



Science Behind Yagna

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1. Origin and philosophical foundations of Yagna :

Gayatri and Yagna are described as the main pillars of Indian philosophy and culture. The eternal source of universal knowledge comprised in the Gayatri Mantra is deciphered and cosmic energy of sound contained in Mantra is activated and expanded with the help of Yagna.

The four Vedas signify the philosophy of the eternity and absolute complementary role of Gayatri and Yagna in the divine creation.

Atharvaveda also deals with sound therapy aspects of Mantras, for the treatment of the ailing human system at the physical, psychological and spiritual levels. The Samaveda focuses on the musical chanting Patterns of the Mantras and the Subtle form of Yagna by defining the Latter as the process of mental oblation on the surface of internal emotions through the cosmic radiation of the omnipresent subtle energy of source. The Yajurveda contains the knowledge of principles are methods of performing Yagnas as Spiritual and Scientific experiments for global welfare.

What is meant by Yagna? It is selfless sacrifice for noble purposes sacrificing of the ego, selfishness and human compassion and dedicated creativity for the welfare of all. It is a process aimed at the refinement of the subtle energy existing in matter, with the help of thermal energy of the Mantras. The experiments of Yagna when performed at a small scale, in day to day life are called Havan or Agnihotra.

2. Scientific Aspects of Yagna :

Different types of energy systems are available. According the first law of thermodynamics, we can convert one form of energy into another form. Out of the various forms of energy, sound and heat, are important with regards to Yagna. Heat energy is obtained from Yagna's fire and Sound energy from Gayatri and other Mantras.

Heat generated from Yagna's fire, will be

converted into different forms of energy. The electromagnetic waves generated, helps in transmitting the energy, at Cosmic Level; and the desired sonic signals stored in the Mantras, which are chanted during the process of sacrificing the special materials in the fire.

2.1 Various Substances offered in Yagna :

a) Wood : It must be dry and free from dust, insects and worms. It is cut into small pieces, known as Samidha or Agnikunda. The different types of woods available are :

1) Sandal Wood 2) Agar and Tagar Wood 3) Deodar 4) Mango 5) Dhak or Palash 6) Bilva 7) Pimpal 8) Bargod 9) Shami 10) Mandar 11) Gulav

b) Substances with aromas : These are 1) Saffron 2) Musk 3) Agar 4) Tagar 5) Chandan 6) Illaychi 7) Jayphal 8) Javitri and 9) Camphor

c) Substances with healthy constituents :

These are 1) Ghee 2) Milk 3) Fruits 4) Cereals like wheat, rice, bareley, til, munga, charo, arhav, masur

d) Sweet Substances : 1) Sugar 2) Dried Grapes 3) Honey

e) Medicinal Plants : 1) Samalata 2) Brahmi 3) Shankhpashpi 4) Nagkesar 5) Mulhati 6) Red Chandan 7) Baheda 8) Hala Saw dust of Sandal-Wood and Pine wood, the agar and tagar wood chips, Kapur, gugal, nagarmotha, illyachi, jayphal, clove and dalcini

2.2 Products of Combustion :

The products of combustion depend on the following factors a) Nature of the substances used and their proportions b) Temperature attained c) Supply of air d) Interaction between the Substances used.

2.2.1 Vapourization of Wood : Some of the combustible substances may be converted into vapourised state, it is due to the way Samidhas are arranged in the Agnikunda, the conditions of temperature and air supply.



2.2.2 Steam Volatilization of Odorous Substances :

The temperature attained in the Kunda, varies between 200 to 600° C. Some of the less volatile substances, may diffused in the atmosphere at this temperature, due to combustion process, steam may be produced in the reaction. Substances like thymol, eugenol, pinene, terpinol, are carried in the surroundings, and the aroma of Yagna, can be smelt, even at a longer distance. The smoke also functions as colloidal particulate for diffusion of volatile aromatic substances which depends again on the wind direction and temperature.

2.2.3. Combustion of Fatty Substances :

The fatty substances used in Yagna's are ghee, and different oils. Ghee helps in rapid combustion of cellulose of wood and keeps the fire burning. All fatty substances after combustion gives mainly glyoxals, aldehydes and ketones. These hydrocarbons produced in the reaction, may again react with one another, producing different types of alcohols, aldehydes, acids etc.

2.2.4 Photochemical Process :

The Yagna process, should be performed in presence of light. These changes occur in presence of ultra-violet and other regions of light. In these reaction, carbon dioxide is reduced to formaldehyde, which finally gives oxygen.

2.3 Inverted Pyramid Shaped Agni-Kunda

The Meaning of the term Pyramid, is fire in the middle. The Pyramid shape is widely experienced to generate and store a special energy field, which possess bacteristatic properties.

2.4 Chanting of Sanskrit Mantras :

The power of Sound Vibrations, can penetrate, into the different levels of energy spheres, All the alphabets of the Sanskrit Language, are endowed with special vibrational powers, which set out harmonious wave patterns, when pronounced.

Scientist from America, proved that the recitation of Gayatri Mantra, produces, 1,10,000 sound waves per second. Uttering of these Mantras, produces vibrations which are soothing to human mind, all plant and animal life. These

vibrations also help in spreading specific energy waves, in the surrounding atmosphere as the oblations are offered.

3.0 Purification of Environment By Yagna :

Research studies show that the incidence of physical ailments, sickness and diseases are reduced in the houses, where the Yagna is regularly performed because it creates a pure, nutritional and medicinal atmosphere. It renews the brain cells, revitalizes the skin, purifies blood and prevents growth of pathogenic organisms.

Agnihotra is basically a healing process. 'Heal the atmosphere and the healed atmosphere will heal you' is the Modus Operandi.

Mixing ghee and Sugar and burning them creates smoke, will kills the germs of certain diseases and secretion take place from same glands related to the wind-pipe, which fill our heart and mind with pleasure.

Sugars present in Havishya have great power to purify the atmosphere. It kills the germs of T.B. Measles, Small pox and cow-pox

Microbiologist observed that the medicinal fumes are clearly bacterolethal in nature. These fumes eradicate bacteria and other micro-organisms, which are the root-cause of illness and diseases.

3.1 Removal of Foul Odours :

Various volatile substances, oils, used in Yagna get diffused in the surrounding atmosphere, along with steam and smoke. Since these oils have good smell, the foul odours are automatically replaced. The aroma can be experienced easily in the surrounding, when Yagna is performed, due to the diffusion of substances like thymol, pine, terpinol and oil of Sandal-wood, Camphor and Clove.

3.2 Removal of Bacteria :

The partial oxidation of hydrocarbons and decomposition of complex organic substances produce formaldehyde, which is a powerful antiseptic. This germicidal action of formaldehyde is only effective in the presence of water vapour, which is also produced in large quantities in Yagna. Oxidation of hydrocarbons also produces formic acid, which is also good disinfectants.



3.3 Removal of Insects :

Insects like flies, ringworm, lice, fleas, either get killed or are driven away, when they come in contact with the fumes of volatile oils like Camphor, diffused in the environment.

3.4 Effects on Plants and Vegetation :

The aromatic substances during Yagna, get diffused in the air and offer protection to plant life against harmful organisms. This ensures healthy plant growth. 'Agnihotra's atmosphere and ash can be used as adjuvants in the 'Natural Farming' methods, also known as Agnihotra farming methods.

3.5 Role of CO₂ generated in Yagna :

Wood and other organic substances, when burnt in 'Agnihotra' produces CO and CO₂ due to slow combustion process. A small quantity of O₂ is also produced. The CO₂ generated is observed by the surrounding vegetation and CO₂ cycle is strengthened. The CO₂ produced in Yagna, is always mixed with other aromatic oils and antiseptic products. It therefore acts as a vehicle in transporting such products to distant surroundings. A small amount of CO₂ inhaled by the person performing Yagna, acts as a stimulant and more and more aromatic fumes are inhaled, which help in curing mental disorders.

Yagnopathy : Medicinal Applications of Yagna :

The fascinating achievements of the modern era of science and technology in improving our comfort levels, stress and pollution have posed the major challenge for man. The world is

beginning to realise that the comforts provided to us by modern science and technology do not necessarily always make life easier.

Apart from greater stress and tension, more unlike diseases untold anxiety and fear is caused by the highly polluted environment and ecological imbalance. Yagna appears to be a boon of the ancient Indian Sciences for achieving this purpose.

The physical and mental effects of Yagnas, can certainly be tested and the claims to cure physical mental diseases, through Yagna, can be verified. In a Yagna, medicines and herbs are vaporised by offering them, into the sacrificial fire, and they enter into the human body, in a gaseous form through the nose, lungs and the pores of the skin. This might be proved to be easiest, least toxic, least risky and most effective method of administering a medicine so as to reach every single cell of the body.

The technique of Yagna, for the treatment of physical and mental diseases, does not comprise mere vaporisation of constituents or herbs to be employed, but various Samidhas are offered into the sacrificial fire of Yagna to create the desired effects. The development of a scientifically established Yagnopathy, which may find not only an honoured but a leading place in other therapies of the world like Allopathy, Homeopathy, Chemopathy, Naturopathy. In future, Yagnopathy may come into being sooner expected, and it may rank as a unique achievement of the modern age.