

NANAKIAN PHILOSOPHY AND SCIENCE

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ਖੇਜੀ ਉਪਜੈ ਬਾਦੀ ਬਿਨਮੈ ਹਉ ਬਲਿ ਬਲਿ ਗੁਰ ਕਰਤਾਰਾ ॥ AGGS, M 1, p 1255.

*"The researcher progresses while the other (discursive and aimless) perishes;
(Nanak) sacrifices himself on the Guru, the Creator."*

Guru Nanak (1469-1539 CE)

"After religious teachers accomplish the refining process indicated, they will surely recognize with joy that true religion has been ennobled and made more profound by scientific knowledge."

Albert Einstein (1879-1955 CE)

ABSTRACT

Discussion on a subject, Religion and Science, is contradictory to each other for some; while for others both are quite two different but independent realms; still for others each has something to say to other; and still some have started to say that they are compatible with each other. Currently for modern people religion is neither good nor bad but irrelevant. It may be so because religion has not been portrayed in its real perspective. In this paper philosophy embodied in the Bani (Hymns) of Guru Nanak, founder of Sikhi(sm), has been explored by the application of Science and logic to discover if philosophy of Guru Nanak (called *Nanakian Philosophy*) is relevant for the humanity of the Modern Science Age.

INTRODUCTION

Modernity, considering role of science and logic, has posed acute challenges to many religions. For a large number of people in modern societies, religion is neither good nor bad but simply irrelevant, given many alternative ways to find meaning in various forms of cultural pursuits, ethical ideals, and lifestyles. Other factors that have contributed to a decline in religious participation in the modern world include the presentation of religion on superstitious thinking, as a source of political control and divisiveness, as a confirmation of established patriarchal values, or as an emotional crutch [13, 14]. Moreover, the advances in various sciences have contradicted a number of religious beliefs. The sciences describe the Universe and life on this Earth without reference to deities, the soul, or spiritual meaning as compared to that of

religious belief in the Intelligent Design of Superpower.

In most of the religious preaching freedom of expression is snubbed and no reasoning is allowed. The three-century old quote of David Hume (1711 - 1776), "*In all ages of the world, priests have been enemies of liberty.*", is still right even during the 21st century of Science Age.

Actually the conflict between Religion and Science started during the Period of Renaissance (between 14th and 16th century) when Science was emerging as an important subject affecting the lives of human beings and the scientists started challenging certain concepts of religion in Europe. Meanwhile Guru Nanak (1469-1539) during the same Period of Renaissance was challenging the ignorant religious concepts by observing the nature of the Universe and the use of Logic in India. Unfortunately, soon after the Gurus'

period (1469-1708) the Bani of Guru Nanak started to be represented under the influence of Vedic and Vedantic philosophies rather than the intended scientific and logical approach. This is evident from the first exegesis of the *Aad Guru Granth Sahib* (AGGS) during 1883 by Bhai Badan Singh, a *Nirmala* [18]. This exegesis is famous by the name of *Faridkot Vala Tika*, which became a Prototype Exegesis for further translation of the AGGS into Punjabi, English and other languages. Consequently, Sikhism has become as a mystical, esoteric, enigmatic, and ritualistic religion.

CAUSES OF MISINTERPRETATION

Lack of scientific and rational deliberation and contemplation of Gurbani in its real perspective by the earlier writers and scholars could be the main cause of misinterpretation of Gurbani. In this respect following remarks of Guru Nanak are worth considering:

ਬਾਣੀ¹ ਬਿਰਲੁ² ਬੀਚਾਰਸੀ ਜੇ ਕੇ ਗੁਰਮੁਖਿ² ਹੋਇ ॥

Baṇī birla² bīchārsī je ko guramukh² ho^e.

ਇਹ ਬਾਣੀ¹ ਮਹਾ ਪੁਰਖ ਕੀ ਨਿਜ ਘਰਿ ਵਾਸਾ ਹੋਇ ॥੪੦॥

Ih baṇī mahā purakh¹ kī nij ghar vāsā ho^e. ॥40॥

ਅਗਗਸ ਮ: 1 ਪੰਨਾ 935 [1].

Only rare Guru-oriented² will deliberate and contemplate on the word¹ (philosophy).

This is the word¹ (philosophy) of the pre-eminent preceptor that is to be imbibed in one's own mind.

AGGS, M 1, p 935 [1].

It is true that very few Sikhs are deliberating Gurbani in its real perspective. But majority of them will readily accept any wrong concept preached or taught without verifying the facts even during the Current Science Age. A similar observation has been recorded in Gurbani about this human behaviour. In general people easily accept false statement to be true, do wrong things, and follow the path that is crooked as described by Guru Arjan:

ਝੂਠੁ¹ ਬਾਤ² ਸਾ ਸਚੁ³ ਕਰਿ ਜਾਤੀ⁴ ॥

Jhūṭh¹ bāt² sā sach³ kar jāṭī⁴.

ਸਤਿ⁵ ਹੋਵਨੁ ਮਨਿ⁶ ਲਗੈ ਨ ਰਾਤੀ⁷ ॥੨॥

Saṭ hovan man lagai na rāṭī⁷. ॥2॥

ਬਾਵੈ⁸ ਮਾਰਗੁ⁹ ਟੇਢਾ¹⁰ ਚਲਨਾ ॥

Bāvai mārag⁹ tedhā¹⁰ chalnā.

ਸੀਧਾ¹¹ ਛੇਡਿ ਅਪ੍ਰਠਾ¹² ਬੁਨਨਾ¹³ ॥੩॥

Sīdhā¹¹ chhḍi apṛṭhā¹² bunnā. ॥3॥

ਦੁਹਾ ਸਿਰਿਆ¹⁴ ਕਾ ਖਸਮੁ¹⁵ ਪ੍ਰਭੁ¹⁶ ਸੇਈ ॥

Duhā siriā¹⁴ kā kḥasam parabh¹⁵ so¹⁶.

ਜਿਸੁ ਮੇਲੇ¹⁷ ਨਾਨਕ ਸੇ ਮੁਕਤਾ¹⁸ ਹੋਈ ॥੪॥੨੯॥੯੯॥

Jis mele Nānak so mukṭā ho¹⁸. ॥4॥29॥98॥

ਅਗਗਸ ਮ:1, ਅਗਗਸ ਮ: 5 ਪੰਨਾ 185.

One takes⁴ it to be true³ what is false^{1,2},

What the truth⁵ is not imbibed in one's mind⁷.

One (usually) takes the forbidden⁸ and crooked¹⁰ path⁹.

One abandons the right¹¹ method but weaves¹³ the wrong¹² pattern.

Nanak Says:

Although the both ways¹⁴ (right and wrong) are happening under the Laws of Nature^{15,16}.

Only those who are introduced¹⁷ to the right path are liberated¹⁸.

AGGS, M 5, p 185.

Due to this inherent weakness of human as explained above, the Sikhs at large take information given in the early writings of Sikh theologians and historians as true. Moreover, discontented and depressed people in general are more inclined to believe in mythical works coated with various allurements. And there was no dearth of such people then and even now. The following quotes from non-Sikh philosophers are almost the same what Guru Arjan said about 300 years before them:

“The public will believe anything, so long as it is not founded on truth.” Edith Sitwell (1887-1964)

And

“A lie can travel halfway around the world while the truth is putting on its shoes.” Mark Twain (1835 - 1910)

What Sitwell said is exactly happening with the Sikhs of even 21st century since they will believe anything said by *Sants, Babas* (so-called sages), Sikh preachers, and *Kathakaars* (interpreters) in Gurdwaras without looking into their authenticity.

The false information given in old writings about Gurbani and Sikhism has been imprinted as true permanently in the minds of many Sikhs. If any tradition, belief, or code, given in old writings, is challenged by some researchers then many devout Sikhs, *Sants, Babas, Raagis*, traditional Sikh preachers, theologians, and the Sikh authorities - the so-called custodians of Sikhism, declare such action as a blasphemy of Gurbani and Sikhism.

It is evident that the Bani of Guru Nanak, incorporated in the *Aad Guru Granth Sahib* (AGGS) by Guru Arjan in 1604, is scientific and logical since it was promulgated during the Period of Renaissance – the Period of Advent of Science. During this period wrong religious concepts were being challenged by scientists in Europe, Guru Nanak was correcting the wrong religious concepts and rituals in South Asia. Guru Nanak based his philosophy on the observation of Nature and the Universe and this type of philosophy was later called as *‘Natural Philosophy’*, defined as follows:

The study of nature and the physical universe before the advent of modern science.

The word 'science' itself is simply the Latin word for knowledge: *scientia*. Until the 1840's what we now call Science was 'Natural Philosophy', so that even Isaac Newton's great book on motion and gravity, published in 1687, was *The Mathematical Principles of Natural Philosophy (Principia Mathematica Philosophiae Naturalis)*. Newton was, to himself and his contemporaries, a "philosopher." [22]

Here I would say that Guru Nanak (1469-1539) laid the foundation of 'Natural Philosophy' by observing natural events about cosmology, which lead to evolution of 'Science' [6, Chap.12: p 176]. Meanwhile something new was happening about 'Natural Philosophy' in Europe, and it was called the *nova scientia*, the 'new' knowledge, which began with Nicolaus Copernicus (1473-1543), a contemporary of Guru Nanak. Therefore, Bani of Guru Nanak should be studied and represented scientifically and logically since it is based on 'Natural Philosophy', which became 'Science' later on. Besides, it is also evident that though his philosophy was formulated during the 15th and 16th centuries, it has universal acceptability and applicability for the humanity of the Modern World.

There is another aspect of philosophy of Guru Nanak that Guru Nanak presented God and Religion according to 'Natural Theology' rather than the commonly understood 'Theology' at that time [7]. Let us discuss about Guru Nanak's philosophy (Natural Philosophy of Guru Nanak) based upon his observations on the behavior of the Nature and the Universe.

GURU NANAK'S PHILOSOPHY AND SCIENCE

Some Sikh theologians even some Sikh scientists are trying their best to keep Science and Religion (Sikhism) as two separate fields. While discussing with the ardent theologians it was found that they are not ready to give any place to Science and logic in Sikhism and Gurbani.

We are now living in the Age of Science and it will be very difficult for us to escape from the effect of Science on our lives and thinking. For example, if any religion teaches something like that the Sun revolves around the Earth; people are not going to accept it when the scientific evidence is that the Earth revolves around the Sun. There were many metaphysical phenomena in various religions that have now been found through Science to be of physical, chemical, or biological orders. Similarly, any other metaphysical phenomena of any religion if cannot be explained by Science today, the time is not far off when all such phenomena will be explained scientifically and logically in future.

Still many Sikh theologians sternly believe that Gurbani cannot be explained or understood through Science and logic. They strongly believe that Gurbani can only be understood through ਅਨੁਭਵ (Anubhav) attained through regular long hours of *Naam Japna* and *Naam Simrana*. Anubhav is explained by theologians as an experience or wisdom attained not through any materialist instruments or physical process but through clairvoyance / extrasensory perception.

According to Allen [2] plenty of scientists are devout and are very similar to the population at large in their religious commitments. He says that only elite scientists are significantly less religious. But the trend in the West is that many scientists are trying to justify the miraculous work in the religion rather than to explain scientifically what is right and what is wrong. Many Sikh scientists are not *qua scientists* as defined by Drange [10] since they have not come out of the influence of Vedic and Vedantic philosophies. They are interpreting Gurbani based on Vedic and Vedantic philosophy rather than on Science and logic. On the other hand some Sikh theologians are trying to interpret Gurbani scientifically and logically without having studied any Science. Therefore, no perfect interpretation of Gurbani from Sikhs scientists or theologians has been produced so far.

However, my personal experience with the study of Gurbani is different than that of such theologians. I see that Gurbani can be easily understood and explained with the present day knowledge of Science and logic as has been emphasized by Guru Nanak that the use of wisdom is the only way to understand any subject:

ਅਕਲਿ¹ ਏਹ ਨ ਆਖੀਐ ਅਕਲਿ² ਗਵਾਈਐ ਬਾਦਿ ॥

Akal eh na ākhī¹ai akal gavāī²ai bādī.

ਅਕਲੀ³ ਸਾਹਿਬੁ⁴ ਸੇਵੀਐ⁵ ਅਕਲੀ⁶ ਪਾਈਐ ਮਾਨੁ⁷ ॥

Aklī sāhib sevī⁴ai aklī pāī⁵ai mān.

ਅਕਲੀ⁸ ਪੜ੍ਹਿਹ ਕੈ ਬੁਝੀਐ⁹ ਅਕਲੀ¹⁰ ਕੀਚੈ ਦਾਨੁ¹¹ ॥

Aklī parh kai bujhī⁹ai aklī kīchāi dān.

ਨਾਨਕੁ ਆਖੈ¹² ਰਾਹੁ¹³ ਏਹੁ ਰੋਰਿ ਗਲਾਂ ਸੈਤਾਨੁ¹⁴ ॥੧॥

Nānak ākhāi rāhu eh hor galān saitan. ॥1॥

ਅਗਰਾਸ ਮ: 1 ਪੰਨਾ 1245.

The wisdom¹ which leads to arguments is not called wisdom².

One can understand³ God⁴ only through the use of intellect³,

And through the use of intellect⁶ one attains honor⁷.

Through the use of intellect⁸ one should read to discover⁹ the truth,

And also use intellect¹⁰ before donating for charity¹¹.

Nanak Says¹²:

“This is the real path¹³,
All others lead to devilish actions¹⁴.”
AGGS, M 1, p 1245.

Guru Arjan has further explained the same basic principle of philosophy of Guru Nanak in his own words as follows:

ਬੁਝੈ ਬੁਝਨਹਾਰੁ² ਬਿਬੇਕ³ ॥

Būjhai būjhanhār bibek.

ਅਗਗਸ ਮ: 5 ਪੰਨਾ 285.

Only the one, who has discriminating/discerning intellect^{2,3}, can discover¹ the truth.

AGGS, M 5, p 285.

Is it not strange that Galileo (1564 - 1642), who appeared after 95 years of Guru Nanak during the same Period of Renaissance, said the same principle in his own words as follows?

“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.”

Galileo Galilei (1564 - 1642)

Guru Nanak emphasized that the God given faculties like common-sense, reason (Vichaar) and intellect (Bibek Budh) are to study the religious Scripture scientifically and logically for finding the truth. During preaching and teaching of Sikhism, most of the time emphasis is on imaginative faith rather than on use of conscious intellect to understand Gurbani. Since Faridkot Vala Tika, based upon Vedic and Vedantic philosophy fails to reflect with conscious intellect, logic, or science in the interpretation of Gurbani [18]; it becomes necessary that the Bani of Guru Nanak should be studied scientifically and logically to express the basic principles of his philosophy for the humanity.

SCIENCE AND LOGIC IN GURBANI

After studying the following examples it would become clear that Guru Nanak used Science and logic during composing his Bani:

Cleansing of Body and Mind

Guru Nanak has used simple Science and logic to explain that how a soiled body parts and clothes are cleansed and how the polluted mind can be purified:

ਭਰੀਐ ਹਥੁ ਪੈਰੁ ਤਨੁ ਦੇਹ ॥

Bharīai hath pair tan deh.

ਪਾਣੀ ਧੋਤੈ ਉਤਰਸੁ ਖੇਹ ॥

Pānī dhōtai utras khēh.

ਮੂਤ ਪਲੀਤੀ ਕਪੜੁ ਹੋਇ ॥

Mūt palīṭī kapaṛ hoie.

ਦੇ ਸਾਬੁਣੁ ਲਈਐ ਓਹੁ ਧੋਇ ॥

De sābūṇ laīai oh dhōie.

ਭਰੀਐ ਮਤਿ² ਪਾਪਾ³ ਕੈ ਸੰਗਿ ॥

Bharīai mat pāpā kai sang.

ਓਹੁ ਧੋਪੈ ਨਾਵੈ*⁵ ਕੈ ਰੰਗਿ⁶ ॥

Oh dhōpai nāvai kai rang.

ਅਗਗਸ ਜਪੁ 20 ਪੰਨਾ 4

If hands, feet and body are soiled with dust these can be washed with water.

If the clothes become impure with urine (chemicals) they can be cleansed by washing with soap (other chemicals).

If mind² is polluted¹ with sins³ then it can be purified⁴ by understanding the God⁶ and working of Its Laws of Nature/Universe⁵.”

AGGS, Jap 20, p 4.

* ਨਾਵੈ: It has been interpreted as ‘Laws of Nature rather than any name of God or its repetition.

Concept of Guru Nanak about the Movement of Sun

Science is much of legitimate reason to learn about reality and Guru Nanak’s philosophy consistently reflects scientific observations; although proven later by other philosophers/scientists. For example; Guru Nanak had already written much earlier than Galileo that Sun is also not stationary but is in constant motion like other planets:

ਭੈ¹ ਵਿਚਿ ਸੂਰਜੁ² ਭੈ¹ ਵਿਚਿ ਚੰਦੁ³ ॥

Bhai vich sūraj bhai vich chand.

ਕੋਰ⁴ ਕਰੋੜੀ⁵ ਚਲਤ ਨ ਅੰਤੁ⁶ ॥

Koh karoṛī chalaṭ na ant.

ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 464.

Guru Nanak says:

The Sun² along with its planets³ moves tens of millions⁵ of miles⁴ and there is no limit⁶ how much it has travelled and how much it would travel more.

Note: Here ਭੈ does not mean fear but it means under the Hukm (meaning Laws of Nature/Universe).

Here ਚੰਦੁ (Moon) is represented as a planet of Sun, although scientifically Moon is not a planet but a Natural satellite of Earth.

On the other hand Biblical references Psalm 93:1, 96:10, and 1 Chronicles 16:30 include text stating that "the world is firmly established, it cannot be moved." In the same manner, Psalm 104:5 says, "The Lord set the earth on its foundations; it can never be moved." Further, Ecclesiastes 1:5 states that "And the sun rises and sets and returns to its place" etc.

This concept was first challenged by Nicolaus Copernicus (1473 –1543) then Galileo (1564-1642)

carried it further.

Later on the Inquisition's ban on reprinting Galileo's works was lifted in 1718 (after 76 years) when permission was granted to publish an edition of his works (excluding the condemned *Dialogue*) in Florence. In 1741 Pope Benedict XIV authorized the publication of an edition of Galileo's complete scientific works which included a mildly censored version of the *Dialogue*. In 1758 the general prohibition against works advocating heliocentrism was removed from the Index of Prohibited Books although the specific ban on uncensored versions of the *Dialogue* and Copernicus's *De Revolutionibus* remained. All traces of official opposition to heliocentrism by the church disappeared in 1835 when these works were finally dropped from the Index.

Excommunication in Sikhism

A situation similar to that of Galileo is also found in Sikhism. The ex-communication of a true Sikh, Prof Gurmukh Singh, is an epitome (prime example) of abuse of illicit power by a bunch of self-serving religious leaders. He was excommunicated by the Akal Takht Head Granthi Bedi Khem Singh supported by Rajah Bikram Singh of Friedkote, Mahants, Pujaris and others in 1887. At the time of his ex-communication Prof Gurmukh Singh, one of pioneer founders of the reformist Sikh movement Singh Sabha, was actively pursuing his goal to found the first ever Khalsa College in Amritsar. The band of pretenders to the Sikh spiritual and temporal authority, not only ex-communicated Prof Gurmukh Singh, but also incited the Sikh community not to render him financial help to carry out his missionary work and the noble cause of founding the Khalsa College. They also harassed and hounded Prof Gurmukh Singh's companion Giani Ditt Singh to an early grave. He was excommunicated for his following activities:

- 1) *He does not revere the Sikh Gurus' progeny.*
- 2) *Twenty pictures of Avatars (Hindu Mythical god incarnates) were burned to refute their existence during a convention of Lahore Singh Sabha (Forum).*
- 3) *A Hindu convert to Islam was baptized as a Singh by the Lahore Singh Sabha.*
- 4) *In an article published in the Khalsa Newspaper he wrote, Worship of weapons in the Sikh Gurdwaras is copy of Hindu ritual that is against Guru's edification.*

Prof Manjit Singh revoked this dictatorial edict in 1995 (after 108 years) at the International Conference and acclaimed Prof Gurmukh Singh as a true Sikh [3]. During the last 20-30 years many Sikhs have been excommunicated. Some of them have stood against this system of excommunication while others have succumbed to it due to the societal pressure.

Other Wrong Concepts about the Earth

The general tendency of the Muslim world, apart from learned theories, is to consider the world as a flat disc. According to *Qur'an Passage* – XV, 19, LXXIX, 30, God spread out the Earth is found in the traditions and consciousness of the people. The mountain *Kaf* is separated from the terrestrial disc by a region which men cannot cross, a dark area which would stretch for four months walking, according to saying of Prophet (Tabari-Balami, 1867, 33). The Iranian Muslims describe the animal, a bull supporting the Earth, now as a hybrid of bull and fish (Firdawsl, 1877-84; Vullers, 947). Similarly, popular belief in Baghdad long talked of a bull and a fish as supports for the Earth (Peterman, 1861). The theme of the bull carrying the Earth is also found in the Vedic literature (Ref. Yajur Veda 4:30, 14:5; Narsingha purana, p. 169 Abithana Sinthamani – earth is flat) in India, and the rock from which the mountain *Kaf* springs can doubtless be identified with the stone *Shetiyya* in which Jewish legends see the umbilical stone of the Earth, which God cast down into the depths of chaos or of the Ocean as the support of the Earth (Feuchtwang, 1910) [17].

Wrong Concept about Earth Challenged by Guru Nanak

According to Guru Nanak's philosophy there is no information whether the Earth is flat or the Earth is center of the Universe or the Sun rises and sets on the Earth. However, Guru Nanak has raised a question about the bull carrying the Earth by saying that how much weight a bull can carry (ਧਵਲੈ ਉਪਰਿ ਕੇਤਾ ਭਾਰੁ ॥).

Then he says if the Bull is carrying the Earth then it must be standing on another Earth and so on. However, scientifically there is no Earth below this Earth. Similarly, if the bull is standing on a fish or tortoise in a sea or on an umbilical mountain then there is a question where does the ocean or mountain stand. In fact the mountain and ocean are right on this Earth. Guru Nanak has briefly described his observations about this issue as follows:

ਧੋਲੁ¹ ਧਰਮੁ² ਦਇਆ³ ਕਾ ਪੂਤੁ⁴ ॥

Dhoul dharam daⁿⁱa kã pũt.

ਸੰਤੋਖੁ⁵ ਥਾਪਿ ਰਖਿਆ⁶ ਜਿਨਿ ਸੂਤਿ⁷ ॥

Santokh thãp rakhi^a jin sũt.

ਜੇ ਕੇ ਬੁਝੈ ਹੋਵੈ ਸਚਿਆਰੁ ॥

Je ko bujhãi hovai sachãr.

ਧਵਲੈ ਉਪਰਿ ਕੇਤਾ ਭਾਰੁ ॥

Dhavlai upar ketã bhãr.

ਧਰਤੀ ਹੋਰੁ ਪਰੈ ਹੋਰੁ ਹੋਰੁ ॥

Dharti hor parai hor hor.

ਤਿਸ ਤੇ ਭਾਰੁ ਤਲੈ ਕਵਣੁ ਜੋਰੁ ॥...16

Fis te bhār talai kavan jor.

ਅਗਗਸ, ਜਪੁ 16, ਪੰਨਾ 3.

The mythical white-bull¹ that supports the Earth in fact is the result⁴ of the Laws of Univers^{2, 3} and gravitational attraction⁵ that holds⁶ the Earth in its place⁷.

The one who discovers this order (Laws of Universe^{1,2}) becomes enlightened to understand that:

How could that mythical white-bull carry that much load of Earth?

If the white-bull is supporting the Earth, then what is that place on which this bull is standing?

It means the bull will need another Earth to stand on and then another bull is needed to carry that Earth and so on.)...16

ਸੰਤੋਖੁ² (*Santokh*): Santokh is usually interpreted as contentment/satisfaction that means the one who is contented and satisfied settles down in tranquility. The contentment (*Santokh*) for the Earth means that mystic power with which the Earth is staying in its orbit around the Sun. This mystic power has been interpreted as the ‘Gravitational Attraction’, which keeps the Earth in its orbit around the Sun.

It may be difficult for many scholars and theologians to accept the above interpretation, however, the following interpretation by Principal Teja Singh [19] may help them to understand my above interpretation:

“ਲੋਕਾਂ ਨੇ ਜੋ ਮੰਨਿਆ ਹੋਇਆ ਹੈ ਕਿ ਧਰਤੀ ਨੂੰ ਇਕ ਬਲਦ ਚੁਕੀ ਖੜੋਤਾ ਹੈ, ਉਹ ਬਲਦ ਅਸਲ ਵਿਚ ਰੱਬ ਦੀ ਕਿਰਪਾ ਦਾ ਸਾਜਿਆ ਹੋਇਆ ਕਾਨੂੰਨ ਹੈ, ਜਿਸ ਨੇ ਸਾਰੇ ਸੰਨਸਾਰ ਦੇ (ਸਿਸਟਮ) ਪ੍ਰਬੰਧ ਵਿਚ ਸੰਤੋਖ ਨੂੰ ਵਰਤਾਇਆ ਹੋਇਆ ਹੈ। ਅਰਥਾਤ, ਇਸ ਸਚਿਸ਼ਟੀ ਦੀ ਰਚਨਾ ਜੋ ਇਕ ਬੱਧੀ ਹੋਈ ਮਿਰਜਾਦਾ ਵਿਚ ਚਲ ਰਹੀ ਹੈ, ਇਸ ਵਿਚ ਹਰ ਇਕ ਚੀਜ਼ ਕਿਉਂ ਸਬਰ ਸ਼ਾਂਤੀ ਨਾਲ ਵਰਤ ਰਹੀ ਹੈ?... ਇਸ ਲਈ ਕੁਦਰਤ ਦਾ ਕਾਨੂੰਨ ਰੱਬ ਦੀ ਦਇਆ ਦਾ ਨਮੂਨਾ ਹੈ।”

Literal translation:

“The people have accepted that a bull has lifted the Earth, in fact, that bull is the law of blessing of God, the system with which the whole Universe is working under the ‘Santokh’ means the creation of the Universe is bound to work under those rules, why everything is working perfectly and peacefully in this? If it is not under certain laws then there will be chaos everywhere... That is why Law of Nature is ‘compassion’ of God.”

The above interpretation comes to be somewhat close to that of mine interpretation of ‘Santokh’ as ‘Gravitational Attraction’ with which the Earth is staying in its orbit around the Sun.

Ancient Concepts about the Universe Rejected

Guru Nanak rejected the ancient concepts about the

Universe accepted as true in some religions then he cites his own scientific or logical philosophy about the Universe:

ਪਾਤਾਲਾ¹ ਪਾਤਾਲ ਲਖ ਆਗਾਸਾ² ਆਗਾਸ ॥

Pātālā pātāl lakh āgāsā āgās.

ਉੜਕ³ ਉੜਕ ਭਾਲਿ ਥਕੇ ਵੇਦ ਕਹਨਿ ਇਕ ਵਾਤ⁴ ॥

Oṛak oṛak bhāl thake ved kahan ik vāt.

ਸਹਸ ਅਠਾਰਹ ਕਹਨਿ ਕਤੇਬਾ⁵ ਅਸੁਲੂ ਇਉ ਧਾਤੁ⁶ ॥

Sahas aṭhārah kahan kaṭebā asulū ik dhāt.

ਲੇਖਾ⁷ ਹੋਇ ਤ ਲਿਖੀਐ ਲੇਖੇ ਹੋਇ ਵਿਣਾਸੁ ॥

Lekhā hoṛe ta likhīṛai lekhai hoṛe viṇās.

ਨਾਨਕ⁸ ਵਡਾ ਆਖੀਐ ਆਪੇ⁹ ਜਾਣੈ ਆਪੁ¹⁰ ॥੨੨॥

Nānak vadā ākhīṛai āpe jāṇai āp. ॥22॥

ਅਗਗਸ, ਜਪੁ 22, ਪੰਨਾ 5.

Ancient Concepts:

The Veda got tired after an immense³ search and said one thing⁴.

That there are hundreds of thousands (many lakhs) nether worlds¹ under nether worlds and skies² above skies.

The Semitic books⁵ say that there are eighteen thousand worlds that is their conclusion⁶.”

Nanakian Concept / Modern Concept:

If there is any account⁷ (of the worlds in the Universe) then it can be written down since it is countless.

However, the accountant (or account) may be exhausted if tried to do so.

Nanak Says:

Let us say the God is Great⁸, only God⁹ would know by Itself¹⁰ the infiniteness of the Universe.”

AGGS, Jap 22, p 5.

Scientifically there is no nether world, it is a myth. Similarly, sky is an atmosphere around the Earth and beyond. It cannot be counted in number since it is just a space. What we call sky is in fact the blue color due to the thickness of the air around the Earth through which the sunlight passes and looks blue. The first two sentences represent the concepts of Vedas (Yajur 4:26-28) in Hinduism. The third sentence represents the concept in Islam. The irony is that some Sikh theologians have not understood this fact and consider that these three phrases also belong to Guru Nanak. But Guru Nanak usually refers to the generally accepted concepts of other religious literature first then he gives his understanding about the issue being discussed. Therefore, in the fourth and fifth phrases Guru Nanak describes that the Universe is infinite and it is not possible to account the number of the worlds (stars and their planets in the Universe). Nanakian Philosophy about the infiniteness of the Universe is so correct even today that the scientists have also declared the infiniteness of the Universe.

ORIGIN OF UNIVERSE

First of all I would like to make it clear here that many Sikh theologians interpret Gurbani about creation very similar to that of creation in Hinduism and Abrahamic Religions. It is summed up in Wikipedia as follows:

"As per Sikhism, all that existed before creation took place was God and His/Her Will. The creation took place at the Will of God, through His/Her word (Shabad). It is through God's word that the expansion of Universe came into existence with God's word permeating and pervading everywhere. First came air and then came water from air. From water came life forms. As per Sikhism, creation and destruction are both Divine sport of God, all happening through the word (Shabad) of God. It is a continuous process of creating and destroying. Out of this creation, God fostered enticement and attachment of Maya, human perception of reality. Onkaar is the word through which all of the creation took place." [17]

On the other hand the Sikh Missionary Society of UK has summed up Creation in Sikhism as follows:

"God existed all alone in His abstract form, *Nirgun*, before He created the Universe. This may be called the state of pre-creation. God was in the state of *sunm samadhi*=state of pre-creation, state of contemplation of the void.

According to Guru Nanek, there was darkness and chaos for millions of years. There were mists and clouds. None existed except God. Guru Nanak says:

"There was darkness for countless years. There was neither earth nor sky; there was only His Will.

There was neither day nor night, neither sun nor moon. He (God) was in deep meditation. There was nothing except Himself." (A.G., pg 1035)

Then God willed the creation of the universe. He became manifest: *Sargun*. He diffused Himself in nature. Guru Nanak says:

"Thou created all Thy Universe to please Thyself, to enjoy the spectacle, the reality, which is the light of Thy own Reality-self."

When was the world created? This is a mystery. Was this process of creation a sudden and impulsive one or was it one of evolution and growth? Only God who created it knows. Like a spider, God spun Himself into a web. A day will come when He will destroy that web once again become His sole self." [20]

Both the above views on Internet are indicating that the Universe was created by God. According Sikh Missionary Society God existed all alone in His abstract form, *Nirgun*, before He created the Universe. Then God willed the creation of the Universe. He became manifest: *Sargun*. He diffused Himself in nature.

Origin of Universe in Nanakian Philosophy

Various verses in the Aad Guru Granth Sahib connected about origin of Universe have been interpreted as 'Creation' by famous Sikh scholars. However, the widely accepted theory of Big Bang about to the Origin/Evolution of Universe is found in the Bani of Guru Nanak. According to the standard theory of Big Bang, our Universe sprang into existence around 13.7 billion years ago from "singularity" - an infinitesimally small, infinitely hot, and infinitely dense point [12, 24]. This point is called 'Singularity' by some scientists and 'Nothingness' by others [8]. But Guru Nanak calls 'Nothingness' as 'ਸੁੰਨ' (*Sunn*) which is a 'Singularity' as 'ੴ' (One and Only). Both ੴ and ਸੁੰਨ have been represented by Guru Nanak in a logo as ੴ. i.e. 'ੴ' (One and Only) is 'ੳ' (Oh) That is 'ੴ' 'Infinite' [4-8].

Brief description of Evolution of Universe – A Scientific Concept [24]

The instant in which the Universe is thought to have begun rapidly expanding from an extremely high energy density is known as the Big Bang.

Although one does not find such detailed origin of the Universe in the Bani of Guru Nanak as explained above but origin of the Universe in his Bani is very much comparable to the basic principles of the Big Bang Theory of 20th century. One of the major basic principles is explained in the following single phrase and rest of the expansion of the Universe has been explained in Raga Maru at pages 1037-1038 and other Bani:

ਕੀਤਾ ਪਸਾਉ ਏਕੇ ਕਵਾਉ ॥

Kīṭā pasāo eko kavāo.

ਤਿਸ ਤੇ ਹੋਏ ਲਖ ਦਰੀਆਉ ॥

Tis te ho'e lakh darīāo.

ਅਗਗਸ, ਜਪੁ 16, ਪੰਨਾ 3.

However, our pioneer Sikh scholars have translated/interpreted this phrase as "Creation" rather than as "Evolution" or "Origin" according to their understanding:

Faridkot Vala Tika [23]:

ਕੀਤਾ ਹੈ ਪਸਾਰਾ ਇਕ (ਕਵਾਉ) ਇਕ ਵਾਕ ਤੇ ਭਾਵ ਐਸੇ ਸੰਕਲਪ ਕੀਆ ਕਿ ਮੈ ਏਕ ਸੇ ਬਹੁਤ ਹੋ ਜਾਵਾਂ॥

ਤਿਸ ਸੰਕਲਪ ਕਰਣੇ ਸੇ (ਲਖ) ਬਹੁਤੇ ਹੀ (ਦਰੀਆਉ) ਭਾਵ ਪਰਵਾਹ ਰੂਪ ਜਗਤ ਹੋਤੇ ਭਏ ।

Manmohan Singh (SGPC) [23]:

ਇਕ ਸ਼ਬਦ ਨਾਲ ਤੂੰ ਜਗਤ ਦਾ ਖਿਲਾਰਾ ਕਰ ਦਿਤਾ ਤੇ ਇਸ ਦੁਆਰਾ ਲਖਾਂ ਦਰਿਆ ਵਹਿਣੇ ਸ਼ੁਰੂ ਹੋ ਗਏ।

Prof Sahib Singh [23]:

(ਅਕਾਲ ਪੁਰਖ ਨੇ) ਆਪਣੇ ਹੁਕਮ ਨਾਲ ਸਾਰਾ ਸੰਸਾਰ ਬਣਾ ਦਿੱਤਾ,

ਉਸ ਹੁਕਮ ਨਾਲ (ਹੀ ਜ਼ਿੰਦਗੀ ਦੇ) ਲੱਖਾਂ ਦਰੀਆ ਬਣ ਗਏ।

Manmohan Singh (SGPC) in English [23]:

With One Word Thou didst affect the world's expansion.

And where by lacs of rivers began to flow.

Sant Singh Khalsa [23]:

You created the vast expanse of the Universe with One Word!

Hundreds of thousands of rivers began to flow.

DP Singh [15 - p 28-29]:

ਪ੍ਰਭੂ ਨੇ ਆਪਣੇ ਇਕੋ ਹੁਕਮ (ਜਾਂ ਨਿਯਮ) ਨਾਲ ਸਾਰੀ ਸਿਰਸ਼ਟੀ ਰਚ ਦਿੱਤੀ ਅਤੇ ਉਸ ਦੇ ਹੁਕਮ ਨਾਲ ਹੀ ਜ਼ਿੰਦਗੀ ਦੇ ਦਰਿਆ ਬਣ ਗਏ।

A critical analysis of above translations/interpretations indicates that the first exegesis of AGGS known as Faridkot Vala Tika interpreted the above phrase under the influence of Vedic and Vedantic philosophies as:

God created the Universe with one word from that hundreds of thousands rivers (and living beings) were created.

The same theme has been kept without making any improvement by all the other famous Sikh scholars except Manmohan Singh's SGPC and Sant Singh Khalsa who have even eliminated to mention living beings. Thereafter, some Sikh scholars (including some Sikh scientists) followed Prof Sahib while others followed Manmohan Singh's English translations.

Now the question is:

Why are modern Sikh scholars not trying to interpret Gurbani with an application of Science and logic?

I am sure a new and more accurate interpretation representing the real theme of Gurbani will appear after the application of Science and logic. Einstein's view about this approach is as follows:

"After religious teachers accomplish the refining process indicated, they will surely recognize with joy that true religion has been ennobled and made more profound by scientific knowledge."

It was DP Singh, a Physicist, who deviated from the traditional interpretation of 'Origin of Universe' by using the word ਹੁਕਮ – Hukm (ਜਾਂ ਨਿਯਮ - Laws of Nature).

Now I have interpreted this phrase of Guru Nanak with the application of Science and logic as follows [4]:

ਕੀਤਾ ਪਸਾਉ¹ ਏਕੇ ਕਵਾਉ² ॥

Kīṭā pasā^o eko kavā^o.

ਤਿਸ ਤੇ ਹੋਏ ਲਖ ਦਰੀਆਉ³ ॥

Fis ṭe ho^e lakh dārī^oā^o.

ਅਗਰਸ, ਜਪੁ 16, ਪੰਨਾ 3.

The Universe exploded with one sound² (bang) and started to expand¹.

Thereafter many things³ appeared.

AGGS, Jap 16, p 3.

I have interpreted the word ਕਵਾਉ as 'sound'; in fact, it means 'Bang' (the swift release of a store of effective force or energy although when the Bang occurred for the first time there was no sound produced.). Moreover, ਕਵਾਉ does not mean a 'Word' or 'Sabd' as usually interpreted by many authors but it means 'Hukm' (order) according to *Mahan Kosh* [16]. However, *Mahan Kosh* also says that ਕਵਾਉ is from ਕਵਾ which means 'Energy'. This meaning has been ignored by almost all the scholars. Now I have modified the above interpretation while keeping in view the meaning of ਕਵਾਉ (ਕਵਾ) as 'Energy' as follows:

The Universe exploded from one source of energy² (Singularity) and started to expand¹. Thereafter many things³ appeared.

Because:

1. ਪਸਾਉ (*Pasao - Pasara*) means to expand.

2. ਕਵਾਉ (*Kavao*) means 'sound' or 'word' or 'note' or 'Hukm' (Order). But here ਕਵਾਉ is from ਕਵਾ which means energy according to *Mahan Kosh* [16]. Therefore, ਏਕੇ ਕਵਾਉ means 'From one source of Energy' (ਏਕੇ stands for 'Singularity', which is also called 'Nothingness').

ਦਰੀਆਉ (*Daryao*) has been literally interpreted as rivers by many scholars. Keeping in view the methodology used by Guru Nanak to express his philosophy 'ਦਰੀਆਉ' has been used as a metaphor for 'things'. What are those things? Scientifically what appeared after the 'Big Bang' was a large number of galaxies each composed of a large number of stars (Suns) and their planets? Therefore, the 'ਲਖ ਦਰੀਆਉ' (*Lakh Daryao*) has been used to represent 'many things' because of limited vocabulary available at that time. However, one must understand that no water was formed immediately after the Big Bang. It took billions of years to form Earth and water in the Universe. Therefore, 'ਲਖ ਦਰੀਆਉ' (*Lakh Daryao*) is a metaphoric expression of 'many things' (that means starting from elementary particles to particles to nucleo-synthesis to nuclear to atoms which gave rise to many galaxies as described earlier).

The concept of 'ਦਰੀਆਉ' (*Daryao*) in Nanakian Philosophy as 'things' has been explained by Guru Arjan further so that the metaphor, 'ਦਰੀਆਉ' (*Daryao*), may not be misunderstood as 'Rivers' as has been understood

by some scholars in the above phrase of Guru Nanak:

ਏਕ ਕਵਾਵੈ¹ ਤੇ ਸਭਿ² ਹੋਆ ॥੧॥

Ēk kavāvai te sabh ho^ā. ॥1॥

ਅਗਗਸ, ਮ: 5, ਪੰਨਾ 1003.

From one source of energy¹ (Singularity) everything² appeared.

AGGS, M 5, p 1003.

Note: 'ਏਕ ਕਵਾਵੈ' in the above phrase is same as 'ਏਕੋ ਕਵਾਉ' of Guru Nanak's previous phrase. And ਕਵਾਵੈ is from ਕਵਾ. ਕਵਾ means 'Energy' according to *Mahan Kosh* [16].

The above discussion clearly leads us to believe that Guru Nanak had explained Big Bang in one phrase:

ਕੀਤਾ ਪਸਾਉ¹ ਏਕੋ ਕਵਾਉ² ॥ ਤਿਸ ਤੇ ਹੋਏ ਲਖ ਦਰੀਆਉ³ ॥

(Kīṭā pasā^o eko kavā^o. Fis te ho^e lakh darī^āo.)

Note: The word ਦਰੀਆਉ (*dariao*) has also been used by Guru Nanak in his Bani incorporated in the AGGS as 'real river' (p 464), as 'river' metaphor for 'God' (p 25), as 'river' metaphor for 'Guru' (p 1329), as 'river' metaphor for 'Guru' - Sacred place' for taking bath (meaning to learn from Guru) to purify mind (p 1411).

Normally many Sikh theologians are against the use of Science and logic to interpret Gurbani. Therefore, such interpretation is considered as heresy and/or blasphemy by conservative theologians. If any scholar who tries to interpret Gurbani by the application of Science and logic that contradicts the conventional/traditional interpretation that scholar is ridiculed or in some cases is excommunicated. It is so true that more than 100 years ago Robert Green Ingersoll (1833-1899) said about the use of word 'Blasphemy' as a crime in religion:

*"This crime called **blasphemy** was invented by priests for the purpose of defending doctrines not able to take care of themselves."*

On the other hand George Bernand Shaw thinks that:

"All great truths begin as blasphemies."

Moreover, the truth has to pass through three stages before it is accepted as truth:

All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident.

Arthur Schopenhauer (1788 - 1860)

However, according to Guru Nanak finally the truth will prevail:

ਕੂੜ ਨਿਖੁਟੇ ਨਾਨਕਾ ਓੜਕਿ ਸਚਿ ਰਹੀ ॥੨॥

Kūr nikhute nānkā oṛak sach rahī. ॥2॥

ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 953.

Falsehood cannot stand long finally the truth will prevail.

AGGS, M 1, p 953.

Guru Nanak advises people not to waste your lives living on falsehood and try to discover the truth:

ਮੂਰਖ ਸਚੁ ਨ ਜਾਣਨ੍ਹੀ ਮਨਮੁਖੀ ਜਨਮੁ ਗਵਾਇਆ ॥

ਵਿਚਿ ਦੁਨੀਆ ਕਾਹੇ ਆਇਆ ॥੮॥

Mūrakh sach na jāṇanḥī manmukhī janam gavā^ā.

vich duniā kāhe ā^ā. ॥8॥

ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 467.

The fools do not know the Truth. The self-willed (manmukhs) waste their lives in falsehood.

Then Guru Nanak poses a question:

(Try to know) what is your purpose of life for coming into this world? ॥8॥

AGGS, M 1, p 467.

Finally, Guru Nanak says that he himself speaks the truth what may come. Please note that here 'Nanak' is with *onkar*, which mean Nanak himself not as a pen-name:

ਸਚ ਕੀ ਬਾਣੀ ਨਾਨਕੁ ਆਖੈ ਸਚੁ ਸੁਣਾਇਸੀ ਸਚ ਕੀ ਬੋਲਾ

॥੨॥੩॥੫॥

Sach kī baṇī Nānak ākhai sach sunā^{isī} sach kī belā. ॥2॥3॥5॥

ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 723.

Nanak speaks the Truth and proclaims that he will speak the Truth at the right time (when needed). ॥2॥3॥5॥

AGGS, M 1, p 723.

God as ਨਿਰਗੁਣ (Nirgun) and ਸਰਗੁਣ (Sargun)

It is generally believed by many Sikh theologians that God is *Nirgun* (without any attributes) but can become *Sargun* (with all attributes) and also can assume anthropomorphic forms when needed. This concept is supporting the existence of God in Trinity and incarnation into various gods and goddesses in anthropomorphic forms according to Vedic and Vedantic philosophical concept of God.

Now there is a question:

If God is *Nirgun* 'without any attributes' then how could God also exist in *Sargun* form with all attributes {including ਮਾਇਆ (*Maya*)}? But according to Nanakian Philosophy *Nirgun* does not mean that God is without attributes since *Nirgun* state is same as ਸੁੰਨ (*Sunn*) state, which is equivalent to 'Nothingness' and/or 'Singularity' in which energy/matter – time/space are highly concentrated in a very minute single

point which looks like ‘Nothingness’ (*Nirgun*). Therefore, in the concept of Guru Nanak ‘*Nirgun*’ state does not mean ‘without attributes’ rather in this state God is still ‘*Sarguni*’ since energy/matter – time/space are present in highly concentrated form which gives all attributes of Universe as explained by Chahal [8].

In the following phrase Guru Nanak has used the word, *Nirgun*, for God to portray that It is in the *Sunn* State (‘Nothingness’ or ‘Singularity’) which actually contains the potential (energy-matter and time-space) for evolving into everything:

ਨਿਰਗੁਣ¹ ਰਾਮੁ² ਗੁਣਹ³ ਵਸਿ⁴ ਹੋਇ ॥

ਆਪੁ⁵ ਨਿਵਾਰਿ⁶ ਬੀਚਾਰੇ⁷ ਸੋਇ ॥੧॥ ਰਹਾਉ ॥

Nirgunṇ rām guṇah vas hoᶜe.

Āp nivār bīchāre soᶜe. ॥1॥ rahāᶜo.

ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 222.

The God², Who is considered without any attributes¹ (Nothingness), still has all the attributes³ under Its own control⁴.

The one⁵, who gets rid⁶ of egoistic attribute (bad attributes), can contemplate⁷ by oneself the state of Nirgun God as Nothingness or Singularity and state of Sargun God as Universe/the Nature. I. Pause.

AGGS, M 1, p 222.

Note: Here ਰਾਮੁ (*Ram*) is not the son of Deshrath or god or *devta* in Hinduism but that Entity (the God), which is in *Nirgun-Sargun* state

In the following phrase Guru Nanak says that *Nirgun* state (Nothingness/Singularity) of God becomes *Sargun* state (the Universe):

ਅਵਿਗਣੇ¹ ਨਿਰਮਾਇਲੁ² ਉਪਜੇ³ ਨਿਰਗੁਣ⁴ ਤੇ ਸਰਗੁਣ⁵ ਥੀਆ⁶ ॥

Avigāṇo nirmāᶜil upje nirgunṇ ṭe sargunṇ thīᶜā.

ਅਗਗਸ, ਮ: 1., ਪੰਨਾ 940.

From Sunn¹ State (Nirgun/Nothingness) the immaculate² (God) appeared³; then from this state of without attributes⁴ (Nirgun/Nothingness) assumed⁶ the immanent state⁵. (Sargun/the Nature/Universe).

AGGS, M 1, p 940.

ਅਵਿਗਣ = It has been interpreted by Bhai Kahn Singh [16] as a state which cannot be described. Scientifically this state is ‘Nothingness’ which is equivalent to ‘*Sunn*’ as defined by Guru Nanak.

ਸਰਗੁਣ = Immanent State. It means God become the Universe/the Nature.

It can be easily inferred that the *Nirgun* state is not without attributes rather it is the state in which the energy/matter – space/time occur in highly concentrated form into a single point (Singularity) but looks like *Nirgun* state (Nothingness). And *Sargun* state of God represents the Universe/the Nature. But it

does not mean that God exists in Trinity or in Anthropomorphic Form or involved in *Maya*.

Although Guru Nanak has explained the origin of Universe in one phrase, ਕੀਤਾ ਪਸਾਉ¹ ਏਕੇ ਕਵਾਉ² ॥

ਤਿਸ ਤੇ ਹੋਏ ਲਖ ਦਰੀਆਉ³ ॥ (Kīṭā pasāᶜo eko kavāᶜo. Fis ṭe hoᶜe lakhṇṇ dārīᶜāᶜo.), but it does not indicate the source of its origin. The above discussion indicates that the source of origin of Universe is the *Nirgun* state (Singularity/Nothingness which actually contained energy-matter and space-time) of God became the *Sargun* state of God, the Universe/the Nature.

Time of Origin

What is the time of origin of the Universe? According to scientific data, the origin of Universe is approximately 13.7 billion years ago. But, Guru Nanak says that it is difficult to estimate the exact time of origin of Universe in his following stanza:

ਕਵਣੁ ਸੁ ਵੇਲਾ ਵਖਤੁ ਕਵਣੁ ਕਵਣੁ ਥਿਤਿ ਕਵਣੁ ਵਾਰੁ ॥

ਕਵਣਿ ਸਿ ਰੁਤੀ ਮਾਹੁ ਕਵਣੁ ਜਿਤੁ ਹੋਆ ਆਕਾਰੁ ॥

Kavaṇṇ so velā vakḥṭṭ kavaṇṇ kavaṇṇ thiṭṭ kavaṇṇ vār.

Kavaṇṇ sē ruṭī māhu kavaṇṇ jīṭṭ hoᶜā ākār.

ਅਗਗਸ, ਜਪੁ 21, ਪੰਨਾ 4.

Guru Nanak first poses a question:

What was that time; and what was that time/ moment;

What was that month; and what was that day;

What was that season; and what was that month; when the Universe was originated?

AGGS, Jap 21, p 4. [4].

Then he answers as follows:

ਵੇਲ ਨ ਪਾਈਆ ਪੰਡਤੀ ਜਿ ਹੋਵੈ ਲੇਖੁ ਪੁਰਾਣੁ ॥

ਵਖਤੁ ਨ ਪਾਇਓ ਕਾਦੀਆ ਜਿ ਲਿਖਨਿ ਲੇਖੁ ਕੁਰਾਣੁ ॥

ਥਿਤਿ ਵਾਰੁ ਨਾ ਜੋਗੀ ਜਾਣੈ ਰੁਤਿ ਮਾਹੁ ਨਾ ਕੋਈ ॥

vel na pāᶜīᶜā paṇṭṭī jē hovai lekḥḥ purāṇṇ.

vakḥṭṭ na pāᶜīᶜo kāṭṭīᶜā jē likḥṇṇ lekḥḥ kurāṇṇ.

Thiṭṭ vār nā jogī jāṇai ruṭṭ māhu nā koᶜī.

ਅਗਗਸ, ਜਪੁ 21, ਪੰਨਾ 4.

The Pundits could not find that time, whether it were written in the Puranas.

That time/moment is not known to the Qazis either, whether it were written in the Qur’an.

Nor the month nor the day nor the season nor the month is known to the Yogis.

AGGS, Jap 21, p 4.

It was so because at that time of Big Bang there was no time.

Then who knows this? Guru Nanak answers it as follows:

ਜਾ ਕਰਤਾ¹ ਸਿਰਨੀ² ਕਉ ਸਾਜੇ³ ਆਪੇ⁴ ਜਾਣੈ ਸੋਈ ॥

Jā kartā sirñhī ka^o sāje āpe jāñai soī.

ਅਗਸ, ਜਪੁ 21, ਪੰਨਾ 4.

Only the God^{1,4}, Who became³ the Universe² (Sargun from Nirgun), knows the time of origin.

AGGS, Jap 21, p 4. [4]

Origin of Our Solar System

It has been discussed earlier that the origin of Universe was not known to Pundits, Kazis, and Jogis. Guru Nanak says it is only known to God. However, in the following verse Guru Nanak explains the formation of our solar system, and the date of formation goes as back as more than a billion years ago. Guru Nanak describes the primordial state of our solar system (not as the primordial state of the Universe) as a mass of gases in our galaxy:

ਅਰਬਦ¹ ਨਰਬਦ² ਯੁੱਧੁਕਾਰਾ³ ॥

ਧਰਣਿ⁴ ਨ ਗਗਨਾ⁵ ਹੁਕਮੁ⁶ ਅਪਾਰਾ ॥

Arbaḍ narbaḍ ḍhūndhūkārā.

Dharaṇ na gagnaḥ hukam apārā.

ਨਾ ਦਿਨੁ ਰੈਨਿ ਨ ਚੰਦੁ ਨ ਸੂਰਜੁ ਸੁੰਨ ਸਮਾਧਿ⁷ ਲਗਾਇਦਾ⁸ ॥੧॥

Nā ḍin rain na chand na sūraj sunn samādh lagāidā. ॥1॥...

ਅਗਸ, ਮ:1, ਪੰਨਾ 1035.

More than a billion years^{1,2} ago,

There was only a mass of gases³.

There was no Earth⁴ or sky⁵, but only the laws⁶ of the Infinite (God).

There were no day, no night, no moon, no sun, but Nothingness⁷ by itself⁸.

This mass of gases is compared to the state of Big Bang after about one billion years when stars and its planets started to form.

After long description of the primordial state Guru Nanak says:

ਖੰਡ⁹ ਬ੍ਰਹਮੰਡ¹⁰ ਪਾਤਾਲ¹¹ ਅਰੰਭੇ¹² ਗੁਪਤਰੁ¹³ ਪਰਗਟੀ¹⁴ ਆਇਦਾ ॥੧॥

੫॥ ਅਗਸ, ਮ: 1, ਪੰਨਾ 1036.

Khaṇḍ brahmand pātāl arambhe guptāhu pargatī āidā. ॥15॥

Solar system with the Earth¹⁰ of various continents⁹ as our world including so-called mythical under-worlds¹¹ were formed¹² from the mass of gases, which were supposed to be hidden¹³ appeared¹⁴ from that mass of gases. 15.

AGGS, M 1, p 1036.

Note: ਅਰਬਦ ਨਰਬਦ (*Arbaḍ narbaḍ*): ‘Arbaḍ’ (a colloquial word for ‘arb’) means one billion and

‘Narbaḍ’ means which cannot be counted in ‘Arbaḍ’, therefore, *Arbaḍ narbaḍ*, means more than one billion, may be a period in tens of billions of years (4.6 billion years ago).

3. Guru Nanak calls the Laws of Universe as Laws of God (ਹੁਕਮੁ ਅਪਾਰਾ).

5. ਸੁੰਨ (*Sunn*) has been interpreted as ‘Nothingness’.

In the above verse Guru Nanak is explaining the primordial state of our solar system but it is erroneously interpreted by some theologians to explain the primordial state of Universe. Gases (many elements) started to appear about one billion years after Big Bang from which our solar system and our galaxy, Milky Way, appeared. Actually the Universe originated with Big Bang from ਸੁੰਨ (*Sunn* / Nothingness / Singularity) about 13.7 billion years ago whereas our Solar System originated from a mass of gasses about 4.6 billion years ago.

Impact on modern science

Galileo (1564- 1642 CE) was born 25 years after Guru Nanak (1469-1539 CE). According to Stephen Hawking Galileo probably bears more of the responsibility for the birth of modern science than anybody else, and Albert Einstein called him the ‘**Father of Modern Science**’ [11].

On the other hand the followers of Guru Nanak failed to put any impact of his observations on Science or religions. They have spent more time in equating his scientific findings and legitimate observations that are found in Vedas and Vedanta. Moreover, Sikh theologians kept Science far away from interpretation of his Bani. Although Guru Nanak is considered as a reformist by some scholars, while for others, especially the foreign scholars, he is a syncretistic of Hinduism and Islam but it is never too late to recognize Guru Nanak as a great philosopher and a scientist of Period of Renaissance (14th-16th centuries), and to declare him as the ‘**Founder of Modern and Universally Acceptable Philosophy**’ for the humanity.

ਸੁਣਿ ਮੁੰਧੇ ਹਰਣਾਖੀਏ ਗੂੜਾ ਵੈਣੁ ਅਪਾਰੁ ॥

ਪਹਿਲਾ ਵਸਤੁ ਸਿਵਾਇ ਕੈ ਤਾਂ ਕੀਚੈ ਵਾਪਾਰੁ ॥

(AGGS, p 1410)

Guru Nanak (1469-1539)

Oh innocent devotee (bride) with inquisitive eyes of a dear!

Listen to the deep message of infinite wisdom.

Evaluate everything then buy/adopt.

And about 25 years after Guru Nanak, Galileo said the same principle of Guru Nanak as follows:

"I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use."

Galileo Galilei (1564 – 1642)

Final Words

Guru Nanak has promulgated his philosophy based on the Nature and the Universe keeping in view the prevailing philosophies or concepts. The Sikhs and non-Sikh seekers of the Reality are very fortunate that they can find the original philosophy of Guru Nanak embodied in his Bani, which was enshrined in the Aad Guru Granth Sahib (AGGS) by Guru Arjan. Thus, the AGGS is the most authenticated and primary source of Philosophy of Guru Nanak (Nanakian Philosophy). Therefore, it is the duty of Sikh scholars to understand the real philosophy of Guru Nanak by interpreting his Bani with application of Science and logic to make it more easily understandable by rest of the humanity. In this respect following quote of Einstein is worth mentioning:

"After religious teachers accomplish the refining process indicated, they will surely recognize with joy that true religion has been ennobled and made more profound by scientific knowledge."

Albert Einstein (1879-1955 CE)

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