

***Pancha Yajnya* (Five Sacrifices): The Scientific Philosophy of Human Ecological Responsibility Since the Vedic Age: A Review**

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ABSTRACT *Manusmriti* is considered to be the first ethical law book of the world for the human society, scribed during the immediate post-Vedic age. The compendium has prescribed to perform five sacrifices (*Pancha Yajnya*) as a part of routine activity in daily life of a house-holder. These five sacrifices elaborate one's socio-ecological responsibilities are such as: (1) *Rrushi Yajnya* - (sacrifices for the source of knowledge - teachers), (2) *Pitru Yajnya* (responsibility for the parents, ancestors and self genetic system), (3) *Deva Yajnya* (protection for the environmental powers as Gods), (4) *Bhoota Yajnya* (care for the protection of biodiversity) and (5) *Nrru Yajnya* (Positive interaction with fellow human beings of the society). Men should be committed to show obligation to the above environmental constituents as their ethical and ecological responsibilities. The analysis of the scientific basis behind the religious events of *Pancha Yajnya*, proves its aim to raise eco-consciousness amongst the human environment. These five sacrifices amounts to be as the highest ethno-ecological philosophy of the world, originated in the Vedic age and still practised today in the Indian social scenario being modified in different turns and tunes. In course of time the philosophy of *Pancha Yajnya* slowly entered into the daily rituals like *Tarpana* (ceremonial offering of water to all concerned) and *Bisswadeva Puja* (offering of food) of a householder to reiterate his ecological responsibility. Further, with the growth of *Tantra* philosophy (Spread to save), *Pancha Yajnya* took a turn of worshiping iconic representatives, popularly known as *Pancha Devataa* (Five God powers). Amongst them, *Ganesh* is comparable with the community activity or *Nrru Yajnya*; obligation offered to Sun God (*Soorya*) is a token of respect and remembrance to forefathers represents *Pitru Yajnya*; *Vishnu*, the fostering power of bio-diversity, represents *Bhoota Yajnya*; *Ssiva* is comparable with the ancient sages and seers, a source of knowledge, universal teacher equalised with *Rrushi Yajnya* and *Durgaa*, an integration of all Godly powers, represents the *Deva Yajnya*. Geetaa has elaborated the spectrum of sacrifices in its 4th chapter *Jnyaana Karma Sanyaasa Yoga* (The yoga of action and renunciation). The integration of the Vedic age *Pancha Yajnya* philosophy in Geetaa says that: one should work with selfless motive for sacrifice (*Nrru Yajnya*) following the foot prints of his ancestors (*Pitru Yajnya*), those who had achieved perfection through sacrifice. The skill of the selfless work is to be learned from Vedas (Source of Knowledge - *Rrushi Yajnya*) and to be implemented in practical life as well to foster the nature (ecological powers - Gods - *Deva Yajnya*); in return rain is bestowed (by Gods) as gift that produces food for sustenance of life and proliferate the bio-diversity. Man, identified as one amongst the biosphere, should have a moral responsibility for the protection of all living beings (*Bhoota Yajnya*). In the present scenario the theme of *Pancha Yajnya* has turned to a community activity and celebration instead of an individual commitment. It is systematically celebrated through festivals of the rainy season in India as a welcome episode to rain and expression of gratitude to the environment, exhibiting through festive functions. Since the origin of the philosophy of *Pancha Yajnya*, in course of thousands of years may have undergone metamorphosis, yet its basic concept remains unaltered and unmutated, readily acceptable for the present society, amenable worldwide, to raise up eco-consciousness in the human environment.

INTRODUCTION

The ancient Indian literature can be divided into two broad groups, *Ssruti* and *Smruti*. *Ssruti* means facts to be learned (remembered and memorised) on the basis of hearing. The Vedas and Upanishads come under this category which are transmitted verbally by continuous succession of Guru and *Ssishya*. They are protected from mutilation and are preserved since thousands of years. *Smruti* means what is remembered in literary sense, but they include social laws, usages, customs, manners and moral codes. They are post-Vedic and no date can be definitely assigned to these scriptures. *Smruti*

are traditionally supported to be based on the Vedas. They are considered much more as applied sociology. The religio-social codes undergo changing with the changes in the order of the society as per time, place and circumstances. Accordingly the *Smrutis* are forwarded periodically by different *Smruti* writers (like Manu, Goutama, Yagnyabalka, Sataatapa, Haarita etc.) to meet the social needs. There are twenty major *Smrutis* and still more number of minor *Smruties*, about fifty are available. Out of all these, *Manusmriti* is regarded as the foremost and biggest compendium on human jurisprudence of ancient India and *Maharshi* Manu as the first law giver of the world.

In the past decade, efforts are made to analyse the various scientific depictions of the epic *Manusmruti* from modern scientific point of view (Dash 1998; Mohapatra 2003). The compendium is considered to be the first ethical law book of the world, scribed in the immediate post-Vedic age. *Manusmruti* is an open volume of human life, deals with aspects from birth to transmigration (Padhy et al. 2001) and also widely deals with the various ethnoecological aspects with scientific merit that enlighten the present day environmentalists (Padhy 2000). The Vedic age science in *Manusmruti* is at par with the modern age, may be depicted in fanciful and coded language with a different *modes operandi*; but the basic theme is not far from the truth.

The concept and performance of various *Yajnya* is much more elaborated in *Karma Kanda* (Ritual methodologies) of Veda, which are complicated, expensive and time consuming. But, in *Manusmruti* (Manu) a *Gruhastha* (Householder) is prescribed to perform five sacrifices (*Pancha Yajnya*) as a part of routine activity in daily life. These sacrifices are very much simplified and advised to carry out the processes without negligence. The aim of the present communication is to explore the scientific merit of these sacrifices from ecological point of view (Padhy 2008a, b, c, d, e). The meaning of the *Slokas* referred in the text are followed according to Buhler (1886).

I. YAJNYA: A PERSPECTIVE STUDY FROM GEETAA

The performance of *Yajnya* has a predominated idea on a ritual oriented activity with worshiping of different God and Goddess along with chanting of *Mantra* and *Havan* (fire worship). In a wider sense *Yajnya* means any systematic sacrifice accomplished for common interest (universal) with a selfless motive. If self-benefit of any sort is involved, it is to achieve a higher divine order in material or spiritual progress. In the present society commonly the following *Yajnyas* are performed such as: *Ghruta Yajnya* (worshiping Gods with addition of clarified butter to fire), *Arinna Yajnya* (feeding the needy), *Naama Yajnya* (Chanting of the sweet name of God accomplished with music), *Japa Yajnya* (silently mental recitation of any *Mantra*, upto a specific number) and *Jnyaana Yajnya* (discourse on a specific philosophical subject). Out of the above, *Ghruta Yajnya* involves Vedic rituals; *Arinna*

Yajnya has direct involvement of common man; *Naama Yajnya* meant to purify the vibration of the atmosphere; *Jnyaana Yajnya* is performed by elite for development of self consciousness and *Japa Yajnya* is based on a single person's devotion to enhance the concentration of mind. The latest one is praised in Geetaa (*Adhdhaaya X, Ssloka 25*), as the best of all the sacrifices.

The Upanishads are the cream of Vedas, and all the systems of philosophy in India derive their inspiration and authority from these scriptures. The Bhagavad Geetaa is equal to that of the contemporary Upanishads of Vedic age. One step ahead, in *Geetaa Dhyanam* (concentration of Geetaa) it is narrated that all the Upanishads are the cows, the milker is Krishna - the cowherd boy, Partha (Arjuna) is the calf, man of purified intellect are the drinkers, the milk is the supreme nectar of the Geetaa. The glory of Geetaa is unlimited which embodies the Supreme spiritual mystery and secret. It contains the essence of all the four Vedas, as claimed. Geetaa is a blending form of *Ssruti* and *Smruti*. It has collection of spiritual laws of eternal order and righteousness (*Ssruti*) and also deals with duties of man and problems pertaining to life and society (*Smruti*).

The fourth Chapter of Geetaa is entitled as "The Yoga of Action and Renunciation" (*Jnyaana Karma Sanyasa Yoga*). The spectrum of sacrifices are very well elaborated in this chapter such as (IV/23-33).

- Offering sacrifice in the shape of worship to Gods (*Poojaa*).
- Sacrifice of the self (*Aatman*) through the sacrifice known as the perception of identity into the fire of *Brahma* (*Parama-Aatman*)
- Sacrifice of the senses in the fire of self discipline (*Sanyama*)
- Sacrifice of the sense objects in the fire of non-accepting them by senses (*Tyaaga*).
- Sacrifice through practice of Yoga (*Yoga Yajnya*).
- Sacrifice of the function of the senses and function of life forces in the fire of Yoga (obtained through practice) in the form of self control, kindled by wisdom (Yoga *Aarudha* – highest state of Yoga – *Samaadhi*).
- Sacrifice of the material possessions (*Daana*).
- Sacrifice in the shape of austerities (*Tapasyaa*).
- Sacrifice through observing austere vows (*Brata*: strictly moral ethics).
- Sacrifice in the shape of wisdom through the

study of sacred texts (*Swaadhyaaya – Jnyaana Yajnya*).

- Sacrifice by offering the act of exhalation into that of inhalation or *vice-versa*; which control the process of inhalation and exhalation (both being co-ordinated) and conjoin the vital air (self life force) to the vital air (i.e. the universal life force). (*Yoga Pranidhaana – contemplation of Yoga*)
- In a final statement it is said that, sacrifice through knowledge is superior to sacrifice of material gains. Moreover, a subject, whose relentless actions are free from attachment, who has no identification with the body and does not claim it as his own; whose mind is established in the knowledge of self (*Aatman*) and who works merely for the sake of sacrifice (without any attachment), performs the best. For him, who realises *Brahma* (life centre of life force) everywhere; in his sacrifice the instruments to offer the oblation, the oblation itself, the fire to which the oblation is added, the sacrificer himself, the process of offering and as well the goal, to be reached, everything is *Brahma*, as he performs the sacrifice being absorbed (engrossed) in *Brahma*. This is the highest order of sacrifice.

But, all the above sacrifices in true sense are possible for some one, when he realises the philosophy of action (*Karma - IV/16-23, 31*) which states that:

What is action ? and what is inaction ?; are the questions that perplex the wisest man.

The truth of action, inaction and prohibited action must be known, because the ways of action are mysterious.

He, who sees inaction in action and action in inaction, is wise among the man.

He, who works selflessly; whose actions are pure in the fire of knowledge; who abandons greed; who is content; who is self sufficient; who forsakes hope; restrains his mind; free from craving; relinquishes rewards; satisfied with whatever comes; unaffected by extremes; free from jealousy and maintains a balance on failure and achievement - his deeds do not fetter him; he does nothing at all, though fully engaged in action. For such a man all his actions melt away as his mind is established in the knowledge of self and he works for the sake of sacrifice.

Moreover, the man who does not offer sacrifice is neither happy in this world nor in the other world (expected to be a better one).

II. PANCHA YAJNYA: ONE'S ECOLOGICAL RESPONSIBILITY

The total life period of a human being as per the Vedic age concept is divided into four parts i.e. *Brahmacharya* (studentship), *Gruhasta* (householder), *Baanaprastha* (hermit in the forest - retirement life) and *Yattibrata* (the ascetic). This division is known as *Barnnashrama*, each order is a systematic planned period to perform one's specific duty as per schedule following the ethical laws; responsible for self-discipline and social harmony. Amongst these four, the second order 'Householder' is considered as the most excellent order (*Manu-III/78*). Further specified that:

As all living creatures subsist by receiving support from air, even so (the members of) all orders subsist by receiving support from the householder (*Manu-III/77*).

The sages, the manes, the gods, the *Bhoots* (Biodiversity) and guests ask the householder (for offering and gifts); hence he who knows (the law), must give to them (what is due to each) (*Manu-III/80*).

The householder is advised to perform *Pancha Yajnya*, in order to comply the demands before him as referred above.

Let him never, if he is able (to perform them), neglect the sacrifices to the sages (*Rrushi Yajnya*), to the Gods (*Deva Yajnya*), to the *Bhootas* (living creatures – *Bhoota Yajnya*), to men (*Nrru-Yajnya*) and to the manes (*Pitru Yajnya*) (*Manu: IV/21*).

Teaching (and studying) is the sacrifice offered to *Brahman* (alternatively *Rrushi Yajnya*), the (offering of water and food called) *Tarpanna* the sacrifice to the manes, the burnt oblation the sacrifice offered to the gods, the *Bali* offering (food) that offered to the *Bhootas*, and the hospitable reception of guests the offering to men (*Manu-III/70*).

Let him worship, according to the rule, the sages by the private recitation of the Veda, the gods by burnt oblations, the manes by funeral offering (*Ssraaddha*), men by (gift of) food, and the *Bhootas* by the *Bali* offering (*Manu-III/81*).

The five sacrifices are also called in different term viz.

Ahuta - Muttering (*Japa*) - *Rrushi Yajnya*
Huta - Burnt oblation (*Homa*) - *Deva Yajnya*
Prahuta - (food) scattering on ground (*Bali*) - *Bhoota Yajnya*
Braahmya-huta - offered in the digestive fire (*Braahmana Bhoojana*) - *Nrru Yajnya*.

Praasita - offering of water (*Tarpanna*) - *Pitru Yajnya* (Manu-III/73,74)

A deep analysis of the performance of sacrifice as per the above, symbolises a house-holder's offering of obligations for the surrounding social, biological and non-biological environment, from which he receives different unasked benefits. The philosophy of *Pancha Yajnya* is aimed to create eco-consciousness in a householder and his family through performance of *Yajnya* rituals, that ultimately reflected in the society. In course of time, the word *Yajnya* is replaced by *Rruna* (debt - as locally uttered by people), to make conscious some one that he is indebted to these five sources of benefit; should perform his duty and obligations accordingly, to be free from these debts. In fact, the concept of the sacrifice is duty oriented, while the clearing of debt is of psychological, ethical and social binding.

Rrushi Yajnya points towards some one's duty for the sages and seers, his Guru (teacher) from whom he has received knowledge and is enlightened. The position of Guru in Vedic culture is so high that he is equalised with the supreme Gods, considered and respected as parents (Manu: II/144). A couple beget a child through mutual participatory action and some one is born out of the womb of the female partner, a process similar to all animals; but the teacher by initiating the source of knowledge (*Gaayatree Mantra*: the cream of the Vedas) performs the second birth of a *Ssishya* (pupil) which is the real birth, exempts the later from the process of ageing and death (Manu: II/147,148). A *Ssishya* is considered as *Dwija* (twice born) after his *Upnayan* (Thread ceremony) during which he receives the *Gaayatree* initiation (Manu: II/169, 170).

He, who gives natural birth and he, who adorns the Vedic knowledge, the giver of the Veda is more venerable father; than that for the birth for the sake of the Veda ensures eternal rewards both in this life and after the death as well (Manu, II/146).

As long as some one dwells with his teacher during the studentship, he should respect his teacher with utmost care and sincerity, as is the right aptitude and attitude. Further, he should carry the knowledge (Vedas) respectfully and makes its practical implementation by commencement of self study when he enters in to the second stage of life as *Gruhastha* (householder). He should convey the knowledge to the right recipient, who has a real attitude to be enlightened. This is how the knowledge flows in

the society. Some one's duty towards his Guru (knowledge), is accomplished perfectly when he teaches others; opens their eyes of wisdom and carry them forward out of the darkness of illiteracy. This should be the first and foremost social obligation and responsibility of an educated citizen, let it be Vedic age or modern.

Deva Yajnya

We are indebted to the environmental factors known as *Pancha Mahaabhoota* viz. 1) *Aakaassa* (space), 2) *Vaayu* (Air), 3) *Teja* (energy), 4) *Aapa* (Water) and *Kshiti* (earth) which are indispensable to the biological world. The environment is represented in the form of climatic, edaphic, physiographic and biotic factors in modern ecology, with a basic derivation from these *Pancha Mahaabhoota*. In ancient India (as well followed now) the *Mahaabhoota* factors were recognised as Gods (*Devataa* – Natural powers) such as *Vaayu Devataa*, *Surya Devataa*, *Jala Devataa*, *Baruna* (God of the oceanic wealth), *Indra* (God of precipitation), *Agni Devataa* (Fire God) and *Vasundharaa* (mother earth) etc. The Vedic Indians were realised the presence of a conscious energetic personality in these *Mahaabhoota* factors who worships and fosters them, as the mankind receives continuously different unasked gifts from these Gods. It should be the prime duty of a *Gruhastha* not to indulge in any activity that would spoil the natural order of these factors. Otherwise, it should be one's responsibility to keep the environment clean and look forward to avoid pollution.

In ancient India every day *Ghruta Yajnya* was performed in every house as a token of *Deva Yajnya* (worship to Gods). The smoke evolved and generated due to burning of clarified butter, different medicinal herbs and specific fuel wood, used to reach (through) the high sky, trigger the clouds and act as harbinger of the rains.

An oblation duly thrown into the fire, reaches the Sun; from Sun comes rain, from rain food, there from the living creatures (derive their subsistence) (Manu-III/76).

Experiments to this effect performed by modern scientists yield positive results and from practical point of view, performance of community activity such as *Ghruta Yajnya* and mass prayer under drought conditions to bring the rains is a common feature in India. Scientifically, a house holder should remain conscious of the different ecological factors

around him, restrain himself to disturb the nature's order and perform his prime duty to keep the environment clean at local (micro-ecological) level, with a perception of global activity.

Bhoota Yajnya

Man is a social animal and is primarily biological. He is amidst the biodiversity and has to maintain an ecological homeostasis for his self-sustenance.

The 1st Verse Isaupanisad says

The whole universe together with its creatures belongs to the Lord (nature). No creature is superior to any other and the human being should not have absolute power over nature. Let no species encroach upon the rights and privileges of other species. However one can enjoy the bounties of nature by giving up the greed.

A *Gruhasta* should perform his duty towards the bio-diversity around him. He should be occupied with minimum of the nature and extends love and take care of the domestic and pet animals who depend on him for food and shelter and maintains too the plants around him for aesthetic, medicinal and kitchen garden purpose. In India from religious point of view, feeding grass to cows and maintenance of *Gowshaallaa* (cowshed), offering of vegetables and fruits to elephants and *Chanaa* (*Cicer arietinum* L. or *Pisum sativum* L.) to monkeys in temples, feeding the crows and dogs in the morning and grains to doves; also dropping of sugar crystals near ant shelters and throwing fish food to ponds are comprised the different *Bhoota Yajnya* activity with a basic sympathetic attitude for conservation of animal biota. Worshiping of snakes on a specific day, and to bull and elephant whenever in sight, signify a common Indian's affection for animals. Even few religious avenues are specifically devoted for conservation of rats (Rajasthan), Hawak (*Pakshi Tirtha* - Tamilnadu), fish (Narmada river) and monkeys (Chitrakuta, MP/UP and many other temples in India). The association of animals as *Baahana* (Vehiculum) with different gods; the prime four incarnations of *Bhagawaan Vishnu* viz. Fish, tortoise, wild boar and lion and worshiping of different deities with animal head such as *Ganesh*, *Hayagriva*, *Panchamukhi Hanumaan* etc; significantly put

forth the importance of animal world in religious activity (Padhy et al. 1999, Panigrahy et al. 2002). The worship of plants and their religious utility needs no elaboration. The simple maintenance of a plant *Tulasi* (*Ocimum tenuiflorum* L.) in every Hindu family throws light enough in this regard.

In a wider sense, *Manusmruti* has prescribed non-violence to the sub-human beings and vegetation as the basic theme for conservation of bio-diversity with a multiple approach from ethical, social, sympathetic, administrative, dietic and religious point of view (Dash and Padhy 1998). In the present scenario, NGOs organised by Smt. Menaka Gandhi (People for animals), PETA (People's Ethical Treatment for Animals) and many others as broadcasted through Discovery, National Geographic and Animal Planet channels perform this *Bhoota Yajnya* by protecting the rights of the animals at the global level. From the grass root level itself a citizen should join his hands for mass plantation programmes, be a vegetarian in food habits and be kind-hearted and sympathetic to animals around him. It is ascertained that unwanted human activity leads to disturbance of ecological homeostasis and environmental pollution, which is a major threat to the bio-diversity today. Keeping aside the positive progressive attitude, one should minimum restrain himself from any negative activity; would be the best step for *Bhoota Yajnya*.

Let him gently place on the ground (some food) for dogs, outcasts, *Chhandalas* (a specific lowest cast), those affiliated with diseases that are punishment of former sins, crows and insects (Manu: III/92)

Nrru Yajnya has anthropological significance. Man is a social animal. Society is his niche, his relationship with other human beings is the link of the social chain and the composite interaction of human beings within themselves and with the surrounding physical and biological environment constitutes the human ecology. Various depictions in *Manusmruti* pertain to human environment are presented earlier in a wider form being divided into six categories viz. (1) Socio-Ecological Niche, (2) Academic Environment, (3) Family atmosphere, (4) Social interaction, (5) Salubrity: an environmental necessity and (6) Ethical protection for biota (Padhy et al. 2001).

Family is the micro-environment, where human interaction is initiated that complements to the scope of the society. A *Gruhasta* is advised:

Let him not have quarrel and conflict with his father, his mother, with female relations, with brothers, with his sons and his wife, daughters, with even his servants, with his domestic priests, with his teacher, with his maternal uncle, with guests and the dependent infants or aged persons or sick man, with learned elite, with his paternal and maternal relations and with sweet relatives (i.e. relations connected by marriage) (Manu: IV/179, 180).

One's perfect inter-relationship with the family members, etiquette to guests and respect for elders in the society, are the prime activities of *Nrru Yajnya*.

Having performed this *Bali* offering (as per Manu: III/92), he shall first feed his guest and, according to the rule, give alms to an ascetic (and) to a student (Manu: III/94).

But let him offer, in accordance with the rule, to a guest who has come (of his own accord) a seat and water, as well as food, garnished (with seasoning), according to his ability (Manu: III/99).

Grass (mat), room (for resting), water, and fourthly a kind word; these (things) never fail in the houses of good men (for offering to the guest) (Manu: III/101).

Conservation of one's relationship with the members of the community to maintain social i.e. societal harmony is a must; also abundance of relationship with specific persons who are lack of social integrity is equally essential. In a wider sense, material sacrifice for others, charity and nobility with any human being have greater social implication from the point of sustainable ecology. Moreover, one should extend his services for the needy, guest, a poor, a diseased or a victim of natural calamity. The basic theme of *Nrru Yajnya* strictly concerns to sacrifice for others and obligation for society and mankind.

Pitru Yajnya

One should salute his own DNA, which codifies and control his physical, physiological, psychological and social status in micro-form; gets expressed in macro-form in the phenotype. One should not forget his forefathers who conserved their self (own) genome without being admixed to produce *Varnassankara* (Dash and Padhy 1998a); transmitted to the present generation and expected to be transmitted to future generation under every ethical protection.

It is important that, one should take care of his elderly parents and as well nourish his offspring for the sake of maintenance of the DNA, in addition to ethical and social responsibilities. Remembering the obituary elite personalities like scientists, artists, leaders, poets and writers, social workers and sacrificers by observing their birth and death anniversaries, as well rendering service to the old age homes ensures respect to elderly persons who are the designated communities amenable for *Pitru Yajnya*.

Father is hundred times venerable than the teacher, but the mother is thousand times more than father (Manu: II/145).

In a wider sense, the philosophy of *Pancha Yajnya* can be analysed from modern human ecological point of view (Figure 1), that focuses and emphasizes the environment in toto.

III. PANCHA YAJNYA - AS REFLECTED IN THE DAILY RITUALS OF A HOUSEHOLDER

This Vedic age philosophy of *Pancha Yajnya* slowly entered into the daily rituals and established rather occupied as a token activity in daily life keeping alert to the subjects more consciousness on this ecological phenomenon. A *Gruhastha* (Chief subject of a dweller) is expected to conduct *Sandhya* (Worship to Sun God) *Tarpan* (offering of water) and conduct *Viswadeva Pujaa* (offering of food) reiterating his responsibility for the environment.

Sandhyaa: An elite (*Dwija*) is expected to worship the Sun God thrice daily, called *Trisandhyaa*. *Sandhyaa* means the union time of two periods i.e. (i) Morning: Night departs, day arrives (ii) Noon: Juncture of forenoon and afternoon (iii) Evening: day departs, night arrives. In *Sandhyaa* ritual procedure the *Gaayatree Mantra* is muttered for a prescribed number followed by offering of water to Sun God. *Gaayatree Mantra* is the cream of all Vedas, needs to be realised by the worshiper, which some one has learned when he gets first initiated by his Guru as mentioned previously (Padhy 2008a). The effect of this hymn was first foreseen (*Drasta: realisation*) by *Maharshi* Viswaamitra, a great sage ecologist of the Vedic age. It is said that, Viswaamitra had performed so much *Yajnya* (sacrifice) and *Tapasyaa* (austerity), that its resultant fruits are still enjoyed by the present humanity even to whom; we should be indebted all along. The etiology of his name: *Visva* (universe) + *Mitra* (friend), substantiate his sacrifice for the common cause of humanity.

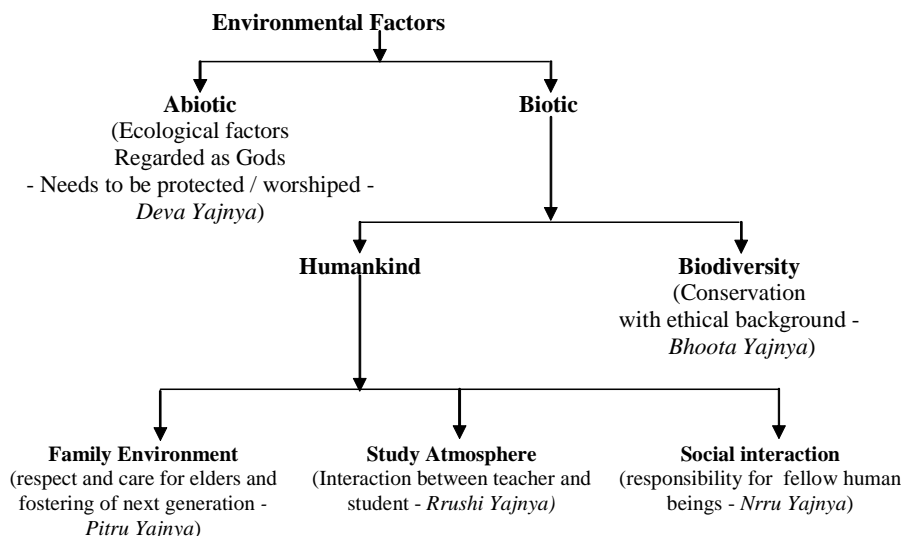


Fig. 1. Relation between the philosophy of Pancha Yajnya and modern human ecological principles.

The whole aim of Gaayatree recitation is self-explanatory as depicted in the box. The worshiper gets energized and surcharged with cosmic energy, floating around us like Reki: an Indian originated Japanese Yoga system.

BOX

Message of Gayatree Mantra

*Meditate on the radiant glory of God who illuminates all,
May our soul be worthy of receiving His divine light,
Enlightened by His grace, may we aspire for high objectives and resolve to proceed on the spiritual path with a drive,
May this divine flame guide the faculties of our intellect on the path of ultimate salvation.*
(Vidyalankar 1974)

Tarpana: Following Gaayatree worship, one is expected to offer Tarpana, a procedure of physical offering of water to all subjects and objectives connected with the Pancha Yajnya, with a metaphysical intension of worship. It is simplest of all worshiping procedures, incurring no expenditure; a Gruhastha should perform the ritual daily as a routine work, insignia of Pancha Yajnya.

Tarpana is otherwise known as Brahma Yajnya. Offering of water is done along with Kussa grass (Desmostachia bipinnata), dropped from

a grooved copper spatula (Paatri). In case of water offering to Pitru, extra Tila (Sesamum indicum) is mixed with the system. In every offering, Aum is pronounced as prefix of the name of the subject or object, followed by a word Strupyantaam (be contented). Few examples are as follows, chosen one from each section of Pancha Yajnya.

1. Rrushi Yajnya: Aum; Rrushaya Strupyantaam (Let the sages be contented)
2. Deva Yajnya: Aum; Brahma Strupyantaam (Let Brahma – the creator be contented)
3. Bhoota Yajnya: Aum; Bhootaane Strupyantaam (Let all living creatures be contented)
4. Nrru Yajnya: Aum; Manushya Strupyantaam (Let all human beings be contented)
5. Pitru Yajnya: Aum; Kabyaabaadaanala Strupyantaam (Let the Pitru, who accept the offered food called Kabya, through the media of fire named Baadaanala be contented)

The syllable Aum signifies the power of creation, power of maintenance and power of destruction; the basic cosmic ecological principles of the universe, that vibrates on and often. The spectrum of subjects and objects offered water during Tarpana is depicted in Table 1.

In addition to the system of water offering as per table 1, there are few Mantras through which special Tarpana is devoted to such a wider form;

that shows the magnanimity of Hindu culture, their meaning depicted as follows:

Obligation for Cosmic Environment and Biodiversity (Ecological Significance): Starting from the *Brahma* (the supreme soul, God the great, unexplained reality) till a *Stambha* (pillar - life less), the *Char* (animals) and *Achar* (plants) of the *Jagat* (world); let the *Tribhubana* (Three regions of the world: *Bhuloka* – the terrestrial; *Bhubhaloka* – the aerial and *Swagaloka* – the cosmic, heaven) be contented with my offering.

Obligation for Humanity (Anthropological Significance): Endless clans of crores, inhabitant of *Sapta Dweepa* (seven islands – continents) be contented from all sides with my offering.

Obligation for Human Relationship (Social Significance): He who is not a friend / relation (*Abandhaba*), or a friend (*Bandhaba*) or a friend in some other life; be totally contented, who is interested to accept (my offering).

Biswadeva Poojaa: A *Gruhastha* after performing *Sandhyaa* and *Tarpana* early in the morning, expected to offer cooked food to all

concern through *Pancha Yajnya*, a ritual process known as *Biswadeva Poojaa* (worshiping the powers of the universe). Food, the source of energy for all living beings arranged in the trophic levels; is a product due to integral action of different ecological factors / powers / *Devata* (Padhy 2008a). Offering of a small part of the food before self-consumption, may be mythical as no one physically accepts it; but certainly an insignia of expressing some one's obligation and responsibility for the factors of the environment. In this process, on a specially designed geometrical diagram, the house holder offers a portion of the cooked food of that day in specified quarters with the recitation of *Aum* as prefix, and another word either *Swaaha* (for Gods) / *Swadhaa* (for manes) / *Hannta* (for *Rrushis*) / *Namah* (for *Bhootas* and *Nrru*) as suffix to those names to whom it is offered. All these words *Swaaha* etc. express a single meaning "let it (food) may please be accepted". The following are offered oblation in this ritual.

Deva Yajnya; oblation offered to:

- 1) *Brahamaa* - The creation power of the universe.

Table 1: The following are offered water during *Tarpana* insignia of expression of obligation.

Rrushi Tarpana (offering of water to the source of knowledge)

(1) *Rrusaya* (the Sages), (2) *Sanaatana* (The ancients), (3) *Guru* (The spiritual guide) - also applicable to any teacher, (4) *Parama guru* (Grand Teacher), (5) *Parapatara guru* (Great grand teacher), (6) *Paramasti guru* (great, great grand teacher), (4) *Aacharya* (Prime teacher), (8) *Puraana Aacharya* (Teacher of epics), (9) *Gandharba Aacharya* (Teacher of art and music), (10) *Itara Aacharya* (Teachers in general of any subject), (11), *Vedas* (The source of knowledge), (12) *Chanadasi* (The poetic verses of Vedic hymns, that has encapsulated the knowledge).

Deva Tarpana (offering of water to the powers of nature)

(1) *Brahmaa* (God power of creation), (2) *Vishnu* (The God power of maintenance), (3) *Rudra* (God power of destruction), (4) *Prajapati* (God power of procreation), (5) *Devaa* (all the Gods), (6) *Devya* (all the Goddesses), (7) *Devaanuraga* (The followers of Gods), (8) *Apasara* (The celestial dancers), (9) *Sambacchhra* (The calendar year - time is conceptualised as God)

Boota Tarpana (offering of water to the biodiversity)

(1) *Bhootani* (all living creatures), (2) *Naaga* (the serpents), (3) *Suparna* (The birds), (4) *Pasaba* (The domesticated animals), (5) *Vanaswati* (The plants), (6) *Ousadha* (The medicinals), (7) *Sagara* (The Oceans), (8) *Parbata* (The mountains), (9) *Sarita* (The rivers), (10) *Yaksha* (A living supernatural being, spiritual apparition ghost, spirit (Williams, 1899), (11) *Pisacha* - A class of demons, so called due to their fondness for flesh (Williams, 1899), (12) *Rakhyansi* - The guarding, watching care taking, protecting, saving, preserving power of nature (Williams, 1899), (13) *Bhoota Graama Chaturbidha* (All types of living beings and their habitats around us).

Nrru Tarpana (offering of water to the humanity)

(1) *Manushya* - The humanity.

Pitru Tarpana (offering of water to the Manes)

(1) *Pitaa* (father), (2) *Pitaamaha* (grand father), (3) *Pra-pitaamaha* (great grand father), (4) *Maataa* (Mother), (5) *Pitaamahi* (grand mother), (6) *Pra-pitaamahi* (great grand mother), (7) *Maataamaha* (Maternal grand father), (8) *Pra-maataamaha* (Maternal great grand father), (9) *Brudha Pra-maataamaha* - (Maternal great, great grand father), (10) *Pitrubya* - (elder and younger brothers of father), (11) *Pitrubya Patni* (wife's of the elders and younger brothers of father), (12) *Bhaatru* (elder and younger brothers), (13) *Bhaatru Patni* (wife's of the brothers), (14) *Bhagani* (sister), (15) *Maatula* (maternal uncle), (16) *Maatulani* (maternal aunt), (17) *Pitru Swasru* (sister(s) of father), (18) *Pitru Swasruya* (inherited relations of father's sister), (19) *Maatru Swasru* (sister(s) of mother), (20) *Maatru Swasruya* (inherited relations of mother's sister), (21) *Maatulayadi Pitru* (successive forefathers of maternal uncle), (22) *Maatulayadi Maatru* (successive mothers of maternal uncle), (23) *Maatulayadi Sapeendaviya* (all the inherited relations of maternal uncle), (24) *Samagootra* (all the members of one's clan), (25) *Aacharya* (The teacher - respected as father), (26) *Swasura* (father in-law), (27) *Ritvika* (family priest), (28) *Jachaka* (who asks for offering), (29) *Savarna* (all the members of one's *Varna* (Caste)).

- 2) *Prajaapati* - The power of procreation / multiplication / expansion
- 3) *Gruhyaveya* - All Gods of the house.
- 4) *Kaasyapaya* - The children of *Kaasyapa* the father of Gods; may be the female descendent of the former – the earth; may be personified as *Aaditya* (Williams 1899).
- 5) *Anumataya* - To all pleasant, loved and beloved Gods acting according to an agreement / or personified as a Goddess the 10th day of the moon's age when the Gods and Manes receive oblation with favour (Williams 1899).

Bhoota Yajnya: oblation offered to:

1. *Prajnyaa* - The clouds
2. *Abhaya* - The waters
3. *Pruthibee* - The earth
4. *Dhaatree* - The bearing / fostering / establishing / supporting power of earth.
5. *Vidhaatree* - The distributing / arranging / disposing / accomplishing power of earth.
6. *Digbali* - Underlined authorities of the eight directions of the earth (*Ashtabasu*)
7. *Brahmaa* - The supreme natural abode above the cosmos – *Brahmaa*, the God power of creations resides – may be the epicentre of the universe.
8. *Antareekshya* - The cosmos
9. *Soorya* - The solar system
10. *Biswaviya* - The universe
11. *Devataa of Bisswa* - Energy sources of the universe
12. *Bhootas of Bisswa* - The living creatures of the universe
13. *Ushasee* - The morning (transitional period) which greets the day to activate all concerned).
14. *Bhootaanaam Cha Pataya* - Lord of the *Bhootas* i.e. living beings / five elements (*Pancha Mahaa Bhoota*) – ecological factors – also attributed to lord Siva (Williams 1899).

Rrushi Yajnya

One part of the food is offered to seven sages of Vedic age named Sanaka, Sananda, Sanaatana, Kapila, Aasuri, Bodu and Pancha Ssikka; considered to be the most ancient elite of the world.

Pitru Yajnya

Parts of the food is offered successively to the heritage (i.e. father; grand father and great

grand father, together; the second part to maternal grand father, great grand father and great great grand father as well the third part to the above two groups jointly). One can extend more parts if he likes to offer especially for any other if desires so.

Nrru Yajnya

A part of the food is sacrificed for guests (humanity) from ritual point of view and three more parts for crow, dog and beggar; the later called *Baahya Bali* (oblation outside). After finishing the ritual the house holder is expected to go out side his house and keep the *Baahya Bali* parts in an open space for the birds, animals, insects and worms etc. He would wait there fifteen minutes expecting any guest or beggar to arrive. If any one comes expecting food, he would be served them first to which lunch of the family follows. The other parts (food) offered previously in the ritual are thrown to any water body as a supplement to aquatic creatures. The above procedure is narrated in *Yajurveda*.

IV. GEETAA INTEGRATES THE HUMAN ENVIRONMENTAL RESPONSIBILITY

The concept of five scarifies depicted in *Manusmruti* finds a special position in *Geetaa*. The later scripture has originated towards the end of *Dwapara Yuga* (previous to the present age) more than 5000 years ago. The five obligations expected out of *Pancha Yajnya* has a great ethical value pertained to human life and their interrelationship is much more dynamic around the human community from social and scientific point of view; as the *Geetaa* elaborates.

Nrru Yajnya

The spectrum of sacrifices elaborated in the proceeding pages seems to be of spiritual and ethical value; but should be performed by a common man from practical and social point of view. One self is expected to perform the sacrifices being conscious of the philosophy of action and supremacy of knowledge. In the environment the sun, moon, plant world, animal kingdom, space, air, fire, water, earth etc., everyone performs sacrifice for each other according to the norms of action and knowledge set by the nature. For man only it is rightly pointed out:

Man does not attain freedom from action without entering upon action; nor does he reach perfection merely by ceasing to act (Geeta: III/4).

None can ever remain inactive even for a moment; for everyone is helplessly driven to action by nature born qualities (Geeta: III/5).

Action is superior to inaction; therefore perform your allotted duty selflessly (Geeta: III/8)

All deeds are traps, except the actions performed for the sake of sacrifice. Hence there is need for selfless action (Geeta: III/9).

The above narrations clearly indicate that any duty, either from the personal or community point of view, should be performed with the spirit of sacrifice. This theme of *Nrru Yajnya* is the epicentre of the other *Yajnyas*. As regard to one's duty, he is expected to perform it being unattached with the motive of sacrifice.

Pitru Yajnya

Noramlly we follow the standards set up by our elders, ancestors and great man to whom we regard as our *Pitru*. The aim of *Pitru Yajnya* is to express our obligation to our ancestors those who have brought up us upto this existing standard, genetically and socially. The following verses clearly indicate that the society must honour to the elders and ancestors (like Janaka, the Sage King of Raamaayana) those who have reached perfection through their unattached action and have opened paths for the coming generations to follow up it.

It is through action (without attachment) alone that Janaka and other wiseman reached perfection. Having an eye to maintenance of the world order too you should take to action (Geeta: III/20).

For whatever a great man does, that every thing other men also do; whatever standards he steps up, the generality of men follow the same (Geeta: III/21).

It may so happen that some one's actions today may be an example for others in future; this is how the *Nrru Yajnya* and *Pitru Yajnya* are interrelated.

Rrushi Yajnya

Veda speaks of itself (Saraswati 1973) as the universal and perennial source of knowledge. The word Veda has an etymological origin from the

word "*vid*", which means to know, the knowledge. The divine knowledge of Veda is applicable to all people, all places, in all times and available above the discrimination of religion and sex. The wisdoms of Veda are ever fresh, ever appropriate and ever lasting above the limitations of time, place and action, beyond the range of doubts, disbelief and danger; it is irreversible, infallible and indestructible. Vedic knowledge is flawless, stainless and spotless (Talreja 1982).

Geetaa says:

The prescribed action has its origin in the Vedas, and the Vedas proceed from the indestructible (God); hence the all pervading infinite is always present in sacrifice (Geeta: III/15).

Vedas has a special claim as *Apurusheya*, means not created by human. Conjoining of such an adjective for Veda is ever confusing to a common man. In fact, the saints have realised the Vedic knowledge in their transcendental state of mind, which is achieved under deep meditation (*Samaadhi*), scribed their perception in the form of hymn (*Ssloka*) and attributed the knowledge to the source of divinity, instead of claiming the authorship for self. Since all actions culminate in knowledge, the theme links the *Nrru Yajnya* with the *Rrusi Yajnya*.

Deva Yajnya

In ancient India the sage scientists have realised the existence of ecological factors known as *Panchamahaabhoota* such as *Aakaasa* (space), *Vaayu* (Air), *Teja* (Energy), *Aapa* (Water) and *Kshiti* (Earth) which are indispensable to the biological world (Mohapatro 2001). Modern ecology explains the above factors as abiotic, represented in the form of climatic, edaphic, physiographic etc. These natural powers of the environment which exist in different forms are regarded as different gods in Hindu religion such as *Surya Devataa* (Sun), *Vaayu Devataa* (Air), *Agni Devataa* (energy), *Jaladevataa* (Water), *Indra* (God of rains), *Varuna* (god of ocean) etc. A house-holder is expected to worship these natural powers as a token of obligation.

Geetaa Says (III/10-12)

At the beginning of creation, the creator created the mankind along with the spirit of sacrifice, said them "you shall prosper by this; may this yield the enjoyment you seek".

Foster the Gods through sacrifice, and let the Gods be gracious to you. Each fostering other being selfless, you will attain the highest good.

Fostered by sacrifice, the Gods will surely bestow on you unasked, all the desired enjoyments". He who enjoys the gifts bestowed by them, without giving them in return (obligation), is undoubtedly a thief.

The interaction between the humanity and the powers of the nature, each fostering the other, is a lesson to take care of the environmental factors (not to pollute them) to get the benefits in return. Of late the present scientific man has realised their own negative commitments on nature, responsible for environmental pollution and events like global warming, acid rain, green house effect, ozone depletion etc. etc. A coordination between the *Nrru Yajnya* and *Deva Yajnya* is highly essential in the present context as directed by Geetaa to save the environment.

Bhoota Yajnya

The nature performs *Bhoota Yajnya* in the form of rainy season for the proliferation of Biodiversity (Padhy 2008e). The hydrological cycle which triggers the biogeochemical cycle and supplies nutrition to all concerned: plants, animals and microbes; is a product of the interaction of all the ecological factors.

All begins are evolved from food; production of food is dependent on rain; rain ensues from sacrifice, and sacrifice is rooted in prescribed action (Geeta: III/14).

The above narration is a link between the environmental factors (*Deva Yajnya*) and biological world (*Nrru* and *Bhoota Yajnya*) through the hydrological cycle. To commence the rains, the Sun scarifies energy; the water bodies donate the water through evaporation; plants drag the water from deep soil, enrich the environment with water vapour; the sky provides space and ideal conditions for precipitation; the force of wind waves the cloud in right direction; the high mountains obstruct the monsoon and finally the nature's hydrological cycle completes its circle. The bio-geochemical cycle, an inner wheel of the hydrological cycle involves the sacrifice of the microbial world; of whom a common man is not aware. So the sacrifice for rain is a collective effort of the abiological and biological factors of the environment in which duty of man (*Nrru*

Yajnya) is very much associated for agriculture and production of food. The integration of *Pancha Yajnya* as elaborated in Geetaa is depicted in Figure 2.

V.PANCHA YAJNYA: AN AMALGAMATION IN TANTRA PHILOSOPHY

In the *Kali Yuga* (Present age) the philosophy of *Tantra* and mythology has entered into Hindu religion. The word *Tantra* is derived from the basic term 'tan' – to spread; and the agential suffix 'tra' – to save, gives the full meaning that "the knowledge which is spread to save (Bernard 1989). *Tantra* represents manifestation. The super natural power, an universal concept, got manifested to perform different functions; an ecological spread over. In the Vedic age, nature was worshiped in the form of different powers, in which a conscious energetic personality was realized, later named as *Devataa*: the sun, moon, rain, air, water, earth etc. These set of ecological factors were recognized with a mythological personality, designed scientifically and holding different weapons generally in four arms (twice powerful than man), provided with an animal vehiculum. The weapons represent the *modus operandi* of the powers and the characteristics of the animal usually express or symbolize the nature of the corresponding specific aspect of the *Devataa*; otherwise the animal is nothing but the expression of the God's personality in its animal form (Vitasaxis 1977). Probably this is how the philosophy of *Tantra* is originated and as many as the existence of thirty three crores of *Devataas* is depicted in *Pooranic* literatures of Hindu mythology.

It is difficult to understand how this number thirty three crores came to exist; but variegated *Devataas*, with different forms, names and powers can be observed in Indian scenario. As a person is a father for his children and head of the family, a husband to his wife, a lovely friend in his nearer circle and an officer in his office; he plays different roles from a common man to an important personality, with different ability in holding and exercising different powers, posture and position being the same one. Similarly, a *Devataa*, with different iconic representation, associated with different vehiculum and weapons, being considered from two universal factors of time and space; emerges out as a separate individual, power or entity. Probably, the thirty

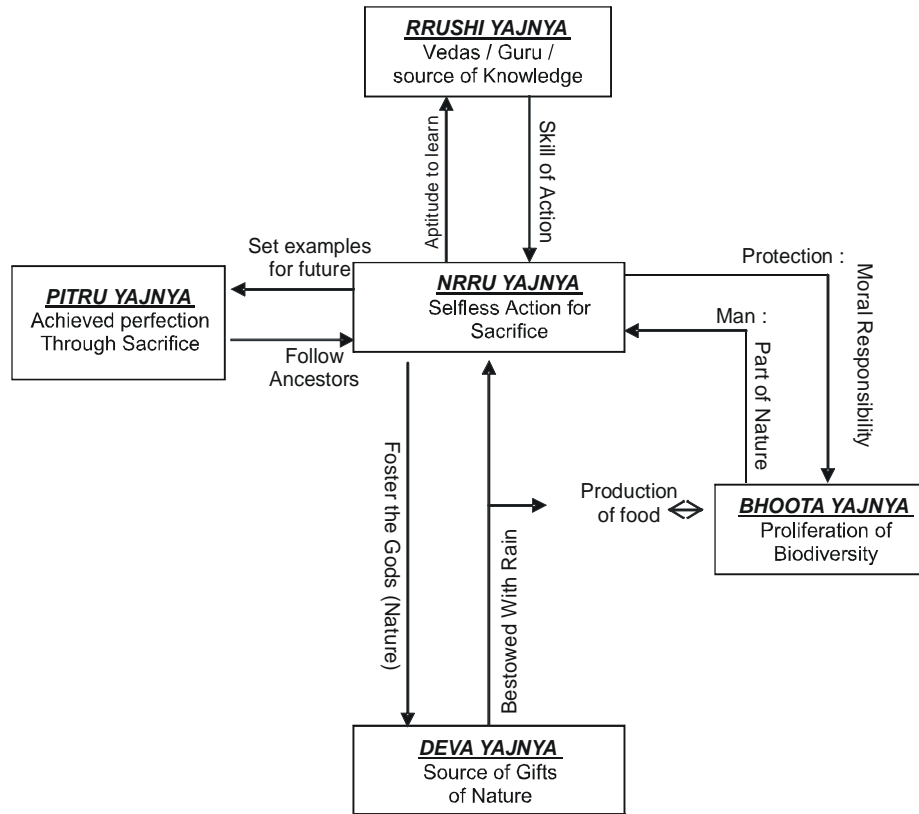


Fig. 2. The basic interactions within the *Pancha Yajnya* as depicted in *Geetaa*

three crores is the ultimate sum total of all manifestations, powers, without any of them, man would remain incomplete, dissatisfied.

All the *Devataas* of Hindu mythology are broadly classified into five groups, popularly known as *Pancha Devataa*. The single iconic representative of each group are *Ganesh*, *Soorya*, *Vishnu*, *Ssiva* and *Durgaa* (Fig. 3). This classification systematically has a root in Vedic philosophy; the reason for which *Tantra* is known as the fifth Veda. As with the change of age (*Yuga*) the human structure, longevity, knowledge and potentiality of performance changes; similarly the religious realizations also change from time to time (*Manusmriti* I/81-83). In *Kretaa Yuga*, *Sruti* (the other name of Veda) was the source of knowledge, *Smruti* (gist of Vedas as ethical law books: *Manusmriti* and others) in *Treta Yuga*, *Pooraana* in *Dvaapara Yuga* and *Tantra* in *Kali Yuga*. In course of time Vedic rituals are side tracked, got

replaced by worshiping of different God and Goddess according to *Tantra* Philosophy. The relationship between the *Pancha Yajnya* concept of Vedic age and *Tantra Pooja* of *Pancha Devataa* can be traced out from ethno ecological point of view.

The *Ganesh* (*Nrru Yajnya*)

The name *Ganesh* is derived from the etymological root '*Gana*' which convey the idea of common followers; and '*esh*' means Lord. So, He is the Lord of the *Ganas*, i.e. the Lord of the common men, represents the human population. Moreover, He is worshiped to help people to overcome all sorts of obstacles. He is considered as the guide, protector, master and worshiped as the messenger to carry the prayer of a common man to any God. This is the reason why *Ganesh* is worshiped first (*Agra Poojya*) before any other

God being worshiped. The human beings claim self as (*Nara*) the descendents of the supreme God (named as *Nara – Manusmruti* I/10); represented as *Ganesh*, the eldest son of *Ssiva* and *Paarvati*, portrait with family members in religious pictures (icons). Very few Gods have this claim as son of the supreme power as *Ganesh* and a family structure as *Ssiva*. Interestingly, the God is provided with a mouse as His vehiculum; structurally being opposite in size of the master; a thought provoking association from *Tantra* point of view.

From philosophical point of view, *Ganesh* the elephant headed, huge structured man is

considered to express the unity of men in microcosm; with the great being elephant as the macrocosm. From ethnobiological point of view, being elephant he passes through jungle growth, pulls out what ever stands in his way and uproots, tears to pieces the trees that bar his road; a practical symbol of over coming obstacles. If confronted with other uninvadable barrier / difficulty, he drills hole like a mouse (His vehiculum) and slips through narrow space beneath closed doors or under thick walls. So *Ganesh* is an integrated symbolic personality (human community) with elephant like Physical ability and mouse like technical trick, always with a solution

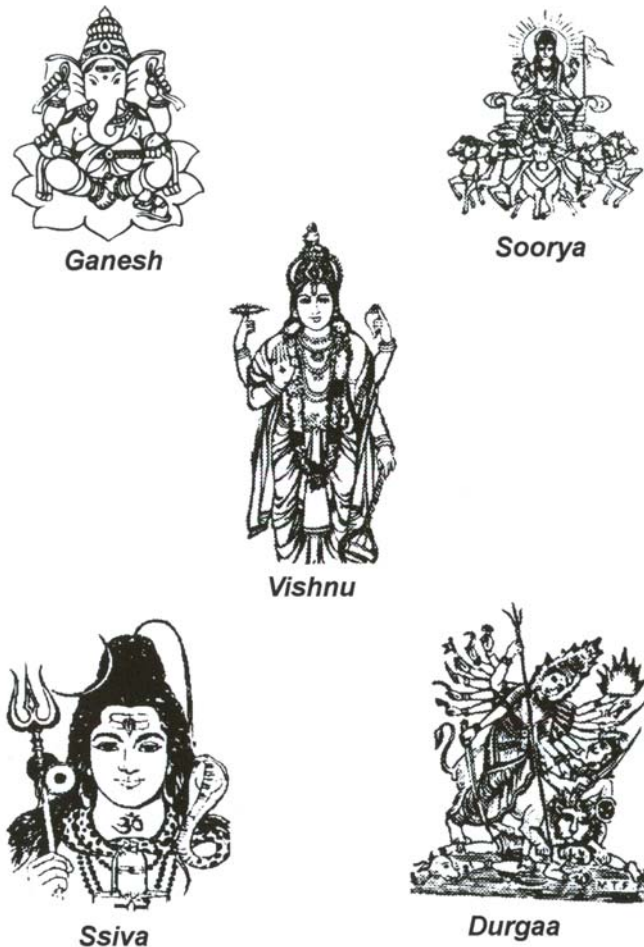


Fig. 2. The basic interactions within the *Pancha Yajnya* as depicted in Geetaa

at hand for every problem. In every common ceremony *Ganesh* is worshiped first in order to accomplish the work smoothly. *Ganesh* is comparable with the community activity or the *Nrru Yajnya*.

In a Vedic classification all animals are divided into two groups: *Mukhadaana* and *Hastadaana*. The first group take hold by mouth include all animals other than man, monkey and elephant; the later three in second group take hold by *Hasta* – Hand (the power of capturing). The word *Hasti* (elephant) has the origin (root) from ‘*Hasta*’, substituted by the tusk which performs works as the power of capturing as the hand of human or monkey. Probably due to this similarity, an elephant head and with a human body having four hands (signifies enhanced skill to exercise power) of the icon of Lord *Ganesh*, represents the human community in integrated form.

The Soorya (*Pitru Yajnya*)

The concept of *Pitru* is metaphysical; but implementing and worshiping the later as Sun God is truthful from religious and scientific point of view. We witness the existence of Sun God, more physical than mythological, as elaborated previously (Padhy 2008b, d). The Solar System represents the *Pitru Loka* (Manes inhabitant). Solar energy enters to the trophic level being harvested by autotrophic system with an unidirectional flow, and can not be expected to be back. Similarly, the genome complex received from the ancestors by the present generation can not be back to them. Man has no gift to repay to Sun God, for the continuous and unasked source of energy ever since time immemorial. Only one has to offer a little water in daily ritual *Tarpan* as an obligation to Sun God and a token of respect and remembrance to forefathers (*Pitru Yajnya*).

The vehiculum of Sun God is a chariot with a single wheel (The structure of God Himself) pulled by seven horses, represent the seven colours (spectra) of the light. The red horizon of morning named as *Aruna*, is his Coach, Goddess *Ushaa* (morning is named so) and *Raatri* (name of night) are considered as His sister and wife respectively; this is how *Tantra* represents the spread of nature.

The Vishnu (*Bhoota Yajnya*)

The word *Vishnu* means *Viswabyaapee* (spread throughout the universe) points towards the life energy, the biodiversity right from the simplest unicellular to the multicellular gigantic

forms of life. In Hindu philosophy *Vishnu* is regarded as the fosterer (*Paalana Kartaa*) of the biosphere. He has another name *Naaraayana*, the one who abode on waters (cosmic ocean), symbolizes that life is created in water and sustained in it (Mohapatra et al. 2001). His mount (*Vaahaana*) is *Garuda* (eagle), the bird that flies at high in the sky with a deep penetrating vision on the earth; represents its access to every titbits of the nature, whatever the case may be. *Vishnu* sleeps on a coiled snake named *Ananta*, signifies the endless factor of the universe i.e. time; represents his self-existence before the creation and continued to be even after dissolution. His consort (*Shakti*) is *Lakshmi* or *Shree*, the Goddess of beauty, good luck, wealth and food; scientifically the source of energy for the ecosystem to migrate in the food chain. She is the female power feeds (energize) the biodiversity, and supports the male power to foster, as the parents in a family. Metaphysically, *Vishnu* and *Lakshmi* together represent the biodiversity; their worship signifies the *Bhoota Yajnya*. It is prime Human responsibility, to take care of the biodiversity, spread as the nature, all through.

The Ssiva (*Rrushi Yajnya*)

Ssiva, otherwise called as *Mahaadeva* (the great Lord) or *Rudra* (a Vedic age terminology) symbolizes the power of destruction of the cosmic ecology. He is worshiped as *Lingam*, the Phallus, being fixed on a *Yoni* (the point of creation – the female sex organ), which expresses the power of creation is ever associated with destruction. Mythology says, the Gods reside in the heaven, enjoy the unlimited resources with an immortal cosmic body. *Ssiva* is exceptional among the Gods, being *Mahaadeva* resides in the Himalayas, wears a crescent, the cobras around his neck, sits upon the skin of a tiger, his mated hair wound into a mop higher upon his head and lives being unattached to any material enjoyment and possession. He is the greatest of all Yogis, sacrificed to drink the fiery poison emerged out of the churning of cosmic ocean (Padhy et al. 2001). He is the only God with a family structure, wife *Paarvati* and children *Ganesh* and *Karteekeya*. More elaboration on *Ssiva* as the God of Himalayan ecology will be reflected in the forth coming communication.

Ssiva is comparable with the ancient Indian sages and seers for the qualities of his sacrifice,

unattached simple life and immersed amidst the calmness of the highest state of *Yoga - Samadhi*. He is enriched with the *Samaadhi Prajnyaa* (Knowledge achieved out of the highest state of Yoga) and known as *Jagatguru* (the universal teacher). In many Indian *Pooraanas* knowledge is disseminated in the form of dialogue between *Ssiva* and *Paaravti*, significantly establish the God as a teacher. *Ssiva* is the creator and master of grammar. It is said that, the great Indian sage *Panini*, who has formulated and developed the grammar and phonetics of Sanskrit language (depicted in his compilation *Astaadhdhaayee*), could do it by following the sound vibration of *Ssiva's* drum (*Damburu*) in Himalayas. *Ssiva* has a good name as *Aasutosh* (satisfied with little gift), a quality of true teacher; in Indian scenario a bow down (*Namaskaar*) - posture during regards by a *Sisshya* is the later's surrender before a Guru to achieve his blessings. Worshiping of *Ssiva* confers one's obligation for his teacher and source of knowledge, i.e. *Rrushi Yajnya*.

The animal vehiculum of *Ssiva* is *Nandi* (bull), famous for its calmness and procreation; but virulent when gets disturbed.

The Durgaa (Deva Yajnya)

She is the only Goddess in the group of other four Gods, represents the *Shakti* (energy, power). Usually, in Hindu icons God and Goddess are represented with four arms (represents the super power), but *Durgaa* has either eight, ten or eighteen arms, mount either a tiger or a lion, signifies her capability of concurrence over and exercise of power. She holds various symbolic weapons as a super power to kill the demonic forces; but with one hand blesses her faithful worshipers, reassures them that they should not fear; she is just there for them.

At one time there was a demon named *Mahishaasura* with a group of powerful associates. He was enriched with boons from lord *Brahmaa* (the creator) achieved through his extraordinary austerity. The boon was regarding his death by a naked woman. *Mahishaasura* declared victory over the Gods and captured the *Swarga Loka* (Heaven), a symbolic fact that nature (all Gods) was disturbed unnaturally, ultimately called for a rescue. Mother *Paarvati*, the consort of *Ssiva*, sacrificed her veiled womanly adornment i.e. the shame for universal benefit appeared as an all powerful warrior to fight

against the demon in response to the prayer of the Gods and all concerned. She received the weapons from all Gods, became most powerful and killed the demons as narrated in the epic *Chandi Pooraana*. *Durgaa* is an integration of all Godly powers, a synthetic deity; worshiping such super power is equalised with *Deva Yajnya*.

VI. PANCHA YAJNYA EVOLVED AS A COMMUNITY COORDINATED ACTIVITY

In course of time with the growth of the society, the activity of *Pancha Yajnya* entered into social functions and turned into a community activity instead of personal responsibility (Padhy 2008e). The operation of this *Yajnya* activity at the community level can be traced out through the social functions during the rainy season. The total scenario is a welcome episode of the rains that nurses the whole biodiversity throughout the year.

The rainy season for four months as a single unit is referred to as *Chaturmaasyaa*. This coincides with the months part of *Aashaadha*, *Ssraavana*, *Bhaadraba*, *Aasswina* and part of *Kaartika* months of Hindu calendar (July, August, September and October). In a different calculation the *Chaturmaasyaa* period starts from the *Ekadasee* day (11th day of the bright or dark fortnight) of the bright fortnight of *Aashaadha* till the similar *Ekaadasee* of *Kaartika*. This period comprises a sum total of 120 days includes nine *Ekaadasee*, each comes with a gap of fifteen days. The importance of *Ekaadasee* needs to be highlighted from religious point of view, as they are 24 in number in a year and a day considered as the most auspicious day for the devotees of *Vaishnava* culture (worshipers of *Vishnu - Naaraayana*). A true *Vaishnava* is expected to observe a vow under fasting on this day. Scientifically, a fasting in fifteen days interval moderates the metabolic system and many such rituals with a scientific basis are associated with religion in Hindu culture. Interestingly, four *Ekaadasee* (s) in a year is considered as *Bada Ekaadasee* (i.e. very special ones), out of that three come during the *Chaturmaasyaa*; their importance is discussed later.

Bhoota Yajnya

Ecologically, the rainy season is the feeding season for the whole year. The cumulative action

of the ecological factors of nature, through the active hydrological cycle, pours the rain water to the environment, triggers the earth's biogeochemical cycle and nurses the biodiversity (*Bhoota Yajnya*). The biodiversity which in turn responsible for the existence of human ecology, proliferates during this time. The water accumulated and food produced during these four months is consumed by the whole ecosystem throughout the year. The total activity of the environment is such that, the nature performs the *Bhoota Yajnya* during this time and the human race efficiently joins its skill and hand to it; gets a major share of its food for existence and maintenance.

From a mythological point of view, *Bhagawaan Naaraayana*, who is considered as the *Paalaka* (the power of maintenance of nature) of the biodiversity along with his divine consort *Mahaalaxmi* (the goddess of food, wealth, nature and beauty) is responsible for the sustenance of life on this earth (universe).

"If, I cease to act, these worlds would perish; may, I should prove to be the cause of confusion and of the destruction of these people (Geeta III/24)."

It is mythically expressed that *Naraayana* is ever on his *Ananta Ssayana* (endless sleep). As the epics narrate, all the times 'Thy' is transfixed in Yoga *Nidraa* (yogic slumber posture), the highest state of yoga (*Samaadhi*). Incidentally the first *Ekaadasee* of *Chaturmaasyaa* is named as *Hari Ssayana Ekaadasee* (*Hari* = *Naraayana*; *Ssayana* = sleeping - entering to *Samaadhi*) and the last (9th *Ekaadasee* is named as *Deva Utthaapana Ekaadasee* (The supreme God gets up). During *Chaturmaasyaa*, 'He' specially enters into Yoga *Samaadhi* to channelise his divine powers for the commencement of rain and simultaneous proliferation of biota. The mid *Ekaadasee* (5th) in between the above two is named as *Paarswa Paribarttana* (change of posture) which can be coordinated with the raining pattern of India; as the monsoon moves from South-West corner (Kerala state) to north direction in the beginning, gets obstructed by Himalayas and flows in opposite direction. These three *Ekaadasee* referred as above, are the special days (*Bada Ekaadasee*) during *Chaturmaasyaa*, which remind some one through the religious vows of his ecological responsibility during in the rainy season.

The whole scenario is such, that the supreme power (nature) concentrates for the proliferation and maintenance of the Human ecology during

the rainy season and directs the mankind to work for their own sustenance by performing *Bhoota Yajnya* in the form of agriculture. Accordingly, the human community in India remains devoted to agriculture during this period insignia of performing *Bhoota Yajnya* and all the other *Yajnya(s)* are tagged with the later. Moreover, the five *Yajnya(s)* are interrelated with each other from their internal philosophy to a practical point of view (Padhy 2008c) and performance of one *Yajnya* needs the active supplementation of other *Yajnya(s)*; this is the reason why all the social functions in *Chaturmaasyaa* has a coordination with *Pancha Yajnya*.

The other point of speciality of *Chaturmaasyaa* is that during this period personal oriented social functions such as marriage, *Upanayanaa* (sacred thread ceremony), *Gruha Pratishthaa* and *Gruha Pravesaa* (establishing and entry rituals of a newly constructed dwelling) etc are highly restricted. The scientific basis behind such astronomical prohibition in that, people are busy with their cultivation work and as well road communications get distributed (as the situation in earlier days) during the rainy days; cut-off one region from another. This prohibition supports a common man to concentrate (Yoga) on agriculture during this period without being disturbed for any other purpose; more so a socio-ecological phenomenon. Mythically, *Naaraayana*, who is also known as *Yajnyeswara* (the prime to be worshiped in any sacrifice), remains busy for universal upliftment through his yoga, should not be invited for a personal cause that disturbs his greater concentration amenable for community activity. Similarly, the nomadic communities do not move during rainy season and the roaming saints observe *Chaturmaasyaa Brata* (the vow of rainy season), settle themselves at specific places.

In Puri (Orissa, India), the place (*Dhaama*) of the world famous Sri Jagannath Temple, the Lord is considered as the divine form of *Bhagawaana Naaraayana*. The most important function of the lord is *Ratha Yatraa* (Car festival), which is celebrated in the month of *Aashaadha* during commencement of the rainy season every year, witnessed by more than ten lakh of people arrived from world over. The Lord, comes out of his temple, joins with the common people and becomes one with them irrespective of caste, creed and sex, accepts their prayer; as if the greatest interaction of humanity with the divine power is essential to celebrate the *Bhoota Yajnya*. By the by, the full moon day of *Aassweena* (comes after *Dassaharaa*) is named as *Kumara Poorneemaa*

(a day devoted for youngsters) is the birth day of Goddess *Laxmi* (the power of wealth, beauty, nature, production, fostering), the day she is specially worshiped. Being the consort of *Naaraayana*, she is the symbol of the Biodiversity, spread everywhere (Padhy et al. 2001). In fact the second part of cultivation period (October, November, December) is for the proper growth of the corn plants, seed production and harvesting which can be equated with the glory of mother *Laxmi* and she is worshiped and greeted accordingly before the commencement of the above agriculture events; a festival devoted for *Bhoota Yajnya*.

Rrushi Yajnya

Man is considered as human, because of his intellectual power; otherwise no way different from other animals; to acquire the power of knowledge the importance of teacher (in any form he may exist) can not be ignored. *Maharshi Vyaasa*; originally known as *Krushna Dwaipaayana* also *Badaraayana*, was a great saint of *Dwaapara Yuga*, 5000 years ago. He inscribed eighteen *Puraana(s)*, *Mahaabhaarata* and the great *Bhagawata Mahaapuraana* in Sanskrit language. He is the authority who compiled all the Vedic hymns preserved and practised by different schools of thought and divided the Vedas into four parts *Rig, Saam, Yajur* and *Atharva* and *Vedaanta Darssana* which narrates the cream of the knowledge of Veda. This great saint is called as the '*Jagat Guru*' the teacher of the universe (world).

The *Poorneema* of *Aashaadha* month is the birth day of *Vyaasa Deva* is named after him as *Guru Poorneema*; a day specially offered to express some one's obligation for the great teacher. An Indian is expected to worship his own *Guru* on this day as a token of his respect for the source of knowledge which has enlightened him. The *Guru Poorneema* is the first social function during the rainy season, a celebration of the *Rrushi Yajnya* by all concerned.

Pitru Yajnya

The first half of the *Aasswina* month (coincides with September) is known as the *Pitru Pakshya*, the fortnight of the manes (*Pitru Purusha*). This dark fortnight ends with the no-moon day named as *Mahaalayaa Amaabasyaa*.

The word *Mahaalayaa* can be defined as *Mahaa + aalayaa*, which means great habitat. The earth turns to a great habitat for these fifteen days; because the manes are invited from the upper space to the human habitat to be worshiped. During these fifteen days every family is expected to offer *Tarpan* (offering water) to the *Pitru* as a token of obligation (Padhy 2008b). Also any day within the fortnight according to suitability of the family, is fixed to offer *Ssraaddha* (ceremonial offering of food) for the *Pitru*. This period is considered as the community *Pitru Yajnya* period above caste and creed. The *Pitru(s)* are expected to stay on the earth is super face upto *Deepavalee*, the day they are again worshiped with *Deepa Daana* (offering of light path) and are shown torch by every family to lighten their pathway to move upwards upto their manes habitat. This is how the *Pitru Yajnya* is celebrated through *Maahaalayaa* and *Deepavalee* on the basis of social functions.

Deva Yajnya

Following the *Maahaalayaa* the second part of *Aassweena* month, is known as *Devi Pakshya / Maatru Pakshya* (fortnight of the mother). During this period the universal mother *Durgaa* is worshiped for 10 days upto *Dassaharaa* (10th day of the bright fortnight). Mother *Durgaa* (a synthetic deity) is an integration of all natural powers of Gods. According to the epic *Chandi Poorana* (a book devoted to realise the glory of mother *Durgaa*), to smash the evil power of *Mahishaasura* all the Gods worshiped and devoted their weapons (powers) to the great mother (*Mahaamaayaa*). This is the reason why *Durgaa* represents the universal power, the undefined energy which ultimately defined to various forms to perform different functions. The worship of *Durgaa* is equalised with the *Deva Yajnya*. All details of this concept are discussed earlier (Padhy 2008d). Moreover, the *Aassweena* month is the end period of rainy season; the sky usually remains clear with a balanced weather. This period is called as *Sarat Rrutu* (a sub season of rain), the most pleasant time every where and people enjoy the worship of mother *Durgaa* as *Ssaaradeeya Poojaa*. The scenario is such that the human community in India, expresses its heart felt obligation to the Gods (the powers of nature) through mother *Durgaa* for the adequate supply of rain and successful cultivation during the past four months.

Nrru Yajnya

This *Yajnya* is mostly aimed for human interaction. The mutual understanding among the members of a society, their interaction with a positive attitude and community living comes under the *Nrru Yajnya*. In fact the *Nrru Yajnya* plays a central key role (Padhy 2008c) and continuously commence along with other *Yajnya(s)*. Moreover, Agriculture (*Bhoota Yajnya*) is not a single man's activity, rather a community effort from every angle. Similarly, during the *Pitru Yajnya* period, *Mahaalayaa* the related families invite each other to their *Ssraaddha* celebration and also people feed to the elite (*Braahmana*) and poverty stricken poor on that day, as if the community celebrates mass *Nrru Yajnya* during that period. Following *Maahalayaa* the *Drugaa Poojaa*, *Mahalaxmi Poojaa* and *Kaali Poojaa* are celebrated throughout India can be interpreted as collective and collaborative community activity of celebration, a token of *Nrru Yajnya*.

On the other hand, *Ganesh* specially represents as the Lord of common man (*Gana* = Common + *esh* = Lord), elaborated earlier (Padhy 2008d). *Ganesh* represents as the integrated symbolic personality of human community. The 4th lunar day of *Ssukla Pakshya* of *Bhaadrabaa* is known as *Ganesh Chaturthee*, the day is specially celebrated as the birth day of the Lord, the highest community function of the year throughout India. Worshipping to Lord *Ganesh* depicts a great community activity, as celebrated by subjects of all educational profiles, urban or rural, is the symbol of *Nrru Yajnya* that falls during rainy season.

DISCUSSION

Every individual in the biosphere has its own niche: its identity, working principle and ecological position. Each one performs its own job, a major part of which is above the self motive. The plant systems as producers carryout photosynthesis, harvests the solar energy, prepares food for self, stores a substantial share for others. Food stored, enters in the form of energy to the eco-system by the process of eating and being eaten as food chain. Members in each trophic level sacrifice for this process. Plants exchange oxygen with carbon dioxide of the atmosphere, diminish the pollution and sustain the animal kingdom. They transpire water sucking from deep soil, restore it in the hydrological cycle; as well stabilize the edaphic system with their network of roots. The aesthetic, medicinal and multifarious economical value of plants need not be elaborated

or emphasized further. From rational view point, are they not performing *Yajnya* ?

We can choose another example from the detritus food chain of the ecosystem the decomposers, quite opposite to producers the bacteria and other micro-organisms, of whom we had no record before the invention of microscope. They are the scavengers of the nature, responsible for ensuring the bio-geo chemical cycle, work silently, gain little out of their performance compared to their contribution. Unless they perform the sacrifice, life would have been impossible on earth. Every individual, from virus to whale, are potentized by the nature to accomplish their duty being interconnected and interdependent with a basic theme of sacrifice; but the integrity of human beings is questionable in this regard.

Man is so called intelligent, provided with mind to reason the best and the worst; on the contrary animals and plants express through their behavioural character. Comparatively man should be more sacrificial, rational and be the guardian of the nature. It should be human responsibility to be with the nature; but unfortunately man's attitude of selfishness and exploitation is against the nature's principle, that drags the whole ecosystem towards a doom, an obscurity (Fig. 4). Another important aspect needs to be focused here, that the members of the biodiversity consume only the basic needs from the environment, a *Yajnya* on sustainable ecology; the concept on which man only talks and writes in volumes, without any practical i.e. pragmatic approach. Moreover, the community activity of present day human beings, is more social, political and pseudo-religious only which needs to be renovated. The whole concept of *Pancha Yajnya* is to vibrate the theme of eco-consciousness in every human mind.

Spirituality and religion may be two words having two meanings as per dictionary; but both are used alternatively to express the belief in the existence of God. The word often attributed to religion in Sanskrit is *Dharma*, has a different internal meaning which implies to the basic principle. The term *Dharma* is derived from *Dhru Dhaatu* (*Kriya* - activity), the later means to bear or hold i. e. the capacity of conceiving a system in conformity par with its foundation, i.e. the principle (Sanyal 1962). Every system works with its principle (ideology), probably the concept secularism is meaning less, when *Dharma* is equalized with the word religion. To make the word secular as meaningful, one must consider religion as a cult of faith and worship; but not *Dharma*, as nothing can exist without the later.

On the other hand, Science: *Vijnayaan* in Sanskrit on grammatical analysis has the meaning *Bishesha + Jnyaan* – enriched with knowledge. The interdependency between science and religion as commented by Einstein says “science without religion is lame and religion without science is blind”. Others have opinion that, “Science and spirituality have to live together as two fundamental pursuits not to compete with each other, but to complement with each other” (Krishnamurthy 2002). Moreover, modern day environmentalists of the world over, have seriously started considering on the diversified aspects of the role of religion, that can; rather must play in saving the natural environment (Goldsmith 2000).

Science is defined as the organized knowledge, obtained by observation and testing of facts, about the physical world, natural laws and society (Hornby 1989), often based on physical existence. On the other hand, spirit is associated with some

one’s mind, feeling, emotion and temper towards his soul and supernatural power, not of physical things. Exhibiting science and religion on a common platform for discussion; an approach from scientific point of view, we have not seen an atom and arrangement of electrons and protons in it, may be there are thousands of indirect scientific proofs for their existence; yet we believed in it (at par with spirituality). Nature has thousands of facts where science has provided proof and we have believed in an intermingled concept.

The whole task of blending the thoughts of science and religion as above, is aimed to find the truth of *Pancha Yajnya* in daily rituals of *Tarpana* and *Vaiswadeva Poojaa*. Just offering of water and food for all concerned and expecting their content ness, seems to be ridicules, mythical and unscientific. But, with this poor physical offering, associated with a greater universal feeling “One with all” and the concept of obligation, makes the whole ritual system

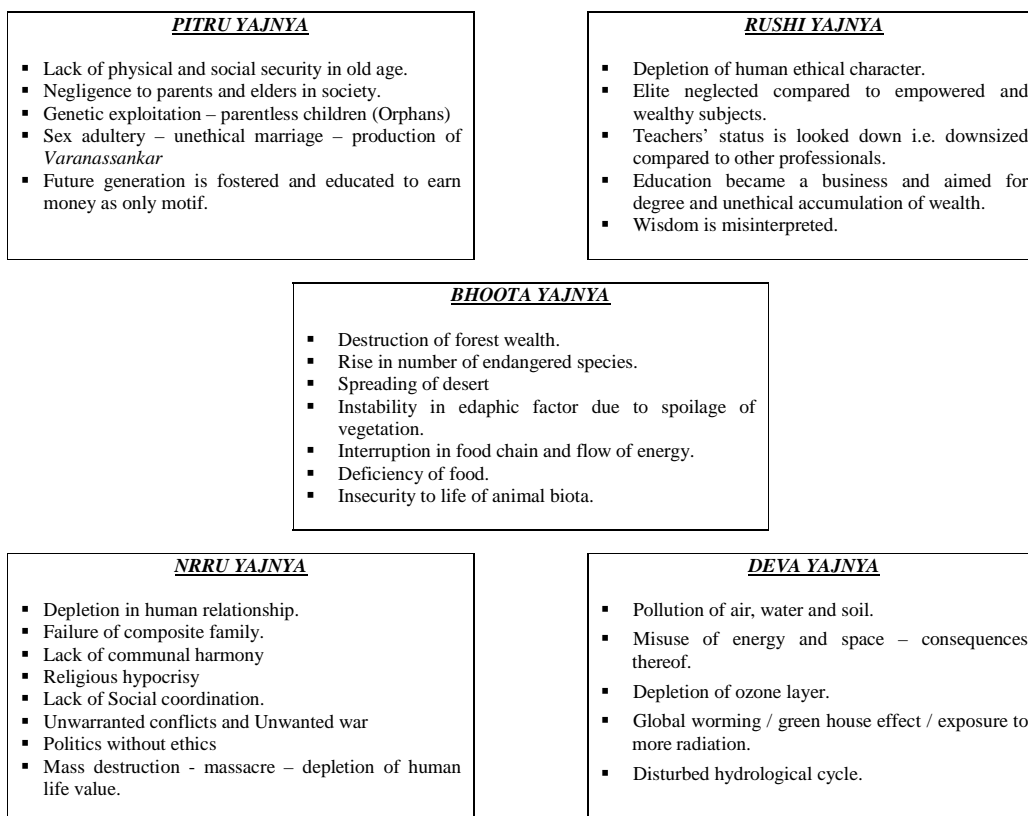


Fig. 4. Expected negative impacts in human environment caused due to lack of attitude for *Pancha Yajnya*.

scientific. This is how science and religion stand with each other. At length, it must be focussed, as realized, "Truth is the religion of science and religion is based on the science of truth".

India is famous for the world's oldest school of thought i.e. Veda. The word Veda is originated from the Sanskrit root *Vid*, means knowledge. The *Smrutis* (*Manusmriti* prime among them) are post Vedic compilations which mostly carry the Vedic thoughts in the form of ethical laws. The *Pancha Yajnya*, concept reflected in *Manusmriti* is the highest ethical feelings of an individual / society towards the environment. May be the philosophy of sacrifice which used to remind a common man of his environment in the form of daily rituals in the Vedic age, again re-discussed in Geetaa, further entered to *Tantra* and turned on to worship of *Devataa*(s) and finally thousands of years after its origin, has taken the shape of community activity and social functions. It is rightly uttered that "*Sangha Shakti Kali Yuga*", which means community activity is the power in *Kali Yuga* - the present scientific age. Since during this period, selfish motifs of man would not allow him to progress to achieve any common goal with personal efforts: a community approach to perform any *Yajnya* is essential. Even though the original Vedic thought is metamorphosed, it is still in touch with a common man's life through the social functions. The ecological philosophy of *Pancha Yajnya* is simple, basic, scientific, pragmatic and easily approachable, needs a re-entry into the environment curriculum from class room to society in the present context; if we want to motivate our future generation for ethical protection of the environment.

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