Neither the yogi nor the scholar knows the lunar day, week day, season and the month. The Creator who creates the world Himself knows the time.” (SGGS, p. 4)

Hawking mentions that Copernicus, in 1514 who proposed the idea that sun was stationary at the center and that the earth and the planets moved in circular orbits around the sun,

feared being branded a heretic by the Church, hence circulated his model anonymously. (p.4). Copernican model propagated that “fixed stars did not appear to change their positions apart from a rotation across the sky caused by the earth spinning on its axis, hence it became natural to suppose that the fixed stars were objects, like our sun. (Hawking (a) p.5) His idea was taken up a century later by Kepler and Galileo Galilei. **However, just around the time Copernicus was toying with his idea, Guru Nanak had already said, “Countless are earths and the mountains for doing virtuous deeds and numberless over numberless Dhruvs (stars) the instruction receivers.** Numberless are Indras, the moons, the suns; numberless universes and numberless countries.” (SGGS p.7). The other questions raised in Chapter 1 are given out in the table to save space.

Hawking’s Queries (HQ)

HQ. Did the universe have natural boundary? (Hawking (a) : p.5) Whether the universe is limited in space? (Hawking(a): p.8)

Guru Nanak’s hymns explains (GN)

GN. The Lord’s creation is limitless. The bounds of His creation and their end is limitless. (SGGS p.5)

HQ. Were the stars static or moving? (Hawking (a) : p.6)

GN. “Lord’s fear (power) moves the sun and lord’s fear moves the moon. They travel myriad’s of miles without an end.” (SGGS, p. 464)

HQ. a) Has the universe existed forever or it was created at finite time in the past? (Hawking (a): p.6) b) Is the universe expanding or contracting? (Hawking (a): p.6) c) Is the universe eternal and unchanging? (Hawking(a): p.6) What could have caused the stars to turn on in the first place? (Hawking(a): p.7) What was the first cause of creation of the universe? (Hawking(a): p.8) Did the God create the universe? (Hawking(a): p.9) Is it right to imagine that the God created the universe at the instant of big bang? (Hawking(a): p10)

GN. With one Word (bang) Thou (the Lord) didst effect the worlds expansion, whereby lacs of rivers (of galaxies) began to flow. (SGGS p.3) We find these answers: 1: Universe did not exist forever. 2. It was created at a finite time in the past. 3. The universe have been expanding ever since its origin. 4. The universe is continuously changing, and not static. 5. The stars were formed with the expansion of energy. 6. The Lord created the universe with one sound, or command (bang!)

HQ. When was the universe created? (Hawking(a): p.8)

GN. Neither the yogi nor anyone else knows the lunar day, week day, season and the month (of the creation of the universe). The creator who created the universe only knows the moment. (SGGS p.3)

HQ. Whether the universe had beginning in time? (Hawking(a): p. 8) What did God do before He created the universe? (Hawking(a): p 9) Did the time start with big bang? (Hawking(a): p9)

GN. **For countless ages, there was utter darkness. There was no earth or sky. The Infinite Lord’s Will alone was pervasive. There was neither day, nor night, nor moon, nor sun. The Lord sat in profound meditation.....There was no hell, nor heaven, nor death, nor time.” (SGGS, p.1035) “Time originated with the sun” (SGGS, p.357) Universe thus did not have the beginning in time.**

HQ. Have the Newton’s theory of gravitation and Einstein’s general theory of relativity and quantum mechanics provided the right answer to the beginning, existence and ending of the universe? (Hawking(a): p 9-12)

GN. No. They have not. Guru Nanak has explained the beginning, creation,

expansion and end of universe clearly as follows: With one Word the Lord created the universe and started the expansion of the universe into millions of rivers (of galaxies) (SGGS p.3). He created the universe spontaneously (SGGS, p.930) The existence of the universe is as per Lord's Will, and will end when He so wills.

HQ. Is there a single theory to describe the whole universe? (Hawking (a) p.12)

GN. Yes. The universe is created, expanded, exists and will end according to **Lord's Will.** (command)

HQ. Is there a quantum theory of gravity or a complete unified theory of the universe? (Hawking (a) p.13)

GN. Lord's Will is behind all the theories, hence the only unified theory.

HQ. Does the theory of 'natural selection' provide answer to all questions about universe? (Hawking (a) p. 13)

GN. No. It only provides partial answer.

HQ. Why are we on earth? (Hawking (a) p.14)

GN. We are on earth to perform according to His Will.

HQ. Where did we come from? (Hawking (a) p.14)

GN. We came from the True Lord and our ultimate aim is to merge wherefrom we came, i.e., into the true Lord.

The answers given by Guru Nanak are not 'off the cuff' remarks of a layman. They are born out of his profound intuition and spiritual experience; both divine and worldly. They are empirically verifiable as can be seen from the observations made by various modern scientists.

Guru Nanak (GN)

Origin of universe Guru Nanak has explained the origin vividly: For countless ages, there was utter darkness. There was no earth and sky. The Infinite Lord's Will alone was pervasive. There was neither day, nor night, nor moon, nor sun. The Lord sat in profound meditation. There was no hell, nor heaven, nor death, nor **time.**" (SGGS, p.1035) "The Lord Himself was in a state of nothingness from where He chose to come into existence Himself. There was nothing of the universe at that time¹. (p.1035) He went on creating the entire nature, creating nothingness from nothingness. (p.1037)² "The Lord started creating regions and the universes and continued creating so from *sūnn-samadh*" (P. 1036)³. All the five elements were created from nothingness⁴. (p.1038) He further explained how the Lord created the universe from nothing, very vividly on pp.1037-1038⁵. About creation of life Guru Nanak explained, "The physical body is created by the union of semen and blood and the life is created by the union of air, water and fire. He is doing this wonderful play by creating this world of substance and love. (p.1026) ⁶ Everything is created out of Him alone. (p.223)⁷ There is only One Lord who created the entire universe. (p.1188)⁸ "Time originated from sun" (SGGS, p.357) With one word (bang) the Lord effected the worlds' expansion whereby millions of rivers (of galaxies) began to flow. (SGGS p.3)

Modern Scientists

Origin of Universe:Allen Sandage, -The big bang can be understood only as a "miracle."

Hawking: Scientists have failed to describe the universe.

Gregg Easterbrook "How and why life exists and how the universe began?"

Georges Lemaître "Existence began with the detonation of a "primordial atom" of

infinite density.”

Gregg Easterbrook “*Something* made an entire cosmos out of nothing.”

Prof. Abdus Salaam: In the first moment of time, everything in the universe was compressed into an unbelievable dense form. **So crushed was the matter that Physicists have to start the clock of time some few moments after zero because the law of nature will not extend to that point of infinite temperature and mass. (Imagined Worlds, stories of scientific discovery (p.70)**

What was present before the big bang? Version of the **big bang** theory has been put forward to deal with this question, but there is no real way to answer it. For one thing, we can say that time began at the **big bang** and that it is meaningless to talk about “before” the big bang because time did not exist. (Jay M. Pascachoff, **Astronomy from the earth to the universe**, p.454)

In 1929, Edwin Hubble made the landmark observation that wherever you look, distant galaxies are moving rapidly away from us. In other words the universe is expanding. This means that at earlier times objects would have been closer together. In fact it seemed that there was a time, about ten or twenty thousand million years ago, when they were all at exactly same place and when, therefore, the density of the universe was infinite. This discovery finally brought the question of the beginning of the universe into the realm of science. (Hawking (a): p.9)

Modern astronomical observation indicate that the universe came into existence roughly 10,000 million years ago, from a huge ball of fire tremendously hot and very dense indeed. (Josip Kleczek and Peter Jackes, **The universe and Planet earth**, p. 96)

A set of theories of the universe known as big bang theories satisfies the cosmological principle,. Basically, these cosmologies say that once upon a time there was a great big bang that began the universe. From that moment onwards the universe expanded. (Jay M. Pasachoff., **Astronomy: the earth to the Universe**, p.454)

Much has been heard of late about the origin of the universe, but the term is, in a way, rather misleading. No body has ever been able to suggest how the elements making the earth, the sun, the stars and the galaxies came into existence. All we can do is to start from some basic assumption, and then work out a sequence of events ending up with the universe as we see it today. Either the matter came into being at some particular moment in time, at least 10,000 million years ago, or else there are two basic theories, the evolutionary and the cyclic. According to the evolutionary idea, all the matter of the universe was suddenly created in the form of what may be called a ‘**primaeval atom**’. This atom exploded sending matter outward in all directions. Galaxies were built up; inside the galaxies, stars formed; and with the stars, planets. **The universe had a definite beginning and is evolving towards eventual death.** Expansion will never stop. (Patrick Moore and Iain Nicolson, **Black Holes in Space**, p.26)

All of the Friedmann solutions have the features that, at some time in the past, (between ten and twenty thousand millions years ago) the distance between neighbouring galaxies must have been zero. At that time, which we call big bang, the density of the universe and the curvature of the space-time would have been infinite. **Because mathematics cannot really handle infinite numbers, this means that the general theory of relativity (on which Friedmann’s solutions are based) predicts that there is a point in the universe where the theory itself breaks down.** Such a

point is an example what mathematics call a singularity, where curvature of space-time is infinite. This means that even there were events before the big bang, one could not use them to determine what would happen afterward, because predictability would break down at the big bang. Correspondingly, if, as is the case, we know only what has happened since the big bang can have no consequence, so they should not form part of a scientific model of the universe. We should therefore cut them out of the model and say that time had a beginning at the big bang. (Stephen Hawking, **A Brief History of Time**, p.50)

Hubble's observations suggested that there was a time, called the big bang, when the universe was infinitesimally small and infinitely dense. Under such conditions all the laws of science and, therefore, all ability to predict the future, would break down. If there were events earlier than this time, then they could not affect what happens at the present time. Their existence can be ignored because it would have no observational consequence. One may say that time had a beginning in the big bang, in the sense that earlier time simply would not be defined. It would be emphasised that this beginning in time is very different from those that had been considered previously. (Hawking (a) p. 10-11)

G.N. God created the universe when He so willed (SGGS p.1039) Everything was created from the Lord (SGGS p.223)

M.S. In an unchanging universe beginning in time is something that has to be imposed by some being outside the universe; there is no physical necessity for a beginning. One can imagine that God created the universe literally at any time in the past. On the other hand, if the universe is expanding, there may be physical reasons why there had to be beginning. One could still imagine that God created the universe at the instant of big bang, or even afterwards in just such a way as to make it look as though there had been a big bang, but it would be meaningless to suppose that it was created before the big bang. An expanding universe does not preclude a creator, but it does place limits on when he might have carried out his job! (Hawking (a) p.9-10)

Materialisation means, generally speaking, a transformation of energy into particles with a rest mass. Materialisation played a vital role in the early period of the universe (the big bang) about 10,000 million years. (Joseph Kleczek and Peter Jakes, **The Universe and the Planet earth**, p.43)

By Einstein equation $E=mc^2$ (where E is Energy, m is mass and c is velocity of light) energy is proportional to mass. (Hawking, **A Brief History of Time**, P.114)

Galaxies are still being carried away from one another by the expansion of the universe, which may continue forever if there is too little matter in the universe for gravity to pull it together again. (Heather Couper & Nigel Henbest, **Astronomy**, P. 37)

G.N. Nobel Prize-winning French biologist Jacques Monod, "The ancient covenant is in pieces: man knows at last that he is alone in the universe's unfeeling immensity; out of which he emerged **only by chance**."

M.S. Man was not created by accident. The Lord created the man with a purpose. Guru Nanak said, "The life is created by the union of air, water and fire. The True Lord plays by creating this world of materialism and love. (p.1026)⁹ The Lord created the physical world in numerous varieties of colours. He goes on creating the universe the way His Greatness is. (p.6)¹⁰ The body is fashioned by uniting the five elements. Within that the Lord's jewel (the spirit) can be seen. (p.1030)¹¹

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References

- 1 nopd Bopd X[zX{ekok Arbad Narbad dhundookara.. (p.1035)
- 2 nkg/ e[dofs efo efo d/y? ;[Bj]z ;[zB T]gkfJdk..
Aapai kudrat(l) kar kar dekhai sunh(u) sun(u) upaida (p.1037)
- 3 yzv pqjwzv gkskb nkozG/ r[gsj] gorNh nkfJdk..
Khand brhimand pataaal arambhai, gupthu pargtee aaida (p. 1036)
- 4 gzu ss[;[Bj]z gork;k..Panch tatav sunhun pargasa (p.1038)
- 5 ;[zB ebk ngozgf Xkoh.. nkfg fBokbw[ngo ngkoh..
nkg/ e[dofs efo efo d/yfj ;[zBj] ;[zB[T]gkfJdk..1..
Sunn kala aprampar(l) dhaaree. Aap(i) niralam apar apaaree.
Aapai kudart(l) kar(l) kar(l) dekhai sunhun sunn(u) upaida.
Paun paani sunai te saajai. Srist upai kaia garh raaje.
Agan paani jeeo jyot tumari sunnai kala rahaida.....
Sunhun chand sooraj gainare. Jis ki jyot tribhavan saare.
Sunnai alakh apaar niralam(u) sunnai tadi laida.
Sunhun dharat aakas(u) upai. Bin thama raakhe sach(u) kal pae.
Tribhavan saaj(l) mekhuli maya aap(l) upai khapaida (p. 1037)
- 6 fpzd[oes[fwfb fgzv[;ohnk.. gt[D[gkDh nrBh fwfb ihnk..
nkg/ u'li eo/ ozr wjbh j'o wkfJnk w'j g;kok j/.. (gzBk 1026)
Bind(u) rakt(u) mah(l) pind(u) sreea. Paun paani agni mil jeea.
Aapai choj karai rang mahlee hor maya moh pasara he (p.1026)
- 7 J/e; s/ ;G Ugs j'Jh.. Eks te sabh opt hoyee.
- 8 J/e' eosk fiB ir[ehnk.. eko karta jin jag keea (p. 1188)
- 9 fpzd[oes[fwfb fgzv[;ohnk.. gt[D[gkDh nrBh fwfb ihnk..
nkg/ u'li eo/ ozr wjbh j'o wkfJnk w'j g;kok j/.. (gzBk 1026)
Bind rakt(u) mah(l) pind(u) sreea. Paun paani agni mil jeea.
Aapai choj karai rang mahlee hor maya moh pasara he (p.1026)
- 10 ozrh ozrh Gksh efo efo fiB;h wkfJnk fiB T]gkJh..
efo efo t/y? ehsk ngDk fit fs;[dh tfvnkJh..
Rangee rangee bhaatee kar (i) kar(i) jinsi maya jin upaayee.
Kar(i) kar(i) vekhai keeta apna jiv tis di vadiai (p.6)
- 11 gzu ss[fwfb ekfJnk ehBh.. fs; wfj okw osB[b? uhBh..
nksw okw[okw[j? nksw jfo gkJhn? ;pfd thukok j/..
Panch tatav mil kaya keenee. Tis mah(l) raam ratan(u) lai cheenee.
Aatm raam(u) raam(u) hai aatam har(l) paaiai sabd(u) veechara he.(p.1030)