



International Journal on Eternal Wisdom and Contemporary Science

ISSN (Online): 3107-8184
Volume 2 • Issue 2 • December 2025 • pp 38-51

***Pancha Prāṇa* And Fundamental Forces of Nature: Amazing Analogies**

Captain Alavandar Mohan

Civil Engineer; Short Service Commissioned Officer at Indian Army

Abstract:

In common parlance, *prāṇa* is understood as the process of inhalation and exhalation and when this process of breathing stops then the life ceases to exist and oxygen is referred to as *prāṇa vāyu* because of its importance in keeping the body alive. In the Vedic scriptures, however, *prāṇa* is a far more profound concept. It denotes the universal life force that sustains both the macrocosm and the microcosm. The *pancha* (five) *prāṇa* play a vital role not only in sustaining the body of living beings but also in maintaining the functioning of the universe. In this paper I have presented a detailed analysis of the functions of *pancha prāṇa* as proclaimed in *Prashnopanishad* and explored the possibility of equating these Vedic concepts to the fundamental forces of nature as described by modern science.

Keywords: *Pancha prāṇa, Apāna, Samāna, Vyāna, Udāna, Mukhya Prāṇa, Fundamental forces of nature*

INTRODUCTION

According to Vedic concepts *ātman* is immortal and eternal and *māyā* is the reason behind the manifestation of the materialistic universe. *Ātman* engages in *samsāra* by associating itself to a body made up of matter in subtle or gross form. *Prāṇa* plays a vital role in the formation of the continuous life circle of the macrocosm as well as the microcosm. It is not only the creatures which goes through multiple cycles of destruction and recreation (the cycle of life and death), even the universe has a definite life and is periodically destroyed and recreated.

For any work to manifest, energy is required. Energy, as science demonstrates, is interconvertible with matter. The fundamental forces of nature are the natural organizing

principles that govern all interactions in the universe. At the cosmic level, these forces keep the universe in balance: planets revolve, stars hold their form, the atmosphere is regulated, and the interplay of air, light, water, and energy creates the necessary conditions for life and so on.

According to our Vedic scriptures, *pancha prāṇa* play an important role in the formation of the universe and also the creatures. At the microcosm level, the body of a living being is maintained by converting the food matter into energy and kept functional by the *pancha prāṇa*. At the macrocosm level also, energy is needed for sustenance and is supplied by the stars, black hole, cosmic matter and so on and the universe is kept functional by the fundamental forces of nature (the *pancha prāṇa*).

The aim of this paper is not to merely equate *prāṇa* with the fundamental forces of nature. *Prāṇa* is a very nuanced concept – a sophisticated multi-layered idea. Whereas science defines the fundamental forces as a set of mathematical formulas. It recognises the fundamental forces as mere inert forces without any intelligence. Science deals only with matter (*achit*) and does not believe in *chit* and *Ishwara*. As a result, science provides a very limited understanding of the fundamental forces which created this universe.

The Vedic scriptures claim that when *Brahman* (*ātman*) ‘decided’ that it would expand itself to many and create the universe, it divided itself into *chit* (sentient beings), *achit* (insentient beings) and *Ishwara* (the Supreme Being). *Prāṇa*, which is like the shadow of *ātman*, became the binding force of all three ingredients and, thus, a visible, gross, active universe was formed. In other words, *prāṇa* is the life force of the very existence of the universe.

SCOPE AND METHODOLOGY

Although many ancient Indic texts contain the concept of *prāṇa* and detail out their functions, I have based my study primarily on *Prashnopanishad*.

Prashnopanishad deals with matter, energy, fundamental forces, time and the formation of the universe. It details out the role played by *pancha prāṇa* in the upkeep of the external world and also the gross body of creatures. It is scripted in the form of questions and answers. Six students ask one question each to their master.

In this paper I will be discussing only the relevant portions of the first three questions. These questions primarily revolve around the creation and sustenance of the universe (both at the macrocosm and the microcosm level) and are pertaining to matter and fundamental forces. The next three questions are related to deeper subjects (such as various states of mind, the role played by *prāṇa* in making the body function as one single entity) and are beyond the scope of this paper. I have not covered the details of the role of *prāṇa* in maintaining our health and well-being as this aspect has already been covered in another paper titled “The *Sanatana*

Concept of the Five *Pranas* and its Interrelation with Human Health and Well-being (*Svastha*)” by Dr. David Frawley published in the Volume 1 Issue 2 (page 81 to 94) of this Journal.

MODERN SCIENCE CONCEPT OF FUNDAMENTAL FORCES

Contemporary science deals with four fundamental forces of nature - Gravitational Force, Electromagnetic Force, Strong Nuclear Force and Weak Nuclear Force. Research is underway to find a fifth force to explain the phenomena which are not explainable by these four fundamental forces. Although we are very familiar with the four fundamental forces, let us briefly revisit the concepts

- Gravitational Force or Gravity: Gravity is the force of attraction between masses. It holds planets, stars and galaxies together. Gravity works over infinite distances and is the weakest of all four forces. Its effects are most significant at a cosmic scale such as holding earth in its orbit around the sun.
- Electromagnetic Force: The electromagnetic force acts between charged particles and is responsible for phenomena like light, electricity and magnetism. This is stronger than gravity and has infinite range.
- Strong Nuclear Force: This force binds protons and neutrons together in the atomic nucleus. It is the strongest of all four forces but has a range only over a very short distance within the nucleus.
- Weak Nuclear Force: The weak nuclear force is responsible for radioactive decay and certain types of nuclear reactions. This force also acts at short range within the nucleus diameter. It is also the reason for movement of electrons and conduction of heat.

Contemporary science considers these fundamental forces as external and does not refer to them in the context of functioning of the body of living beings. Whereas Vedic scriptures identify them with independent functions both within the body as well as in the external world.

VEDIC CONCEPTS OF FUNDAMENTAL FORCES (*PRĀṆA*) AND MATTER (*RAYI*)

The first question was asked by Kabandhi, “O.. Master, whence (from what, place, source, or cause) are these creatures born?”

अथ कबन्धी कात्यायन उपेत्य पप्रच्छ।

भगवन् कुतो हि वा इमाः प्रजाः प्रजायन्ते इति॥ १.३

atha kabandhī katyāyana upetya papraccha

bhagavan kute ha vā imāḥ prajāḥ prajāyanta iti (1.3)

The master replies in mantra 1.4 that the creator of the universe, after doing penance for long, realized that by creating the pair - matter and life forces ('rayi' and 'prāṇa'), he can create the universe and all living beings.

तस्मै स होवाच
प्रजाः कामो वै प्रजापतिः सः तपोऽतप्यत।
सः तपस्तप्त्वा स मिथुनमुत्पादयते।
रयिं च प्राणं चेति एतौ
मे बहूनां प्रजाः करिष्यत इति॥ १.४.
tasmai sa hovāca
prajākāmo vai prajāpatiḥ sa tapo'tapyata
sa tapastaptvā sa mithunamutpādayate
rayim ca praṇaṁ cetyetau
me bahudhā prajāḥ kariṣyata iti (1.4)

Rayi is from the *ākāśh* (the space created after the big bang). As per Vedic sequence, a lotus appears from the navel of Lord Narayana and that lotus blossoms out, analogous to the Big Bang. Lord Brahma appears over the lotus for starting the creation of the universe and gross bodies for all living beings. We should be clear at this point of time that *jeevātmā* in the form of *Hiranyagarbha* already existed and what is now being created after the big bang or blossoming out is only the matter and the fundamental forces for further creation of the materialistic universe.

The next mantra 1.5 further states that the Sun is the *prāṇa* and the Moon is the *rayi*. Anything with the form or formless are matter (*rayi*).

आदित्यो ह वै प्राणो रयिरेव चन्द्रमा रयिर्वा एतत्।
सर्वं यन्मूर्त्तं चामूर्त्तं च तस्मान् मूर्तिरेव रयिः॥ १.५
ādityo ha vai prāṇo rayireva candramā rayirvā
etatsarvaṁ yanmūrtaṁ cāmūrtaṁ ca tasmānmūrtireva rayiḥ (1.5)

In the solar system, it is understandable that the sun plays an important role in maintaining natural fundamental forces. Although the sun is a matter made up of huge Hydrogen mass, it is the source of gravitational, electromagnetic and other forces which maintain the equilibrium in our solar system and even over the Earth we live in. Strong and weak nuclear forces get instilled at the time of formation of matter and the universe from primordial substances itself.

WHICH IS SUPREME? MATTER OR *PRĀṆA*?

The second question is asked by Bhargav, “O Master, how many devatas support the body of the creature, which of them enlighten that, who again is among them is the greatest?”

अथ हैनं भार्गवो वैदर्भिः पप्रच्छ ।
भगवन् कत्येनं देवाः प्रजाः विधारयन्ते
कतर एतत्प्रकाशयन्ते
कः पुनरेषां वरिष्ठ इति ॥ २.१
atha hainaṁ bhārgavo vaidarbhiḥ papraccha
bhagavankatyeva devāḥ pracāṁ vidhārayante
katara etatprakaśayante
kaḥ punareṣāṁ varīṣṭha iti (2.1)

Although the three questions raised here seem to be very simple, they are really intriguing.

The master replies that the *Devatas* pertaining to *pancha bhoothas* (space, air, earth, fire and water) and *indriyas* (senses) claimed that they only held the body together and were real masters of the body.

तस्मै स होवाच । आकाशो ह वा एष देवो वायुरग्निरापः
पृथिवी वाङ्मनश्चक्षुः श्रोत्रं च ।
ते प्रकाश्याभिवदन्ति
वयमेतद्वाणमवष्टभ्य विधारयामः ॥ २.२
tasmai sa hovācākāśo ha vā eṣa devo vāyuragnirāpaḥ
pṛthivī vāṁmanaścakṣuḥ śrotraṁ ca |
te prakāśyābhivadanti
vayametadbāṇamavaṣṭabhya vidhārayāmaḥ (2.2)

But that time the *mukhya prāṇa* raises objections and says to others that don't be in wrong notions and illusion. It is me who divides myself into five sub pranas and supports the body.

तान्वरिष्ठः प्राण उवाच मा मोहमापद्यथाहमेवैतत्पञ्चधात्मानं
प्रविभज्यैतद्वाणमवष्टभ्य विधारयामीति तेऽश्रद्धधाना बभूवुः ॥ २.३
tānvarīṣṭhaḥ prāṇa uvāca mā mohamāpadyathā'hamevaitatpañcadhātmānaṁ
pravibhajyaitadbāṇamavaṣṭabhya vidhārayāmīti te'sraddadhānā babhūvuḥ (2.3)

When other *Devatas* of materialistic nature objected, the *mukhya prāṇa* acted as if it has ascended away. Then other *Devatas* lost their locus standi and they too had to leave the body. When *mukhya prāṇa* returned, the mind, speech, ear and rest of all organs started functioning and thus everyone accepted the supremacy of *prāṇa*.

सोऽभिमानादूर्ध्वमुत्क्रामत इव तस्मिन्नुत्क्रामत्यथेतरे सर्व
एवोत्क्रामन्ते तस्मिंश्च प्रतिष्ठमाने सर्व एव प्रतिष्ठन्ते ।
तद्यथा मक्षिका मधुकरराजानमुत्क्रामन्तं सर्वा एवोत्क्रामन्ते
तस्मिंश्च प्रतिष्ठमाने सर्वा एव प्रतिष्ठन्त एवं वाङ्मनश्चक्षुः
श्रोत्रं च ते प्रीताः प्राणं स्तुन्वन्ति ॥ २.४

so'bhimānādūrdhvamutkrāmata iva tasminnutkrāmatyathetare sarva
evotkrāmante tasmiṁśca pratiṣṭhamāne sarva eva pratiṣṭhante |
tadyathā makṣikā madhukararājānamutkrāmantaṁ sarva evotkrāmante
tasmiṁśca pratṣṭhamāne sarva eva pratiṣṭanta evaṁ vāṁmanaścakṣuḥ
śrotraṁ ca te prītāḥ prāṇaṁ stunvanti (2.4)

Prāṇa's importance is further elucidated in mantra 2.13 of Prashnopanishad. All three worlds and its materials are under the control of prāṇa, which may...

प्राणस्येदं वशे सर्वं त्रिदिवे यत् प्रतिष्ठितम्।... २.१३
prāṇasyedaṁ vaśe sarvaṁ tridive yatpratiṣṭhitam |... (2.13)

The above mantras very clearly identify that the gross body is made up of matter and is kept alive and functional by *prāṇa*. Further, we can observe in the subsequent question how the five *prāṇa* support the body at microcosm level and the universe at macrocosm level.

BIRTH SOURCE AND DIVISIONS OF PRĀṆA

The third question of Kaushalya goes as follows: “Oh... Master, from where the *prāṇa* is born? How does it enter the body? How does it function after it has divided and located itself? How does it go out? How does it support the outer cosmos as well as the individual body?”

अथ हैनं कैशल्याश्चाश्वलायनः पप्रच्छ
भगवन् कुतः एष प्राणो जायते?
कथमायात्मस्मिन् शरीरे?
आत्मानं वा प्रविभज्य कथं प्रतिष्ठते केनोत्क्रमते कथं बाह्यमभिधत्ते?
कथमध्यात्ममिति ॥ ३.१
atha hainaṁ kauśalyaścāśvalāyanaḥ papraccha
bhagavankuta eṣa prāṇo jāyate
kathamāyātyasmiṁśarīra
ātmānaṁ vā pravibhajya katham pratiṣṭhate kenotkramate katham
bahyamabhidhate
kathamadhyātmamiti (3.1)

Look at the depth of the question. The question is related to the functions of the natural fundamental forces at macrocosm and microcosm level. Let us look into the details of the answer.

This *prāṇa* originates from *ātman*, the supreme origin. It is like the shadow of HIM. It gets into the womb at the thoughts of the mind of the yet to be born.

आत्मन एष प्राणो जायते।
यथैषा पुरुषे छायेतस्मिन्नेतदाततं
मनोकृतेनायात्यस्मिन् शरीरे॥ ३.३
ātmana eṣa prāṇo jāyate
yathaiṣā puruṣe chāyetaṣminnetadātataṁ
manokṛtenāyātyasmiñśarīre (3.3)

It is well known that the heartbeat of an embryo starts at around seven weeks of conceiving when *prāṇa* enters the womb. Until such time mother's *prāṇa* takes care of the growth of cells of the embryo.

The above mantra states that “From the Self are all beings born... from the Self, indeed, arises *prāṇa*” highlighting the Universal Life Principle aspect of *prāṇa* - The Bridge Between Consciousness and Matter. This mantra affirms that *prāṇa* is not an independent principle but the first manifestation of Consciousness. It acts as the functional link between the immutable *ātman* and mutable matter, enabling motion, cognition, and vitality across all planes of existence. From the cosmic viewpoint, *prāṇa* corresponds to the universal energy that sustains all fundamental forces, while in the individual it sustains biological and mental processes.

The *prāṇa* divides itself into *Apāna*, *Samāna*, *Vyāna*, *Udāna*, and *Mukhya Prāṇa* and positions them at appropriate places to ensure the body's growth and to keep it alive and functional. These divisions and locations in the microcosm are explained in mantras 4 to 7.

यथा सम्राडेवाधिकृतान्विनियुङ्क्ते
एतन्ग्रामानेतान्ग्रामानधितिष्ठस्वेत्येवमेवैष
प्राण इतरान्प्राणान्पृथक्पृथगेव सन्निधत्ते ॥ ३.४
yathā samrādevādhikṛtānviniyunkte
etangrāmānotānprāmānadhitiṣṭasvetyevamevaiṣa
prāṇa itarānprāṇānpṛthakpṛthageva sannidhatte (3.4)

पायूपस्थेऽपानं चक्षूः श्रोत्रे मुखानासिकाभ्यां
प्राणः स्वयं प्रतिष्ठते मध्ये तु समानः
एषः ह्येतद्धुतमन्नं समं नयति
तस्मात् एताः सप्तार्चिषो भवन्ति॥ ३.५.

pāyūpasthe'pānaṃ cakṣuḥśrotre mukhanāsikābhyāṃ
prāṇaḥ svayaṃ prātiṣṭate madhye tu samānaḥ
eṣa hyetaddhutamannaṃ samaṃ nayati
tasmādetāḥ saptārciṣo bhavanti (3.5)

हृदि ह्येष आत्मा । अत्रैतदेकशतं नाडीनं तासां शतं
शतमेकैकस्या द्वासप्ततिर्द्वासप्ततिः
प्रतिशाखानाडीसहस्राणि
भवन्त्यासु व्यानश्चरति ॥ ३.६
hṛdi hyeṣa ātmā | atra itadekaśataṃ nāḍīnaṃ tāsāṃ śataṃ
śatamekaikasyā dvāsaptatirdvāsaptatiḥ
pratiśākhānāḍīsahasrāṇi
bhavantyāsu vyānaścarati (3.6)

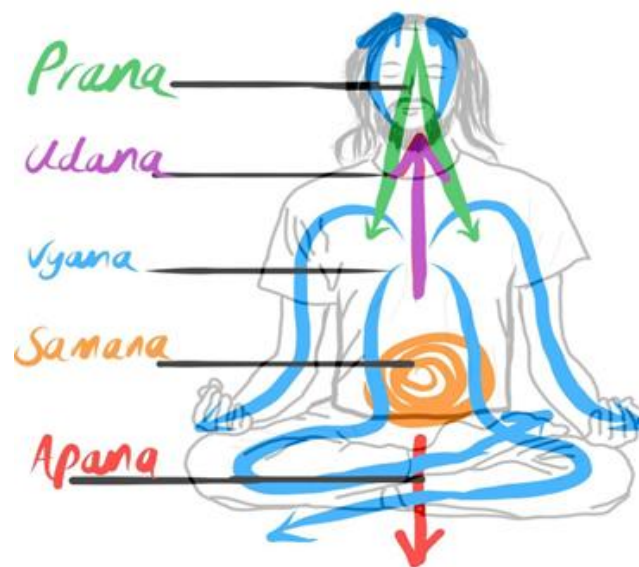
अथैकयोर्ध्व उदानः पुण्येन पुण्यं लोकं नयति पापेन
पापमुभाभ्यामेव मनुष्यलोकम् ॥ ३.७
athaikayordhva udānaḥ puṇyena puṇyaṃ lokam nayati pāpena
pāpamubhābhyāmeva manuṣyalokam (3.7)

After identifying the role of various *prāṇa* in the inner space (the gross body or the microcosm), the master further explains in subsequent mantras how these forces function in the external space with cosmic reference.

The Sun is the real source of *prāṇa* for the solar system. *Apāna*, the gravitational force, attracts planets to each other and the earth attracts all beings and governs them. Space between the sun and the earth is *samāna* which keeps the atmospheric pressure, wind flow and reason for rain etc. *Vyāna*, electromagnetic force, is like the wind which is present at every point of the space.

आदित्यो ह वै बाह्यः प्राण उदयत्येष होनं चाक्षुषं
प्राणमनुगृह्णानः ।
पृथिव्यां या देवता सैषा पुरुषस्यापानमवष्टभ्यान्तरा
यदाकाशः स समानो वायुर्व्यानः ॥ ३.८
ādityo ha vai bāhyaḥ prāṇa udayatyēṣa hyenaṃ cākṣuṣaṃ
prāṇamanugrḥṇānaḥ |
pṛthivyāṃ yā devatā saiṣā puruṣasya apānamavaṣṭabhyāntarā
yadākāśaḥ sa samāno vāyurvyānaḥ (3.8)

Let us see the locations and functions of each of the five *prāṇa* mentioned in the above mantras at microcosm level i.e. gross body of creatures.



Apāna: (Gravitational Force) *Apāna* dwells in the organs of reproduction and excretion located at the bottom of the torso. It pulls the food into the stomach and all actions pertaining to gravity are done by *apāna*, the gravitational force. At cosmos level it is the same force which attracts planets, stars, and keeps the galaxies together and moving.

Mukhya prāṇa: (Under Scientific Research) A part of the *prāṇa* itself abides to organs of perception known as *jñanendriyas* like eyes, ears, mouth, nose, skin. This plays an important role in connecting the senses organs to the mind and makes a meaningful understanding of the observation. Also, *mukhya prāṇa* functions as monitor of other four *prāṇa* to ensure proper mind intellect body coordination.

Samāna: (Weak Nuclear Force) *Samāna*, which can be equated to weak nuclear force, dwells in the middle portion of the body - the stomach. *Samāna* is the source of seven *agnis* known as 'jatharāgni' and helps to digest food, transfer the essence of food to the blood stream and to spread warmth equally within the body.

Vyāna: (Electromagnetic Force) It is said that *ātman* resides in the heart. There are 101 nerves, each has 100 branches and further 72000 sub branches wherein *vyāna vāyu* moves. Our nerve system, including the brain, is made up of neuron cells responsible for transmitting information throughout the body using electromagnetic signals. So, *vyāna* represents electromagnetic force. The word *nādi* means hollow stem of a plant, stalk of a lotus, nerves, artery or vein of the body. In my opinion, in the above context the word *nādi* is used for nerve system only.

Udāna: (Strong Nuclear Force) This stations itself in the upper portion of the torso between the neck and the diaphragm where heart lungs and other important organs are located. The word *udāna* itself means the upward lifting force.

UDĀNA, IN MORE DETAILS

Udāna mainly performs three functions within our body. Let us first understand how this force works at atomic level within the nucleus. In the nucleus it keeps protons and neutrons on the move forever and ensures they do not collide or collapse into each other. Similar involuntary movement happens inside the chest portion of our body. *Udāna* ensures up and down movement of the diaphragm and facilitates expansion and contraction of the lungs for breathing. Thus, *udāna* plays an important role in keeping us alive.

Secondly, we find how difficult it is to lift 10 kg weight and move for even 100 meters. Whereas, we move around effortlessly with our (say) 80 kg body. This is because of the uplifting nature of *udāna vāyu* against gravitational force.

The third function of *udāna vāyu* is to take the *jeevātmā* to its destiny. At the time of death, through *sushumna nādi*, the *udāna* force ascends *jeevātmā* and leads upwards to the virtuous worlds in accordance with their deeds. Similarly, when the dissolution of the universe occurs in the cosmic event, this same *udāna vāyu*, the strong nuclear force, is withdrawn from every atom and, thus, the universe eventually returns to the divine source. When this force is withdrawn, the whole universe turns into the size of a small neutron ball and goes into a black hole leading to the death of the universe.

THE FIFTH FUNDAMENTAL FORCE?

Our body has an extensive network of nerves made up of neuron cells. The nerves are the physical channels through which electromagnetic signals are transmitted and this network of nerves ensures that the body functions as a single unit. As mentioned in one of the previous sections, the word *nādi* ordinarily means hollow stem, artery, vein, nerve etc. In yogic practice *nādis* are believed to be the subtle passages for pranic forces to move within the body. *Nādis* and *chakras* play an important role in channelizing the pranic force and by practicing *pranayama* and other *yoga* techniques one can control the movement of pranic forces through the *nādi* and guide the pranic forces to various *chakras*. This, in turn, helps in the upkeep of the physical body and also helps in maintaining the spiritual well-being.

The three fundamental *nādis* are *Ida*, *Pingala*, *Sushumna*, the left, right and the centre. The yogic practitioners aim to guide their pranic force towards the *sushumna nādi* as this leads the *yogi* to *para-gati (mokṣa)*. Here, liberation (*mokṣa*) is described as the cessation of *prāṇa*'s motion, the merging of the dynamic into the still — the *spanda* dissolving into *nispanda*. While *prāṇa* sustains phenomenal existence, the *ātman* stands beyond all activity, eternal and self-luminous.

This transcendence of *prāṇa* is intimately connected to the *turiya* (Pure Consciousness or Ultimate Reality that transcends all *prāṇic* activity). *Turiya* is described in *Mandukyopanishad* mantra 7 in the following manner.

“It is not that which is conscious of the internal subjective world, nor that which is conscious of the external world, nor that which is conscious of both, nor that which is a mass of consciousness, nor that which is simple consciousness, nor is it unconsciousness: it is unseen by any sense-organ, beyond empirical dealings, incomprehensible by the mind, essentially by of the self alone, negation of all phenomena, the peaceful, the auspicious and the non-dual. This is what is considered as the fourth (*turiya*). This is the *atman* and this is to be realised.”

नान्तःप्रज्ञं न बहिःप्रज्ञं नोभयतःप्रज्ञं न प्रज्ञानघनं
न प्रज्ञं नाप्रज्ञम् । अदृष्टमव्यवहार्यमग्राह्यमलक्षणं
अचिन्त्यमव्यपदेश्यमेकात्मप्रत्ययसारं प्रपञ्चोपशमं
शान्तं शिवमद्वैतं चतुर्थं मन्यन्ते स आत्मा स विज्ञेयः ॥ ७ ॥

I opine that this aspect of *prāṇa* corresponds to the fifth fundamental force of nature which contemporary science is still trying to decipher. It marks the philosophical culmination where science ends but Vedanta begins with Consciousness (*Brahman*).

Vedic scriptures state that *prāṇa* and *Brahman* (*Ātman*) are two aspects of one Reality — *Brahman* being still awareness or pure Consciousness, *prāṇa* being its first movement or vibration (*spanda*). In this sense, *prāṇa* functions as Consciousness-in-motion, transforming potential into manifestation — a concept that harmonizes with both theistic and non-dual philosophies. *Advaita* interprets *prāṇa* as *Brahman*’s dynamic expression through *Māyā*; *Vishishtadvaita* sees it as *Īśvara*’s sustaining presence within the universe; *Dvaita* views it as the dependent energy of the Supreme Being. Despite their apparent differences, all traditions converge on one point — *prāṇa* sustains multiplicity through unity. Modern cosmology’s idea of an initial quantum fluctuation or “cosmic breath” parallels this Vedic insight.

From the Upanishadic standpoint, *prāṇa* is not mere air or biochemical vitality — it is the cosmic regulator through which Consciousness manifests as energy and matter. Science observes the laws of *prāṇa*; Vedānta experiences the lawgiver within. *Prashnopanishad*, thus, remains a timeless guide — urging humanity to explore not only the external universe of forces but also the inner cosmos of consciousness, where the true nature of *prāṇa* is realized as the very breath of the Eternal.

SUPPLEMENTARY INSIGHTS ON THE CONCEPT OF PRĀṆA

- *Chāndogya Upaniṣad* (1.11.5) states that all things that we see around us disappear in *prāṇa* at the time of their destruction and from it they are recreated.
प्राण इति होवाच सर्वाणि ह वा इमानि भूतानि प्राणमेवाभिसंविशन्ति प्राणमभ्युज्जिहते सैषा देवता प्रस्तावमन्वायत्ता तां चेदविद्वान्प्रास्तोष्यो मूर्धा ते व्यपतिष्यत्तथोक्तस्य मयेति ॥ १.११.५ ॥
prāṇa iti hovāca sarvāṇi ha vā imāni bhūtāni prāṇamevābhisamviśanti prāṇamabhyujjihate saiṣā devatā prastāvamanvāyattā tāṃ cedavidvānprāstoṣyo mūrdhā te vyapatiṣyattathoktasya mayeti (1.11.5)
The above mantra identifies *prāṇa* as the “lord of all” - the cohesive and governing power of the cosmos and as the rhythm (*ṛta*) maintaining universal harmony. In other words, *prāṇa* is the governing principle underlying all phenomena.
- *Taittirīya Upaniṣad*, chapter 2, describes its significance within the *pañcha kośas* (five sheaths). The *prāṇamaya kośa* animates both the *annamaya* (physical) and *manomaya* (mental) *kośa*. Thus, whether viewed physiologically or cosmologically, *prāṇa* is the coordinating energy of order, analogous to the integrative field in modern physics that regulates fundamental interactions.
- *Bṛhadāranyaka Upaniṣad*, chapter 1.3, presents a profound allegory wherein the senses and elements each claim supremacy, until *prāṇa* reveals its true role. Here, *prāṇa* emerges as the unifying intelligence that harmonizes the functions of all *devatās* (energetic principles).
- *Muṇḍaka Upaniṣad* (2.1.3) elucidates the cosmological emergence of *prāṇa*.
एतस्माज्जायते प्रणो मनः सर्वेन्द्रियाणि च ।
खं वायुर्ज्योतिरापः पृथिवी विश्वस्य धारिणी ॥ २.१.३ ॥
etasmājjāyate praṇo manaḥ sarvendriyāṇi ca |
khaṃ vāyurjyotirāpaḥ pṛthivī viśvasya dhāriṇī (2.1.3)
From That (the Imperishable) indeed arises the *prana*, the mind, all the sensory organs, the *akash*, the wind, the fire, water and the earth which supports all.
- *Kaṭha Upaniṣad* (2.2.3) speaks of the Supreme Self sustaining life between the twin movements of *Prāṇa* and *Apāna*. “In the center of the heart dwells That, which moves *Prāṇa* and *Apāna* — That indeed is the Supreme.”
ऊर्ध्वं प्राणमुन्नयत्यपानं प्रत्यगस्यति ।
मध्ये वामनमासीनं विश्वे देवा उपासते ॥ २.२.३ ॥
ūrdhvaṃ prāṇamunnayatyapānaṃ pratyagasyati |
madhye vāmanamāsīnaṃ viśve devā upāsate (2.2.3)
This mantra symbolizes the cyclic pulsation of the cosmos — expansion (*śṛṣṭi*) and contraction (*pralaya*). Just as inhalation and exhalation sustains life, cosmic creation and dissolution sustains existence — revealing a profound equivalence between the microcosm and macrocosm.

CONCLUSION

Philosophical and Scientific Convergence: *Prashnopanishad* highlights that *prāṇa* arises from the eternal Self (*Ātman*), permeates creation, divides into five forms, and sustains both the cosmos and individual life. Without *prāṇa*, matter would remain inert and lifeless. From a scientific perspective, forces and energy define existence. From a Vedic perspective, *prāṇa* performs the same unifying role. The identification of *pancha prāṇa* with fundamental forces illustrates how ancient seers intuited reality that aligns, symbolically and conceptually, with modern physics.

Prāṇa is not merely breath or air but the life principle that animates the universe itself. *Prashnopanishad* offers a remarkable framework that resonates with modern inquiries into matter, energy, and fundamental forces. Where science examines forces objectively, Vedic wisdom explores their experiential and existential aspects. Thus, the convergence of eternal wisdom and contemporary science provides a richer understanding of both cosmic order and human life. The message of *Prashnopanishad* remains relevant for modern research, not only as philosophy but as a guide for scientific exploration into the deeper nature of reality. This Upanishad is worthwhile for scientific research and to bring forth the ideas and notions which have not been touched upon by modern science and psychology.

Brief Profile of the Author:

Captain Alavandar Mohan is a civil engineering graduate from Regional Engineering College, Tiruchy. He served in the Indian Army as a Short Service Commissioned Officer. He has constructed large scale civil engineering projects such as railways, dams, bridges etc in India and as well as abroad. Learner of Samskritam and a volunteer at Samskrita Bharati, which has the motto - सम्भाषण तः शास्त्र पर्यन्तम् (meaning - from spoken Sanskrit until Vedic Scriptures), Captain Mohan also serves Samskrita Bharati as President, Dakshina Tamil Nadu Region. He is of the opinion that our Shastras have a lot of science hidden though it cannot be proved by equations and theorems and learning Sanskrit has been an eye opener for him and made him move towards Shastras which is the Ocean of Ecstasy.

Statements and Declaration:

This paper may be treated as an extension to the paper titled “The *Sanatana* Concept of the Five *Pranas* and its Interrelation with Human Health and Well-being (*Svastha*)” by Dr David Frawley published in *International Journal on Eternal Wisdom and Contemporary Science* Volume 1 Issue 2 (page 81 to 94).

I hereby declare that this manuscript is my original work and does not infringe on any rights of third parties. This work has not been previously published in whole or in part. I declare that I have no conflict of interest with my places of employment or anybody else in publishing this article. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Bibliography:

- Prashnopanishad, commentary in Tamil and Sanskrit by Sri. Anna, of Sri Ramkrishna Mutt.
- Prashnopanishad, commentary in Tamil by PRS Mani.
- The Principal Upanishads by Swami Sivananda. The Divine Life Society.
- Various upanyas and lectures by Shri. Velukkudi Krishnan and Shri Ranganathan Swamigal.
- www.vedanet.com – various articles on Prana by Dr. David Frawley
- <https://texts.wara.in/vedas/upanishads/prashna.html> for transliterated mantras of Prashnopanishad