

# AN INTERNATIONAL SCIENTIST AND A LEADING EXPONENT OF NANAKIAN PHILOSOPHY PROF. DEVINDER SINGH CHAHAL

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ARTICLE

Interviewed by  
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Prof. Devinder Singh Chahal, an international microbiologist, having worked at various prestigious universities in India and the USA, migrated to Canada in 1975. In Canada, firstly, he worked at the University of Waterloo, Ontario and later on at Institut Armand-Frappier, Université du Québec, Laval, Québec. He retired as a Professor of Industrial Microbiology in 1996. In his long career as a microbiologist, he is credited with the discovery of two new species of fungi, three scientific books, numerous research articles, and five patents.

Besides, he has published 6 books and several articles on the scientific and logical interpretation of *Gurbani*. He played an instrumental role in establishing the Institute of Understanding Sikhism, Laval, Quebec. Presently, he is working as an honorary Editor-in-Chief of "*Understanding Sikhism: The Research Journal*." Besides, he is a member of the Advisory Committee of SGGGS Study Centre, G.N.D. University, Amritsar since 2011. He has been honored for his services to Sikhism by several Sikh organizations e.g., SGPC, Amritsar; DSGMC, New Delhi and SGGGS World University, Fatehgarh, Punjab.

A renowned microbiologist and a noted Sikh theologian, Prof. Chahal, is a founder member of the School of Scientific and Logical Interpretation of *Gurbani*. He is committed to bringing out the truth of *Gurbani*, logically, rationally and scientifically. With his scientific training and devotion to *Gurbani*, he is eminently qualified to do so. Prof Chahal adheres that Nanakian Philosophy is perennial and universal in its approach to understand Cosmology, Nature, life and human behavior in the

present era. In his works, he portrays intellectually courageous and authentic attempts to interpret Guru Nanak's verses logically and scientifically, to create an accurate understanding of the Guru's messages. His scientific background and professional life as a scientist have undoubtedly influenced his choice of paradigm and perspective. Prof Chahal asserts that Guru Nanak, his philosophy, his *bani*, his Sikhi (Sikhism), and the Guru Granth Sahib delineate the basics befitting the 21st century. His views on various aspects of Nanakian Philosophy are presented here for the benefit of readers:

**Dr. Singh: You are a scientist by training and teacher cum researcher by profession, then how have you become so interested in theology?**

**Dr. Chahal:** While I was a student in High School, our science teacher used to tell us stories to create interest in science. After the end of World War II, I joined a college in 1949. There, our science teacher told us about the power of the atom bomb, which had been dropped on Hiroshima and Nagasaki cities of Japan. Soon afterward, several atomic power plants were installed all over the world for energy production. It was the dawn of the Atomic Age. Soon after it, humankind entered the Space Age, and thereafter into the Age of Computer Science. Today the Hubble Telescope in space is still exploring many galaxies other than our own, The Milky Way. In this Age of Science, many advances in Medical Sciences and Biotechnology have happened. I have been lucky that it all happened during my lifetime.

Since my childhood, I appreciated scientific discoveries,

which make life-span longer, disease-free and comfortable. However, religions of the world remained unchanged since the time of their birth. They failed to make any impact in heralding the era of peaceful coexistence for humankind, rather they contributed to the killing of human beings in the name of God. As I was born in a Sikh family, I used to go to Gurdwaras on some special occasions. The rituals being practiced at the Gurdwaras and Sikhi being taught there appeared to be illogical and unscientific to me. Over time, my interest grew to understand Sikhi through books and verses incorporated in the Aad Guru Granth Sahib (AGGS), using logic and available scientific information.

I studied the AGGS very critically, with the application of logic and science - the touchstones of truth. I read it three times and it took me 1.5 years to finish one reading. Now, to write my research articles, I consult four translations of the AGGS i.e. *Faridkot Vala Teeka* by Nirmalas, *Guru Granth Darpan* by Prof Sahib Singh, and *Teekas* (translations/interpretations) by S. Manmohan Singh and Dr. Sant Singh Khalsa. All these translations/interpretations are available free on the Web site: [www.srigranth.org](http://www.srigranth.org). I found that all of these translations follow the *Faridkot Vala Teeka* which is based on Vedic and Vedanta philosophies. No translation/interpretation of the AGGS is found which is based on the application of logic and science. I started this line of work in 1975.

**Dr. Singh: What is Nanakian Philosophy, and what are its sources?**

**Dr. Chahal:** First of all it is widely accepted that Guru Nanak is the founder of Sikhi (commonly called

Sikhism). According to Guru Nanak 'Sikhi' is:

**ਸਿਖੀ ਸਿਖਿਆ ਗੁਰ ਵੀਚਾਰਿ ॥**

AGGS, M. 1, p 465.  
*Sikhi<sup>1</sup> is that teachings<sup>2</sup> which is based on the enlightening<sup>3</sup> philosophy<sup>4</sup>.*

It indicates that 'Sikhi' means "philosophy". I gave an academic term, "Nanakian Philosophy" for that philosophy which is embodied in the hymns of Guru Nanak. The source of Nanakian Philosophy is the hymns of Guru Nanak only, which has been incorporated in the AGGS, considered to be an authentic source of hymns of Guru Nanak.

**Dr. Singh: What makes the Nankian Philosophy original and unique?**

**Dr. Chahal:** Nanakian Philosophy is original because it is not based on any other philosophies known by that time and is unique because it is quite different than all other religious philosophies.

**Dr. Singh: Is Nanakian Philosophy in conflict or harmony with science?**

**Dr. Chahal:** Nanakian Philosophy has no conflict with science since it is based on intuition, logic, and the great vision of Guru Nanak, which can pass the test of logic and science – the touchstones of Truth.

**Dr. Singh: It is understood that you apply Nanakian Methodology to interpret hymns of Aad Guru Granth Sahib. What is Nanakian methodology?**

**Dr. Chahal:** 'Nanakian methodology is the methodology used by Guru Nanak in composing his hymns. He has composed almost all his hymns in the question-answer system, whether it is a discourse with

someone or a general message. In addition to that, he uses allegories, metaphors, and similes, because of limited vocabulary available to him at that time, to explain his philosophy. In most interpretations of hymns, allegories, metaphors, and similes have been considered as a factual part of his philosophy, rather than in their perspective expressions. By doing so, such interpretations lose the intended meaning.

(i) **Use of Practical Methods:** Many times, the very simple methods practiced almost every day are quoted to explain his philosophy. For example,

**ਭਰੀਐ ਰਬੁ ਪੈਰੁ ਤਨੁ ਦੇਰਾ ॥**

**ਪਾਣੀ ਧੋਤੈ ਉਤਰਸੁ ਖੇਰਾ ॥**

AGGS, M. 1, p 20.  
*If hands<sup>2</sup>, feet<sup>3</sup>, and body<sup>4</sup> are soiled<sup>4</sup> then that dust<sup>5</sup> can be washed<sup>6,7</sup> off with the use of water<sup>5</sup>.*

(ii) **Use of Established Concepts / Ancient Philosophy:** There is another method in which Guru Nanak uses pre-established old concepts or notions or ancient philosophy at the beginning of the verse and then at the end of the verse explains his philosophy. For example,

**ਪਾਤਾਲਾ ਪਾਤਾਲ ਲਖ**

**ਆਗਾਸਾ ਆਗਾਸਾ ॥**

**ਓੜਕਾ ਓੜਕਾ ਭਾਲਿ ਥਕੇ ਵੇਦ ਕਹਨਿ**

**ਇਕ ਵਾਤਾ ॥**

AGGS, Jap # 22, p 5.  
*Vedas<sup>8</sup> have become tired<sup>7</sup> while counting<sup>6</sup> then Vedas says one thing<sup>10</sup> that there are hundreds of thousands<sup>2</sup> of Patal<sup>1</sup> and Agas<sup>3</sup>.*

This is an ancient concept, but some interpreters take it as fact given by

Guru Nanak. Moreover, scientifically there is no such *Patal* (nether world) in this Universe and the *Agas* is space, not the sky. It is pertinent to know that Guru Nanak wrote his compositions in poetic form, using a few words. Therefore, it becomes necessary to add appropriate missing words to interpret his hymns. Prof Sahib uses this method very often to interpret the hymns, especially of Guru Nanak. The work of Dr. D.P. Singh on the Methodology for interpreting Gurbani is the most extensive study.

**Dr. Singh: Some scholars emphasize that Nanakian philosophy depicts a way of life, not a religion. What is your opinion about it?**

**Dr. Chahal:** It is not a religion. Now the question arises: Does it depict the way of life? Yes! It enlightens about the Universe, about our Mother Earth and its environment, our Solar System, our Galaxy-the Milky Way; human behavior, equality in humanity and how to live in harmony by serving humanity.

**Dr. Singh: As per the Nanakian philosophy, what is the meaning or purpose of our presence in this Universe?**

**Dr. Chahal:** The purpose of all types of lives (microorganisms, plants, animals, and humans) is to reproduce and protect its future generation. It is an inherited character of every type of life. It is true for humankind as well. To reproduce better generation, who can protect the environment around them, to live comfortably and amicably on this planet, the Earth, as long as possible, until it is engulfed by a black hole or merge back into singularity or nothingness (*sun*n or *nirgun* state). The 'One' in **ੴ** (*Ek Oh Beant*/ One and Only That is

Infinite) of Guru Nanak represents 'Singularity', which expanded into the Universe (described as Big Bang Theory by scientists). The cyclic nature of the existence of **ੴ** continues. The Big Bang Theory resonates well with '*Kita pasao*' as explained by Guru Nanak:

**ਕੀਤਾ ਪਸਾਉ ਏਕੋ ਕਵਾਉ ॥**

**ਤਿਸ ਤੇ ਹੋਏ ਲਖ ਦਰੀਆਉ ॥**

AGGS, M. 1, Jap, p 3.

*The Universe exploded from one<sup>2</sup> source of energy (Singularity)<sup>3</sup> and started to expand<sup>1</sup>. Thereafter<sup>4</sup>, many<sup>5</sup> things<sup>7</sup> appeared<sup>6</sup>.*

**Dr. Singh: What is the perspective of Nanakian Philosophy about the existence of God?**

**Dr. Chahal:** The concept of **God** in Nanakian Philosophy is quite different than that of God in different religions. The God described by Guru Nanak existed before the appearance of space and time exists now and will exist forever. For example,

**ਆਦਿ ਸਚੁ ਜੁਗਾਦਿ ਸਚੁ ॥**

**ਰੈ ਭੀ ਸਚੁ ਨਾਨਕ ਹੋਸੀ ਭੀ ਸਚੁ ॥**

AGGS, M. 1, Jap, p 1.

*Was in existence<sup>2</sup> before the beginning of the space and time<sup>1</sup>; Was in existence<sup>4</sup> in the past<sup>3</sup>. Is in existence<sup>5</sup> in the present<sup>4</sup>; Will remain in existence<sup>7</sup> forever<sup>5</sup> (in the future).*

As, no descriptive or specific name has been given to this Entity, which is Eternal, so, I use the term **Eternal Entity** (as described above by Guru Nanak) in place of God, in my writings.

**Dr. Singh: Can faith in God be justified?**

**Dr. Chahal:** In fact, every religion teaches us to have 'faith' in God. In 'faith' everything is done by God and the faithful should believe and praise that God. This type of 'faith' does not help to have a peaceful life. But Nanakian philosophy emphasizes that every action and reaction, occurs according to *Hukm* (Laws of Nature/ Universe) and God does not interfere in it.

**Dr. Singh: Do scientists believe in God?**

**Dr. Chahal:** There are two types of scientists: (i) '**Scientists**': There are many scientists, who do believe in God and try to prove its existence. (ii) "**Scientists qua scientists**" They are those scientists who do not accept the existence of God, as accepted in many religions. Nanakian Philosophy describes God not as a 'Being' but as a logo, **ੴ**, which means "*Ek Oh Beant*" in Punjabi and "One and Only That is Infinite" in English. The "One" in **ੴ** is not a numerical one but represents physical ONE, which means "singularity" or "nothingness" of scientists and also as *sun*n and *nirgun* state called by Guru Nanak. In this state energy-matter and space-time are in highly concentrated form, giving rise to an infinitesimal small entity, called singularity or nothingness, *sun*n or *nirgun*. When the "One" in **ੴ** started to expand, it became the Universe or the *sargun* state, as enunciated by Guru Nanak.

**ਕੀਤਾ ਪਸਾਉ ਏਕੋ ਕਵਾਉ ॥**

**ਤਿਸ ਤੇ ਹੋਏ ਲਖ ਦਰੀਆਉ ॥**

AGGS, M. 1, Jap, p 3.

*The Universe exploded from one<sup>2</sup> source of energy (Singularity)<sup>3</sup> and started to expand<sup>1</sup>. Thereafter<sup>4</sup>, many<sup>5</sup> things<sup>7</sup> appeared<sup>6</sup>.*

Therefore, these scientists may accept 'nature' as God, along with the orderly existence of the Universe and the Laws of Nature/Universe (*hukm*).

### ਗੁਰਮੈਂ ਅੰਦਰਿ ਸਭੁ ਕੇ

#### ਬਾਹਰਿ ਗੁਰਮੈਂ ਨ ਕੋਇੰ ॥

AGGS, M. 1, Jap, p 1.

*Every action and reaction<sup>3</sup> occurs under<sup>2</sup> these Laws or Nature/ Universe<sup>1</sup> and nothing<sup>6</sup> is out<sup>4</sup> of these laws<sup>5</sup>.*

**Dr. Singh:** What is the Nanakian perspective about spirituality?

**Dr. Chahal:** Let us first define religion, spirituality and philosophy:

- (i) **Religion** is a set of texts, practices, and beliefs about the transcendent, shared by a community, and involves a relationship with God.
- (ii) **Spirituality** is about a person's relationship with the transcendent, questions that confront one as a human being. This may or may not involve relationships with God.
- iii) **Philosophy:** The term 'philosophy' is derived from a combination of the Greek words 'philos', meaning love, and 'sophia,' meaning wisdom. 'Philosophy' is generally defined as It is a theory or logical analysis of the principles underlying conduct, thought, knowledge and the nature of the Universe; including ethics, aesthetics, logic, epistemology, and metaphysics, etc.

Guru Nanak founded 'Sikhi' not as a religion. 'Sikhi' is the same as "philosophy". Nanakian Philosophy discusses God, not as 'Being' but as represented in a logo, ੴ, as

described earlier. So, Nanakian Philosophy is original and unique, as it has nothing in common either with religion or spirituality.

**Dr. Singh:** What is the perspective of Nanakian Philosophy about Society?

**Dr. Chahal:** Perspective of Nanakian Philosophy is covered under the conduct, thought, knowledge, and nature of the Universe, as described by Guru Nanak in his hymns. It also includes ethics, aesthetics, logic, epistemology, metaphysics, etc.

**Dr. Singh:** Does Nanakian Philosophy drive towards sustainability?

**Dr. Chahal:** Sustainability is a very wide subject concerning the sustaining of the Earth and environment for the living of humanity and its welfare, now and in the future. Guru Nanak has indicated great respect and importance of this subject:

#### ਪਵਣੁ ਗੁਰੂ ਪਾਈ ਪਿਤਾ

#### ਮਾਤਾ ਧਰਤਿ ਮਹਤੁ ॥

#### ਦਿਵਸੁ ਰਾਤਿ ਦੁਇ ਦਾਈ ਦਾਇਆ

#### ਖੇਲੈ ਸਗਲ ਜਗਤੁ ॥

AGGS, M. 1, Jap, p. 8.

*Air is like a Guru, water is like a father (both represent the environment), And Earth is like the great mother (which provides all types of resources and food). Both day and night are like a male nurse and a female nurse, respectively, and the whole of humanity plays in their laps.*

So Nanakian philosophy provides a significant premise for nurturing/attaining sustainability.

**Dr. Singh:** Based on Nanakian Philosophy, what can be done to stop humans fighting each other for race,

religion, caste, color, or creed?

**Dr. Chahal:** Nanakian Philosophy teaches us about the respect of Earth and the environment around it. Since all humans genetically 99.9 % resemble each other thus there should not be any fighting with each other. And it is the duty of every human to serve others by sharing knowledge and wealth. Guru Nanak enunciates;

#### ਸਭੁ ਕੇ ਉਚਾ ਆਖੀਐ

#### ਨੀਚੁ ਨ ਦੀਸੈ ਕੋਇ ॥

#### ਇਕਨੈ ਭਾਡੇ ਸਾਜੀਐ

#### ਇਕੁ ਚਾਨਣੁ ਤਿਹੁ ਲੋਇ ॥

#### ਕਰਮਿ ਮਿਲੈ ਸਚੁ ਪਾਈਐ

#### ਧੁਰਿ ਬਖਸ ਨ ਮੋਟੈ ਕੋਇ ॥

AGGS, M. 1, p 62.

*Call every human is in the highest stage of evolution, therefore, do not call anybody as lower than that stage. They have come out from the same One source of energy. Therefore, the reward for duty conducted truthfully by everybody (all of them are equal), cannot be ignored or erased.*

**Dr. Singh:** Can rational inquiry and Nankian convictions co-exist?

**Dr. Chahal:** Nanakian Philosophy is based on rational inquiry, use of logic and natural observations by Guru Nanak.

**Dr. Singh:** What is the perspective of Nanakian Philosophy on life, soul, death, afterlife, and reincarnation; *karam* and *nadir*?

**Dr. Chahal:** Life and Soul: There is no so-called soul in any living organism including humans. Nevertheless, there is no life without DNA (deoxyribonucleic acid). There was no life on this Earth until the DNA was formed. DNA is a pure chemical without any life or soul but no life can

occur without it. DNA is a molecule that contains the instructions for each organism to develop, live and reproduce. These instructions are found inside every cell and are passed down from parents to their children. DNA was first observed by Frederich Miescher, a German biochemist in 1869. But, only in 1953, James Watson, Francis Crick, Maurice Wilkins, and Rosalind Franklin figured out its structure. DNA is made up of molecules called nucleotides. The DNA is composed of five elements (*panj tat*): Carbon, Hydrogen, Oxygen, Nitrogen, and Phosphorus forming a double helix. Human DNA has around 3 billion bases, and more than 99% of these are the same in all people. It supports Guru Nanak's observation that the whole of humanity is equal.

**Life:** About 3.9 billion years ago, the Earth's atmosphere contained the right mix of Carbon, Hydrogen, Oxygen, Nitrogen, and Phosphorus to form DNA. Scientifically these are the five elements that gave rise to life instead of the mythical five elements (*panj tat*), e.g. earth, sky, water, air, and fire, which are not elements at all. Scientists have discovered fossilized cells, from approx. 3.8 billion years ago, which resemble present-day cyanobacteria. Single-cell life evolved into multicellular organisms and by and by more complex lives as plants, and animals took birth. At the peak of this evolution, Humans - *Homo sapiens*, appeared about 0.5 million years ago. The modern humans, *Homo sapiens sapiens*, appeared only 0.46 million years ago. During evolution, no such thing (soul) entered in humans at any time of their appearance. Therefore, life is due to the presence of DNA, not because of the soul.

**Death:** It is understood that consciousness characterizes human existence and the irreversible loss of consciousness defines human death. Long before modern technology, everyone agreed that death occurred when heartbeat and breathing ceased, and the soul abandoned the body. According to Carlos A.G. Machado, a cardiologist brain death (BD) is a state of a complete and irreversible neurological stoppage, characterized by irreversible coma, absent brainstem reflexes, and apnea.

**Death without Oxygen:** In general, the brain can withstand up to three to six minutes without oxygen before brain damage occurs. If the brain goes without oxygen longer than this, serious and often irreversible damage is likely to take place. After ten minutes, severe neurological damage has generally occurred. Very few people regain any cognitive function after the brain has gone 15 or more minutes without oxygen. During the 15th Century, Guru Nanak had expressed similar views in his hymns, for example;

**Death of Consciousness:**

ਦੇਹੀ<sup>1</sup> ਮਾਟੀ<sup>2</sup> ਬੋਲੈ<sup>3</sup> ਪਉਣੁ<sup>4</sup> ॥

ਬੁਝੁ<sup>5</sup> ਰੇ ਗਿਆਨੀ<sup>6</sup> ਮੂਆ<sup>7</sup> ਹੈ ਕਉਣੁ<sup>8</sup> ॥

ਮੂਈ<sup>9</sup> ਸੁਰਤਿ<sup>10</sup> ਬਾਦੁ<sup>11</sup> ਅਹੰਕਾਰੁ<sup>12</sup> ॥

ਓਹੁ<sup>13</sup> ਨ ਮੂਆ<sup>14</sup> ਜੇ ਦੇਖਣਹਾਰੁ<sup>15</sup> ॥

AGGS, M. 1, p 152.

*The body<sup>1</sup> is made of minerals<sup>2</sup> and it speaks<sup>3</sup> through the vibration of air<sup>4</sup>.*

*O wise one<sup>6</sup>! Discover<sup>5</sup> who<sup>8</sup> has died<sup>7</sup>.*

*It is the death<sup>9</sup> of consciousness<sup>10</sup> along with it died duality<sup>11</sup> and ego<sup>12</sup>.*

*That<sup>body13</sup> which is visible<sup>15</sup> does not die<sup>14</sup> (it is the consciousness which*

*dies makes the body dead).*

**Life after Death:** As explained earlier that there is no soul, therefore, there is no life after death, no reincarnation or entering into 8.4 million life-cycle and there is no heaven and hell in this Universe. Guru Nanak says there is no Life after Death;

ਸੁਣਿ<sup>1</sup> ਸੁਣਿ<sup>2</sup> ਸਿਖ<sup>3</sup> ਰਮਾਰੀ<sup>4</sup> ॥

ਸੁਕ੍ਰਿਤੁ<sup>5</sup> ਕੀਤਾ ਰਹਸੀ<sup>6</sup> ਮੇਰੇ ਜੀਅੜੇ<sup>7</sup> ਬਹੁੜਿ<sup>8</sup>

ਨ ਆਵੈ ਵਾਰੀ<sup>9</sup> ॥

AGGS, M. 1, p 154.

*O Mind! Listen<sup>1</sup> to my<sup>3</sup> philosophy/teachings<sup>2</sup>.*

*O my mind<sup>6</sup>! It is your good deeds<sup>4</sup> that will remain<sup>5</sup> with you for this life. It is not for you for the next life since you are not coming<sup>8</sup> back again<sup>7</sup>. (It means no life after death.).*

**Karam (Deeds):** It means credit for one's deeds. Since there is no soul thus a human does not bring any credit of his deeds (good or bad) from his/her previous birth to be paid off during the current life. However, the reward of *karam* (deeds) of this life is awarded in one form or the other in this very life.

**Nadar (Blessing of Eternal Entity):** The Eternal Entity (God) is bounteous. Thus, It has already blessed all the necessities required by humans on this Earth.

**Dr. Singh: What are the barriers to the logical and rational interpretation of Guru Nanak's compositions?**

**Dr. Chahal:** Though, there is no barrier to interpret hymns of Guru Nanak logically, rationally and scientifically, however, most of the interpreters are not freethinkers and many of them lack the knowledge of science. Moreover, a large number of them

are still under the influence of Vedas and Vedanta philosophies since the time of Bhai Gurdas (1604), and the Nirmalas' (1883) interpretation of the Aad Guru Granth Sahib. The biggest barrier is that most of the interpreters do not dare to go against the traditional interpretations of Sikhi, due to the fear of the Draconian Sword of Jathedar of Akal Takht, hanging over their heads. This is the biggest barrier to interpret logically, scientifically and truthfully.

**Dr. Singh: You have been the founder president of the Institute of Understanding Sikhism since its inception in 1998. Can you elaborate on some of the outstanding contributions of the institute?**

**Dr. Chahal:** The Institute for Understanding Sikhism (IUS) was established in 1998. Its periodical, *Understanding Sikhism: The Research Journal* was started in 1999. Since then, it is publishing well-researched articles on Sikhi to date.

IUS has described the AGGS; defined the terms: Sikh and Sikhi; developed a system of referencing the hymns; developed a methodology for interpreting verses. Several articles have been published to indicate that Sikhi is logical and scientific with a universal appeal. Some articles on *ardas*, the Yuga system, the origin of the Universe, life, death, soul; *Miri-Piri*; and the concept of God, etc have also been published. Our research publications emphasize Nanakian Philosophy since it is important to understand the philosophy of Guru Nanak, other bani in the AGGS, and Sikhism of today.

Several books have been printed by IUS. A few of these have been put online for free and easy access by the readers. These books are: "*Some*

*Salient Principles of Sikhism; Sabd Guru to Granth Guru; Jap: The Essence of Nanakian Philosophy, Nanakian Philosophy: The Basics for Humanity, Nanak: the Guru; Sabd: the Guru of Nanak;*" etc.

**Dr. Singh: Recently you have revised and enlarged your book titled: "Jap - The Verse of Guru Nanak." How is your interpretation in the revised edition of Jap differ from its earlier descriptions by you?**

**Dr. Chahal:** There are more than two hundred translations or interpretations of *Jap Verse* of Guru Nanak. The new version of the book: "*JAP: The Essence of Nanakian Philosophy*", is available free of cost at the web links: <http://i.uscanada.com/books/2018/JAP-2018-Final-filtered.html> ; <http://www.i.uscanada.com/books/2018/JAP2ndEdition2018a.pdf>

My interpretation of *Jap* verses is based on the application of logic and science. In fact, the *Jap* composition can pass all the tests of logic and science, the touchstones of 'Truth'. Most of the earlier authors have translated or interpreted *Jap* under the influence of Vedas and Vedanta philosophies and have failed to apply logic and scientific wisdom in their approach. Most importantly, the Commencing Verse, (erroneously called Mool Mantra), which appears before *Jap* verses and many major sections/ subsections in AGGS, (either in full or in abbreviated form), has been explained in details. Thereafter, the summary of both *slokas* and 38 stanzas (*pauris*) is provided. Each stanza is provided with an appropriate title based on the main theme of the stanza. Some of the stanzas have been divided under different titles as more than one theme is discussed therein. This

book has been well received by the readers.

**Dr. Singh: What is the Nanakian perspective on religious/spiritual experience as reported by various religious devotees/scientists? Can you share any of your unique religious/spiritual experiences?**

**Dr. Chahal:** Before we discuss the Nanakian perspective on religious/spiritual experience, it is necessary to define religion and spirituality.

**Religion:** A set of beliefs concerning the cause, nature, and purpose of the Universe, especially when considered as the creation of a superhuman agency or agencies, usually involving devotional and ritual observances, and often containing a moral code governing the conduct of human affairs.

**Spirituality:** There is no single and widely agreed upon, definition of spirituality. Surveys of the definition of the term, show a broad range of definitions with limited overlap. Modern usages tend to refer to spirituality as a subjective experience of a sacred dimension and the "deepest values and meanings by which people live", often in a context separate from institutionalized religious institutions.

**Philosophy:** The term 'philosophy' is derived from a combination of the Greek words '*philos*', meaning love, and '*sophia*', meaning wisdom. A fairly acceptable definition of philosophy is; "*Theory or logical analysis of the principles underlying conduct, thought, knowledge, and the nature of the Universe: included in philosophy are ethics, aesthetics, logic, epistemology, metaphysics, etc.*"

**Sikhi:** 'Sikhi' has been defined by Guru Nanak as follows:

## ਸਿਖੀ<sup>1</sup> ਸਿਖਿਆ<sup>2</sup> ਗੁਰੂ<sup>3</sup> ਵੀਚਾਰਿ<sup>4</sup> ॥

AGGS, M. 1, p 465.

*Sikhi<sup>1</sup> is that teaching<sup>2</sup> which is based on the enlightening<sup>3</sup> philosophy<sup>4</sup>.*

It indicates that 'Sikhi' means enlightening philosophy.

**Sikh:** Generally, Sikhs are people associated with Sikhism, a monotheistic religion that originated in the 15th century, in the Punjab region of the Indian subcontinent, based on the revelation of Guru Nanak. The term Sikh has its origin in the words शिष्य (*śiṣya*), meaning a disciple or a student. However, Guru Nanak defines 'Sikh' as follows:

## ਨੀਰੁ<sup>5</sup> ਗਿਆਨਿ<sup>6</sup> ਮਨ ਮਜਨੁ<sup>7</sup>

## ਅਠਸਠਿ<sup>8</sup> ਤੀਰਥ<sup>9</sup> ਸੰਗਿ ਗਰੇ ॥

## ਗੁਰੁ ਉਪਦੇਸਿ<sup>10</sup> ਜਵਾਰਹ

## ਮਾਣਕ<sup>11</sup> ਸੇਵੇ<sup>12</sup> ਸਿਖਾ<sup>13</sup> ਸੇ ਖੇਜਿ<sup>14</sup> ਲਰੈ ॥

AGGS, M. 1, p 132).

*One who bathes<sup>3</sup> (studies) in the water<sup>1</sup> of knowledge<sup>2</sup> is equivalent to bathing in the so-called 68<sup>4</sup> sarovars (sacred ponds), at sacred places<sup>5</sup>.*

*The above teachings<sup>7</sup> of the Guru<sup>6</sup> (or enlightening teachings) are like valuable stones<sup>8</sup>, the one, who can discover<sup>11</sup> this and follow/practice<sup>9</sup> it, is a Sikh<sup>10</sup>.*

It means a Sikh is a researcher of the enlightening teachings. It is evident from both the definitions, Sikhi and Sikh, Guru Nanak is talking about "Enlightenment".

**Enlightenment:** 'Enlightenment' is defined as; The Age of Enlightenment (also known as the Age of Reason or simply the Enlightenment) was an intellectual and philosophical movement that dominated the world of ideas in Europe during the 18th century, the "Century of

Philosophy". The ideas of the Enlightenment undermined the authority of the monarchy and the Church and paved the way for the political revolutions of the 18th and 19th centuries. In simple words 'Enlightenment' is a tremendously broad movement, the core themes are:

**(i) Reason.** Enlightenment thinkers typically denounced supernatural occurrences as mere superstition. It became the **deist movement** that gripped Europe and the United States during the late 18th century. **Deism** is the belief that God exists but chooses to let the Universe proceed according to natural law. Deists deny supernatural occurrences and insist that God is knowable through reason and nature, not divine revelation.

**(ii) Skepticism.** This covers skepticism of religious dogma, the institutionalized church, government authority, and even skepticism of the nature of reality. It was accepted that Catholics monarchs had been placed in positions of power by the Will of God and were not subject to Earthly powers. But with the Age of Enlightenment, this idea began to lose its credibility. It was the same situation in Indian theology that Kings were considered as God. Now there are no more kings in India. The skeptics typically rejected 'blind faith.' They want 'proof.'

**Nanakian Philosophy:** 'Nanakian Philosophy' is the philosophy embodied in the bani (hymns) of Guru Nanak, incorporated in the AGGS, which has been accepted by the other Gurus who succeeded to the House of Nanak. They have tried to explain Nanakian Philosophy in their bani, and have also written their own philosophy in the AGGS. Nanakian Philosophy is an original and unique philosophy that is quite

different than religion and spirituality. However, it appears to be similar to that "Enlightenment" with respect to reasoning, Deism - the belief that God exists but chooses to let the Universe proceed according to natural law (*Hukm*). Nanakian Philosophy developed during the 15th and 16th centuries is comparable to the 'Age of Enlightenment' (which appeared about 200 years after Guru Nanak).

I have not been able to have any religious or spiritual experience even at the age of 87. Right from the beginning, my mind remained bent towards science. I follow the observation of Dali Lama: "If scientific analysis were conclusively to demonstrate certain claims in Buddhism to be false, then we must accept the findings of science and abandon those claims." For example, the Holy Bible says that the Sun revolves around the Earth, however, scientific evidence says that it is the Earth that revolves around the Sun. Now the whole world accepts the findings of the science rather than that of the Holy Bible. We may come across such examples in Sikhism, too, as being preached and taught in these days. We have to let people know the facts.

**Dr. Singh: Karl Marx, the German philosopher, and economist, once said that "Religion is the opium of the people." Is Nanakian Philosophy a new variety of this opium?**

**Dr. Chahal:** Yes, I think so, "Religion is the opium of the people". Once someone becomes addicted to it, he/she gets ready to sacrifice himself/herself for some religious concept, even though it could be wrong. But, Nanakian Philosophy is not that type of opium since it allows a person to question and reason it out to find the truth before accepting it. Guru Nanak

says:

ਸੁਣਿ ਮੁੰਧੇ ਹਰਣਾਖੀਏ<sup>੧</sup>

ਗੁੜਾ ਵੈਣੁ ਅਪਾਰੁ ॥

ਪਹਿਲਾ ਵਸਤੁ ਸਿਵਾਣਿ<sup>੨</sup>

ਕੈ ਤਾ ਕੀਚੈ ਵਾਪਾਰੁ ॥

*Oh, innocent devotee<sup>2</sup> (bride) with inquisitive eyes<sup>3</sup> of a dear! Listen<sup>1</sup> to the deep<sup>4</sup> message<sup>5</sup> of infinite<sup>6</sup> wisdom<sup>5</sup>.*

*First<sup>7</sup> evaluate<sup>8</sup> everything<sup>9</sup> then buy/adopt<sup>10,11</sup>. (The deep message is to be careful from superstitious and deceptive religious teachings.)*

And

ਸਚਾ ਕੀ ਬਾਣੀ ਨਾਨਕੁ ਆਖੈ ਸਚੁ<sup>੧</sup>

ਸੁਣਾਇਸੀ ਸਚ ਕੀ ਬੋਲਾ ॥

AGGS, Mehl 1, p 723.

*Nanak (himself) speaks<sup>3</sup> the truth<sup>1,2</sup> and will declare<sup>5</sup> the truth<sup>6</sup> at the right<sup>6</sup> time<sup>7</sup> when it is necessary.*

Therefore, Nanakian Philosophy urges us to discover the truth, then speak it out at the right time, when it is required to speak out. On the other hand, religion is to accept what is taught/told without questioning.

**Dr. Singh: Nanakian Philosophy is 550 years old, do we need it in the twenty-first century? Why should scientists care about Nanakian Philosophy?**

**Dr. Chahal:** We must understand the differences between 'Sikhi' and 'Sikhism'. Sikhi, original and unique philosophy, was founded by Guru Nanak. Sikhism is an institutionalized religion developed after the demise of Guru Nanak in 1539. The way Sikhism is being preached and taught these days, it may not be able to stand the test of logic and science.

During the Period of Renaissance (14th-17th centuries) Sikhi (Natural Philosophy) was founded by Guru Nanak (1469-1539) in South Asia and

Natural Philosophy founded by Nicolaus Copernicus (1473-1543) in Europe. Guru Nanak, who challenged the institutionalized religions in India, was a contemporary of Copernicus, who challenged the concept of the Bible that Sun revolves around the Earth. The three Laws of Physics discovered by Isaac Newton (1643-1726) are considered as 'Natural Philosophy'. On the other hand, Guru Nanak discovered *hukm*, the Laws of Nature/Universe during 1469-1539, about 200 years before Newton's Laws were discovered.

Natural Philosophy became Science during the 19th century. The term "scientist" was first coined in 1834 in Cambridge, England. Under these circumstances, Guru Nanak's Sikhi (Natural Philosophy) can stand the test of logic and science of 21st century, since the description of God, the origin of the Universe, description of *hukm* (Laws of Nature/Universe) are comparable to the findings of science and technology of 21st century.

**Dr. Singh: In comparison to other religious schools of thought, where do you place Nanakian philosophy?**

**Dr. Chahal:** Nanakian Philosophy is original and unique. It is quite different than many religious schools. However, it is at the top of Natural Philosophy, which was developing since the ancient time (560 BC to 347 BC) by Greek philosophers and of modern Natural Philosophy of Copernicus and Isaac Newton's time (1473-1726) in Europe, and Enlightenment developed during the 18th century. Ultimately Natural Philosophy became science during the 19th century. On the other hand, no religion has originated as Natural Philosophy except Sikhi.

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