

## Urge for Ecological Sensitivity in Ancient India: Two Case Studies In Texts, Praxis And Performance

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### Abstract

After USEPA's 2014 report declaring the United States, the European Union, the Russian Federation, China, Japan and India among the top carbon emitters of the world, global concerns over ecological sensitivity have increased. CO2 levels across the world, usually at a scale of average 280 ppm, have crossed an unprecedentedly crossed the mark of 420 ppm in recent year. One significant question at this crucial stage is – does mankind have any lessons from its past to equip itself for the problems of contemporary times? The ancient Indian Vedic seers placed great importance on the relationship between man and nature, which is established through sacred incantations and expressed through rituals. This paper is premised on the central argument that folk-rituals across the races and peoples of diverse cultures in South-Asia reflect this ancient ecological sensitivity rooted in the collective consciousness of indigenous cultures.

To present its case, the paper takes up two case studies from India where ecological concerns are rooted in not only in ancient Indian texts (i.e. Vedas); they have also become a part of household rituals and performances. *BhūmiSūktam* (The Earth Hymn), a part of the Atharva Veda, is a collection of sixty-three verses, establishes a captivating portrayal of Mother Earth as the foundation of man's existence and a representation of the entire environment. The second case consists of the *kōlam* household rice-flour drawings in South India as an offering to the earth goddess, *Bhūdevi*, not just as a prayer but also a metaphor for coexistence with nature. Thus, the paper concludes how these texts and the rituals related to them serve as a constant reminder of the necessity to maintain and promote the ecological equilibrium of nature.

**Keywords:** Ecological sensitivity, *Atharvaveda*, *Bhūmi Sūktam*, *Kolam*

### Introduction

Ecology focuses on the interdependence between living organisms and their environment. Its conservation involves careful management, protection, and preservation of Earth's natural resources, weaker animal species and the environment. For Rick Spinrad, the steady increase in carbon footprints across the world from 280 ppm for the past several millennia to 420 ppm in the recent years is a "direct result of human activity". (Robinson, 2024) "This brings us to pause and ponder over the ecological imbalances threatening the modern world and the ways to cure and curve them. The question to be asked is what are the diverse components of the disturbance and what are methodology is in strategies suggested and adapted in the past to sustain ecological balances. Can we add this crucial stage learn any lessons from our ancient Vedic lower for equipping ourselves to face the human predicaments of today?" (Pant, 2007)

If the famous English poet T.S. Eliot's speculation be considered, 'Time present and time past / Are both perhaps present in time future / And time future contained in time past.' These words, like those by many of our contemporary scholars on ecology, believe that answers to mankind's future problems lie in its past. In the Indian context, all life in the Cosmos is interconnected and intertwined according to ancient Indian worldview, The transformation, cyclical decay and renewal of life are widely acknowledged principles in Vedic literature. The Vedic vision places great importance on the relationship between man and nature, which is established through sacred incantations and expressed through rituals. These rituals serve as a constant reminder of the necessity to maintain and promote the ecological equilibrium of nature.

### Ecological Approach in the Vedic Literature

For the twentieth century Indian Vedic scholar Anandshankar Dhruv (1942), "the fundamental approach in the Vedas is to envision the *Paramātmā* in Nature... Nature is temporally categorized into three broad divisions: Earth (*Pṛthivī*), Space (*Antarikṣa*) and Heaven (*Dyuloka*). The approach of the composition of these texts is to see God or the Supreme not as transcendental but immanent in this world." (335) In the *Ṛgveda*, one of the most ancient texts of India, environmental forces are apotheosized i.e. they are personified and then deified. The term '*Devatā*' denotes a divine being or entity that possesses qualities of brightness, strength, generosity, and power. For instance, *Agni* (Fire), *Ākāśa* (Ether), *Vāyu* (Wind), *Uśas* (Dawn), *Aranyāni* (Female Vegetation-Goddess). These are attributed with human qualities, with a view to bringing the ecology into close proximity with common human beings so as to establish a connect between

common man and Nature. These forces are then deified based on certain exceptional qualities inherent in their nature, and the common man is shown to be looking up to them for ideals in terms of civilizational ethos and values viz. truth, generosity, compassion, righteousness, moral upliftment, and finally liberation (Mokṣa). The radiant luminosity of the sun, the intense heat of the sacrificial fire, the majestic movement of the rainstorm in the heavens, the regularity of the dawn, the constant flow of the winds, the ferocity of the tropical storm, and other similar natural forces, essential actions, or facets are exalted and anthropomorphized as deities (*Devatā*). The *R̥gvedic* hymns can be categorized into many sections, with the majority of them falling under the category of Natural hymns, which are hymns that pertain to natural forces.

The depiction of the Earth's shape in the *R̥gveda* is quite intriguing. It is mostly associated with the concept of Heaven, forming a dual conception with Rodasi and *Dyāvapṛthivī*. There is a single hymn dedicated to *Pṛthivī*, whereas there are six hymns dedicated to *DyavaPṛthivī*. In the Vedas, *Pṛthivī* is seen as the maternal figure and *Dyau* is regarded as the paternal figure. Together, they constitute a pair *Dyāvā-Pṛthivī* - mentioned as the eternal parents of mankind and of most other Vedic deities too, that “pair to keep all the creatures safe” (Chanana, 1996)

The *Atharvaveda* hymns, of the four *Vedas*, named after the fire-churning priest known as ‘*Atharvan*’, were created with the purpose of promoting harmony in both family and community life. The forest-dwelling seers have now turned their focus from the sky and its nature gods (as venerated in the previously composed Vedas) to the earth, which sustains life. *Atharvaveda* contains sections pertaining to bacteriology, knowledge on human anatomy, medicinal therapies, and pharmaceuticals. The *Atharvaveda* serves as the fundamental foundation of Ayurveda. In fact, Ayurveda is referred to as the '*Bhaishajyaveda*' or the '*Bhishagveda*' because it originated from the *Atharvaveda*.

#### ***BhūmiSūktam* of *Atharvaveda*: Ecological Concerns in the Text**

The first case under analysis is the inaugural *Sūktam* (hymn) of the twelfth *kānda* (section) of the *Atharvaveda* is devoted to the veneration of Mother Earth. This hymn is referred to as the '*BhūmiSūktam*' or the '*PrithiviSūktam*' due to this reason. The sixty-three hymns of this *Sūktam* provide truth-based principles for the welfare of all beings, both animate and inanimate, and both visible and invisible, in the entire world. These hymns address the concerns related to ecological balance and offer solutions for establishing human responsibilities in this context. They are “the truth-based guidelines for the well-being of one and all, movable-immovable and visible-invisible in the entire world –*Jagat*, for the concerns in this regard and also their solutions while determining human duties thereof.” (Kumar, 2023) The *Bhūmi Sūktam Atharvaveda* may be considered a significant ancient text that provides valuable insights about the connection between humans and their surroundings, emphasizing the responsibility to safeguard the environment. The seer *Atharvan* has depicted a captivating portrayal of Mother Earth, the foundation of our existence and a representation of the entire environment, in 63 verses of this hymn.

In the *Bhūmi Sūktam*, the term ‘earth’ does not refer just to the physical ground. It geologically looks at earth that encompasses the three fundamental components of the environment: solid, liquid, and gaseous. Earth, in its solid state, encompasses the land and all that exists above it, including both living and non-living entities. The Guardian and Protector of all things related to future generations. She maintains the liquid level of the environment, namely the oceans and rivers. The aspect of the Earth is characterized by the movement of air across its surface, with the light of fire following the direction of the wind, which alternates between moving forward and backward. She endures the burden of both physical exertion and guiding all four directions, which are under her control.

The adjectives and attributes used for Earth found in the Hymns of the *Bhūmi Sūktam* of the *Atharvaveda* themselves explicate the outlook of ancient Indian seers towards the planet and its ecology. In the fourth verse of the hymn '*Bibharti*' refers to the nurturing Mother Earth, while in the sixth hymn, '*Niveshani*' signifies the bestower of happiness; '*Vishwambharā*' denotes the provider of assistance. The seventh hymn describes '*Vishwadānīm*' as the supporter of all beings without discrimination. The ninth hymn portrays Earth as '*Bhūridhārā*' - the possessor of numerous powers. In the Twenty-Fourth Hymn, '*Pushkarām*' symbolizes the provider of nourishment. The thirtieth hymn uses the term '*Śuddhā*' to describe a pure spirit, i.e., a benevolent being. The Thirty-Eighth hymn refers to '*Sadohavirdhāne*' as a place of gathering and sustenance. Lastly, '*Vyailabāh*' is mentioned. (a place characterized by diversity, inhabited by people speaking various dialects in the hymn Forty-First), '*Dhruvā*' (determined and resolute in the hymn Forty-Fifth), '*Bahavah Panthānah*' (a place where followers of different paths coexist in the hymn Forty-Seventh), '*Devi*' (possessing noble qualities in the hymn Fifty-Fifth), '*Prathamānā*' (extensive and widespread also in the Hymn Fifty-Fifth), '*Chāru*' (beautiful and esteemed in the Hymn Fifty-Sixth), '*Gopāh*' (the guardian in the Hymn Fifty-Seventh), and '*Gribhīh*' (the ideal place to reside also in the Hymn Fifty-Seventh) The mentions of '*Surabhīh*', '*Aditih*', and '*Kāmadudhā*' in the Hymns Fifty-Ninth and Sixty-First introduce humanity to the distinctive qualities of Mother Earth, such as splendour, beauty, ability, prosperity, and strength. The inherent qualities of Mother Earth should ensure the ongoing well-being of humanity.

As previously stated, understanding of the Supreme (Brahman) is a prominent feature of the *Atharvaveda*. The *Atharvaveda* primarily focuses on the study and understanding of '*Ānanda*' (Bliss), which ultimately leads to the condition of '*Parmānanda*' (the Highest Bliss), representing the divine form of *Paramātma* (the Supreme Self) Himself. Clearly, the *Atharvaveda* has a unique position among the Vedas. The knowledge imparted by the welfaristic hymns of the *Atharvaveda* is crucial, applicable, and enduring for attaining the purpose of human existence. It has been demonstrated to be the means for the uninterrupted progression and prosperity of life in the Cosmic world (*Jagat*), particularly by fostering a balanced and harmonious state through the principle of peaceful coexistence.

The *Bhūmi Sūktam* proclaims the planet Earth as a divinely bestowed realm, abundant and auspicious in every aspect. The term "Mother Earth" has been recognized as a sacred location of worship, referred to as '*Tapobhumi*' where sages, scholars, Rishis, and *Maharshis* attain the condition of Satya, which is the ultimate truth, via their rigorous penances. Moreover, these responsibilities towards '*Ṛthivī Mata*' are clearly defined, emphasizing the essential role of humans in preserving and utilizing the abundant resources of the Earth, such as hills, lands, seas, and rivers, to ensure the survival, prosperity, and holistic development of all individuals in society. In addition, there is an unparalleled desire for the preservation of Nature and environmental balance, as both are crucial for the existence and continuity of life on Earth. Nature is the source of life. It offers a safeguarding shield for existence. The natural environment, consisting of elements such as plants, bodies of water, and so on, sustains life. Nature, in its unadulterated state, guarantees the continuation of life. Additionally, it significantly contributes to the cleanliness and flexibility of the environment, playing a crucial part in the ongoing sustainability of life.

The *Sūktam* does not merely represent the superficial layer of the 'Reality'. It adds that to have a profound and meaningful understanding of Earth, one must cultivate virtues such as Truth. Verse 12.1.1 states that the earth is supported and maintained by not just by rocks and soil but by Truth (*Satya*), Eternal Righteousness (*Ritam*), Consecration/Initiation (*Deeksha*), Pursuit of the Supreme (Brahma), and Sacrifice (*Yajna*). Thus, the Indian conception of Earth, encompassing both living organisms and the surrounding environment, is that it is not solely bound by the gravitational and other physical laws of the Universe. Earth is not an inanimate entity. She is also not a pitiable feminine entity, but holds the title of the "Monarch of the past and the future" (Mahulikar, 2021). She embodies the essence of motherhood, drawing strength from the principles of Truth, Order, Austerity, Devotion, and Sacrifice. Therefore, it is these mindsets that an individual is anticipated to adopt throughout their life.

According to verse 12.1.12 of the *Sūktam*, Earth is referred to as the maternal figure and mankind are described as her offspring. Therefore, as descendants of the Earth, it is incumbent upon humans to not only assist in her preservation, but also to safeguard and enhance her. Consequently, it is incumbent upon individuals to regularly engage in the practice of veracity, morality, and self-discipline in their daily existence. All the forms of nature personifications of the goddess invariably converge into the abstract notion of *Śakti* or Energy and its inherent power of synergy. All the visible forms of nature, despite their outer appearances, mountains streams, rivers, fields, vegetations, etc. is said to be endowed with an invisible energy of *śakti* that constitutes its subtle nature. Several epithets of earth refer to virgin mothers who possess the ability of parthenogenesis, meaning they may give birth without the assistance of men. In Indian mythology, this may be compared to Durga, a deity who remains perpetually chaste.

According to the hymn, the earth's seasonal cycles are based on *Rta*, which is the principle of universal order that governs the seasonal movements like the central hub of a wheel. The earth is governed by a predictable pattern of cosmic organization: the daily occurrence of the sun rising and setting, the cyclical progression of seasons, and the occurrence of springtime and harvest. *Rta* refers to the inherent fairness and organization that maintains the ecological equilibrium of nature. Thus, the profound interconnectedness emphasized in the Vedas serves as a standard for environmental ethics. The Vedic concept of geo-piety regards humans as custodians of natural resources, responsible for replenishing the earth's abundance rather than exploiting it. Conservation refers to achieving a state of harmony with the land, forest, waterways, and natural surroundings. The seeker says:

I admire you, Earth,  
May your growth be rapid, O Pure One, may my attack never penetrate  
Your vital areas, your heart. (Atharvaveda 12.1.35)

In addition to this, the hymn emphasizes the importance of both individual and collective conscientiousness among all individuals, regardless of gender. According to Verse 12.1.12: That is, "O (Mother) Earth, may your hills, snow mountains and regions, and forests be pleasing to us; may nourishing, plowable and fertile, graceful, influential and sheltering, vast and protected (Mother) Earth accord us prestige without decay." The Twentieth mantra of the hymn is explicitly devoted to the desire for both the Sun and the Agni to be propitious. The desired outcome of the fire's impact on planet Earth is to ensure its brightness from the Sun, so safeguarding life, preserving its beauty and health, and preventing diseases. This

represents the fundamental essence of this mantra. The Thirtieth mantra of this *Sukta* focuses on the importance of maintaining cleanliness and purity of water. The Thirty-Sixth verse emphasizes the compatibility of seasons; the Forty-Third is dedicated to achieving good crops, forty-fourth highlights the beneficial properties of mineral substances; the fifty-first verse discusses the positive impact of air speed on well-being. While the sixty-first mantra addresses the alleviation of various griefs and sorrows, the final two verses reveal man's desire for the well-being of everyone:

May those born of thee, O Earth, be for our welfare  
Free from sickness and waste  
Wakeful through a long life  
We shall become bearers of tribute to thee!  
Earth, my mother! Set me securely with bliss  
In full accord with Heaven. Wise one,  
Uphold me in grace and splendour. (*Atharvaveda* 12.1.62-63)

For any theory of ecological conservation, Pant (2007) opines that "The theory of conservation has to be the science of totality which moves from segmental knowledge to the integrative wisdom of our Vedic years. It is generally considered that ecological awareness has developed in the recent past only but this becomes unfounded when one reads the *Bhūmi Sūktam* of Atharva Veda that AIMS at conserving the environment in its broadest sense not only on the physical level but also on the normal, mental, religious spiritual and the cosmic level by checking and controlling the pollution attitude and perception of people towards nature. In this way the *Bhūmi Sūktam* depicts a theory of environmental stewardship, Eco-spirituality." (200)

The idea of ecological conservation can be divided into three stages: the protection of natural resources, environmentalism, and global citizenship. All of these stages are encompassed in the verses of *Bhumi Sūktam*. The reservation of natural resources can be categorized as either utilitarian conservation or biocentric preservation. The environmental consciousness expressed in the Atharva Veda is remarkably strong, to the extent that it advocates for the punishment and even elimination of those who misuse the planet. The third phase of conservation centers not just on specific areas of wildness, but also on the life-sustaining systems of the entire globe. The notion of 'sustainable development' was first established during the Earth Summit that took place in Rio de Janeiro in 1992. In sync, the *Bhūmi Sūktam* of Atharva Veda states that every entity and organization is a constituent of a vast extended family governed by the immortal Mother Earth.

#### **Text in Practice and Performance: *Bhumi Pujan* Ritual in India**

*Bhumi Pooja*, sometimes referred to as *Bhoomi Puja*, is a customary ceremony in India conducted before to the commencement of construction for a new edifice or dwelling. It is a ritualistic practice to request blessings from the Earth and divine entities, ensuring the prosperous completion of the construction project and the future residents' welfare. The ritual included the recitation of prayers, the presentation of offerings, and the act of obtaining consent from the Earth to disrupt its surface for the purpose of construction. The essential items for the *Bhumi puja* ceremony include of clay lamps, oil lamps, flowers, turmeric, kumkum, camphor, coconut, fruits, rice grains, betel nuts, Pancharut (a blend of milk, ghee, honey, sugar, and curd), Basil leaves, sweets, and Homam materials. It is widely thought that it bestows prosperity, harmony, and spiritual protection upon the new residence. Farmers perform a *Bhumi Puja* ritual before to cultivating the land. A conventional excavation is formed using a spade. Deities are positioned on the elevated platform. A Kalash, adorned with a coconut and covered in red fabric, is positioned to be buried following the completion of the religious ceremony.

The essence of the verses included in this ritual is similar to that of the verses of the *Bhūmi Sūktam*. Here too, the seeker asks forgiveness from earth for having to till her breasts for his livelihood. To a race that has hymns like *Bhūmi Sūktam* contained in the ancient-most of its knowledge-texts and scriptures, such eco-sensitivity filled with respect for the earth is but natural. It may be viewed as having been ingrained in the collective unconscious of the people over several millennia, and reflected even now, though not in the same way as in the Vedic times, in the folk-performances of Indian culture.

#### **Environmental Sensitivity in Everyday Life: A Case of *Kolam* Household-Drawings**

The second case under study for illustrating eco-sensitivity from texts to praxis and performance is the traditional household-drawings drawn during early morning time by women in Southern India in their front-yards which are called '*Kolam*'. These ritual-drawings are performed by people of different states in India on different festive occasions, and are known by different names viz. rangoli, mugu, alpna, *Kolam*, etc. It is a part of the old knowledge-tradition of India. In Tamil, the word '*Kolam*' means beauty. According to recent research by Nagarajan (2018), "nearly twenty million Tamil women daily create these self-innovated household drawings made out of rice-flour on the thresholds of houses, temples, etc. during early morning. They are a part of the collective Tamilian belief-system that the householder should feed a thousand souls, whether familiar or stranger, animal or human." Since every household cannot afford feeding a thousand souls, a rice-flour-made *Kolam* that is edible for animals and insects, serves as daily food for each. *Kolam*

drawings, created by women in the South Indian state of Tamil Nadu, have been a daily tradition for centuries. These intricate designs are meticulously crafted on the floor at the entryway of their dwellings using rice flour, chalk, chalk powder, and several other materials. Kolam paintings have the ability to communicate intricate messages and feelings, despite the possibility of the original message and language being lost over time. Kolam artworks are imbued with profound philosophical concepts and teachings about life.

Here, every creature is looked upon as possessing a soul irrespective of its form unlike the Darwinian hierarchy of animal kingdom, thus leveling the differences of size, shape, skills, intellect and ability among all living creatures from ant to elephant and from honeybee to humans. This is based on the philosophical doctrine of *Karma* – that believes in a creature being borne multiple times assuming various forms as per his deeds. A deeper underlying philosophical principle here is that of *Advaita* (the non-dual self) that looks at all the creatures as souls rather than their physical forms – entities emerging out from and dissolving into one Supreme Entity called the *Brahman* (the cosmic principle of existence) in the *Vedanta* system of Indian philosophy, alternatively called *Tao* in Chinese and *Tai Chi* in Neo-Confucianism. The spirit of Indian philosophy, especially *Upaniṣadaic* thought, lies in identifying the individual Self (Atman) with the Universal Spirit (Brahman) as ontological premises, that gives rise to feelings of shared living with the other humans and living creatures on the planet, whose inner being also, according to these philosophical premises, is borne of the same Supreme Entity.

'*Aham Brahmāsmi*' ("I am Brahman"): says *Bṛhadāraṇyaka Upaniṣada* (1.4.10), with a rejoinder '*Tattvamasi*' ("Thou art that") in *Chhandogya Upaniṣada* (6.8.7) and '*Sarvam Khalvidam Brahma*' ("All this is Brahman") in *Chhandogya Upaniṣada* (3.14.1), '*Ekam Evadvitīyam*' ('That Brahman is the one, without a second') as in *Chhandogya Upaniṣada* (6.2.1) Different schools and texts of Indian philosophy have either agreed or refuted to Brahman and Atman metaphysics (viz. Buddhism, Jainism, Charvaka, etc.) While a whole tradition of philosophical schools, texts and textual commentaries, almost two millennia old, attests these theoretical postulates in Indian philosophy, it has shaped its axiology not in theory but also in praxis. Thus, the *Kolam* handmade drawings are not mere superficial rituals as they seem to be prima facie, they are rooted in the ethical and aesthetic consciousness of a whole race.

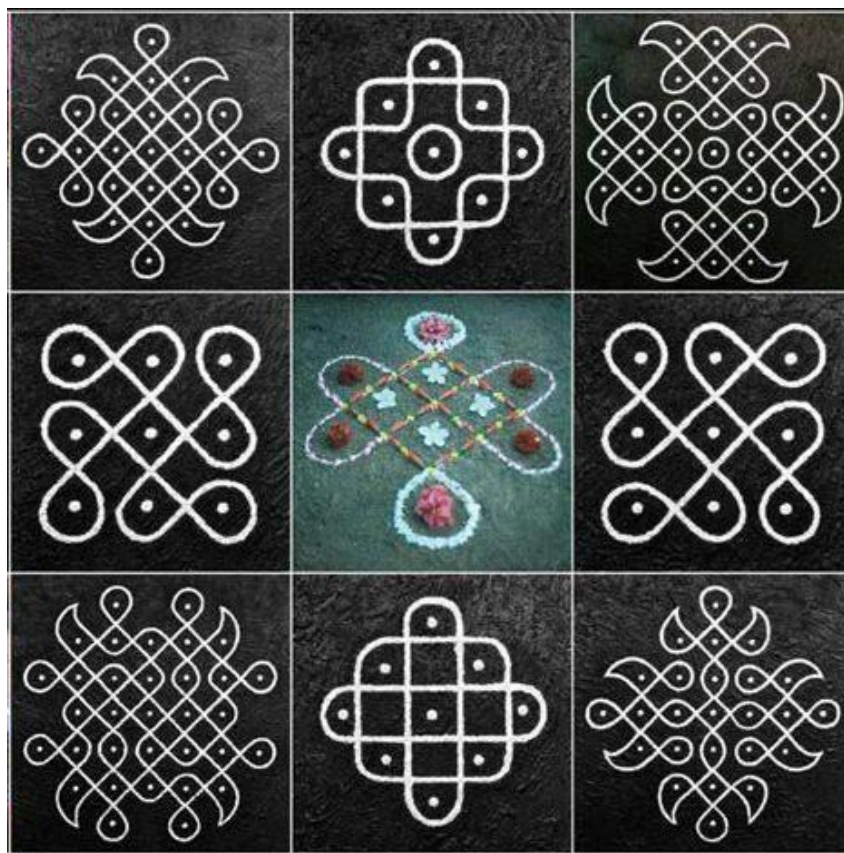


Figure 1: Different types of kolams. Source: <https://in.pinterest.com/pin/49215906519688027/>



**Figure 2: Tamil woman drawing kolam** <https://www.atlasobscura.com/articles/indian-rice-art-kolam>

A few hours after the *Kolam* has been made on the earthen ground, holes start appearing on the white lines, indicating that the flour has been eaten away by creatures. The ethical ground for such charity being necessary for every household, as specified in the *Dharmaśāstras*, is that running a household invariably involves a householder to commit some kind of violence consciously or unconsciously – “was a very dangerous thing, was a very violent activity.. a householder has five slaughter-houses: the hearth, the grinding stone, the broom, the mortar-pastel and the water-pot, using which he/she is bound. In order to expiate successfully the offences committed by the means of these, the great sages have prescribed for the householders the daily performance of five great sacrifices...” (Nagarajan, 2018)

One of the sacrifices suggested is the *bhootyajna* – giving food to all animals or strangers without expectations of counter-hospitality. *Kolam* is a means for a householder to clear her subtle household debts as well as perform one of the five great sacrifices, feeding a whole lot of creatures living in holes and burrows and vegetation around him. It kills microscopic and macroscopic creatures in our vicinity leading to negative karmic consequences. It is an act of forgiveness to the ecosystem for any violence committed while walking on the soil. Besides ecological sensitivity, it also symbolizes creating compassion, wish for auspiciousness in their body, their home, their family and the village. This comprises the ethical aspect of the *Kolam*.

The *Kolam* is taken not only as an artefact of beauty, but as an offering. Its practitioners, while connecting the dots intricately, emphasize on patience and persistence. It usually takes an hour or two to complete a regular-sized *Kolam*, and the patterns are usually not repeated. The size of the *Kolam* and the level of intricacy also indicates the mood and temperament of the householder woman in the morning. Moreover, it is a silent indication of the situation of the household: if a *Kolam* is not found on the front-yard of a family, it has possibly met an accident or death or is incapable of hosting guests on that particular day. *Kolam*, thus, interfuses aesthetics – a typical hallmark of art in Indian culture.

*Kolams* are particularly observed in Tamil households during the festival month of *Margazhi*, which occurs in the Tamil calendar between December and January. *Kolam* drawings have profound associations with other folklore forms of drawings seen in different regions worldwide, such as *sona* drawings, rangoli (in Northern India), celtic drawings, and *malekula*. *Kolam* drawings exhibit distinct variations in their rule sets compared to other similar drawings. For example, in *sona* or *malekula* drawings, the *pulli Kolam* (derived from the word ‘pulli’, meaning dot) consists of a closed curve that divides the planar space into a number of bounded sections equal to the number of dots. Each bounded region includes exactly one dot. The *Kolam* art has a remarkable symmetry, with repeated fractals in its design. This symmetry has been compared to mathematical models like the Sierpinski triangle, which is a fractal composed of recursive equilateral triangles.

A similar ritual is also observed in other parts of the country (‘*Kidiyaru Bharvu*’ in Gujarat, for instance) where householders pour wheat-flour or rice-flour in the crevices of their household for ants or similar species of insects as a part of their daily ritual.

### Meaning and Life philosophy in *Kolam* Paintings

*Kolams* are imbued with profound philosophy and impart valuable life lessons. The dots symbolize life's obstacles, and successfully navigating them while retaining symmetry allows one to effectively handle life's fluctuations. Our attention is often drawn towards the difficulties or barriers, rather than the less apparent inner resilience. Creating a *Kolam*, whether it is on a surface or on a sheet of paper, is a contemplative activity. A serene ambiance is evoked when the grid of dots is meticulously sketched and the lines elegantly intertwine with them. My grandmother possessed the ability to effortlessly recall and reproduce complex patterns just from her memory. She would elucidate that all she needed was to retain a sense of the design and allow her hand to move instinctively. In addition, she would adamantly advocate for creating the *Kolam* on the floor while flexing at the hips, as a means of maintaining both physical and mental flexibility. *Kolams* symbolize the transient nature of existence and the importance of detachment, imparting the wisdom of releasing attachments as intricate and aesthetically pleasing designs are created, fully aware that they will soon vanish. For Chaki (2019):

“The making of the *Kolam* itself is a performance of supplication. The artist folds her body in half, bending at the waist, stooping to the ground as she fills out her patterns. Many *Kolam* artists see the *Kolam* as an offering to the earth goddess, *Bhūdevi*, as well. But the *Kolam* is not just a prayer; it is also a metaphor for coexistence with nature.” (Chaki, 2019)

*Kolams* symbolize infinity as the closed loops can create never-ending paths with the line going around the dots following the shortest distance. These paths are similar to Euler’s circuits in which a path is traced only once. *Kolams* usually have at least one symmetry — reflection, rotational, translational or scaling. *Kolam* is a language, graphically encoded and spiritually rich in traditions

### Conclusion

Without a doubt, the sixty-three mantras of *Bhūmi Sūktam* in the Atharvaveda express a strong desire for harmonious coexistence on Earth and the preservation of a prosperous and secure life. These desires are conveyed through human praises and prayers. However, these mantras serve as a reminder for individuals to fulfil their necessary duties towards Mother Earth. This includes adopting a fair and amicable approach towards nature, the environment, and natural resources. It is crucial to acknowledge the current dire circumstances caused by the long-term misuse of natural resources and the irresponsible treatment of the environment and nature. Regarding this matter, the extent of man's negligence can be accurately assessed by the fact that he destroys almost one crore hectares of woods year by cutting and burning. The loss of biodiversity has been substantial as a result of deforestation and fire. The significance of the duty to fulfil both individual and collective responsibility towards planet Earth is clear in such circumstances.

Similarly, the *Kolam*-drawings encompasses a complete way of existing in the world; it expresses longings, worries, sensitivities, and pain, and ultimately it confirms the ability of women's blessings to bring about a desired state: a well-functioning, joyful home. They are a symbol of co-existence with nature – a performance steeped again in the ancient indigenous wisdom of India.

Thus, it is clear from both these case studies that ancient Indian texts guide most of the rituals, performances and practices across cultures. It would not be wrong to say that they can serve as diagnostic guidelines in the face of significant threats to global environmental balance and nature preservation. The existence of life on planet Earth is now in doubt due to these pressing concerns. The philosophy underlying both the textual verses of Atharvaveda as well as the indigenous cultural practices of *Bhumi Poojan* and *Kolam* paintings can ensure the harmonious operation of the universal system.

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