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Consciousness, Death, Soul, and Sikhi: Scientifically Interconnected with each other

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ABSTRACT

For thousands of years, consciousness, death, and soul have been studied by philosophers. Consciousness refers to the awareness of unique thoughts, memories, feelings, sensations, and environments in humans. Stopping of heartbeat and breathing was considered the cause of death. On the other hand, it was considered that all functions of life are controlled by the soul so much so that thinking, and emotion are also controlled by it. Death was caused when the soul leaves the body. However, the latest research indicates that the irreversible loss of consciousness is the cause of death. Scientific discoveries indicate that consciousness, neuroscience, and death are interconnected with each other. However, the soul has got nothing to do with consciousness or death. This paper discusses that there are great similarities found between scientific knowledge and Sikhi (philosophy in the Sikh Holy scriptures) about consciousness, death, and soul. This indicates that the interconnectedness between consciousnesses and death has been long acknowledged in Sikhi even before the time of science.

Keywords: Atma (ਆਤਮਾ), awareness, brain, Jot, neuroscience, reincarnation.

INTRODUCTION

For thousands of years, the human consciousness was studied by philosophers. It was Rene Descartes's philosophy that mind and body are distinct—a thesis now called "mind-body dualism." He reached this conclusion by arguing that the nature of the mind (that is, a thinking, non-extended thing) is completely different from that of the body (that is, an extended, non-thinking thing), and therefore one can exist without the other (Skirry, n.d.) Consciousness refers to your awareness of your unique thoughts, memories, feelings, sensations, and environments. Essentially, your consciousness is your awareness of yourself and the world around you. This awareness is subjective and unique to you. Consciousness has intrigued philosophers and scientists for thousands of years, thus, researchers have to continue to explore the different bases of consciousness including the physical, social, cultural, and psychological influences

that contribute to our conscious awareness. (Cherry, 2020)

Consciousness research has focused on understanding the neuroscience behind our conscious experiences and finding out specific neurons that might be linked to different conscious events. (Koch, 2018)

For many centuries, people were considered dead when they stopped breathing and when their hearts stopped beating. However, during the era of medical intensive research, the cessation of brain functions began to be considered the main clinical sign for diagnosing death, indicating its interconnection with consciousness.

According to ancient theories, the soul is responsible for mental or psychological functions like thought, perception, desire, and even for all the vital functions



of living organisms. (Lorenz, 2009) Scientific studies about consciousness and death indicate that a soul has no interconnection with them at all. However, some phrases and stanzas from 'Sikhi' were collected which were interconnected with consciousness, death, and soul.

METHODOLOGY

Scientific literature on consciousness, death, soul, and Sikhi was collected to understand what they are and to discover if there is any interconnection with each other. For the effective presentation of this article, further concerned literature has been quoted along with discussion to make it easy to understand the interconnection among consciousness, death, soul, and Sikhi by the researchers and the readers. Some Sikh terms used in this article have been defined under Methodology.

Sikh Terms Defined

Some Sikh terms have been defined for the readers to understand their meanings in their real perspective:

"Sikhi" is being used as a replacement for "Sikhism" by many Sikh and non-Sikh writers. However, there is a great difference between "Sikhi" and "Sikhism". "Sikhi" has been defined by Guru Nanak as follows: (Chahal, 2002a) (Chahal, 2021)

ਸਿਖੀ¹ ਸਿਖਿਆ² ਗੁਰ³ ਵੀਚਾਰਿ⁴ ॥

Sikhī sikhi ā gur vīchār.

Sikhi¹ is the teachings² which are based on the enlightening³ philosophy⁴.

AGGS, M 1, p 465.

Notes:

ਸਿਖੀ (Sikhi): This word is understood as a verb to "learn" by many theologians thus they go far away from the real theme while interpreting the above phrase. Here "Sikhi" is a noun.

ਸਿਖਿਆ (Sikhia/Teachings): something that is taught: philosophy.

ਵੀਚਾਰਿ (Vicha)/Philosophy: the branch of knowledge or academic study devoted to the systematic examination of basic concepts such as truth, existence, reality, causality, and freedom; a particular system of thought or doctrine.

This type of "Sikhi" has not been disseminated by the followers of Guru Nanak.

It becomes evident from the above definition that "SIKHI" is a "philosophy of Guru Nanak", embodied in his bani incorporated in the Holy Scripture of the Sikhs. Nevertheless, his followers converted "SIKHI" slowly and steadily into a highly institutionalized religion, "SIKHISM". Therefore, the simple difference between them is that "Sikhi" is the philosophy of Guru Nanak, and "Sikhism" is a religion based on the philosophy of Guru Nanak plus the philosophies of the next five Gurus, 15 Bhagats, 11 Bhatts, and 4 Sikhs. Besides the philosophies of *Dasam Granth* of Guru Gobind Singh, *Vaaran* of Bhai Gurdas, and many other writings are also included to formulate "Sikhism".

Nanakian Philosophy is defined as: "A philosophy promulgated by Guru Nanak that was taught and enriched by other nine Sikh Gurus, who succeeded to the House of Nanak." (Chahal, 2002c).

Title of the Sikh Holi Scripture: There is no standardized title for the Sikh Holy Scripture, instead every writer has their preference of using the title as Adi Granth, Guru Granth, Guru Granth Sahib, Sri Guru Granth Sahib, etc. However, the first copy scribed by Bhai Gurdas under the guidance of Guru Arjun was called "pothi". The current version of this "pothi" includes the bani of the 9th Guru, Teg Bahadur, which was added by Guru Gobind Singh. Guru Gobind Singh declared this version of "Pothi" as a Guru Granth. It is printed by the Shiromani Gurdwara Parbandhak Committee (SGPC), Amritsar which carries the title Aad Shri Guru Granth Sahib Ji. Surprisingly, nobody uses this title. Chahal, after critical analysis of this issue, discovered that in this title "Shri" before "Guru" is redundant, as is "Ji" after "Sahib". Therefore, the right title for Sikh Holy Scripture is "Aad Guru Granth Sahib" (abbreviated as AGGS). (Chahal, 2002b) This title has been consistently used by the Institute for Understanding Sikhism in its journal, Understanding Sikhism: The Research Journal.

Referencing the Bani. Some writers use only the page number without indicating the source: a Granth, a book, or an article; they do not write the name of the author of the bani (it is academically incorrect), however, some write *Mahla* Number (M 1, M2, etc.). A few writers try to indicate reference as "Adi Granth and page number", "Guru Granth and page number", "Sri Guru Granth Sahib and page number", and some may add Mahla and the Name of the author of the bani. Chahal devised a standardized method of reference for bani as follows:

AGGS, M 5, p 663.

AGGS stands for the Aad Guru Granth Sahib, *M* stands for Mahal, 5 stands for the fifth succession to the House of Nanak (Guru Arjun), and *p* stands for the page of the AGGS. *M* is replaced with the name of a Bhagat or Bhatt for their bani. (Chahal, 1999)

Bani (words of Guru): Bani has been used in the singular as well as plural forms. I used the etymology of each word to find the most appropriate meanings for the main theme in that phrase. Each word is numbered as a superscript and the same number is used to indicate the meaning of that word in the interpretation so that the readers could easily understand the interpretation. Bani quoted here has been interpreted by the application of logic and scientific information. Consequently, my interpretation is different from the traditional interpretation found in the literature.

LITERATURE AND DISCUSSION

1. CONSCIOUSNESS

a) Consciousness in science

Leisman & Koch (2009) say that technology reveals that brain activity is associated with consciousness and conventional explanations portray consciousness as an emergent property of classical computer-like activities in the brain's neural networks. But their views are that patterns of neural network activities correlate with mental states, that synchronous network oscillations in the thalamus and cerebral cortex temporally bind information, and that consciousness emerges as a novel property of computational complexity among neurons. Despite millions of analyses, consciousness remains puzzling and controversial. In the simplest definition, consciousness is considered as sentience or awareness. Today, it often includes any kind of cognition, experience, feeling or perception, awareness, and self-awareness. On the other hand, Searle says, "that consciousness is a biological phenomenon like any other, then it can be investigated neurobiologically. Consciousness is entirely caused by neurobiological processes and is realized in brain structures." (Searle, 2000) Therefore, it becomes necessary to understand neurons.

Neurons

According to Brain Facts/Society for Neuroscience, each mammalian neuron consists of a cell, cell body, dendrites, and an axon. Figs. 1 and 2)

Neurons are cells within the nervous system that transmit information to other nerve cells, muscle, or gland cells. The cell body contains the nucleus and cytoplasm. The axon extends from the cell body and often gives rise to many smaller branches before ending at nerve terminals. Dendrites extend from the neuron cell body and receive messages from other neurons. Synapses are the contact points where one neuron communicates with another. The dendrites are covered with synapses formed by the ends of axons from other neurons. (Society for Neuroscience, 2012)

Newly developed techniques for measuring brain activity are enabling scientists to refine their theories about what consciousness is, how it forms in the brain, and where the

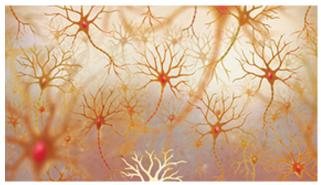


Figure 1. How Neurons Communicate. From Brain Facts.

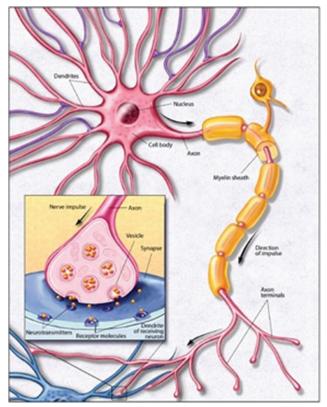


Figure 2. Illustration by Lydia V. Kibiuk, Baltimore, MD; Devon Stuart, Harrisburg, PA.

boundaries lie between being conscious and unconscious. Understanding consciousness can help researchers explore the possibility of treating brain injuries, phobias, mental health issues, and schizophrenia. (Sohn, 2019)

The seat of conscious awareness is closely related to the cerebral cortex. Each experience corresponds to a specific set of neural activity, called neural correlates consciousness (NCC) in a posterior hot zone of the brain, parietal, occipital, and temporal lobes of the cerebral cortex. Fig. 3.

The brain can be considered a Neuronal Correlates of Consciousness (NCC) since it generates experience, day in and day out. But the seat of consciousness can be further ring-fenced. Take the spinal cord, a foot-and-a-half-long flexible tube of nervous tissue inside the backbone with around a billion nerve cells. If the spinal cord is completely severed by trauma to the neck region, the body is paralyzed in the legs, arms, and torso, without bowel and bladder, and bodily sensations. Yet that person can see, hear, smell, feel emotions, and remember as much as before the incident that radically changed their life. (Koch, 2018)

CONSCIOUSNESS IN SIKHI

In ancient philosophy and according to many theologians of various religions, consciousness is considered the soul. They think that it is the soul that controls all the activities of the body. As soon as the soul, which is considered indestructible, leaves the body, the person dies. Let us discuss what sort of interconnection of consciousness is with Sikhi:

Guru Nanak explains that all living beings have the same consciousness without mentioning the soul as follows:

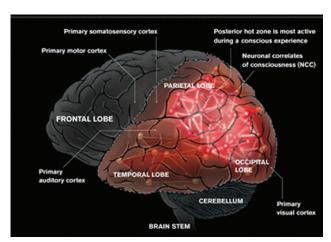


Figure 3. Illustration by Mesa Schumacher.

ਏਕਾ¹ ਸੁਰਤਿ² ਜੇ ਤੇ³ ਹੈ ਜੀਅ⁴ ॥ Ėkā surat jete hai jī•a. ਸੁਰਤਿ⁵ ਵਿਹੂਣਾ⁶ ਕੇ ਇ ਨ ਕੀਅ⁷ ॥ Surat vihūṇā ko•e na kī•a. ਜੇ ਹੀ⁸ ਸੁਰਤਿ⁹ ਤੇ ਹਾ ਤਿਨ ਰਾਹੁ¹⁰ ॥ Jehī surat tehā tin rāhu. ਲੇਖਾ¹¹ ਇਕੋ ਆਵਹੁ ਜਾਹੁ¹² ॥॥ Lekḥā iko āvhu jāhu. ||1|| ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 24.

There is the same¹ consciousness² in all³ living beings⁴. Since no living being is evolved⁷ without⁶ consciousness⁵. The living beings will follow the way of life¹⁰ according to their level⁸ of consciousness⁹.

They come into existence (take birth) and go away (die) 12 according to the

Information written¹¹ (on their genes) and circumstances around them.

AGGS. M 1, p 24.

Guru Nanak's following verse explains that the seat of consciousness is in the brain, metaphorically named *Dasam duar*:

ਪਉਣੈ 1 ਪਾਣੀ 2 ਅਗਨੀ 3 ਕਾ ਮੇਲ੍ 4 ॥
Pa•uṇai pāṇī agnī kā mel.
ਚੰਚਲ ਚਪਲ ਬੁਧਿ ਕਾ ਖੇਲ੍ 8 ॥
Cḥancḥal cḥapal buḍḥ kā kḥel.
ਨਉ ਦਰਵਾਜੇ 9 *ਦਸਵਾ ਦੁਆਰੁ 10 ॥
Na•o ḍarvāje ḍasvā ḍu•ār.
ਬੁਝੁ 11 ਰੇ ਗਿਆਨੀ 12 ਏਹੁ ਬੀਚਾਰੁ 13 ॥ ॥
Bujḥ re gi•ānī ehu bīcḥār. ||1||
ਕਥਤਾ 14 ਬਕਤਾ 15 ਸੁਨਤਾ 16 ਸੋਈ ॥
Kathṭā bakṭā sunṭā so•ī.
ਆਪੁ ਬੀਚਾਰੇ 17 ਸੁ ਗਿਆਨੀ 18 ਹੋਈ ॥ ॥ ਰਹਾਉ ॥
Āp bīcḥāre so gi•ānī ho•ī. ||1|| rahā•o.
ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 152.

The combination⁴ of air¹, water², and energy³ (various elements) make the wonderful⁵ body⁶ and intellect⁷ to work⁸.

There are nine openings⁹ in this body (to outside) and the tenth is the (neuron system) brain¹⁰ $*(Dasam\ duar)$ without any opening (to outside).

Reflect¹³ upon and discover¹¹ this system, O wise¹² one. 1. The one, who teaches¹⁴, speaks¹⁵, and listens¹⁶, and contemplates¹⁷ about this system is truly a wise¹⁸ person. 1. Pause.

AGGS, M 1, p 152.

Note: *ਦਸਵਾ ਦੁਆਰੁ¹⁰ (*Dasam duar – tenth door*): It is a mythical term without any door (opening to outside) considered as a place where God or soul resides. However,

according to Sikhi (Nanakian Philosophy), Dasam duar refers to the brain. There is no such place in the body or elsewhere for God to reside. God (Eternal Entity) pervades everywhere in the Universe. Prof Sahib Singh (Singh, 1972) also interprets Dasam duar as the brain. Although there are 10 openings, 2 eyes, 2 ears, 2 nostrils, 1 mouth, 1 annus, 1 urethra, and 1 vulva, there is no door to the ਦਸਵਾ ਦੁਆਰ (Dasam duar) which opens to outside. However, it has an opening inside the body through which the spinal card (composed of millions of nerves passes through the backbone and its nerves go to every part and organ of the body and interconnect the body and organs with the brain (Dasam duar). Dasam duar (brain) composed of millions of neurons and synopses is responsible for the creation of consciousness.

In the following phrase, Guru Nanak has clearly explained the *Dasam duar* as the brain:

ਚੰਦਨ੍ਹ¹ਚੀਤਿ² ਵਸਾਇਆ³ ਮੰਦਰੁ⁴ ਦਸਵਾ⁵ ਦੁਆਰੁੰ ॥ Chandan chītౖ vasā॰i॰ā mandar dasvā du॰ār. ਦੀਪਕ੍ਰ⁷ ਸਬਦਿੰ ਵਗਾਿਸਆਿੰ ਰਾਮਾੰ ਨਾਮ੍ਰ¹¹ ਉਰ¹² ਹਾਰੁ¹³ ॥੫॥ Dīpak sabadౖ vigāsi॰ā rām nām ur hār. ||5|| ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 54

Consciousness² is like the essence of sandal wood¹ in³ the brain^{5,6} ($\underline{dasam^5}$ $\underline{duar^6}$), which is equated⁵ to the place of a brain⁴.

The Eternal Entity (God)¹⁰ and the Laws of Nature/ Universe¹¹ were realized/understood⁹ by the brain through the enlightening⁷ Sabd⁸ which is like a necklace¹³ on my chest (in my mind)¹.

AGGS, M 1, p 54.

Note: ਚੰਦਨੁ (*Chandan*): Means the essence of sandalwood, but metaphorically it is considered God (Eternal Entity) by many theologians.

ਚੀਤੀ (chit): The consciousness that originates due to actions of millions of neurons and synapses in the brain.

ਮੰਦਰ੍⁴ ਦਸਵਾ⁵ ਦੁਆਰੁੰ (manḏar ḏasvā ḏu▫ār): A temple is a metaphoric place for the brain where one's consciousness comprehends God.

Consciousness Interconnected with Death

The following verse explains the stages in humans, which lead to death because of senility of various organs:

ਨੈਨੀ¹ ਦਿਸਟਿ² ਨਹੀ ਤਨੁ³ ਹੀਨਾ⁴ ਜਰਿ⁵ ਜੀਤਿਆ⁵ ਸਿਰਿ⁷ ਕਾਲੌ⁸ ॥

Nainī ḍarisat nahī ṭan hīnā jar jīṭi□ā sir kālo. ਰੂਪੁ9 ਰੰਗੁ10 ਰਹਸੁ11 ਨਹੀ ਸਾਚਾ12 ਕਿਉ ਛੋਡੈ13 ਜਮ14 ਜਾਲੇ15 ॥੧॥ Rūp rang rahas nahī sācḥā kiºo cḥḥodai jam jālo. ||1|| ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 1125.

You have lost most of the power of seeing² from your eyes¹, your body³ has become weak⁴, the old age⁵ has overcome⁶ you and the death⁸ of consciousness (real death) is approaching⁷.

Although there is neither beauty^{9, 10} on your face nor any sign of contentment¹¹ in your mind, even then why should you leave¹³ the path of righteousness¹² although the death¹⁴ is evident¹⁵.

AGGS, M 1, p 1125.

The above phrase indicates that the senility of various organs and the body will lead to the senility of the brain and consciousness, and ultimately death. There is no information in the above stanza if the consciousness relates to the so-called soul as is accepted in many religions and cultures. It is the degeneration of integrative functions which leads to the death of consciousness, i.e., real death. The death of consciousness occurs due to the senility of the vital organs (heart and Lungs) since these cannot supply enough oxygen to the neurons in the brain. There is no mention of the loss of a soul. Similarly, nowhere has Machado mentioned any loss of a soul as the cause of death in his study. Death is the loss of consciousness (explained later). (Machado, 2010) Consciousness is the product of neurons in the brain and through the intensive nervous system of the body, the completely integrated physiological processes of life work together in an ordered manner.

There is extensive use of the words e.g., Atma (ਆਤਮਾ), jio (ਜੀਉ), and jot (ਜੋਤਿ) in the AGGS. Many Sikh theologians interpret these words under the influence of Vedas and Vedanta philosophies in which the death of consciousness is compared with the loss of the soul which leaves the body either to enter the cycle of reincarnation, to heaven or hell. For example,

ਜੀਉ **(Jio**) is usually translated as 'soul' by many theologians but here Guru Nanak has used it as ਜੀਵਨ (*Jeevan*) 'Life:

ਸੁੰਞੀ¹ ਦੇਹ² ਡਰਾਵਣੀ³ ਜਾ ਜੀਉ⁴ ਵਿਚਹੁ⁵ਜਾਇੰ ॥

Suñī deh darāvaņī jā jī o vichahu jā e.

The dead¹ body² looks frightening³ when there are no⁶ life⁴ activities in it⁵.

AGGS, M 1, p 19.

Now Guru Nanak explains real death as the death of consciousness as follows:

ਦੇ ਹੀ¹ ਮਾਟੀ² ਬੋਲੈ³ ਪਉਣੁ⁴ ॥
Dehī mātī bolai pa॰uṇ.
ਬੁਝੁ⁵ ਚੇ ਗਿਆਨੀੰ ਮੂਆਾ ਹੈ ਕਉਣੁਃ ॥
Bujḥ re gi॰ānī mū॰ā hai ka॰uṇ.
ਮੂਈੇ ਸੁਰਤਿ¹ੇ ਬਾਦੁ¹¹ ਅਹੰਕਾਰੁ¹² ॥
Mū॰ī suraṭ bāḍ aha'nkār.
ੳਹੁ ਨ ਮੂਆ¹³ ਜੋ ਦੇਖਣਹਾਰੁ¹⁴ ॥੨॥
Oh na mū॰ā jo ḍekḥaṇhār. ||2||
ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 152.

The body¹ is made of soil² (various elements) and one speaks³ with the vibration of wind⁴.

Try to understand⁵, O wise one⁶, who⁸ has died⁷. It is the death⁹ of consciousness¹⁰, which caused the failure of body functions and with the death of consciousness also died duality¹¹ and the egoistic¹² nature - the products of consciousness.

What you see 14 the body is not dead 13 it was the consciousness, the brain, which has stopped working. 2. AGGS, M 1, p 152.

Medically, death means that the consciousness ceases to function. Consciousness is the product of millions of neurons and synapses interacting in the brain. Therefore, when the brain is dead then there is no more consciousness, thereby, the body's physiology stops. However, after the death of the brain, the body can be kept functional for some days or months with the life-supporting apparatus.

In the following stanza, Guru Nanak has not mentioned anything about the fate of the soul after death but questions? Does any special treatment of the body decide the future of the so-called soul after death? Guru Nanak has explained in the following verse that whatsoever respect or treatment is given to the corpse, it does not make any difference whether the so-called soul of that body will go to heaven, hell, or enters the cycle of birth-death:

ਇਕ ਦਝਹਿ¹ ਇਕ ਦਬੀਅਹਿ² ਇਕਨਾ ਕੁਤੇ³ ਖਾਹਿ ॥
Ik dajḥeh ik dabī•ah iknā kute khāhi.
ਇਕਿ ਪਾਣੀ ਵਿਚਿ ਉਸਟੀਅਹਿ⁴ ਇਕਿ ਭੀ ਫਿਰਿ ਹਸਣਿ⁵ ਪਾਹਿ ॥
Ik pāṇī vich ustī•ah ik bhī fir hasan pāhi.
ਨਾਨਕ ਏਵ ਨ ਜਾਪਈ⁵ ਕਿਥੇ ਜਾਇ ਸਮਾਇ′ ॥੨॥
Nānak ev na jāp•ī kithai jā•e samāhi. ||2||
ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 648.

Nanak Says:

After death, some bodies are burnt¹, some are buried² and some are left to be eaten by dogs³ (and vultures).

Some are thrown⁴ in water, while others are thrown into a dry well⁵.

(Whatsoever the method of disposal may be.)

There is no evidence⁶ where one (so-called soul) goes⁷ after death.

AGGS, M 1, p 648.

Guru Nanak again states that there is no world after death where one will reap the benefits/punishments of the *karma* (deeds) performed during this life:

ਮਤੁ¹ ਕੋ ਜਾਣੈ² ਜਾਇ ਅਗੈ³ ਪਾਇਸੀ⁴ **॥** Matੁ ko jāṇai jā•e agai pā•isī. ਜੇ ਹੇ ਕਰਮ⁵ ਕਮਾਇੰ ਤੇ ਹਾ ਹੋ ਇਸੀ⁷ **॥** Jehe karam kamā•e tehā ho•isī. ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 730.

Nanak Says:

One must not¹ understand² that the <u>karmas</u> (good or bad deeds) of the current life are rewarded⁴ in the next world³. It is here in this world, what⁵ (deeds⁵) you sow⁶ so shall you reap⁷.

AGGS, M 1, p 730.

Guru Nanak further explains that it is not known wherefrom does one (a soul) come from at birth and where one (a soul) goes after death:

ਜਾਤੇ ਜਾਇ² ਕਹਾ ਤੇ ਆਵੈ³ ॥
Jāto jā e kahā te āvai. ਕਹ ਉਪਜੈ⁴ ਕਹ ਜਾਇ ਸਮਾਵੈ⁵ ॥
Kah upjai kah jā e samāvai. ਕਿਉ ਬਾਧਿਓ ਕਿਉ ਮੁਕਤੀ⁷ ਪਾਵੈ ॥
Ki o bāḍḥi o ki o muktī pāvai. ਕਿਉ ਅਬਿਨਾਸੀ ਸਹਜਿ ਸਮਾਵੈ⁹ ॥॥
Ki o abḥināsī sahj samāvai. ||1||

How can we know¹ where did we come from³ and where will we go^2 ?

Where did we originate⁴, and where will we go or merge⁵ into?

How are we bonded⁶ and how are we liberated⁷? How do we merge⁹ with the indestructible⁸ Entity with ease? 1.

ਨਾਮੁ¹⁰ ਰਿਦੈ¹¹ ਅੰਮ੍ਤ੍ਰਿ¹² ਮੁਖਿ¹³ ਨਾਮੁ¹⁴ **॥** Nām ridai amrit mukh nām. ਨਰਹਰ¹⁵ ਨਾਮੁ¹⁶ ਨਰਹਰ ਨਹਿਕਾਮੁ¹⁷ **॥**៕ ਰਹਾਉ **॥** Narhar nām narhar nihkām. ||1|| rahā∘o.

Comprehending¹¹ working of Laws of Natures/Universe¹⁰ is the elixir¹² (Amrit) of life and remembering¹³ them¹⁴ make one to understand that the Eternal Entity¹⁵ is the Laws of Nature/Universe¹⁶ and make him selfless/desirefree¹⁷. 1. Pause

Note: ਨਾਮੂ (Naam): Here it means the Laws of Nature/Universe.

ਸਹਜੇ¹⁸ ਆਵੈ ਸਹਜੇ ਜਾਇ॥
Sehje āvai sehje jā·e.
ਮਨ¹ੰ ਤੇ ਉਪਜੈ²⁰ ਮਨ ਮਾਹਿ ਸਮਾਇ²¹॥
Man te upjai man māhi samā·e.
ਗੁਰਮੁਖਿ ਮੁਕਤੋ²² ਬੰਧੁ²³ ਨ ਪਾਇ॥
Gurmukḥ mukto bandḥ na pā·e.
ਸਬਦੁ²⁴ ਬੀਚਾਰਿ²⁵ ਛੁਟੈੈ²⁶ ਹਰਿ ਨਾਇ²७॥॥
Sabaḍ bīcḥār cḥḥutai har nā·e. ||2||
ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 152.

Under the Laws of Nature¹⁸, one comes (born) and under the same laws, one goes away (dies).

Consciousness arises²⁰ in the brain/mind¹⁹ (by the interaction of neurons in the brain) and works²¹.

Through²⁷ the comprehension²⁵ of sabd²⁴ and the Laws of Nature/Universe²⁷, the Guru-oriented (enlightened) person is liberated²² and does not fall into any bondage²³.
2.

AGGS, M 1, p 152.

Note:

ਸਹਜੰ¹⁸, ਸਹਜਿ (*sejay, sehj*) has many meanings, depending on the context in which it has been used. It means easily, tranquility, etc. Prof Sahib Singh says: it means according to Laws of Nature/Universe on page 11, Volume II. (Singh, 1972) ਸਬਦੁ (sand) as described in *Pauri* (stanza) # 38 of JAP bani of Guru Nanak.

Finally, Guru Arjun sums up Nanakian Philosophy about death as follows:

ਪਵਨੈ¹ ਮਹਿ ਪਵਨੁ ਸਮਾਇਆ² ‖
Pavnai mėh pavan samā•i•ā. ਜੇ ਤੀ³ ਮਹਿ ਜੇ ਤਿ ਰਲਿ ਜਾਇਆ ‖
Jotੁī mėh jotੁ ral jā•i•ā. ਮਾਟੀ⁴ ਮਾਟੀ ਹੋਈ ਏਕ ‖
Mātī mātī ho•ī ek. ਰੇ ਵਨਹਾਰੇ⁵ ਕੀ ਕਵਨ ਟੇਕ ‖៕ Rovanhāre kī kavan tek. ‖1‖

The air¹ (gases) merges² into the air.

The energy³ is amalgamated with energy.

The minerals⁴ (of the body) become part of the soil.

Who will take care of those who are lamenting⁵? 1.

(Since the lamenting persons will also be dying.)

ਕਉਨ੍⁵ ਮੂਆਾ ਰੇ ਕਉਨ੍ਹ ਮੂਆ ॥

Ka•un mū•ā re ka•un mū•ā.

ਬ੍ਹਮ ਗਿਆਨੀਃ ਮਿਲਿ ਕਰਹੁ ਬੀਚਾਰਾਃ ਇਹੁ ਤਉ ਚਲਤੁ¹⁰ ਭਇਆ ॥੧॥ ਰਹਾਉ ॥

Barahm giºānī mil karahu bīcḥārā ih t̪aºo cḥalat̪ bḥaºiºā. ||1|| rahāºo.

Who⁶ has died⁷.

Oh! wise⁸ men (who understand the Eternal Entity - God)! Sit together and comprehend⁹ it is, in fact, a person who came and now that has gone¹⁰ (back to its elemental form).1. (Pause)

ਅਗਲੀ¹¹ ਕਿਛੁ ਖਬਰਿ¹² ਨ ਪਾਈ॥ Aglī kicḥḥ kḥabar na pā॰ī. ਰੋਵਨਹਾਰੁ¹³ ਭਿ ਊਠਿ ਸਿਧਾਈ¹⁴॥ Rovanhār bḥė ūṭḥ siḍḥā॰ī. ਭਰਮ¹⁵ ਮੋਹ¹⁶ ਕੇ ਬਾਂਧੇ¹⁷ ਬੰਧ¹⁸॥ Bḥaram moh ke bā'nḍḥe banḍḥ. ਸੁਪਨੁ ਭਇਆ ਭਖਲਾਏ¹⁹ ਅੰਧ॥੨॥ Supan bḥa॰i॰ā bḥakḥlā॰e anḍḥ. ||2||

(Actually) no one knows what will happen¹² next¹¹ after death.

The one who is lamenting 13 will also depart 14 .

Mortal beings are bonded^{17,18} by superstitions¹⁵ and attachments¹⁶.

The ignorant person (blind) is baffled¹⁹ as if it is a dream.2.

ਇਹੁ ਤਉ ਰਚਨੁ²⁰ ਰਚਿਆ ਕਰਤਾਰਿ²¹ ॥ Ih tao rachan rachio kartār. ਆਵਤ²² ਜਾਵਤ²³ ਹੁਕਮਿ²⁴ ਅਪਾਰਿ²⁵ ॥ Āvat jāvat hukam apār. ਨਹ ਕੇ ਮੂਆ ਨ ਮਰਣੈ ਜੇਗੁ ॥ Nah ko mūoā na marņai jog. ਨਹ ਬਨਿਸੈ²⁶ ਅਬਨਿਾਸੀ²⁷ ਹੋਗ ॥੩॥

Everybody is born and dies according to the Laws of Nature/Universe 20 , the system developed by the Eternal Entity (18 $^{\circ}$) 21 .

Being born²² and dying²³ is under the great²⁵ Laws of Nature/Universe²⁴. 3.

(In fact) No one dies, since the matter*, with which, the being come into existence is indestructible 26,27 . 3.

ਜੋ ਇਹੁ ਜਾਣਹੁ²⁸ ਸੋ ਇਹੁ ਨਾਹਿ **||**Jo ih jāṇhu so ih nāhi.
ਜਾਨਣਹਾਰੇ²⁹ ਕਉ ਬਲਿ³⁰ ਜਾਉ **||**Jānaṇhāre kaºo bal jāºo.
ਕਹੁ ਨਾਨਕ ਗੁਰਿ ਭਰਮੁ³¹ ਚੁਕਾਇਆ³² **||**Kaho Nānak gur bḥaram cḥukāºiºā.
ਨਾ ਕੋਈ ਮਰੈ³³ ਨ ਆਵੈ³⁴ ਜਾਇਆ³⁵ **||**४॥੧੦॥
Nā koºī marai na āvai jāºiºā. ||4||10|
ਅਗਗਸ, ਮ: 5, ਪੰਨਾ 885.

What the people think²⁸ it is not like that.

I sacrifice³⁰ myself on the one, who knows²⁹ this.

Nanak says:

The enlightenment has dispelled³² my superstition³¹ no one dies³³ and no one is born³⁴ or dies³⁵.

(It is just the change of matter into different forms.) 4. 10. AGGS, M 5, p 885.

Note: *Matter is considered as energy.

Guru Arjun finally sums up Nanakian Philosophy about life and death; since there is no life after death, one should endeavor to get the best out of this life:

ਆਗਾਹਾ¹ ਕੂ ਤ੍ਰਾਘਿ² ਪਿਛਾ³ ਫੇ ਰਿਨ ਮੁਹਡੜਾ⁴ ॥ Āgāhā kū tarāgh pichhā fer na muhadrā. ਨਾਨਕ ਸਿਡਿ⁵ ਇਵੇਹਾ⁶ ਵਾਰ ਬਹੁੜਿ⁷ ਨ ਹੋਵੀ ਜਨਮੜਾ⁸ ॥॥ Nānak sijh ivehā vār bahur na hovī janamrā. ||1|| ਅਗਗਸ, ਮ: 5, ਪੰਨਾ 1096.

Nanak says:

Think² about the future¹, look not on the past³ over your shoulder $\mathbf{s}^{\underline{a}}$.

Make⁵ the present life⁶ a great success since there is no birth⁸ or life again⁷.

AGGS, M 5, p 1096.

DEATH

Death in Science

Historically, death was understood as when the body's breathing and heart-beating stopped, but advances in medical research began to consider the cessation of brain function to be an indication of death. Medical concern over making safe and appropriate diagnosis of death in respirator-supported patients led to the elaboration of criteria, which reliably established irreversible loss of brain function. This was an operational way of determining that death had occurred. (Machado, 2010) Machado has no doubts to affirm that consciousness characterizes human existence, and that the irreversible loss of consciousness defines human death (considering its two components: arousal and awareness). Moreover, he also considers that, at the same time, consciousness is the most integrative function of the body. No other function could integrate the functioning of the organism as does consciousness.

As it became possible to revive some people after a period without respiration, heartbeat, or other visible signs of life, as well as to maintain respiration and blood flow artificially using life support treatments, an alternative definition for death was needed. In recent decades, the concept of brain death has emerged. Using the brain-death criteria, a person can be pronounced legally dead even if the heart continues to beat due to life support measures. The first nation in the world to adopt brain death as the definition of legal death was Finland in 1971. In the United States, Kansas had enacted a similar law at an even earlier date. (Randell T, 2004)

A brain-dead individual has no electrical activities and no clinical evidence of brain function on neurological examination. It is important to distinguish between brain death and states that mimic brain death (e.g., barbiturate intoxication, alcohol intoxication, sedation overdose, hypothermia, hypoglycemia, coma, or chronic vegetative states.). Because some comatose patients and some patients with severe irreversible neurological dysfunction will nonetheless retain some brain functions, these conditions are generally not considered brain death; certainly, they are irreversible conditions in which it may be appropriate to withdraw life support.

Note that brain electrical activity can stop completely, or completely (a flat EEG) for some time in deep anesthesia or during cardiac arrest before being restored. Brain death refers only to the permanent cessation of electrical activity. Numerous people who have experienced such flat line conditions have reported near-death experiences, the nature of which is controversial. It is understood that a permanent cessation of electrical activity indicates the end of consciousness.

Instant Death

Many sudden and quick causes of death are processes lasting a noticeable length of time. For instance, a broken femur that severs the femoral artery and produces an open wound in the thigh is likely to cause death in less than a minute, since the virtually complete loss of blood would be rapid. Eventually, inadequate blood flow to the brain causes loss of consciousness. Some causes of death that occur without noticeable delay involve immediate disruption of brain function. Other types of sudden death are when the brain is destroyed at a speed faster than thought. It would include exposure to radiant energy so intense (in proximity to a nuclear explosion) that vaporization of the skull and brain occurs in a time far less than a second. Another rapid death involves crushing

of the skull, which can occur in falls (especially headfirst) from sufficient heights, and horizontal impacts at typical speeds of motor vehicles. It is evident from the above discussion that death is the death of consciousness due to a lack of oxygen to the neurons or sudden crushing of the skull and neurons.

DEATH IN SIKHI

The description of death in Sikhi is different than that in Sikhism. The death in Sikhi is interconnected with the death of consciousness as discussed earlier:

ਦੇ ਹੀ¹ ਮਾਟੀ² ਬੋਲੈ³ ਪਉਣ੍⁴ ॥
Dehī mātī bolai pa॰uṇ.
ਬ੍ਰਡ੍ਰ⁵ ਰੇ ਗਿਆਨੀੰ ਮੂਆਾ ਹੈ ਕਉਣ੍ੰ ॥
Bujḥ re gi॰ānī mū॰ā hai ka॰uṇ.
ਮੂਈੰ ਸ੍ਰਰਤਿ¹⁰ ਬਾਦੁ¹¹ ਅਹੰਕਾਰੁ¹² ॥
Mū॰ī suraṭ bāḍ aha'nkār.
ਓਹੁ ਨ ਮੂਆ¹³ ਜੋ ਦੇ ਖਣਹਾਰੁ¹⁴ ॥੨॥
Oh na mū॰ā jo ḍekḥaṇhār. ||2||
ਅਗਗਸ, ਮ: 1, ਪੰਨਾ 152.

The body¹ is made of soil² (various elements) and one speaks³ with the vibration of wind⁴.

Try to understand⁵, O wise one⁶, who⁸ has died⁷.

It is the death⁹ of consciousness¹⁰, which caused the failure of body functions and with the death of consciousness also died duality¹¹ and the egoistic¹² nature - the products of consciousness.

What you see¹⁴ the body is not dead¹³ it was the consciousness, the brain, which has stopped working. 2. AGGS, M 1, p 152.

SOUL

Ancient Concept

According to the research of Lorenz, there are various ancient theories that the soul is not only responsible for mental or psychological functions like thought, perception, and desire, and is the bearer of moral qualities and even for all the vital functions of living organisms. This is clearly in close contact with ordinary Greek usage of that time, which finds its fullest articulation in Aristotle's theory. The theories of the Hellenistic period, by contrast, are interested more narrowly in the soul as something responsible specifically for mental or psychological functions. Lorenz further reported that Socrates launched his most elaborate and final argument that since life belongs to a soul, therefore, a soul must

be deathless — that is, immortal. Lorenz further says on ancient views about the soul that according to the two dominant Hellenistic schools - Epicurus and Stoa, is the doctrine that the soul is corporeal. Besides, Epicurus is an atomist, thus according to him, a soul, like everything else, must be composed of atoms. However, Lorenz's sources are somewhat unclear as to exactly which kinds of materials Epicurus took to be involved in the composition of a soul. (Lorenz, 2009)

According to David the concept of a soul is as old as about 5,000 years in Hinduism and about 2,800 years old in Greek philosophers. The Ancient Greek word, $\psi \nu \chi \dot{\eta}$, is usually translated as 'soul'. With Homer (800-701 BCE), the presence or absence of the $\psi \nu \chi \dot{\eta}$ meant the difference between the living and the dead. (David, 2012)

Cohen's study indicates that a soul according to Aristotle (384- 322 BCE), is anything that nourishes itself, that grows, decays, moves about (on its own, not just when moved by something else), perceives, or thinks it is alive. And the capacities of a thing in virtue of which it does these things constitute its soul. The soul is what is causally responsible for the animate behavior (the life activities) of a living thing. He further says:

"... the soul neither exists without a body nor is a body of some sort. For it is not a body, but it belongs to a body, and for this reason, is present in a body, and in a body of such-and-such a sort." (Cohen, 2004)

A soul in many religious, philosophical, and mythological traditions, is the incorporeal essence of a living being. The soul or psyche comprises the mental abilities of a living being: reason, character, feeling, consciousness, qualia, memory, perception, thinking, etc. Depending on the philosophical system, a soul can either be mortal or immortal.

Brief Concept of Soul in Religions In Christianity

Dr. Wayne Grudem reveals that some people believe that in addition to "body" and "soul" we have a third part, a "spirit" that relates to God. It is called **trichotomy**. However, others argue that "spirit" is to "soul," and both terms are used interchangeably in Scripture, and this is called dichotomy.

Some examples that a soul will go to the Lord (God):

Jesus told the dying thief, "Today you will be with me in Paradise" (Luke 23:43), even though, both, their physical bodies were soon to die. When Stephen was dying, he knew he would immediately pass into the presence of the Lord, for he prayed, "Lord Jesus, receive my spirit" (Acts 7:59). Paul does not fear death, for he says, "I desire to depart and be with Christ, for that is far better" (Philippians 1:23). (Grudem, 2018) This Christian philosophy of humans wanting to be with God is very similar to that of Hinduism and Sikhism.

In Hinduism

Atman in Hinduism is comparable to the soul and by "knowing Atman" one can achieve liberation from reincarnation. Some (monistic) Hindu schools think of atman as part of Brahman (God) while others (the dualistic schools) think of atman as separate from Brahman. In either case, there is a close connection between atman and Brahman. The Hindus think that through meditation one can join or understand one's connection with Brahman. The concept of atman was first proposed in Rigveda. (Rudy, 2019)

Professor Flood reports that in Hindu Concept of *Atman* means the real self beyond ego or false self is often referred to as 'spirit' or 'soul'. It is considered the self as an eternal servant of God to the self as being identified with God. (Flood, 2009).

In Islam

Dalhart reports that in Islam, *al-Ruh* primarily implies the animated breath of life blown into a living, which departs his physical body at the point of death. Allah the Exalted



Figure 4. In Christianity: Soul-carried-to-heaven.jpg William Bouguereau 1878.

said: "Then He fashioned him (man) in due proportion and breathed into him His Ruh (Soul created by Allah for that person); and He gave you hearings (ear) sights (eyes) and hearts. Little is the thanks you give" (32: 9). Al-Ruh which departs the physical body is of two types, the first is called the lesser death (al-Wafat al-Sugra), happening during sleeping, and then the actual death (al-Wafat al-Kubra). (Dalhat, 2015)

In Sikhism

The concept of death in Sikhism is quite different than that in Sikhi. Dr. Neki says, "In Sikhism, the universal fact of mortality is juxtaposed to immortality (amarapad) as the ultimate objective (paramartha) of life. As a biological reality is inevitable destiny of everyone." In this respect he quotes the following stanza:

"Death will inevitably strike
Even in the land of Lord Indra*
Nor is Brahma's*domain free from it.,
Likewise, is the Lord Shiva's* world Decreed
to come naught."

*Three gods of the Hindu pantheon.

(GG, 237)

Neki describes another type, blessed dying, through sacrifice. He mentioned that the five Sikhs who stood one by one to sacrifice their head (life) at the call of Guru Gobind Singh during *Vaisakh* (April) 1999. They were told to die of their past to be born into the Guru's family.

The kindred spirits who Served their Lord while they lived Kept Him in mind while departing.

(GG 1000)

He continues to quote a few more phrases indicating a person who meditates gets union with God. (Neki, 1992b)

Dr. Virk, a famous writer on science and Sikhism, confirms that in Sri Guru Granth Sahib (SGGS), "the body, mind, and soul are three distinct and necessary components that make up a person; further, that these are all the product of God and together these three separate components function in unity to excel the human being to the highest spiritual heights." He continues to say that the human soul (Atma) and the Cosmic Soul (Parmatma) are intertwined and indistinguishable one from the other. He has quoted

some phrases and stanzas to indicate that the soul (*Atma*) in humans is part of the Cosmic Soul (*Parmatama* – God). (Virk, 2018) His article is a copy of that of Dr. Jaswant Singh Neki, published in the Encyclopaedia of Sikhism. (Neki, 1992a)

CONCEPT OF SOUL IN SCIENCE

Musolino (2015) discusses in his book, that many modern scientists hold the opinion that a mind is a complex machine that operates on the same physical laws as all other objects in the Universe. According to him, there is currently no scientific evidence whatsoever to support the existence of the soul. He further argues that we do not lose anything by letting go of our soul beliefs and that we even have something to gain. He also offers a timely rejoinder to recent claims by a scientist who supports the existence of the soul and the afterlife.

In Physics

Many people think about an immaterial soul that persists after death, they have in mind some sort of spirit energy that takes up residence near our brain and controls our body. According to Carrol, the laws of physics underlying everyday life are completely understood, and there's no way within those laws to allow for the information stored in our brains to persist after we die. (Carrol, 2011) The questions are: what form does that spirit energy take, and how does it interact with our ordinary atoms?

To answer these questions not only is new physics required, but dramatically new physics. Within quantum field theory (QFT), there cannot be a new collection of "spirit particles" and "spirit forces" that interact with our regular atoms, because we would have detected them in existing experiments.

In Neuroscience

Neuroscience as an interdisciplinary field, and its branch of cognitive neuroscience, particularly, operates under the ontological assumption of physicalism. In other words, it assumes that only the fundamental phenomena studied by physics exist. Thus, neuroscience seeks to understand mental phenomena within the framework according to which human thought and behavior are caused solely by physical processes taking place inside the brain, and

it operates by the way of reductionism by seeking an explanation for the mind in terms of brain activity. (Sohn, 2019).

Understanding of Jot in Sikhi

The word, *Jot*, has been extensively used in Sikhi (in the bani of Guru Nanak). In general *jot* (ਜੋਤਿ) is misinterpreted as *Atma* or soul. Application of logic and science indicates that *Jot* (ਜੋਤਿ) in Sikhi does not mean *Atma* (ਅਤਮਾ) or soul but ENERGY as is apparent in the following phrases:

ਨਿਰਭਉ¹ ਆਪਿ² ਨਰਿੰਤਰਿ³ ਜੌ ਤਿ⁴ **॥** Nirbḫa∘o āp niranţar joţ.

The Fearless¹ God² (Eternal Entity) is Itsef³ a <u>jot</u>⁴ (Energy) AGGS, M 1, p 413.

ਸਰਬ¹ ਜੋ ਤਿ² ਪੂਰਨ³ ਭਗਵਾਨੁ⁴ ॥੧॥ ਰਹਾਉ ॥ Sarab jot pūran bhagvān. ||1|| rahā∘o.

The whole¹ <u>jot</u> (energy in this Universe)² is the same as the whole³ <u>Bhagwan</u> (Eternal Entity)⁴. Pause. AGGS, M 1, p 352.

ਰਵਿ¹ ਸਸਿ² ਦੀਪ³ ਅਨੂਪ ਜੋ ਤਿ⁴ ਤਿ੍ਭਵਣਿ⁵ ਜੋ ਤਿੰ ਅਪਾਰਾ **॥** Rav sas dੁīp anūp jot taribhavan jot apār.

There is an infinite amount^{4,7} of jot (energy)⁶ in Sun¹, $Moon^2$ – the unique lamps (<u>diva</u>)³ in the Universe (mythical three words)⁵.

AGGS, M 1, p 57.

ਰਵਿ¹ ਸਸਿ² ਦੀਪਕ³ ਜਾ ਕੇ ਤ੍ਰਿਭਵਣਿ³ ਏਕਾ⁴ ਜੋ ਤਿ⁵ ਮੁਰਾਰਿ⁵ **॥** Rav sas dīpak jā ke taribhavaņ ekā jot murār.

There is the same⁴ <u>jot</u> (energy)⁵ of the God (Eternal Entity)⁶ in Sun^1 , $Moon^2$ - lamp (<u>diva</u>)³, and the whole Universe (mythical three worlds)⁴.

AGGS, M 1, p 489.

ਸਭਾ ਮਹਿ ਜੋ ਤਿ² ਜੋ ਤਿ² ਹੈ ਸੋ ਇ³ **॥** Sabh méh jot jot hai so∘e.

The same³ <u>jot</u> (energy)² is in everybody¹. AGGS, M 1, p 663.

ਮਨਾ ਤੂੰ ਜੋ ਤਿ² ਸਰੂਪੁ³ ਹੈ ਆਪਣਾ ਮੂਲੁ⁴ਪਛਾਣੁ⁵ **॥** Man tੁū'n jot sarūp hai āpṇā mūl pacḥḥāṇ ਮਨ ਹਰਿ•ਜੀ ਤੇ ਹੈ ਨਾਲਿ ਹੈ ਗੁਰਮਤੀ⁷ ਰੰਗੁ•ਮਾਣੁ• **॥** Man har jī terai nāl hai gurmatī rang māṇ. Keeping in view the above explanation and scientific information available and using logic, the above verse has been interpreted as follows:

Hey, mind¹ (man)! You are the embodiment³ of energy², try to recognize⁵ your roots⁴ (origin); that is the Energy.

Hey, mind (man)! The God⁶ (the Energy) is in you all the time, enjoy⁶ and imbibe⁶ the enlightening philosophy¹ (of the Guru (Nanak)).

ਮੂਲੁ ਪਛਾਣਹਿ ਤਾਂ ਸਹੁ¹⁰ ਜਾਣਹਿ ਮਰਣ ਜੀਵਣ ਕੀ ਸੌਝੀ ਹੋਈ **॥** ਗੁਰ¹¹ਪਰਸਾਦੀ¹²ਏਕੋ ਜਾਣਹਿ ਤਾਂ ਦੂਜਾ ਭਾਉ ਨ ਹੋਈ **॥** Mūl pacḥḥāṇėh ṭā'n saho jāṇėh maraṇ jīvaṇ kī sojḥī ho¤ī. Gur parsādī eko jāṇėh ṭā'n dūjā bḥā®o na ho®ī.

As soon as you recognize your roots (origin) then you will understand God¹⁰, life, and death.

You would also realize that there is no other than the One Enlightener¹¹ and Bounteous¹² (God).

Chahal has explained in detail that the Eternal Entitled (18) means "Energy" later (Chahal, 2021)

ਮਨਿ ਸਾਂਤਿ ਆਈ ਵਜੀ ਵਧਾਈ³ਤਾ ਹੋਆ ਪਰਵਾਣੁ ਖ਼∎ ਇਉ ਕਹੈ ਨਾਨਕੁ⁵ਮਨ ਤੂੰਜੋਤਿ ਸਰੂਪੁ ਹੈ ਅਪਣਾ ਮੂਲੁ ਪਛਾਣੁ ॥੫॥

Man sā'nt ā ī vajī vadhā ī tā ho ā parvāņ.

lºo kahai Nānak man tੁਧੰn jot sarūp hai apṇā mūl pachhāṇ. ਅਗਗਸ, ਮ: 3, ਪੰਨਾ 441.

Then the mind will attain peace (contentment) and success¹⁴, (then everybody will) congratulate¹³ you.

Guru Amar Das says:

It is the Nanakian Philosophy¹⁵ **(Literal meaning = Nanak says this philosophy):** Hey mind (man)! You are the embodiment of energy. Try to recognize your roots (origin) from Energy."

AGGS, M 3, p 441.

For proper interpretation of this verse, it is important to understand in which context allegories and metaphors have been used in this verse:

ਮਨ¹ (Mann) = in general means the 'mind' this is the brain, which is a place for the origin of conscience and consciousness, and all thoughts. Mann also represents 'man' itself.

ਜੋ ਤਿ 2 (Jot) = means **energy**, flame, light, spiritual illumination, enlightenment. Here Jot as **energy** is a more suitable meaning.

ਸਰ੍ਪੂ³ (Sarup) = means embodiment.

ਮੁਲੁ⁴(*Mool*) = means the roots, origin.

ਇਉ ਕਹੈ ਨਾਨਕੁ¹⁵ (Aeyoh kahae Nanak) = Here 'Nanak' is not a pen name of Guru Amar Das as is for all the other Sikh Gurus. Here 'Nanak' is Guru Nanak himself, whose philosophy was preached and taught by the Sikh Gurus, who succeeded to the 'House of Nanak'. According to Prof Sahib Singh's grammar, 'Nanak' with 'onkar' to 'kaka' means Nanak himself not as a pen name (Nom de Plume), although in some cases the 'kaka' is without 'Onkar' in 'Nanak' even then it means Guru Nanak himself.

Therefore, ਇਉ ਕਹੈ ਨਾਨਕ੍ਰ¹⁵ (Aeyoh kahae Nanak) is interpreted as 'Guru Nanak says this philosophy'. It means it is the philosophy of Guru Nanak, Nanakian Philosophy, being represented by Guru Amar Das. However, most of the interpreters, except Prof Sahib Singh, translate 'Nanak' as a pen name for Guru Amar Das (Mahla 3). If it is so, then it becomes the philosophy of Guru Amar Das. tt is the philosophy of Guru Nanak being represented by Guru Amar Das.

Most of the time, ਮਨ ਤੂੰ ਜੋ ਤਿ ਸਰੂਪੁ ਹੈ ਅਪਣਾ ਮੂਲੁ ਪਛਾਣੁ ll, is usually interpreted by many scholars as "Oh my soul, you have emanated from the Divine light of God, know your true essence", which is quite far away from the real theme of Nanakian Philosophy. However, Prof Sahib Singh's interpretation accepts that God is ਨਰਾ ਨੂਰ ਹੀ ਨੂਰ ਹੈ (only nur hee nur) meaning 'Wholly Solely Light' as follows:

"ਹੋ ਮੇਰੇ ਮਨ! ਤੂੰ ਉਸ ਪਰਮਾਤਮਾ ਦੀ ਅੰਸ ਹੈ ਜੋ ਨਿਰਾ ਨੂਰ ਹੀ ਨੂਰ ਹੈ (ਹੋ ਮਨ!) ਆਪਣੇ ਉਸ ਅਸਲੇ ਨਾਲ ਸਾਂਡ ਬਣਾ। (hey merai mann! Tun uss parmatama dee ans hai jo nira nur hee nur hai (hey mann) apanai uss aslai naal sanj bana). Logically and scientifically 'Wholly Solely Light' stands for 'Energy' – that Energy which is represented as E = mc². In the above verse, Guru Amar Das advises the man that he has originated from the primordial Energy, 'ੳ, which is called Singularity, Nothingness, or Sunn, from which everything appeared in this Universe. (Chahal, 2021) The above phrases indicate that the Energy in this Universe is the same which came from the main source of ENERGY - the Eternal Entity (ੴ - The God conceptualized by Guru Nanak). Since we are all made of Energy, therefore, this Energy goes back to that Energy – the Eternal Entity.

Do we know how much ENERGY is in a human body? (Szyk, 2021)

Let us calculate according to the equation of Einstein:

$E = mc^2$

E stands for ENERGY; **m** stands for MATTER, and **c** stands for the square of the speed of light (300,000,000 meters per second).

Therefore, One Kg of mass (matter) would give = 90,000,000,000,000,000 joules of energy.

Or

2,855,881,278.5 liters (more than 2.8 billion of liters) of gasoline.

Or

21 500 kilotons of TNT-equivalent energy (≈ 21 Mt).

The average adult weight is 62 kg. Such a person, according to Einstein, has a rest energy of 5.6×10^{12} megajoules (MJ). You can check it with our $E = mc^2$ calculator. Just for comparison, the bomb dropped on Nagasaki had an energy of 8.4×10^7 MJ. In essence, if you managed to explode and set all your rest energy free (which is not achievable... yet), you would cause the same destruction as over 66,000 nuclear bombs. Saying it's a lot is an understatement. This much energy can only be obtained if we can break each atom as is done in an atomic bomb. However, when we cremate the body, it is reduced to ashes containing some minerals, and some gases are released into the air. And the water also evaporates in the air.

Reincarnation

Arenas reports that reincarnation (in Latin meaning "to be made into flesh again") in religion and philosophy refers to the belief soul survives death to be reborn in a new body (Arenas, n.d.) The reincarnated self carries with it some essence or identity of the past life into the next life. Socrates, Pythagoras, and Plato made reincarnation an integral part of their teachings. At the end of his life, Socrates said, "I am confident that there truly is such a thing as living again, and that the living spring from the dead."

However, Prabhavananda and Isherwood say that in Bhagavad-Gita the concept of reincarnation was first recorded in the Upanishads (800 BCE),i.e., Śvetāśvatara Upanishad 5.11 and Kauśītāki Upanishad 1.2., in India. (Prabhavananda and Christopher Isherwood, 2002) According to Hinduism, the self (atman) is immortal, while the body is subject to birth and death. The Bhagavad-Gita states that: "Worn-out garments are shed by the body; Worn-out bodies are shed by the dweller within the body. New bodies are donned by the dweller, like garments." The idea that the soul (of any living being including animals, humans, and plants) reincarnates is linked to



Figure 5. Reincarnation in Hinduism. Medium. (Medium, n.d.).

karma (literally: action) is the sum of one's actions and the force that determines one's next reincarnation.

CONCLUSIONS

Consciousness is the result of interaction between the neuron cells and their synapses. Consciousness includes all kinds of cognition, experience, feeling or perception, awareness, and self-awareness. Neural activity, called neural correlates consciousness (NCC), is in a posterior hot zone of the brain, parietal, occipital, and temporal lobes of the cerebral cortex.

Death: It has been well established that consciousness characterizes human existence, and that the irreversible loss of consciousness defines human death. It indicates that consciousness, neurons, and death are closely interconnected with each other.

Sikhi: Similarly, some phrases from the Aad Guru Granth Sahib (AGGS) have direct interconnection with consciousness and death.

Soul: The concept of a soul in different religions (including Sikhism) is almost the same. *Jot* is another name for the soul in Hinduism and Sikhism. In Sikhi, Guru Nanak does not mention about the soul in his bani. However, the *Jot* in Sikhi is considered energy, and appropriate phrases from AGGS have been quoted to support this fact. In science, there is no evidence of the existence of the soul. Death is considered as the death of consciousness but not by leaving of the soul.

Reincarnation is a well-established concept in Hinduism. Although one may find many phrases in the AGGS indicating reincarnation, however, in Sikhi of Guru Nanak,

reincarnation is rejected. In Islam reincarnation is not accepted. The mainstream Christian denominations reject the notion of reincarnation. However, many churches indirectly accept death and resurrection. Resurrection is reuniting of the spirit and body of a person meaning the raising of a person from death back to life. Almost all religions believe in union of humans with the God after the death.

Competing Interests Statement

The author declares that he has no significant competing financial, professional, or personal interests that might have influenced the performance or presentation of the work described in this manuscript.

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Since 1999, he has been the Founder and the President of the Institute for Understanding Sikhism and the

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He has been one of the 100 Top Most Influential Sikhs of the World from 2012 to 2016 as a writer. He was honored by Shiromani *Gurdwara Parbandhak* Committee (SGPC - "Supreme Gurdwara Management Committee"), Amritsar, India in 2004, and by the Delhi Sikh Gurdwara Management Committee (DSGMC, New Delhi on Khalsa Fateh Divas on March 8-9, 2014. DSGMC is an autonomous organisation which manages Gurdwaras in the state of Delhi, India.

I am handicapped since July 26, 2018. However, after one year of occupational therapy and physiotherapy I am able walk a little distance with walker and write on computer for about 1-2 hours per day.

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