

Physical Matter from Consciousness Energy: Tracing a formal Theory in Vedic Traditions

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ABSTRACT

Inspired by the recent belief that nuclear weapons were used in the (great) *Mahābhārata* War and the science of making such weapons must be available in Vedic literature, we make an effort here to trace a formal theory to this effect in Vedic traditions. Starting with the basic concept of the *purusa* or *Brahman* (as all-pervading, cosmic consciousness energy), the concepts of *panca mahābhūtās* (PMs), *asthānga prakrati*, *panci-karan* rule and its possible generalization in the form of ‘dressing rules with consciousness’ for the PMs and a *tri-karan* rule for inner essences of life (EOLs), namely mind, intellect and ego, an attempt is made to develop a theory. For this purpose, the concepts of physical theories like second quantization, modulation and demodulation, etc. are freely used. Finally, using the properties of five cosmic elements in conjunction with the so-called consciousness charges on each PM and inner EOL in different orders and the three modes of working of Nature, namely *sattva*, *rajas* and *tamas*, we outline here a prescription to prepare a type of Vedic table of physical elements on the lines of Mendeleev periodic table of modern chemistry. Such constructs while exist in the mental domain in their intangible forms, the biochemical, chemical and physical processes subsequently convert these mental constructs into tangible forms, i.e. into their nascent (or without consciousness charge) versions. This happens when the descended mind waves from the cosmos (top-down concept) and the ascending mind waves of localized nature from the brain neurons of the meditating practitioner or scientist (bottom-up concept) match well with each other. In fact, the concept of neural computation in neuroscience during meditation is found useful in offering the first-person experience of an event in Nature. In the process, several new concepts like induced-consciousness, random access talent, etc., are introduced here perhaps for the first time. To this effect, some assertions are made and put in the form of theorems. It is argued that the existing *Jarh prakriti* is the nascent version of PMs and the same gives rise to a type of physical matter which, in turn, is quantifiable and measurable—a prerequisite for the ‘objective’ reality in Nature as explored by the modern science.

Keywords: *cosmic consciousness field; dressing rules; atomic model of human Being; epifields; mind waves; modulation and demodulation*

The most glorified aspect of Vedic science (philosophy) is that it offers the clue to understand the cosmos and its working in totality through some minimal, answering the questions of its existence, functionality and sustainability. Accordingly, we divide

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the present studies in to three separate but interconnected parts oftentimes with a common and synonym terminology. In Part A, we try to establish the cosmic trio of *Purusa*, *Jiva* and (*Jarh*) *Prakriti* as a natural choice of the Super Regulator (mother Nature) towards the existence of cosmos. In Part B we attempt to develop tools to understand the functionality of cosmos, preferably in some plausible analytical terms, and Part C is devoted to analyse the problems pertaining to the maintenance of both cosmic and world orders.

For a quick and ready reference, we list below the symbols and abbreviations used in the text: [b = Being (or *Jiva* or life principle); B = biological body; \mathcal{B} = brain/brain space; C = causal body; E = ego or self-sense; EOLs = essences of life ; FOUs = faculties of understanding; Φ_{cc} = cosmic consciousness field; \mathcal{G} = gross body; I = intellect, faculty of decision ; M = mind, faculty of emotion; \mathcal{M} = micro-body, mind set function; μ = meditation variable/parameter; PMs = *panca mahābhūtās*; RAT = random access talent; ROT = read only talent; SE = senses of perception and action; SMBG = *Srimad Bhagvad-Gita*; SO = soul or inner-most existence; t/τ = *tanmatrā* (quantum of interaction); WO = worldly objects or outer world-objects acting as stimulants as well].

PART A: THE COSMIC TRIO—A NATURAL CHOICE FOR THE EXISTENCE

A.1 The Trio of Cosmic Essence

A.1.1 *Purusa*, *Jiva* and *Prakriti*

Vedanta philosophy clearly speaks of ‘*dveita*’ (dual or two) as far as the working of the cosmos (or ‘*Sristi*’) is concerned. However, the description of cosmos in terms of these two entities, namely *Cetan* (or *Purusa*) and *Jarh* (or *Prakriti*) remains incomplete without introducing a third entity termed as ‘*Jiva*’ – a communicator between these two extreme entities, In scientific terms, these two extreme entities can be translated respectively as the ‘consciousness energy’ (cenergy) and the ‘physical matter’. As minimal for a functional cosmos, now we have three entities, namely, *Purusa*, *Jiva*, and (*Jarh* or nascent) *Prakriti* (cf. SMBG: 13.13). With certain modifications, these three states (or components) of cosmic essence are respectively correspond to the ideas of ‘*cidākās*’, ‘*cittākās*’ and ‘*bhūtākās*’ by Adi Sankaracharya (1966); ‘*Adhyatmika*’ (time existence), ‘*Adhideivika*’ (divine intelligence) and ‘*Adhibhautika*’ (material existence) or causal, micro and gross existences of a Being in SMBG or as SEP (special epi-physical)-matter, EP (epi-physical)- matter and P (physical)-matter in our recent works (cf. Kaushal 2024). A few remarks about the entity *Jiva* are important here:

- i) Note that *Jiva*, while linked strongly with P-matter (*Jarh*) at the one end through the network of space, time and their creations like geometry, it is also linked with SEP-matter (*Cetan*) on the other, purely through the phenomenon of consciousness or meditation. If the description of a phenomenon lies in between the two situations then all the three space, time and consciousness play or can play comparable roles depending on the case; otherwise in the description of extreme-case-phenomena an account of meditation alone (‘*cidākās*’ zone) or of space time alone (‘*bhūtākās*’ zone) is sufficient.
- ii) The role of *Jiva* manifests and becomes important when there is a desire to understand either or both of its ends.
- iii) The prevalence and the distribution in certain proportion of the components of the Cosmic trio also becomes important when one tries to understand the functioning of all sentient and insentient objects, including the animal and plant kingdom in the cosmos under the same ‘umbrella’.

- iv) A miniature of this cosmic trio does exist in the human Being—the so-called a ‘perfect’ creation of the Supreme, which, in turn, again makes a person capable of studying the trio of cosmic essences as a whole.

It may be mentioned that the spirit of this trio is also contained in the three world concept of John Eccles and Karl Popper, namely the world-1(W_1), which really exists and is a matter of realization; the world-2 (W_2), which we perceive through mind and senses and the world-3 (W_3), the world which can be modelled, tangible and quantifiable as in objective sciences. As a matter of fact, this trio in certain limits is also a manifestation (Kaushal 2024, and the references therein) respectively of the three existences of a human Being, namely causal (C), micro (\mathcal{M}) and gross (\mathcal{G}), in this world— a terminology very widely used in our earlier works (Kaushal 1994, 2011, 2024) through a patomic model of human Being. We shall return to some of these discussions in future sections.

A.1.2 Microcosm vs. cosmocosm: *Yathā pinde, tathā Brahmānde*

The common belief that a human Being is a perfect creation of God (cf. point (iv) above) further strengthens the saying ‘*yathā pinde, tathā Brahmānde*’ as per *S’atpath Brāhmana* which means whatever is there in the human body, the same persists in the cosmos. This saying while directly inspires a person to establish cosmic connections, the same person, on the other hand, also experiences in his Self the essence of this wisdom. Then the question remains as to how to devour this fact in scientific spirit. We shall try to look for a plausible answer to this enigma. In fact, support to this saying also comes from the fact that each, the cosmos and the individual, is composed of the same stuff— the five cosmic elements (‘*panca mahābhūtās*, abbreviated as PMs), namely earth (E_a), Water (W), air (A), Fire (F) and ether (E_t), which respectively represent the five states of matter, viz., earth for all solids, water for all liquids, air for all gaseous states, fire for all plasmas and ether as a container of all. Further note that these are the nascent (physical) versions of cosmic elements, otherwise Vedanta philosophy also takes care of the nonphysical (perceived) versions of these PMs through a *panci-karan* rule. We shall generalize this concept to get highly perceived (!) PMs out of the nascent ones.

A.1.3 Cosmic wisdom, Vedic Seers (*Saptarisis*) and *Asthānga Prakriti*

Can the cosmic trio be a source of cosmic wisdom?

The answer of the above assertion is Yes. In the light of above considerations, *Jiva* is basically a dynamic aspect (consciousness inclusive) of *ashtānga prakriti* (*panca mahābhūtās* plus cosmic mind + cosmic intelligence + cosmic ego). Out of which the component cosmic ego becomes the cause of cosmic desire, thereby leading to the formation of some kind of ripples in the otherwise quiet continuum field of cosmic consciousness (Kaushal 2024). The remaining seven components, in their embodied form, can be considered as seven Vedic Seers (*Saptarisis*) of Vedic *mantras* /traditions. As a matter of fact, in future sections we shall advance the concept of eight-fold modulated mind waves. On these modulated waves, the eight components in general appear in their infinitely dressed versions and the same are embedded in the ocean of cosmic consciousness. Such objects are always floating around everywhere in the cosmos. The demodulation and realization of the seven components (as the 8-th component, i.e. cosmic ego becomes the cause of cosmic desire) by competent practitioners tantamount to transcending the cosmic wisdom through a process like that of their intense meditation. The same realized wisdom by (first-person or original) Seers was later transcribed through Vedic *mantras*. In fact, the dynamic aspect of *asthānga prakriti* in the presence of both *Jarh* and *Cetan* , while makes it to work as *Jiva* in the cosmic trio on the

one hand, the same aspect also creates a space time varying cosmos or *Sristi* for the practitioner of meditation on the other. In nutshell, one can make the following assertions:

- **Theorem zero:** Whether it is spiritual science (concerns *Cetan*) or physical science (concerns *Jarh*), in either case, prior to its pluralization (commercialization), the wisdom transcends to or originates from an individual in the form of first-person experience.
- **Theorem 1:** *Jiva* – a composite of eight components of *asthānga prakriti* – works coherently in the presence of *Cetan* only. Alternatively, the role of *Cetan* can be accommodated through the dressing of eight components with cosmic consciousness. Thus, the role of *Cetan* brings the dynamism in the working of *Jiva*. Further note that in the *asthānga prakriti* the PMs have a different stuff and role from that of the inner EOLs.
- **Theorem 2:** In the otherwise quiet cosmic consciousness field, the incessant modulation (loading) of mind waves with eight components of *Jarh prakriti* and their subsequent demodulation by Beings is the main cause of dynamism in the cosmos.
- **Theorem 3:** In cosmocosm, the Cosmic desire through *Jiva* is instrumental in connecting the *Jarh* and *Cetan* in the same way as the process of meditation is instrumental at the level of microcosm in connecting the micro-body to both gross and causal bodies.

We shall return to some of these details in future sections.

A.2 ‘Absolute Existence’ at the Primordial Level in Rigveda

A.2.1 Nāsadiya Sūkta, Big Bang theory, Quark Gluon Plasma and Physical Matter.

Rigvedic *mantras* of Mandal 10, Sūkta 129 in conjunction with some verses of SMBG clearly suggest (cf. Chapter 3, Kaushal 2024) the existence of an all-pervading cosmic consciousness field (continuum) Φ_{cc} . In this field are also embedded eight epi-fields in accordance with *asthānga prakriti*. This field, in its discretized version, further supply infinitely many souls in cosmos through a process like ‘second quantization’ of modern physics. Not only this, the role of *Cetan* is incorporated through the concept of dressing (rules) of components of *asthānga prakriti* (the five cosmic elements plus mind, intellect and ego) with consciousness and the modulation of these components on the consciousness carrier wave (CCW) constitutes a loaded mind wave that pervades everywhere and forever in different varieties. These varieties arise mainly from the nature of modulation and the degree of consciousness charge on the components loaded on the mind wave. In fact, each component of *asthānga prakriti* loaded on a mind wave is present there, in general, in its dressed version with cosmic consciousness and up to certain order (unit). It is the same unit of charge that transmigrates to the practitioner during demodulation and in accordance with his attained intensity of meditation.

As a prehistoric background for the Big Bang theory of physics, we continue here with a discussion of *Nāsadiya Sūkta* of the same Mandal, viz.,

*Nāsadāsinno sadāsittadānim nāsidraṅjono vyomā paroyat,
Kimārivah kuha kasya s’armannamyah kisāsīd gahanam gabhiram.* (1)
(RV.10, 129.1)

“Prior to the primordial Creation there was neither intent (the world of inner latent existence) nor the physical world (the world of outer existence) with reference to human existence, neither universes nor ether. Also, it was not clear what covers what, it was all foggy”.

Further look at such an existence in the light of SMBG (Verses 12.3-12.4) where it is characterized as “unthinkable, omnipresent, indestructible, indefinable, eternal, immovable, un-manifest and changeless” (*Brahman*). Clearly, such an existence is beyond the reach of human faculties of understanding i.e. not only beyond space and time or gross body but also beyond the domain of micro body.

Within such an ocean of existence of pure consciousness the eight components of *asthānga prakriti*, prevail everywhere and forever in a seed like form (of course, in their infinitely dressed versions with cosmic consciousness) as islands in the ocean. The partially dressed versions of these components (including their nascent versions without consciousness that form the part of physical matter) also exist in the ocean forever and everywhere but in some particularized situations. These nascent versions of eight components while form the part of ‘*Jarh*’ *prakriti*, their dressed versions (depending on the order of dressing with consciousness whether cosmic or the localized one that originates from an individual Being) start becoming the part of ‘*Jiva*’ or microcosm. In fact, in philosophical terms the process in the cosmic domain proceeds as *Cetan*→*Jiva*→*Jarh*, *Adhyātmika*→*Adhideivika*→*Adhibhautika*, or *cidākās*’→*cittākās*’→*bhūtākās*’ sequence in a top-down manner. On the other hand, for a scientist or common man undergoing meditation, this sequence is other way round i.e. in a bottom-up manner. Scientists approve only of nascent versions of the components for their study and that too within the limitations not only of their instrument/equipment and detector but also of their faculty of understanding.

As a matter of fact, the spirit behind the working of atomic model of human Being is the same as that of ‘*yathā pīnde, tathā brahmānde*’ and it therefore suggests the same process for the creation of physical world out of the cosmic consciousness field but now in terms of the third entry *Jiva* at the cosmic level in the *dveita* philosophy. Note that there also exists a kind of similarity of these observations with the process of perception of the physical world by the inner most existence, i.e. the soul —a part of the cosmic consciousness (as a discretized version) through the micro body. Now the question arises is that when everything is available in the cosmos then why not everyone can achieve it. The answer is that it is not possible since each of us have different levels of development of faculty of understanding (FOU). And, the development of individual’s FOU depends on the efforts he makes. The ‘effort’ is a kind of action which is just not physical but contains an element of consciousness or in general the role of all three micro faculties, namely mind, intellect and ego. In spite of having similar physical body, all humans or in general all other living Beings of the same biological class have varying capacity of using these faculties. Why it is so? The answer is in the theory of karma of SMBG when combined with the theory of rebirth. We restrict ourselves from going into such details here. In fact, one can achieve (transcend) as much from the cosmos as much efforts the person makes at individual level. Also, the quality of efforts (which in some sense can be defined through the quality of meditation at mind level, physical strength at gross body level and spiritual power at causal body level) also matters in these achievements. The efforts have to be such that the purest *Cetan* and the nascent *Jarh* remain unaffected in the entire process i.e. they remain only spectator in all processes of whatever category they are. In view of such considerations, it is worthwhile to make following assertions.

- **Theorem 4:** For a true seeker with prepared mind set, nothing is impossible to transcend from the cosmos as per his desire and efforts.
- **Theorem 5:** This transcending of wisdom from cosmos takes place in accordance with the intensity of meditation and the quality of efforts of the practitioner.

In fact, a support (not the proofs) to these assertions comes from some common man experiences, namely (i) Cosmic Intelligence has designed the “human computer” in such a way that it has both ROM and RAM types of memories. In other words, both the physical world at the level of PMs and the inner world at the level of mind, intellect and ego are expandable to any extent in the space of consciousness, so that in the limit of *moks'a* they become capable of merging in to the same cosmic consciousness field. (ii) In this scheme of study the whole cosmos acts as a closed and self-consistent system (in the language of physics and in accordance with SMBG: 3.27-28) in terms of all three, *Cetan* and *Jarh* and their by-product *Jiva*, again in coordination at the levels of both the Being and the cosmos. The same, in fact, are considered as eternal, universal and sustainable. (iii) The wisdom, in fact, is the inter-play of mind waves prevailing at the levels of both the cosmos and the individual Being through the processes of descending, ascending and transcending. (iv) If one considers the efficiency in the functioning of the EOLs, then one can also define ‘read only talent’ (ROT) and ‘random access talent’ (RAT) for an individual, in analogy with the ROM and RAM. (v) For the transformation from *Cetan* to *Jarh* or the vice versa, it is the matter of devolution or evolution of an object with respect to the ‘Grand Existence’ or cosmic intelligence (consciousness). Note that this art, in the present scheme of study, is taken care of by the designed dressing (or undressing) of essences of life with consciousness.

While steps are being taken to maintain these considerations in designing the dressing rules of both PMs and inner EOLs (cf. Chapter 4, Kaushal 2024), a support to these assertions also comes from SMBG (Verses 3.27-28). In other words, the level and the quality of efforts made by an individual (in terms of the dressing of eight components through meditation) have to match with the corresponding mind wave available and floating around in the cosmos forever and everywhere.

In view of the above theorems, everyone cannot be the ‘creator’ of ideas or the ‘expert’ of a subject in absolute sense. Once the idea is created at the first- or multi-person level, then the rest remains a kind of literary beauty to fit it in the framework of experiments in scientific domain or in the practical life in the behavioral domain.

A.2.2 Further Remarks about the *Nāsdīya Sūkta*

Like other Vedic *mantras*, this *Sūkta* also has plurality of meanings. However, in the present context some pertinent remarks about it are as follows:

- i) The cloud of darkness described in this *Sūkta* is not in the sense of physics, viz. not with regard to physical fields i.e. neither in the sense of optics nor in the sense of electromagnetic energy nor the gravitation but in the sense of consciousness or intents of ‘*purusa*’ or ‘cosmic’ person. The word ‘darkness’ is used in the sense of ignorance or absence of consciousness as there was no one to acknowledge the occurrence of the event. Here comes the role of *Jiva*, who worked through the practitioner or observer and in some sense, was the creator of the event at the cosmic level and is the observer of the event at the microcosm level. In other words, through mind waves *Jiva* becomes instrumental in the descending process from the cosmos and the same *Jiva* at microcosm level works in the ascending process through the practitioner via his meditation.
- ii) The term Big Bang was used by the ‘first-person’ scientist, Catholic priest Georges Lemaitre’ (1927) in support of the ideas of Astrophysicist Edwin Hubble (1925). It appears that the Big Bang concept and the word itself was used in the spirit of ‘Eureka’ as was used by Archimedes centuries ago. There was nothing like a burst, sound or lightening at the time of Big Bang. If it was so, then who noticed it or who was the

- observer of this event. Obviously, it cannot be a human Being whose existence in fact came much later according to the Darwin theory.
- iii) It was just an experience of highest degree by a human Being who perhaps went deep into the meditation to descend (or transcend) the event already present in the cosmos, as a result of demodulation of the heavily modulated mind waves present already therein.
 - iv) Among the epi-fields present in Φ_{cc} (Kaushal 2024), the subtlest possible (still not as subtle as the Φ_{cc}) among eight components of (*Jarh prakriti*) is the infinitely dressed version of 'ego' component. This version of ego, which, in turn becomes the cause of cosmic desire and the same is loaded on the carrier wave (a ripple in the purest form of Φ_{cc}) more in a natural manner.
 - v) On the other hand, the practitioner has to make increasingly more efforts in terms of meditation to download these eight components one after the other, until the last one, i.e. the ego component is downloaded. Note that such cosmic events are beyond the space time and so are their quantification. Once the Big Bang occurred in the mind of the practitioner (i.e. the downloading of eight components one after the other, in the sequence of grossest first, then the less gross, lesser gross and so on and in the end the subtlest ego), the degree of cosmic consciousness accordingly comes in matching spirit with the consciousness of the practitioner and makes him capable of designing his world of physics in terms of the theory and subsequently the corresponding experiments as far as the creation of space time with reference to physical world is concerned. Here, in-between comes a transition period between the cenergy (consciousness or mental energy) and the physical energy associated with the four fundamental fields of physics, namely strong, electromagnetic, weak, gravitation and the Higgs field as well.
 - vi) Keeping the physical properties of physics forces in mind it seems logical to associate the gravity force with the nascent versions of PMs (*Jarh prakriti*) in general and the electromagnetic force and others with the consciousness essence of the cosmos. This assertion is further supported by the fact that the dynamics of brain neurons and subsequently their pattern formation activity has tendency to become sensitive to the consciousness of the practitioner in the range greater than that of gamma synchronous frequency, viz. 42 Hz (Kaushal 2024).
 - vii) In the Big Bang picture, during the transition to a physical world, there is a little window for the formation of a new kind of matter, called 'quark-gluon plasma' (QGP) whose occurrence is tested in the laboratory of RIHC experiments.
 - viii) As history reveals, elementary particle physicists have been constantly in search of substructures (constituents) of matter one after the other, and the present experiments have left the scientists at the quark-gluon level of such studies. So what happened after the Big Bang? It is considered only a quark-gluon plasma kind of matter that existed during the fractions of first few seconds after the Big Bang. The postulate of QGP at early stages after the Big Bang may sound justified since it is the only substructure that has been supported by the present day experiments as the ultimate substructure. One never knows, tomorrow some researchers may come out with further substructures of quark, and things may change further. Note that this variety of plasma is with respect to colour charge (and not with respect to Coulomb charge (cf. electromagnetic plasma)).
 - ix) Anyway once such QGP is formed, it cools down in temperature and evolves with time to give rise to other composites of heavenly objects, starting from nucleon, nuclei, atoms, molecules etc. to stars, galaxies and so on, at a later stage, and finally to a kind of living matter in conjunction with cenergy in the cosmos. In this direction, while

theoretical speculations and studies are still on the way even today, what Astro-particle physicists have observed in RHIC experiments is a ‘fire-ball’ as a representative of early QGP. In fact, when coulomb charge ions of heavy nuclei like Au¹⁶⁹ or Pb²⁰⁸ collide at relativistic energies, then not only the nuclei but also their constituent nucleons are broken in to coloured objects like quarks, diquarks, and gluons to give rise to this kind of colour-QGP, whose existence is postulated immediately after the Big Bang. This is the present day scenario of Astro-particle physics, that can contribute to the understanding of the concept of (*Jarh*) *Prakriti* in Vedanta philosophy. However, such a formation of matter after Big Bang does not make sense unless a conscious observer (seeker, practitioner, speculator, meditator, postulator, or human driven instrument or sensor) is present in the vicinity to notice these phenomena. If such an observer is around, then how his faculties of understanding (mind, intellect, ego) participate in the process of observation. Modern scientist, in fact, while are silent on such issues, they however feel concern in the problems like quantum measurement or the collapse of quantum wave function, etc., where again the human consciousness plays a role.

- x) Even prior to the emergence of the space time mediated energy in the form of Big Bang event, this descending *asthānga prakriti* divides itself into two categories—one pertains to cosmic micro-existence in the form of cosmic mind, cosmic intelligence and cosmic ego (again beyond the space time but contained in the gross *Jarh* essence of the cosmos), and the second pertains to pure gross (physical) existence i.e. *Jarh*. It is the second category where space time matters and becomes the object of study for scientists who themselves are the conscious observer or the meditator. In some sense, this is the stage where the ‘category error’ of Roger Penrose (1994) seems to exist between the two types of matter.

If one considers the Big Bang sound (!) of George Lemaitre’ in the spirit of ‘Eureka’ of Archimedes’ and the matching of descending mind waves of the cosmos with the ascending mind waves of the practitioner (say, here George Lemaitre’) then many doubts about the presence of observer in the vicinity of the phenomenon are resolved. We shall try to quantify this scenario more in future sections.

PART B: THE COSMIC TRIO—A NATURAL CHOICE FOR THE COSMIC WORKING

B.1 A Brief Review of the Earlier Work

B.1.1 The Subtlest Possible Cosmic Consciousness (continuum) Field Φ_{cc}

SMBG clearly dictates (Verses 12.3-12.4) the nature of this fundamental cosmic entity, the so-called ‘cosmic consciousness field’ Φ_{cc} . As per *Rigvedic mantras* and the wisdom of SMBG, such a continuum of the *Purusa tattva* is already designed (Kaushal 2024, Ch.4-5) in which the eight components of *asthānga (Jarh) prakriti*, namely earth (E_a), water (W), air (A), fire (F), ether (E_t), mind (M), intellect (I) and ego (E) (SMBG:7.4) are embedded and spread all over in their varying dressed versions (from zero order to infinite consciousness). While all the eight epi-fields are embedded in Φ_{cc} in their infinitely dressed versions as well as in their partially dressed versions, however, they are always floating around in Φ_{cc} . May be hypothetically, in their assumed embodied form, at times they perhaps have been instrumental in transmitting the cosmic wisdom to the terrestrial Beings. Out of these eight floating epi-fields, as mentioned before, E is still subtler in the increasing order to the extent that it appears in the form of ripples in the ocean of cosmic consciousness.

B.1.2 Philosophical Atom-like (patomic) Model for a Functional Human Being

While the *asthāṅga (Jarh) prakṛiti* plays a role at cosmocosm level, the same is also active at microcosm level for a functional human Being as per SMBG (cf. Verse 3.42), but in the presence of the same all-pervading cosmic consciousness or of its (discrete) localized version like SO. To this effect, the success of a patomic (philosophical atom-like) model has already been noticed in investigating a variety of phenomena in human behavior and experiences (Kaushal 1994, 2011, 2025). In this model, the central nucleus is worldly objects (WO) consisting of five cosmic elements and their modifications. Akin to this WO, the next levels of subtlety are in the form of biological body (B), senses of knowledge and action (SE). Further, next level of subtlety comes in the trio of mind (M), intellect (I) and ego (E) and in the end comes the subtlest possible level of soul (SO). Note that it is the EOL, SO, that illumines (or makes functional) all the remaining EOLs, WO, B, SE, M, I and E which otherwise are the inanimate objects. The degree of subtlety in fact is explored through the process of meditation, particularly through its intensity. On a crude scale of subtlety, these EOLs, namely WO, B, SE, M, I, E and SO are grouped as gross-body, $\mathcal{G} = \{WO, B, SE\}$, micro-body, $\mathcal{M} = \{M, I, E\}$ and causal body $C = \{SO\}$. As a matter of fact, the three existences (or the three layers of awareness of an individual), \mathcal{G} , \mathcal{M} and C as defined here are in accordance with *bhūtākās*, *cittākās* and *cidākās* and other trios of description of absolute reality in Nature, as mentioned earlier.

Now the question is as to how to generate the EP-matter out of P-matter, but in the presence of SEP-matter, or else as to how to bring in the role of consciousness when preparing the EP-matter from the P-matter? One possible way hinted in Vedic wisdom is by dressing the P-matter with consciousness and its example, well known in the literature, is that of *panci-karan* rule for five cosmic elements. Note that even in *asthāṅga prakṛiti* the stuff of PMs and that of the trio of M, I and E are of different categories.

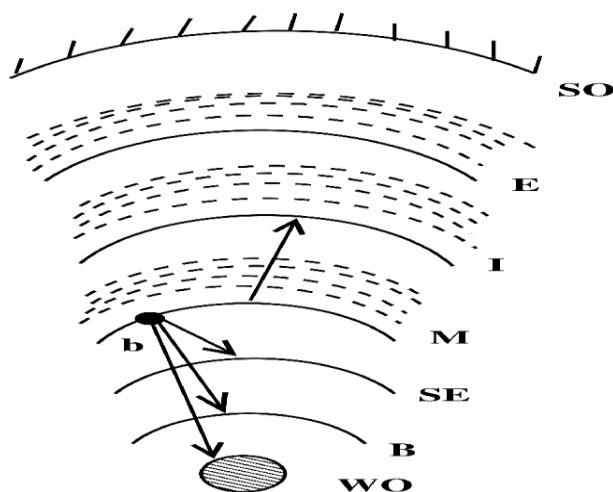


Fig. 1: A modified version of patomic model

B.1.3 EP-matter from P-matter: Dressing Rules and the Role of Meditation

Meditation, perhaps is the only process that connects the individual Being with the cosmos and thereby assists in establishing the cosmic connections of the practitioner. While we postpone the details of this process to the next section, note here that this process adds an element of consciousness to the P-matter and converts it into EP-matter. If this element of consciousness is added infinitely to the EP-matter, then the later starts behaving like SEP-matter or it becomes a part of the cosmic consciousness field Φ_{cc} . This is the philosophy

followed here behind the dressing of P-matter with the consciousness and later developing the dressing rules for separate categories (PMs and the micro body \mathcal{M}) of the stuff. To this effect, the Seers of Vedic wisdom postulated a *panci-karan* rule for charging the five cosmic elements (PMs) with consciousness (see, e.g., AdiSankara 1962). For example, for the *pancikrit* (charged) earth element in the lowest order, symbolically we write (Kaushal 2011),

$$\tilde{E}_a^{(1)} = \frac{1}{2}E_a + \frac{1}{8}W + \frac{1}{8}A + \frac{1}{8}F + \frac{1}{8}E_t \quad (2a)$$

In the next and n-th order charging of the *mahābhūta* E_a , recursively we write

$$\tilde{E}_a^{(2)} = \frac{1}{2}\tilde{E}_a^{(1)} + \frac{1}{8}\tilde{W}^{(1)} + \frac{1}{8}\tilde{A}^{(1)} + \frac{1}{8}\tilde{F}^{(1)} + \frac{1}{8}\tilde{E}_t^{(1)}, \quad (2b)$$

$$\tilde{E}_a^{(n)} = \frac{1}{2}\tilde{E}_a^{(n-1)} + \frac{1}{8}\tilde{W}^{(n-1)} + \frac{1}{8}\tilde{A}^{(n-1)} + \frac{1}{8}\tilde{F}^{(n-1)} + \frac{1}{8}\tilde{E}_t^{(n-1)}, \quad (2c)$$

and similar expressions for other charged *mahābhūtas*. Here, $n=1,2,3,\dots,\infty$, and for $n=1$, the corresponding symbols on the right hand side of (2c) represent the nascent (*Jarh*) version of the corresponding element.

In the same spirit, a *tri-karan* rule is proposed for the elements of \mathcal{M} , namely for the dressings of M, I and E. Accordingly, for the dressed version of M in the lowest order, we write (Kaushal 2011) as,

$$\tilde{M}^{(1)} = \frac{1}{2}\tilde{M}^{(0)} + \frac{1}{4}\tilde{I}^{(0)} + \frac{1}{4}\tilde{E}^{(0)}, \quad (3a)$$

and for the 2nd and n-th order, recursively we write as

$$\tilde{M}^{(2)} = \frac{1}{2}\tilde{M}^{(1)} + \frac{1}{4}\tilde{I}^{(1)} + \frac{1}{4}\tilde{E}^{(1)}, \quad (3b)$$

$$\tilde{M}^{(n)} = \frac{1}{2}\tilde{M}^{(n-1)} + \frac{1}{4}\tilde{I}^{(n-1)} + \frac{1}{4}\tilde{E}^{(n-1)}, \quad (3c)$$

and similar expressions for the EOLs I and E. Here, for $n=1$, in (3c) $\tilde{M}^{(0)}, \tilde{I}^{(0)}, \tilde{E}^{(0)}$ correspond to their respective nascent (*Jarh*) versions. Note that in the limiting case when $n = \infty$, the corresponding entity (out of all the eight cases, PMs plus three inner EOLs) takes a seed-like form and stays in the ocean of consciousness Φ_{cc} (Kaushal, 2024).

B.2 Meditation and its Categorization at Individual Level

B.2.1 Meditation Process and its Gradation

Meditation, basically is the focusing of cenergy (consciousness energy) by adjusting the dynamics of inner EOLs (namely of M, I and E) and by controlling the actions of B and SE. This is done mainly by regulating the traffic of thoughts on the positive side. Recall that corresponding to the three existences, namely \mathcal{G} , \mathcal{M} and \mathcal{C} of a human Being and their respective domains of working, we have identified three processes viz., perception, meditation and realization. Further, returning back to the patomic model it may be mentioned that (i) the latter contains all those essences of life at miniature level which are desired for the *asthānga prakriti*. In fact, it is designed on this basis only; (ii) The perception, while describes the interaction of the Being with the outer world, the realization, on the other hand, relates the

working of both G and M to the inner-most existence, i. e. soul, C ($=\{SO\}$). (iii) In this connection, it is worthwhile to assert some facts based on common man experience;

- **Theorem 6:** The meditation while assists in perceiving the (outer) physical world through the gross component of micro body, M_g , at one end, it also helps in realizing both physical and mental worlds through the subtle component of micro body, M_s , at the other (cf. Fig. 3).

Empirically, we have defined earlier (Kaushal 2021, 2024) the meditation variable μ as

$$\mu = [(\kappa C N_+) / (\tau f N_-)] \quad , \quad (4)$$

where N_+ (N_-) is the number of positive thoughts; f is the frequency of life-breaths, τ is the time duration assigned to complete the task; C is one's capacity of controlling the mind, and κ is the constant of proportionality, in general depends on space, time and circumstances whose effect is ignored here.

Note that (i) all six E, I, M, SE, B and WO are illumined with and become functional only in the presence of SO, (ii) SO (consciousness) in conjunction with E becomes the source of ripple formation in the domain of the so-called 'polluted soul' (PUSO) or '*Jiva*'. (iii) This PUSO, at subtle level while shares with I and M, it also interacts with SE and B at gross level and then the same as a whole becomes functional in the field of WO. (iv) It is this '*Jiva*' that is the cause and also a source of entire gamut of human actions, experiences and involvements in the outer world. First at the micro level (through mind waves or mental involvement) and later at the gross level (physical involvement), it acts on and reacts with WO individually or collectively. (v) A phenomenon like, 'Eureka' or 'Big Bang' for an individual occurs at first-person experience level, particularly when there is a perfect matching of the descending mind wave from the cosmos and the ascending mind wave from a practitioner individually or from some selective individuals of matching frequencies. These selective individuals are 'limited' in the sense that the group is capable of remaining in the same achieved mind set. Again the phrase 'perfect matching' is in the sense that not only the loading of epi-fields on the two categories of mind waves is the same but also their respective dressing orders with corresponding consciousness (i.e. the cosmic one for the descending one and the individual's consciousness for the ascending one). The occurrence of such a matching is rare and so are the big discoveries in 'objective' science.

(vi) Here, we wish to go one step ahead that also makes sense in daily life. As a matter of fact, the transcending mind wave leaves a 'hole' in the ocean of cosmic consciousness field. As in physical theories (nuclear and particle physics) this 'hole' is identical with the descending object in terms of its properties like (a) the number of loading epi-fields and (b) the order of dressing of each of loading epi-field. However, after descending and identifying itself with the ascending mind wave, the resultant takes a new course of evolution but in 'limited' circumstances (in the sense that for a human Being, though the infinite potency of M, I and E is always there but the capacity of working of both inner and outer essences of life coherently is always limited). On the other hand, the 'left behind hole' in the cosmos is capable of controlling a part of human activity in the form of luck, destiny or '*prārabdha*', whereas the rest of activities come under the role of 'free will' of course within certain limits.

(vii) *In some sense individual's 'free will' is a subset of cosmic desire:* It may be mentioned that the human Being in the language of atomic model, is a representation of Φ_{cc}

asthānga prakriti and the same is also a ground for the formation of mind waves at the microcosm level. In the same way as the cosmic ego is embedded in the cosmic consciousness field to cause cosmic desire, the EOL ego, at microcosm level is also embedded in soul through the subconscious mind (cf. Fig. 2), and hence is responsible for to give rise the ‘will power’ to an individual.

B.2.2 Gradation of Meditation on the Basis of *gunās* (three Nature-born Modes of Working)

The meditation process, operative mainly in the micro body domain \mathcal{M} and assists in channelizing the consciousness, however, functions through three inner EOLs, viz., M, I and E. Mathematically, we consider here not only \mathcal{M} but also its constituents M, I and E as vectors in the vector space spanned by three *gunas* over a field of cosmic consciousness (Kaushal 2023, Appendix A). In other words, we try to construct a meditation matrix which will be a guide in categorizing the meditation process on the basis of human qualities. For this purpose, we write \mathcal{M} as a linear combination of constituent vectors, viz.,

$$\vec{M} = a\vec{M} + b\vec{I} + c\vec{E} \equiv M_s \hat{s} + I_r \hat{r} + E_t \hat{t} \quad (5)$$

where $\hat{s}, \hat{r}, \hat{t}$ are unit vectors along the three-axes of *gunās*; M_s, M_r, M_t are the *satoguni*, *rajoguni* and *tamoguni* components of \mathcal{M} (read left hand side of eq, (5) as the vector \mathcal{M}) and a, b, c are the weight functions assigned, respectively to the contribution of M, I, and E constituents. Finally, a matrix structure for μ is obtained (Kaushal 2023) by expressing the vectors M, I and E in terms of basis vectors $\hat{s}, \hat{r}, \hat{t}$ as

$$\vec{M} = \mu_{ms} \hat{s} + \mu_{mr} \hat{r} + \mu_{mt} \hat{t}, \quad \vec{I} = \mu_{is} \hat{s} + \mu_{ir} \hat{r} + \mu_{it} \hat{t}, \quad \vec{E} = \mu_{es} \hat{s} + \mu_{er} \hat{r} + \mu_{et} \hat{t} \quad (6)$$

Here the coefficients (matrix elements) μ_{pq} with $p=m, i, e; q=s, r, t$, define the fractions of *satoguni*, *rajoguni* and *tamoguni* tendencies present in a constituent of \mathcal{M} and labelled in accordance with mind (m), intellect (i) and ego (e). Thus, the features of the representation in (6) are characterized by the meditation-matrix μ , viz.,

$$\mu \equiv (\mu_{pq}) = \begin{pmatrix} \mu_{ms} & \mu_{mr} & \mu_{mt} \\ \mu_{is} & \mu_{ir} & \mu_{it} \\ \mu_{es} & \mu_{er} & \mu_{et} \end{pmatrix} \quad (7)$$

Further, note that this matrix is not symmetric, i.e. $\mu_{pq} \neq \mu_{qp}$. As far as the contribution to a given tendency of a practitioner, viz. *satoguni*, *rajoguni* or *tamoguni* from the constituent of \mathcal{M} are concerned, they can be obtained by using (6) in (5) and comparing the resultant coefficients of basis vectors. Thus we write,

$$M_s = a\mu_{ms} + b\mu_{is} + c\mu_{es}; M_r = a\mu_{mr} + b\mu_{ir} + c\mu_{er}; M_t = a\mu_{mt} + b\mu_{it} + c\mu_{et} \quad (8)$$

As a result, one can also arrange the matrix elements of μ in (7) in an increasing order of their fineness in the task assigned, viz., $\mu_{mt}, \mu_{it}, \mu_{et}, \mu_{mr}, \mu_{ir}, \mu_{er}, \mu_{ms}, \mu_{is}, \mu_{es}$. Thus the diagonal and off-diagonal elements of the matrix μ_{pq} provide different categories and stages of meditation process during one’s spiritual journey.

B.3 Thinking Fast and Slow: Conscious and Subconscious Mind

Vedic science further dictates two important points: (i) Each of the three M, I and E consists of two parts –gross and subtle (cf. Fig. 2). Collectively the gross components of all three M, I and E while contribute to the gross component \mathcal{M}_g of \mathcal{M} (termed as ‘conscious mind’) and to its working in daily life, the subtle components of them collectively constitute the subtle component \mathcal{M}_s of \mathcal{M} (termed as ‘subconscious mind’) and contribute to its working. In fact, in their limited versions these concepts of \mathcal{M}_g and \mathcal{M}_s have also been discussed and elaborately used in utility sciences, like behavioural economics by Kahneman (2011). (ii) As mentioned earlier, each of M, I and E comes in three colors (i.e. three modes of *prakriti*), namely *sattva*, *rajas* and *tamas* and the same collectively decide the character and later the personality aspects of a person through the working of \mathcal{G} .

Now question arises is as to how such a ‘Vedic mind’ can interact with the physical world represented by a functional brain. Note that it is the same consciousness which makes the physical brain functional on the one hand and the ‘Vedic mind’ on the other. Such studies are while desirable, however, become easier to understand in terms of ‘conscious mind’ and ‘subconscious mind’ introduced above. Murphy, in his recent book (2011) has discussed the power of subconscious mind expressed through the day-to-day activities, of course without referring to the formal theory available in Vedic Science. It is not difficult to identify these intangible entities in Vedic Science but in a top-down manner. In this case the patomic model (cf. Fig.1) of human Being again plays a crucial role in understanding the underlying dynamics. In Fig. 3, one can see two shaded thresholds generated out of \mathcal{M}_g and \mathcal{M}_s . Here note that \mathcal{M}_g has opening towards physical world constituting the gross body \mathcal{G} , and \mathcal{M}_s has immediate links with the spiritual zone. One while moving upward on the meditation scale μ , the islands like biological body (B), the senses of knowledge and action (SE), then inner EOLs mind (M), intellect (I) and ego (E) fall on the way, and much beyond this is the source of consciousness, soul (SO) in the space of meditation. With reference to a human Being all this arrangement is placed in the realm of (*Jarh*) *prakriti* (WO) as per SMBG (Verse 3.45).

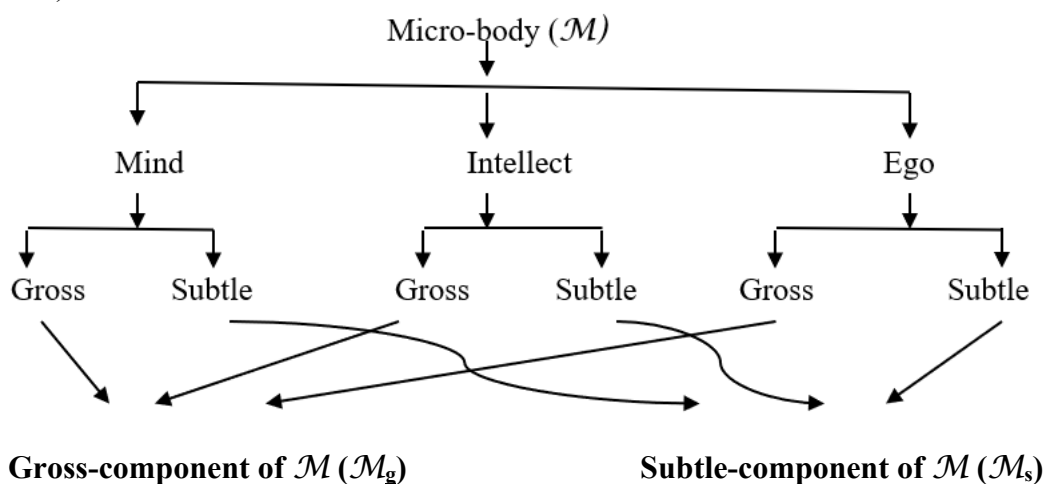


Fig. 2: Schematic display of as to how the micro-body \mathcal{M} of patomic model splits into the gross component \mathcal{M}_g and the subtle-component \mathcal{M}_s .

Next, we try to understand the process of realization which pertains to the functioning of both \mathcal{G} and \mathcal{M} but in the back ground of C. It is a kind of inner transformation in a human Being

(b) that takes place as a result of certain interactions and thereby exchanges of *tanmātrās* of different categories among inner EOLs (Kaushal 2024). As shown in Fig. 4, the capsule structure, composite of all (inner and outer) EOLs including SO (also termed as ‘*Jiva*’), first interacts with the outer world through the window of \mathcal{M}_g with somewhat lower orders of dressing of outer EOLs (small μ case). At the same time b also interacts with M, I and E in a differential manner (depending on the case, viz. emotion, decision or memory), of course after intervention by \mathcal{M}_s . As μ increases further, particularly after the cross over in the figure, the role of \mathcal{M}_s becomes prominent, particularly for SO-dominant experiences. For the details of interactions and the role of corresponding *tanmātrās* we refer to our earlier works (Kaushal 2011, 2024). Next we try to analyse the process of meditation from the lens of neuroscientists.

B.4 Meditation and Neuroplasticity

B.4.1 Benefits of Short- and Long-term Meditation

Ancient Vedic texts such as the SMBG and the *Yoga Sutras* clearly emphasize meditation as a practical method for psychological and spiritual growth through intentional cognitive transformation. To this effect, traditional Vedic meditation practices—such as mindfulness meditation, transcendental meditation, and mantra meditation—are meant to shift cognitive states from the dominance of *rajas* (activity, restlessness) and *tamas* (inertia, dullness) to a balanced state of *sattva* (clarity, equilibrium). These practices systematically enhance cognitive clarity, emotional stability, and mental resilience. The meditation matrix (7) discussed above further supports such a gradation of meditation stages in the path of spiritual journey. Meditation has been intensively studied from a neuroscientific perspective for its capacity to induce neuroplasticity—structural and functional adaptations in brain networks. Neuroimaging studies demonstrate that long-term meditation practice is sensitively related to higher neural activity and connectivity, particularly in the prefrontal cortex and the anterior cingulate cortex, the areas important for attentional control, emotion regulation, and executive function. In some sense, scientific research supports Vedic assertions by demonstrating how meditation reshapes cognitive processing, leading to increased psychological flexibility and balance (Gaur et al, 2025).

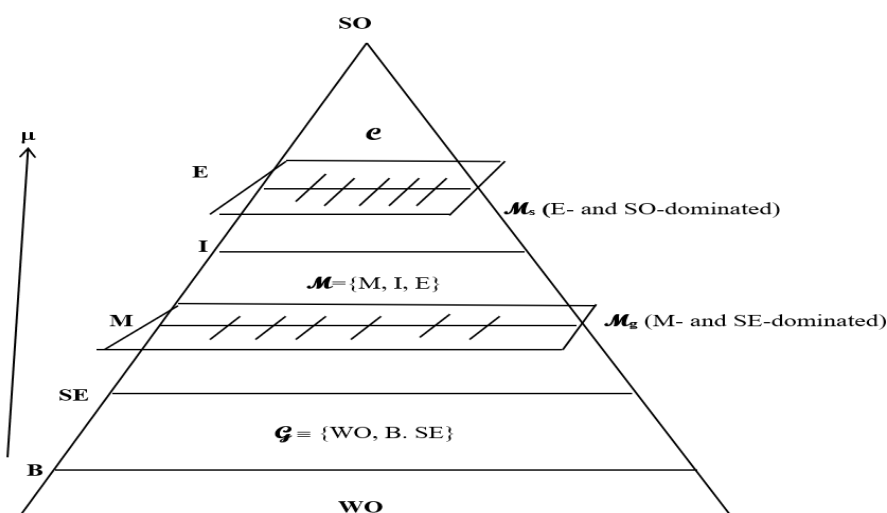


Fig. 3: Identifying the place values of gross (\mathcal{M}_g) and subtle (\mathcal{M}_s) components of the micro-existence \mathcal{M} in the atomic model (cf. Fig. 1). Shaded regions \mathcal{M}_g and \mathcal{M}_s display the two barriers at the two ends of \mathcal{M} -domain to be crossed for the salvation (or *moks'a*) in spiritual journey.

As the Nature-born *gunas* categorize the stages of meditation and subsequently the personalities, neuroscientific studies also outline the long-term benefits of meditation, including improved attentional control, emotional regulation, and executive functioning through enhanced neural connections in the prefrontal cortex. Such studies while are aligning with the Vedic conception that ongoing meditation practice purifies the cognitive functions of the subtle body, they are also suggesting long-term psychological and emotional transformations.

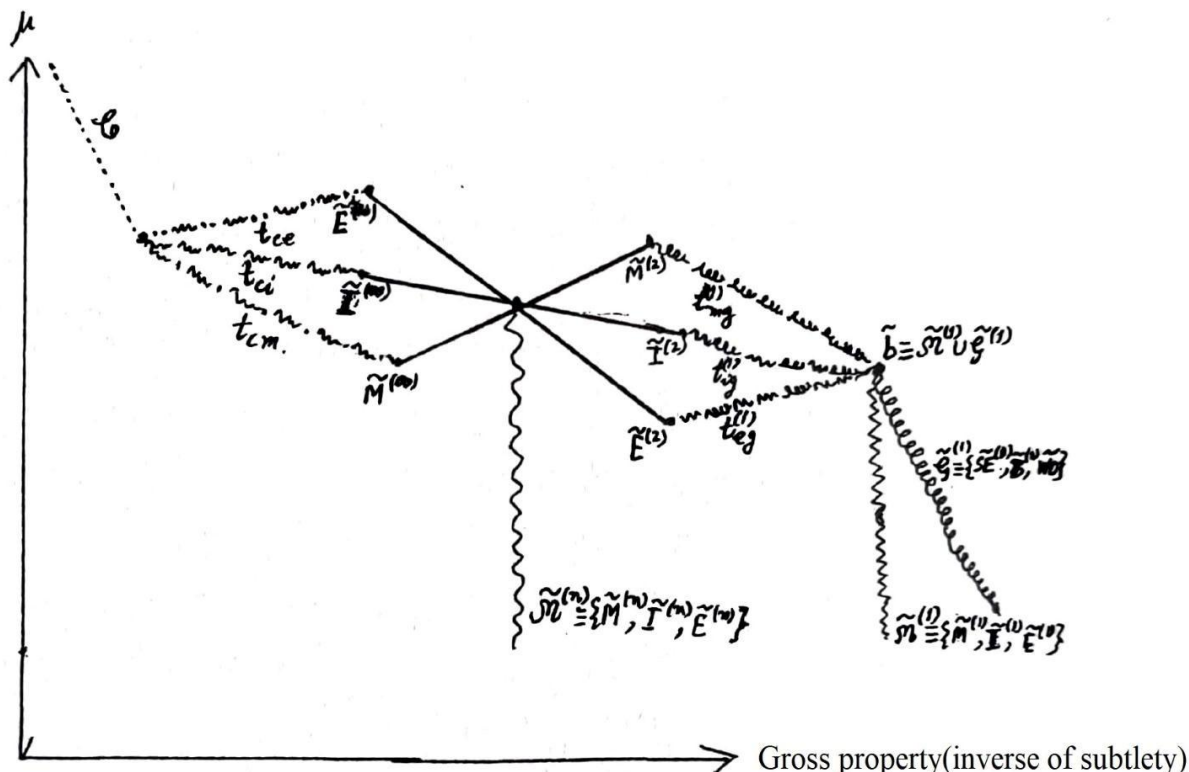


Fig. 4: Interactions inside the human Being expressed through different sets of ‘quanta of interactions’ (tanmātrās) at different stages of spiritual evolution.

B.4.2 Meditation and the Causal vs. Correlative Understanding

As far as the explanation of data on human behaviour and experiences are concerned, the tools of neuroscience alone, through its bottom-up approach, remain inadequate, particularly when the data belongs to the causal-body domain or to a subjective experience. For a study of such phenomena or experiences in totality, what one needs is to use a top-down approach of philosophy. (To understand the meaning of these phrases in physics context, see e. g. Ellis (2005)). In fact, one fundamental difference between Vedic philosophy and neuroscience lies in incorporating the role of consciousness in these studies. Neuroscience is primarily concerned with identifying correlates of consciousness, and mapping patterns of neural activity to subjective experience, perception, and other states of awareness. It focuses on establishing correlations between mental and physiological processes in an attempt to localize consciousness within neural activity. Vedic philosophy, on the other hand, takes a fundamentally causal perspective of consciousness. It proposes consciousness as primary and irreducible rather than emergent from physical processes like neuronal computations. Consciousness, in this view, is independent of matter and is the ultimate organizing principle for both material and psychological phenomena. This causal explanation positions consciousness as the governing force behind the both –manifestation of material and cognitive

experiences. Note that the subjective experiences or expectations are also expressible as the physically quantifiable outcome in the Chevreul's hand-held pendulum (Kaushal 2016).

The philosophical difference between neuroscience's correlational approach and Vedic philosophy's causal emphasis mirrors broader controversies in consciousness studies, notably formulated under the "hard problem of consciousness" (Chalmers 1995). Neuroscience has yet to fully bridge this explanatory gap, whereas Vedic philosophy naturally accepts subjective consciousness as primary and irreducible. This philosophical disparity underscores the ongoing debate and differing perspectives between empirical science and traditional metaphysical interpretations of consciousness.

With a view to having a meaningful discussion on 'mind'-brain interactions in neuroscientific spirit, we identify here some of the neuronal activities as the functions of inner EOLs M, I and E. To this effect, neuroimaging studies suggest that long term meditation practice relates to certain areas in the brain space critical for attentional control, emotional regulation and executive function, which we respectively denote by \mathcal{B}_e , \mathcal{B}_m , and \mathcal{B}_i in accordance with the roles of inner EOLs E, M, and I of Vedic philosophy.

B.4.3 Vedic Philosophy and a Possible Solution to 'Hard Problem of Consciousness'

B.4.3.1 Functional Brain as a Part of Biological Body B in patomic model

Recall that the EOLs in patomic model are arranged (cf. Fig. 1) in the space of meditation and in their increasing order of fineness. Further, the senses of knowledge and action (SE), while are considered as finer than the biological body B, the human brain (\mathcal{B}) as a part of B, still remains a regulator not only of SE but also of inner EOLs M, I and E. (In some sense, \mathcal{B} or its parts play a dominant role in controlling the actions of gross body and in the interplay of gross and micro bodies of a living Being). In other words, the domains of working of inner EOLs and that of \mathcal{B} are not independent. As a matter of fact, all EOLs while become functional in the presence of the same consciousness emanated from SO, the functioning of the brain \mathcal{B} needs a special treatment in this scheme of study, particularly with regard to the role of consciousness in human actions. Moreover, the stuffs of which B and SE (including \mathcal{B}) and that of inner EOLs are made, belong to different categories (cf. category error (Penrose 1994)).

Note that it is the same totality of consciousness that illumines \mathcal{M} and now will work for illumining \mathcal{B} as far as the dressings of EOLs with consciousness are concerned. Neuroscientists somehow are not able to digest this fact. For them, in their bottom-up approach (i.e. from materialism to spiritualism), the consciousness is a by-product of brain neuronal computation with respect to a particular brain wave. On the other hand, in the western schools of thinking the intangible 'mind' remains a 'black box' in spite that it does contain an element of cenergy. With regard to the brain functioning it may be mentioned that the cenergy flows both ways i.e. from \mathcal{M} to \mathcal{B} , to keep the latter functional and from \mathcal{B} to \mathcal{M} , to supply a feedback to higher levels of consciousness.

B.4.3.2 Revisiting the Roles of \mathcal{M} , SE, \mathcal{B} and B in the patomic model

The cognitive experiences corresponding to the three inner EOLs M, I and E basically pertain to faculties of emotion, decision and memory intents, respectively and the same trio in the case of neuroscience is discussed in a tangible and quantifiable language, viz., attentional control, emotional regulation, and executive functioning through enhanced neural connections

in the prefrontal cortex. It is quite possible that the latter trio may turn out to be certain combinations of the basic fundamental trio in \mathcal{M} , of course at certain layers of or wrapping with consciousness during the neural computation. Further note that this process may continue at both conscious and subconscious stages of neural computation. A ground for such considerations already exists in the Vedic philosophy (cf. Fig. 3).

To this effect, note the following points: (i) In analogy with \mathcal{M} , consider \mathcal{B} as also having a trio of cluster of neurons corresponding to the three cognitive experiences. Not only this, they are further divided into gross and subtle categories viz., \mathcal{B}_g and \mathcal{B}_s , as for \mathcal{M} (cf. Fig. 3), according to the degree and depth of neural computation carried out in \mathcal{B} by brain neurons. (ii) In a top-down spirit, the functioning of \mathcal{M} with respect to C , is the same as that of \mathcal{B} with respect to G , in a bottom-up manner; (iii) The intangible constituents of \mathcal{M} while have capacity for infinite expansion with a possibility of cosmic connections as well (in the spirit of random access memory in a computer), the tangible constituents of \mathcal{B} , however, have limited capacity of expansion (read only memory spirit in a computer). (iv) These are the human efforts through the processes of perception, meditation and at a much later stage through realization, that enhance the capacity of working of constituents of \mathcal{B} . In fact, the first two processes play a dominant role in these efforts. (v) Like that of the constituents of \mathcal{M} , here the dressings of the constituents of \mathcal{B} with consciousness cannot be carried out infinitely. (vi) As the components of \mathcal{M} , namely \mathcal{M}_g and \mathcal{M}_s , are responsible for thinking fast and slow, the components \mathcal{B}_g and \mathcal{B}_s of \mathcal{B} , also respectively support these processes but in a restricted sense. Within the frame work of these considerations, in analogy with (3) we write here a *tri-karan* rule for the dressing of constituents of \mathcal{B} with additional induced-consciousness. Corresponding to M, I and E, we write the constituents of \mathcal{B} , symbolically, as

$$\mathcal{B} = \{ \mathcal{B}_m, \mathcal{B}_i, \mathcal{B}_e \} \quad (\text{as } m\text{-, } i\text{-, and } e\text{- components of } \mathcal{B}),$$

$$\equiv \{ \mathcal{B}_m^g, \mathcal{B}_i^g, \mathcal{B}_e^g; \mathcal{B}_m^s, \mathcal{B}_i^s, \mathcal{B}_e^s \} \quad (\text{as trios of each gross and subtle components of } \mathcal{B}),$$

where \mathcal{B}_q^p , for $p = g, s$ and $q = m, i, e$, represents p-th and q-th component of \mathcal{B} , i.e. a specific cluster of neurons in \mathcal{B} . In fact, dressed versions of components \mathcal{B}_m , \mathcal{B}_i and \mathcal{B}_e or their certain combinations can define the domains of neuron clusters responsible for the cognitive experiences, namely emotional regulation, executive functioning and attentional control through enhanced neural connections in the prefrontal cortex. A *tri-karan* rule for the first order dressing of \mathcal{B}_m with consciousness suggests that

$$\tilde{\mathcal{B}}_m^{(1)} = \frac{1}{2} \mathcal{B}_m^{(0)} + \frac{1}{4} \mathcal{B}_i^{(0)} + \frac{1}{4} \mathcal{B}_e^{(0)}, \quad (9a)$$

and similar expressions for $\tilde{\mathcal{B}}_i^{(1)}$ and $\tilde{\mathcal{B}}_e^{(1)}$. Here, $\mathcal{B}_m^{(0)}, \mathcal{B}_i^{(0)}, \mathcal{B}_e^{(0)}$ respectively correspond to $\mathcal{B}_m, \mathcal{B}_i$ and \mathcal{B}_e . For the 2nd and n-th order dressings, we write recursively, as

$$\tilde{\mathcal{B}}_m^{(2)} = \frac{1}{2} \mathcal{B}_m^{(1)} + \frac{1}{4} \mathcal{B}_i^{(1)} + \frac{1}{4} \mathcal{B}_e^{(1)}, \quad (9b)$$

$$\tilde{\mathcal{B}}_m^{(n)} = \frac{1}{2} \mathcal{B}_m^{(n-1)} + \frac{1}{4} \mathcal{B}_i^{(n-1)} + \frac{1}{4} \mathcal{B}_e^{(n-1)}. \quad (9c)$$

About these relations, the following remarks are in order:

(a) It is the same brain that acts differently for the yogi-category of persons and for the worldly persons. In the former case, the relations (3) are effective (with infinitely large n) since the

intangible EOLs M, I and E are infinitely expandable and in their subtle form they are close to the source SO (cf. Fig. 3). On the other hand, here in relations (9) the tangible components \mathcal{B}_m , \mathcal{B}_i and \mathcal{B}_e of \mathcal{B} are found to have only finite capability because of the limitations of the instrument or of the doctor. Therefore, in relation (9c) n can never be infinite for a worldly person. The brain \mathcal{B} , particularly its component \mathcal{B}_g is of immediate concern in *Jarh prakriti* and, in general, its role is taken care of by the PMs in WO. Note that \mathcal{B}_m , \mathcal{B}_i and \mathcal{B}_e sequentially are of immediate concern of WO in the bottom-up approach whereas E, I and M are those of SO in the top-down approach.

(b) As the meditation by a practitioner becomes intense, n increases in (3c), his cosmic connections become strong and the person develops the art of transcending the wisdom from cosmos to himself. On the other hand, as n increases in (9c), the person becomes more and more wiser to explore the *Jarh prakriti* or to understand Nature in its tangible form out of its infinitely many intangible versions.

(c) It is the same meditation that works on both the fronts i.e. in making M, I and E capable of extracting more out of the same *Cctan* through SO and in investigating more out of the same *Jarh prakriti* through the components \mathcal{B}_m , \mathcal{B}_i and \mathcal{B}_e .

In Vedic science the consciousness is considered as fundamental and it manifests in two interconnected ways: First, in lower strata, through B (i.e. through biological body or through any other part of it) or through WO (in a reflexive manner, as an EP-matter), mainly to make the brain functional. Second, in higher strata through the brain itself to make the brain neuron functional. On the other hand, neuroscientists even today think of consciousness as a product of complex neuronal computation involving widespread brain activity and long-range communication according to the global neural work space hypothesis. As far as the effect of meditation of a practitioner on his brain is concerned, it takes his brain-ability to adapt and change throughout life by forming new connections and strengthening the existing ones. In summary, this neuro-dynamic process allows the brain to learn, recover from injuries and response to experiences. This process not only reorganizes the neurons but also helps in growing new neurons.

Recall that the brain of a dead body is not functional and it becomes functional only in the presence of consciousness that descends in a Being with his birth, obviously out of cosmos. Secondly, only a small fraction of it suffices to make $\mathcal{G}=\{\text{WO, SE, B}\}$ functional and a little more is needed to make $\mathcal{M}=\{\text{M, I, E}\}$ functional and still more is needed to overcome the barrier of E and in the end, to enhance the thought process of the practitioner that enables the merging of the Being b in $\mathcal{C}=\{\text{SO}\}$. Further, still more consciousness is needed to establish cosmic connections and to make b capable of realizing the cosmic consciousness field Φ_{cc} . In this whole journey both the processes, meditation and realization, go hand-in-hand. In fact, the consciousness is neither measurable nor quantifiable. Its presence in an epi-physical or in a functional biological system makes the system open (i.e. beyond space-time description) that questions the viability and applicability of physical laws with regard to these systems.

If one goes with the observations of neuroscientists that the consciousness is the result of a certain complex neural computation, then this is a different type of epi-consciousness (or induced-consciousness) which may have different features and characteristics but definitely helps in generating '*pratibha*' (talent) in a Being. In view of the fact that the domains of working of \mathcal{B}_m , \mathcal{B}_i and \mathcal{B}_e are infinitively finite (in view of their expandable work space), one

can coin the phrases ‘read only talent’ (ROT) and ‘random access talent’ (RAT) in analogy respectively with the ROM and RAM concepts used in computer designing.

B.5 Individual (Being)-based and Cosmos-based Consciousness Carrier Waves (CCW)

B.5.1 Descending Mind Waves from Cosmos

Earlier we have discussed (Kaushal 2022, 2024) cosmos-originated (as a result of cosmic desire) ‘mind waves’ spread all over and forever in their partial as well as infinitely dressed versions with cosmic consciousness and, in general, loaded with all the eight components of the *asthānga prakriti*. Recall that a fully loaded (eight-fold modulated) mind wave with infinitely dressed eight components present in the cosmos is denoted now as $(CCW)_{TD}^{e.wafe_t^{mie}}$, where the superscripts have their usual meanings corresponding to PMs, E_a , W, A, F, E_i , and inner EOLs M, I and E and the subscript TD indicates the top-down category of mind wave. Note that here whether these are the PMs or the EOLs M, I, and E, they all are dressed with the same cosmic consciousness. In what follows, we discuss another kind of mind waves originating from an individual Being as a result of his meditating capacity and will power.

B.5.2 Ascending Mind Waves from Individual

In this case we have two sources of consciousness, of course with the same features and characteristics. One appears as the part of cosmic consciousness that makes not only the brain \mathcal{B} (or its component-domains \mathcal{B}_m , \mathcal{B}_i and \mathcal{B}_e) but also the entire biological body B including SE, functional. Not only this, only due to this consciousness the Being b senses the stimulant in WO and makes the brain neurons functional in different dimensions. The second source, as per neuroscientists, is the outcome of complex neural computation that again dresses the domains \mathcal{B}_m , \mathcal{B}_i and \mathcal{B}_e differently for different individuals in terms of their meditating capacity leading to more and more dressing orders of components. As mentioned earlier, because of the limited capacity of an individual (but extendable infinitely at times using the help of external devices for electric impulses), this happens only up to a few bands of brain waves. Such a role of this secondary (induced- or epi-consciousness) limits the dressing orders of certain components of *asthānga prakriti*, (particularly the PMs) in this bottom-up (BU) approach. With regard to the Being-based consciousness carrier waves (i.e. the ascending mind wave), denoted by as $(CCW)_{BU}^{e.wafe_t^{mie}}$, (where the subscript BU stands for the bottom-up case), the following remarks, in view of Fig. 4, are in order:

- a) The fundamental consciousness, present already in \mathcal{G} , particularly in B (through the brain) and SE forms the basis for the consciousness carrier wave in the present case as a result of some minimal meditation by a common man practitioner.
- b) As the meditation increases or becomes intense, the brain neurons at the next stage start the networking and computation through different domains and sites to produce secondary consciousness as per neuroscientists, which, in turn, starts charging (dressing) the components of *asthānga prakriti*, at the individual level beginning with the five cosmic elements, earth, water, air, fire and ether and then the inner EOLs M, I, and E of the practitioner. This increasing dressing of components makes the individual capable to realise and explore more and more the tangible forms of their intangible versions with an increasing resolution but side by side also enhances the RAT of the practitioner. The lower orders of dressing of component, however, provide only the ROT of the practitioner.
- c) The fundamental consciousness while results in to ROT, the secondary (induced) consciousness is responsible for RAT and that varies from individual to individual, but can be extended to infinity for yogi-category of persons (Kaushal 2024).

- d) Note that this dressing of components here continues to higher and higher orders (cf. relation (9)) depending on the efforts of an individual, but in any case it is always less than the one available for the descending mind waves from the cosmos.
- e) These dressed versions of various components are then loaded on the carrier wave of fundamental consciousness, thus giving rise to a modulated ascending mind wave free to traverse in the cosmos.

PART C: TRIOS AT COSMOCOSM AND MICROCOSM LEVELS : A NATURAL CHOICE FOR THE SUSTAINABILITY OF COSMIC AND WORLD ORDERS

C.1 Materialization of Intangible Jarh prakriti, First-person Experiences and Discoveries in Physical Sciences

Note that it is the same *Jiva* (the epi-physical matter in the cosmos and the Being *b* in the individual) that works between the extremes of *Cetan* and *Jarh* at cosmic level and between SO and WO at the individual (patomic) level (cf. Fig. 1). Though the *Jiva* and *b* are the manifestation of the same intangible cosmic essence, but they play their distinct and well defined roles in the maintenance respectively of both cosmic and world orders, including the creation of laws, theories and policies in this respect. When the question comes of the observer of the cosmic event like Big Bang, it was the cosmic *Jiva* who witnessed all and transmigrated the same to the Being of Lamaitre’ who was meditating or conceptualizing the event at the first-person level to happen the event in his thought process. In the same way, Archimedes was meditating for the materialization of his principle which was already present in Nature (*Jarh prakriti*) in intangible form, or Michal Faraday and Newton were meditating for their laws, which were already present in Nature.

Now the question arises as to under what conditions on one’s mind-set or on the stages of his meditation such events are experienced first in the mental world and later, the attempts and efforts are made by the same or any other equally trained individual towards their materialization in tangible form in the laboratory or in practical life. This is how the terms like first-person experience or second- or other-person experience are used in generalizing the concepts. At times, after having such a wonderful or unique experience, the first-person exclaims out of this success of his efforts in some effective words. In fact, all sorts of wisdom and stuff pertaining to both the extremes, namely *Cetran* and *Jarh* , through *Jiva* are available in the cosmos. Later, it remains a matter of preparing composites or constituents out of them using RAT. A plausible answer to this question sought in this work is through the matching of two types of mind waves at a particular level of consciousness. In other words, when the ascending mind wave in the bottom-up approach matches with the descending mind wave in the top-down approach at certain level of conscious evolution (meditation) of an individual such events or discoveries are bound to happen. Symbolically, one can translate this statement and write as,

$$(CCW)_{BU}^{e_a w a f e_t m i e} \left| \begin{array}{l} \text{in terms of no. of loading} \\ \text{components and their dressing} \\ \text{with consciousness from SO} \end{array} \right. = (CCW)_{TD}^{e_a w a f e_t m i e} \left| \begin{array}{l} \text{in terms of no. of loading} \\ \text{components and their dressing} \\ \text{with consciousness from } \Phi_{cc} \end{array} \right. \cdot (10)$$

Note that in eq. (10), the left hand side represents the generated mind wave in the bottom-up case for certain loading components of *asthānga prakriti* which are dressed with the consciousness from SO and that also up to certain orders. On the other hand, the right hand side is the result of demodulation of the top-down mind wave with the desired components and their dressing orders as per need of the left hand side but dressed with cosmic consciousness (cf. Φ_{cc}).

Next we outline a possible method of materialization (in physical sense) of various components of *asthānga prakriti* present already in Φ_{cc} in a seed-like form. In some sense it is the case of a reverse process used in giving them a cosmic character by way of dressing them with consciousness. Now it is the unwrapping of the dressed entities but in accordance (cf. eq. (10)) with the intensity of meditation of the practitioner.

C.2 Available Vedic Wisdom and a Vedic (Periodic(!)) Table of Physical Elements

Once again recall that (i) the increasing meditation enhances the dressing orders or the units of consciousness charge on the nascent PMs according to a *panci-karan* rule and according to a *tri-karan* rule such units of charge also increase on the inner EOLs, M, I and E; (ii) the dressing of M, I and E components of the *asthānga prakriti*, however, helps in enhancing the talent of the practitioner. (iii) At different levels of meditation, the respective attributes of each cosmic element is added to the achieved composite and so is the case with regard to each of the dressed M, I, E. The latter, in fact, adds to the talent of the practitioner in making the tangible out of the intangible or in searching and giving the shape to the formless.

Table 1: Purest versions of Jarh and Cetan and the different versions of Jiva in-between the two.

Jarh:	$\tilde{E}_a^{(0)}, \tilde{W}^{(0)}, \tilde{A}^{(0)}, \tilde{F}^{(0)}, \tilde{E}_t^{(0)}; \tilde{M}^{(0)}, \tilde{I}^{(0)}, \tilde{E}^{(0)}$,	(11a)
Jiva:	$\tilde{E}_a^{(1)}, \tilde{W}^{(1)}, \tilde{A}^{(1)}, \tilde{F}^{(1)}, \tilde{E}_t^{(1)}; \tilde{M}^{(1)}, \tilde{I}^{(1)}, \tilde{E}^{(1)}$,	(11b)
:		
Jiva:	$\tilde{E}_a^{(n1)}, \tilde{W}^{(n2)}, \tilde{A}^{(n3)}, \tilde{F}^{(n4)}, \tilde{E}_t^{(n5)}; \tilde{M}^{(n6)}, \tilde{I}^{(n7)}, \tilde{E}^{(n8)}$,	(11c)
:		
Cetan:	$\Phi_{cc} + \tilde{E}_a^{(\infty)}, \tilde{W}^{(\infty)}, \tilde{A}^{(\infty)}, \tilde{F}^{(\infty)}, \tilde{E}_t^{(\infty)}; \tilde{M}^{(\infty)}, \tilde{I}^{(\infty)}, \tilde{E}^{(\infty)}$,	(11d)

Table 2: Parameters, properties and the stuff available for the preparation of Vedic (periodic(!)) table of elements.

<ol style="list-style-type: none"> 1. Nascent versions of PMs, namely E_a, W, A, F and E_t, and their respective properties, viz., solidity (<i>ghanatvatā</i>), liquidity (<i>taralatā</i>), fluidity or gaseousness (<i>gasiyatā</i>), ionity (igniting character) or generalized charge (<i>ionikata</i>), and cosmic container of all space-time-bound structural existences (<i>bhandāratā</i>). 2. Dressing with consciousness in discrete orders (n) from zero to infinity on nascent PMs. 3. Dressing with consciousness in discrete orders (n) from zero to infinity on inner EOLs M, I and E of the practitioner/scientist (who is going to be the first-person observer or experiencer of the event, creation, design or of the physical element so created). As a matter of fact, the first-person, after a requisite training of his self and efforts, becomes capable of converting intangible (<i>Jarh</i>) P-matter into tangible EP-matter using his RAT. 4. Dressing orders of inner EOLs of the followers, who later support/verify the first-person experience. 5. Pluralization (commercialization) of the first-person experience to masses towards the production from the nascent versions of PMs.

Conjecture 1: As the meditation of an individual practitioner increases, his RAT increases (due to the enhancement in neuronal computation (activities), resulting in to an ‘induced-consciousness’ as per neuroscientists) and the person develops the art of enhancing his ‘mental’ (resolving) power in unveiling the hidden charges and corresponding laws in Nature. For example, for the gravity force the mass-charge, for the electromagnetic force the Coulomb- charge, for the strong and weak forces the baryon-charge, color- charge, etc. emerge. In fact, this chain towards the exploration of a composite in *Jarh prakriti* correspond to different types of substructures explored in EP- matter.

- **Theorem 7:** The same meditation (as in above conjecture) in its one aspect while explores the *Jarh prakriti*, in its other aspect explores the *Cetan* in terms of c-charge (consciousness-charge) on the entire gamut of animate and inanimate entities in the cosmos. In the present scheme of study, the quantity of c-charge is attributed to dressing orders to which contribution also comes from the induced consciousness.
- **Theorem 8:** Purest *Cetan* or *Brahman* (cf. row (11d) including Φ_{cc}) and purest *Jarh prakriti* (cf. row (11a)) are the eternal intangible parts of the cosmos. It is only the tangible *Jiva* (cf. rows (11b), .. ; (11c)....) in different versions that are born and die, and are also transitory.

Clearly, the two sectors one of PMs (namely, E_a , W , A , F and E_t) and the other of inner EOLs (namely, M , I and E) and the third one of their cross composites (with different permutations and combinations of the constituents, including an account of their dressing orders) lead to varieties of entities in the cosmos including various animate and inanimate objects, of course in the presence of the *Brahman* Φ_{cc} . In fact, a similar world also exists for the perfect creation of the Supreme, i.e. the human Being, but in the presence of SO (cf. atomic model, Fig. 1). Thus, note the three possibilities from Table 1: (a) the entities with PMs alone, (b) the entities with inner EOLs alone, and (c) the entities which are composites of both PMs and inner EOLs. Other remarks about Table 1 are as under:

- i) Note that here (nl) , for $l = 1, 2, \dots, 8$, are integers and each (nl) runs from zero to infinity. Further, the case for $(nl) = 0$ for all l correspond to the extreme *Jarh prakriti*. This *Jarhatā* (solidity or inertia) goes on decreasing as (nl) , for all l increases, but are not infinite. On the other hand, the case corresponding to $(nl) = \infty$ for all l , enhances the *Cetanatva* (life or consciousness) in the entities to the extent that they become the part of Φ_{cc} .
- ii) PMs and inner EOLs heavily contribute in designing the cover of biological bodies and the senses of knowledge and action of a Being. On the other hand, higher order dressings of inner EOLs with consciousness heavily contribute to enhance the efforts and talent of an individual in ROT and RAT manner. This, in turn, makes him capable to search theories in the thought process and subsequently to design the instruments for laboratory in the material world, of course in a hierarchical manner. This all happens when an individual’s thinking is in the zone of condition (10).
- iii) Thus, one finds that the Mendeleev Periodic Table is a highly particular case of this general scheme of study. Prior to this, one can as well search for a crude version of Vedic Table of elements. To this effect, some ‘food for the thought’ is given in Table 2.
- iv) In Chart (11) (cf. Table 1), each element is useful as far as any creation in the cosmos is concerned, including the polluted *Cetan* (or, some versions of *Jiva*) and polluted *prakriti* (or, again some versions of *Jiva*).
- v) Note that there are certain categories of mind waves which remain functional in the overlapping domain of essences corresponding to PMs and corresponding to micro-body. This domain in fact is useful for the occult scientists (cf. Chap. 9, Kaushal 2024).

The velocities in this domain can perhaps lie between the velocity of light and the limitless velocity in Φ_{cc} .

CONCLUDING DISCUSSION

This Article is compiled in the ‘food for thought’ style, of course after accounting for the both, subjective aspect (through Vedic philosophy) and objective aspect (through physical sciences) of the same absolute reality in Nature. The Vedic concept of the trio of *Cetan*, *Jiva* and *Jarh prakriti* is extensively explored to understand the creator, creation and the functionality of the creation in the cosmos in the three parts of the Article and that too in a scientific and analytically viable spirit. To this effect, the necessity of a third cosmic essence, i.e. *Jiva* is emphasized and elucidated to understand the working of the Creation in totality.

It is further emphasized that the concept of *Jiva* while is useful as a cosmic observer, it is rather more useful in understanding the working of a functional human Being *b* at the microcosm level in terms of atomic picture (cf. Fig. 1). This is how the entire gamut of human behavior and experiences is understood in a consistent manner in this scheme of study. In fact, the popular saying, ‘*yathā pinde tathā brahmānde*’ of Vedic wisdom is followed here in this work. Further, in order to bring the alignment of these ideas with the modern science of neuroplasticity vis-à-vis the role of meditation in the spiritual evolution of a person, the concept of mind waves is heavily used, particularly in finding a plausible solution to the so-called ‘hard problem of consciousness’ in the context of ‘mind’- body (brain) interaction. To this effect, the concept of induced-consciousness, that sets the limit on the random access talent (RAT) of and on the efforts made by an individual towards the success of a task (or towards the exploration of *Jarh prakriti*), is found useful. As a matter of fact, a criterion in terms of matching of descending and ascending mind waves is discussed (cf. condition (10)) for a person undergoing intense (or attention dominated) meditation and wishes to have first-person experience of a cosmic or terrestrial event.

A plausible theory for the process as to how a common man digests the first-person experience is highlighted in Sects. B.3-B.4. While the conscious mind reacts immediately, subconscious mind takes a chance for the second thought. In terms of meditation, the practitioners with intense and attention dominated meditation, in fact, not only become capable of appreciating the first-person experience of the event but as a result, their RAT also increases to the extent that they also start contributing to the discovery. Keeping such considerations in mind, some ground work for the preparation of a Vedic (periodic) table of physical elements is done and the same is presented in Table 2. Further studies in this direction are desirable.

In physics one deals with space time mediated interactions. The theories and laws so derived, successfully work at classical level to study the structure and dynamics of inanimate objects. As and when one encounters with the living or conscious objects, these well-tested laws of classical physics oftentimes badly fail. As far as the role of consciousness in classical physics theories is concerned, somehow it was not required. It was only after the advent of quantum physics about hundred years ago, the necessity of this concept of consciousness in physics was felt, particularly in the contexts of quantum measurement and in the interpretation of the quantum wave function. Even today the problems on this front still remain open. In fact, in the probabilistic interpretation of the quantum wave function the role of consciousness was tactfully avoided by Schrodinger by introducing the concept of probability; but God never plays(!) a dice. It appears that the concept of *Jiva* as discussed in this work at microcosm level can provide some meaningful results in this direction, particularly when applied in the spirit of extended apparatus of von Neumann. It is worthwhile to use this concept to find

solution of some of these problems since *Jiva* connects the two extremes– the material world (for particle nature) at the one end and the consciousness world (for wave nature) on the other.

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