

## The Scientific Principle in Guru Nanak's Teaching

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SCIENCE IS DEFINED AS systematised knowledge of any kind that reflects a precise application of facts or principles. Viewed in this light Guru Nanak's life was a continuous process of scientific experimentation and enunciation. In this article an attempt is made to bring out the scientific temper and the application of the methodology of science in Guru Nanak's life.

Scientific methodology is defined as a mode of research in which a problem is identified, relevant data gathered, a hypothesis formulated and then empirically tested. The hypothesis that God alone Is, is an ancient tenet, tested and verified many times in mankind's history. However, it was given to Guru Nanak to prove this truth in the modern context.

As befits a good student, (Guru) Nanak proceeded to gather all necessary data from the ancient scriptures, right in his childhood. The young Nanak, alongwith his neighbour Sayyid Hussain, was fond of visiting the assemblage of *sadhus*, *faqirs* and the wandering monks who sojourned in the jungles around Talwandi and listened to recitals and expositions by these learned men. He spent almost his entire childhood in the country-

side and obtained first-hand knowledge of the current social and religious customs.

Quiet often, instead of attending the Pandit Gopal's *pathshala* he would slip away to join Sayyid Hussain in the forest to enjoy the company of "persons distinguished for their religious bent of mind". These constant visits to the forest and his association with religious men affected (Guru) Nanak profoundly and created in him the mood of adulation of the Lord at an impressionable age. At the Pandit Brij Nath's school Nanak obtained a systematic knowledge of Hindu mythology and its philosophical contents. But in preventing the meditative Nanak from wandering in the forests, Brij Nath failed miserably.

At the *madrasa* of Qutub-ud-Din's School, he got acquainted with the Sufi philosophy. The Sufi influence made Nanak all the more introspective and otherworldly. Perhaps under the Sufi influence that had slowly begun to affect him, or because of some exponent of Bhakti teaching whom he met in the wilderness during that period, he began to look for God like a mystic.

On one morning of 1499, Nanak, as usual, went to the River Bein and then suddenly disappeared. A vigorous search was made for

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him and was continued for three anxious days. It is believed that Nanak had the wonderful vision of the Almighty in those three days. He successfully obtained His audience and received the *mulmantra*, which he was to preach with indefatigable persistence for the rest of his forty years of life, east, south, north and west. The secret of the *mulmantra* was to be conscious of Him through *naam-marg*, which the men were to repeat every morning:

*'Ik Onkar Sat Nam Karta purkh Nirbhao Nirvair Akal Murat Ajuni sai-bhang, Gur parsad'*

i.e. There is one God Eternal Truth is His name; Maker of all things, Fearing nothing and at enmity with none. Timeless is His Image: Not begotten, being of His own Being: By the Grace of the Guru, made known to men.

Nanak further elaborated the *mulmantra* by proclaiming that, *'Ad sach, jugad sach. Hei bhi sach, Nanak hosi bhi sach'*. i.e. 'As he was in the beginning: the Truth, So throughout the ages, He ever has been, So even now He is Truth Immanent, So forever and ever He shall be truthful eternal'. Guru Nanak was most eloquent in his discourses on God.

This is his own testimony; *'Bhaia divana sah ka Nanak baurana. Hao har bin avar na jana'*

i.e. Simple Nanak hath become crazy for true Lord, and knoweth none other than God'.

To meet God, Guru Nanak tells the way in Japuji as: *'Sahas sian-pa lakh ho-he, Ta ik na chalai naal. Kir sachiara hoi-ai, Kiv koorh-ai tutai paal. Hukam raza-ee chalna, Nanak likhia naal'*

i.e. 'One may use hundred of thousand devices, Not one can help to reach God. How shall then one justify oneself? How the screen of falsehood is torn? Nanak, by abiding the Will of God. As is ordained by Him'. Guru Nanak further elaborated as; *'Aap bujhae soei bujhe, jis aap sujhae tis sabh kich sujhe'* i.e. 'Only those can know him whom He chooses to reveal Himself'.

To be mystical was not enough. He undertook long journeys *udasis* to spread his message far and wide, and to share his spiritual experiences with others. Just as a scientist conducts a series of the greatest and most difficult experiments... and after arriving at their results, correlates them and enunciates a law, so also Guru Nanak trod the different paths of religions. ....and by discovering their inner harmony, build up the most magnificent spiritual synthesis ever known to history.

The people who came into contact with him were no gullible, illiterate lot. They were scholars and intelligent rational thinkers who made bold to test his wisdom and the truth in his teachings. At Multan, Nanak and Mardana sat on the outskirts of the city, hoping to be invited into the city by one or the other of the numerous *faqirs* within the city. But, instead of an invitation, the Guru received a brimful cup of milk "as a token of the fact that the

town was already full of *pirs* and *faqirs* just like the cup, and that there was no room for another religious teacher". Guru Nanak responded by plucking a jasmine flower, laying it on the surface of the milk and returning the milk to *pirs*. This was to indicate that there was still room for one more. Obviously Guru Nanak was proclaiming that he had something new to say and was demanding a hearing.

When, subsequently, the *pirs* allowed Guru Nanak to enter the city, he did not disappoint them. They heard a sweet discourse between him and the then incumbent of Bah'auddin's religious centre Guru Nanak's "hymns, which were, as usual, extemporized on the spot", made the Hindus and Muhammadan *faqirs* give up their pride and arrogance and learn humility. Thus Guru Nanak willingly submitted himself to these investigations by his contemporaries experts, during his various *udasis*, as a scientist would in a gathering of scientists.

A true scientific spirit has no place for superstitions and sentimental beliefs. A custom introduced for whatever reason may, over a long period, become a superstition or a mere ritual. The life of Guru Nanak was a powerful protest against superstition and narrowness of all kinds. This is seen in his actions at Kurukshetra and Hardwar.

During his first *udasi* Guru Nanak and Mardana went to attend the fair in connection with the solar eclipse at Kurukshetra, made holy because of its association with the *Mahabharata*. On that day, Kurukshetra

would attract a large number of pilgrims and Nanak did not want to miss the opportunity of exposing the taboos and shams introduced by "the priests to increase the revenues to fill their coffers".

On reaching Kurukshetra, Nanak immediately made himself conspicuous by choosing to fight "the holy" on a point, which was sure to agitate them very much. Macauliffe says that Nanak actually cooked a deer, which a disciple had presented to him. When the Brahmans objected to cooking during the solar eclipse, that too the cooking of meat, Guru Nanak invited all the Brahmans for discussion on the Brahmans' "horror at the use of flesh" by declaring: '*Gainda mar hom jag kie devtian ki bane, Mas chhode bais nak pakde rati manas khane.* (SGGS : Var Malhar Ki. P.1289) i.e. 'It was the custom of gods to kill rhinoceroses, roast them and feast upon them. They who forswear flesh and hold their noses when near it, devour men at night.'

He further elaborated as; '*Mas Purani mas katebin chauh jug mas kamana. Jaj kaj viaha suhave othe mas samana.* (SGG., Var Malhar Ki. p. 1290) i.e. 'Flesh is allowed in the Puranas, Flesh is allowed in the books of the Mussalmans; flesh hath been used in the four ages. Flesh adorneth sacrifice and marriage functions; flesh hath always been associated with them.'

Then he used the people's focus on him to explain that "the earth, the sun, the moon and the stars were all suspended in the air, ever moving and running on their natural

course. **The eclipses were nothing but natural shadows on the light of the sun and the moon. He emphasized that the custom of making offering on the occasion was nothing beyond a selfish invention of the priests to increase their own revenues.** To hammer the point that Brahmans were totally ignorant Nanak told the Pandit (who was claiming the greatest learning and who was most voluble on abstaining from flesh) that he was wasting his energy in foolish squabbles.

He said: *'Mas mas kar murakh jhagregian dhian nahin janen. Kaun mas kaun sag kahave kis mehn pap kamanen.* i.e. 'Fools wrangle about flesh, but know not divine knowledge or meditation on God. They know not what is flesh, or what is vegetable or in what sin consisteth.'

Adding further; *'Ap na bujhe lok bujhae pande khara siana. Pande tun jane hi nahin kithon mas upana. Tihio ann kamad kapahan tohiho tribhavan ganna. Tao akhe haun baho bidh hachha toae bahut bikara. Ete ras chhod hove sanniasi Nanak kahe vichara.* (SGGS : *Var Malhar Ki, p. 1289-90*) i.e. Thou understands not thyself, yet thou instructest others; O Pandit thou art very wise! O Pandit, thou knowest not from what flesh hath sprung. Corn, sugar cane, and cotton are produced from water, from water the three worlds are deemed to have sprung. Water saith, "I am good in many ways", Many are the modifications of water. If thou abandon the relish of such things, thou shall be superman, saith Nanak deliberately'.

From Kurukshetra, Nanak left for Hardwar. Here also, Nanak drew the attention of the people gathered at that place in great numbers to himself with seemingly an innocent act, but which really amounted to a challenge to one of the age-old practices.

He quietly walked into the waters of the Ganges and instead of throwing water towards the east, as others were doing, put his hands together to form a cup and began to throw water towards the west. Almost all those who saw him doing that gathered around him to enquire of him the reason of that unusual behaviour.

He replied that he was trying to send water to his fields at Talwandi, so that they might remain green and not dry up. Obviously when he made that reply, he meant to hammer into their head the futility of the practice of trying to propitiate the Sun god for the salvation of one's ancestors by throwing water towards the east, and - by implication and extension - the hollowness of most of the religious rituals, observances and practices.

Guru Nanak's power of observation, an important characteristic of scientific temper, was great. This is evident in the way he employed commonplace incidents in his innumerable parables and analogies. During his visit to Mount Sumer, he met many renowned siddhas. There, when a siddha called Charpat asked Nanak: *'The world is an ocean, and is said to be difficult to cross; How shall man traverse it? Saith Charpat, "O Avdhut, give a true reply"*. Nanak explained: *'As a lotus*

*in the water remaineth dry, as also a water-fowl in the steam. So by meditating on the Word and repeating God's name, shalt thou be unaffected by the world'.*

As is in the ethos of science, a person of scientific vision has the capacity to challenge established theories/customs if they happen to conflict with facts of life. During his stay at Puri, Nanak spoke against the efficacy of the *Padamasna* in winning the Lord. He exposed the claim of the Brahman "who kept his eyes and nose closed" and claimed that "in that state he with his mental eyes saw the secrets of the world". Nanak hid the Brahman's *lota* while he was in the *asna*. When the Brahman, on opening his eyes, could not find the *lota*, he twitted him on "his want of omniscience" as: '*Ant seti nak pakdeh soojhate tin lo. Magar pache kach na sujhe ih padam alo.*' (SGGS : Rag Dhansari Mahala 1, p.663) i.e. 'Thou closest thy nose with thy thumb and the first two fingers, and sayest that thou seest the three worlds; But thou seest not what is behind thee; this is a matter of wonder'.

Dogma, in its initial Greek usage, means an authoritative decision or the opinions of a particular school of thought or sect. A dogmatic attitude reflects a mind that belongs to past, in that, it is closed to new experiences that the present might bring. A scientific mind, on the other hand, is anything but dogmatic. It is its very nature to question, and to seek explanations, logically. Questioning something that has been held in authority for

years requires an inner freedom and courage, that spurs one on to discover the truth for oneself.

Guru Nanak exhibited an anti-dogmatic attitude even in his childhood. On his tenth birthday, Kalu had arranged Nanak's *Janeu* ceremony with customary festivity. When the family priest moved forward to Nanak with *janeu* in his hands 'the boy caught the thread with his hand, and asked the priest what he was doing, and what advantage it was to put a thread of that description on him'. The priest replied that 'the *janeu* was the basis of the Hindu religion, that without it a man would only be a *shudra* and that by putting it on, greatness should be obtained in this world and happiness in the next.

Nanak appears to have been expecting this because he immediately came out with the rejoinder: '*Daya kapah sattokh Sut jat gandhi sat vat. Ih Janeu ji ka hai ta pande ghat. Na ih tute na mal lage na ih jale na jai. Dhan so manas Nanaka jo gal chale pai.*' (SGGS : Asa di var Salok Mahala 1, p 471)

i.e. 'Out of the cotton of compassion, spin the thread of contentment, tie the knot of continence, give it the twist of virtues; Make such a sacred thread, O Pundit, for your innerself. Such a thread will not break, Nor get soiled, be burnt, or lost. Blessed is the man, O Nanak, Who makes it a part of life. This cotton thread, for a penny you buy, Sitting in a square, mud plastered, You put it around the necks of others. In the ears some words you whisper, O Brahmin, and claim to be a spiritual teacher.

With the death of the wearer falls the thread,  
Thus without the thread he departs from the  
earth'.

In spite of the attempts of Pandit Hardayal to prevail upon Nanak to accept the *janeu* in the name of religion, Nanak did not accept the thread and pointed out the hypocritical nature of the ceremony by saying: *Tag na indri tag na nari. Bhalke thuk pve nit darhi. Tag na pairi tag na hathi, tag na jehva tag na akhi. Vetaga ape vate. Vat dhage avra ghatte. Lai bhad kare viaho. Kadh kagal dase raho. Sun vekho loka ih vidan. Man andha nao sujan.* i.e. There is no string for the sexual organ, there is no string for the women to restrain themselves: So that man everyday disgraces his beard. There is no string for the feet, there is no string for the hands; There is no string for the tongue; there is no string for the eyes; without such strings the Brahmin wandereth away. He twists strings for the neck and putteth them on others. He takes fee for marrying others: He putteth out a scroll, and showeth the fate of the wedded pair. Hear and see, ye people, it is strange that, while mentally blind, a man is called wise'.

Thus the creative and questioning mind of Nanak comes out clearly from the above episode of his life. It is this attitude that forms the essence of both science and 'true religion'.

The very premise of science, by its definition, condemns belief in authority, be it scientific or theological.

The division of people by caste religion, and the social hierarchy that it involves, is

one of the ugliest realities of a static socio-cultural system. Science and technology have certainly helped in eradicating these social evils to an extent. The life of Guru Nanak was full of struggle against such social evils.

He preached universal brotherhood and amity among communities and nations. He advocated abolition of all distinctions based on caste and creed. He said: '*Call every one as high, none is low for God. The only potter had fashioned all alike. And his light pervades all creation, Whom call high and whom call low. When we see the same God within all.*'

Guru Nanak strongly condemned caste system and proclaimed that all castes were equal. To give a practical shape to his teachings in this regards, at Kartarpur he introduced the system of *langar* (common kitchen) and *pangat* (persons sitting together in rows to eat, formed the *pangat*). Here he himself dined with people of all castes and classes high and low. In the *langar* all dined together sitting on the ground without any distinction of caste, creed, religion or social status. Every one, from a prince to a pauper, was given the same treatment and was served the same food, prepared in the same kitchen and distributed in the same manner. A spirit of sacrifice, service and brotherhood was developed and the *langar* became a symbol of equality, fraternity and brotherhood. These activities of Guru Nanak represent the hallmark of his scientific spirit.

Guru Nanak exhibited a scientific tem-

per and discipline in all his dealings. He was against supernatural powers and superstitious customs. His reaction to such customs forms a very interesting and delectable fare.

During medieval time, a woman with child was considered impure and unclean for ten days. The period of impurity, popularly known as *sutak*, differed with one's caste. During the period of *sutak* (impurity), the woman was not permitted to touch any vessel or to cook food in the kitchen. Even the very touch of women in *sutak* was supposed to defile all the cooked food, making it impure for consumption. Similarly, for ten days (the exact number varying according to caste rules), the family and the house in which the death occurred was considered to be ceremonially impure. The period of impurity was popularly known as *patak*. During *patak*, no food was cooked or fire burnt in the hearth and the relations provided the family with subsistence. The family slept on the floor on a bed of leaves. On all the ten days certain ceremonies were performed to help the deceased's soul to reach its destination.

Guru Nanak was very critical of such superstitious practices and said: *'If we concede the idea of impurity by birth or death, impurity will be found in everything. There are worms in dung and wood; There is no grain of corn without life. Water is the primary element of life, by which everything is made fresh and green. How can we keep away this impurity? It will enter into our kitchens. Nanak, we cannot remove impurity in this way; It can*

*be washed away by true knowledge. (SGGS: Asa di Var, p. 472)'*

He further elaborated : *Sabho sutak bharam hai duje large jaie, jaman marna hukam hai bhane aave jaie. Khana pina pavitar hai ditone rijak sambahie. Nanak, jini gurmukh bujhia tina sutak nahe'* i.e. All such contracted from touch is superstitious. Birth and death are ordained; we come and go by His will. All eating and drinking, which God gave as sustenance, is pure. Nanak, those who have realized this through the Guru do not believe in this impurity.

A stereotype is essentially a myth that gains in strength and creditability due to its acceptance on a socio-cultural level. Stereotyping is a common malaise in all-social systems, affluent or otherwise. Stereotyping occurs, when particular attributes or qualities are abstracted and applied on a general scale, and allowed to perpetuate over a relatively long period of time. For example, when it is said that, 'A women's place is in the kitchen,' a particular activity, viz, cooking has been abstracted and isolated as the singularly most important duty of a woman, thereby creating a stereotype. The woman is then expected to play the role of a housewife, regardless of her other capabilities. Science and technology have been instrumental to a large extent, in weakening some rigidly held stereotypes (such as 'Women are inferior to men in all respects' and 'Woman is a child-bearing non-entity' etc.), particularly in the emancipation of women.

During medieval times, several stereotypes such as a woman being symbol of lust and object of sexual gratification', 'Women to be never allowed in religious deliberations, were prevalent. Guru Nanak rationally defended woman against those who insisted on relegating her to an inferior position on the basis of her sex. He gave back the woman her personal share in the domain of religion. Guru Nanak's path of salvation was open to women. In this sense, she was certainly placed at par with man, just as the Shudra was placed at par with the Brahmin. In *Asa di Var*, he says: 'It is by woman, that we are conceived, and from her that we are born; it is with her that we are betrothed and married. It is woman we befriend and she who keeps the race going. Why should we call her evil from whom great men are born? It is also from the woman that women are born; there is nobody who is not born of woman. Nanak, only the one true God is independent of woman' (SGGS: *Asa Di var* p. 473).

Thus Guru Nanak played a vital role in opposing - and weakening - many rigidly held stereotypes of the medieval society. The pragmatic response of Guru Nanak to the prevalent stereotypes confirms his scientific bent of mind.

J. Arthur Thompson, a renowned scientist and author remarked in his book - "*Introduction to Science*" as: "Science is not wrapped up with any particular body of facts. It is characterised as an intellectual attitude. It is not tied down to any particular methods of inquiry, it is simply critical thought, which admits conclusion only when they are based on evidence". Similarly, to quote Eric Ashby, "The greatest single contribution which scientific thinking has made, is to set Man free from despotic authority in intellectual matters." Guru Nanak's life is full of such examples which confirm his critical thought, intellectual attitude and revolt against despotic authority. In the light of above discussion, it is concluded that Guru Nanak exhibited a scientific spirit in his spiritual life as also in his dealings with the world.

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