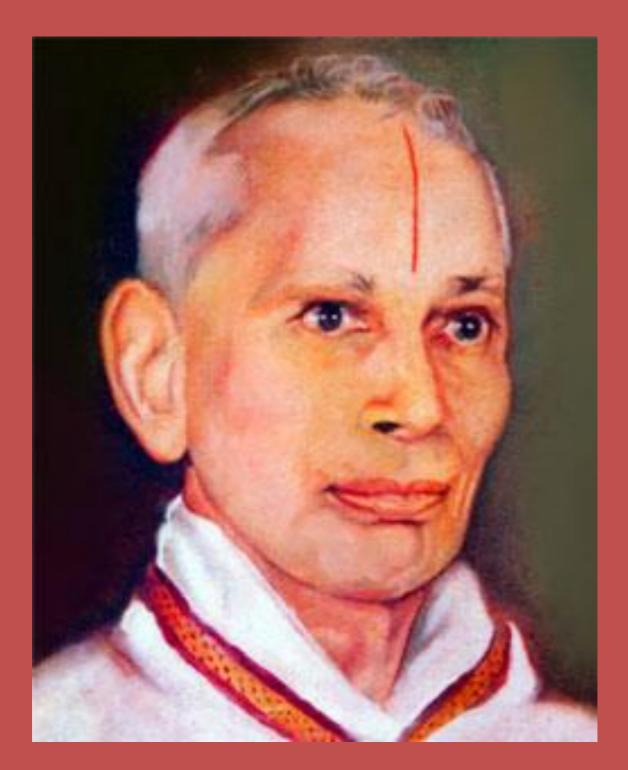
THE VEDIC WAVE OF SCIENTIFIC THOUGHT



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European scholarship took to the study of Sanskrit in the middle of the nineteenth century mainly led by the enthusiasm of German scholars. Very soon they had begun to grow familiar with the beauties of Sanskrit literature as an art in its manifold aspects and beauties of art, of linguism, of meters, of the psychological values, of thoughts and of poetry, prose and drama with the values of singing of music, as well as of thoughts and feelings, as well as emotions and also their mutual contributions of the values of a great culture. But generally they were not quick to cognise the value of Vedic Sanskrit as suggestive of subtle findings of deep truths of the positive sciences and their (overt and covert) explications and implications of deeper studies.

This fact appears to be due to the general impression of the Europeans that the East is not proficient and even aware of the practical appreciations, methods of applying their general knowledge to the utilitarian values of making practical life more and more easy and happy. This may be due to their impression that the East is most familiar with its philosophic attitude alone on life. This is the common attitude of the general trend of the philosophy of the middle ages but not of the Vedic thoughts and their practical content of actual life.

This fact is clearly evident in the language of Vedic Sanskrit, which is teeming with the diffusion of the novel ideas of Yajna as a coordinated team work of a group of powers of Devas, Rishis and human beings, all living together in consonance in the constitution of Prajapathi in lending their works and powers to the common Yajna organism of cosmic society as the individual offering of each one of the Devas, on his own part to the common purpose as Dana and realising the value of it with all the intense understanding of it as Tapas, which means looking into or Alochana besides entering into the common cosmic organisation of the great Yajna of heroic cooperation and co-ordination with the entire existence. Their general impression is that the East is not proficient in the practical side of arts and sciences that such an attitude was alien to the philosophically minded East. Even the accounts of space travels in the air found

in the great Puranas and classical literature did not impress or strike seriously on the minds of the Western scholars, though they had admiration for the depths and marvels of the practical sciences of medicines, surgery and of war etc. in early ages, with vivid descriptions of the creation and usage of the implements and machines of fire, energy and electricity known commonly to the Vedas as Rubhu, Vibhava and Vaaja occurring in cosmic depth as the engineering powers or Devas and their war implements of Vimanas, moving in the airy paths of space for travel. एते पन्थाः सवितः पुर्व्यासो अरेणवः सुकृता अन्तरिक्षे पथिभिर्देवयानैः । Thus even the puranic accounts of air travels and Vimanas and aeroplanes were not seriously attended to. Pusha is clearly said in the Vedas to have laid definite paths in the atmospheric middle region and the celestial region of the planetary and the higher starry regions. There are clear and definite descriptions of them in the Vedas in addition to their clear descriptions of the creative skill of Visvakarma functioning from his central Atman through the cogent parts of its organisms as Devas or Powers. This

appears clearly due to an attitude of unwillingness to admit India's name in practical sciences. Even when Western Scientists were compelled by the compulsion of their scientific thoughts in the west too, to break the atom into its constituents, they did not seriously think or admit the fact that matter and energy are interchangeably working until Dr. Einstein definitely stretched and pushed the idea strongly on to the minds of the scientists with the advent of the Atomic Bomb and that of the continued chain action of successful breaking of the atoms. These facts were clearly shown in the Vedas to show that they were not mere abstract philosophers, who eschewed all phenomena as mere illusion. They knew quite clearly and distinctly that the phenomenal world has the soul of the noumena, which would give the clue to the explanation and presence of the noumenal power of the heart of existence.

The Upanishad named Isavasya is the last chapter of Sukla Yajurveda. Its philosophic thoughts do not belong to the upanishadic thoughts in general for it suggests clear and distinct ideas of the world as co-

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ordinated system of various movements coworking as "Jagatyam Jagat" which means the movement in the heart of a system of movements. The word "Jagat" is a movement and the expression "Jagatyam Jagat" means the central movement of all kinds of central movements. This movement, which is the centre of all movements is pragnant with the supreme spiritual conscient power which is said to be the soul of all coordination of infinite movements guiding and urging all movements as the master-power of consciousness called Isa, the Supreme Power, who is the residing centre and guide of all movements. Instead of trying to understanding this wealthy and healthy statement as the motive power, the expression "Jagat" as world is taken merely as the dead, immobile and inactive power without consciousness and guiding and controlling capacities. When this power moves into every corner through the pulsations of life as prana in man, it is called Chaitanya, which spurs the expression as the flood of pranas into cognisant Sarasvati, the all-flowing flood of knowledge, what is called speech coming from prana in man through voice, is also present in

the depths as even inorganic, conscient substances, as inevitable power seated working in the heart of even things as the ruling and guiding queen of Devas or powers in the centre of the deeper Mandra consciousness of Devas.

यद्वाग्वदन्त्यविचेतनानि राष्ट्री देवानां निषसाद मन्द्रा।

Like a milk–cow it is yielding knowledge through four streams as the languages of Para, Pasyanti, Madhayama and Vaikhari, or ordinary syntactical language. Man must grow deeper and higher into the heart of the heights with the aid of his grown up consciousness in order to be able to hear the messages of consciousness from even inconscient objects. It is, therefore wonderfully said that the ancient patriarchs have found out the light that lies hidden under the cover of darkness and with their true thoughts and efforts they have produced the dawn of Light as their adorable Dawn of Light in the mother of illumination.

गूढं ज्योतिस्तमसः पितरोऽन्वविन्दन् । सत्यमन्त्राऽजनयन्नुषासम् ॥ If one is content with seeing the darkness alone, he would have led the world into darkness alone.

अन्धं तमः प्रविशन्ति ये विद्यामुपासते । ततो भूय इव ते तमो । य उ विद्यायां रताः । विद्याविद्ये चोभे वेदितव्ये ॥

Therefore both the science religious and secular have to be understood. One gives protection from danger and the other gives freedom and safety in all life. It is very clear that abstract theoretical knowledge based on intuitive effort is to be gained by thoughts of spiritual light on Agni as knowledge of the tangible light of the Sun by thoughts based on the observation and of the phenomena of the light of the Sun.

अग्निम्च्छा देवयतां मनांसि चक्षूंसीव संचरन्ति ।

Definite guidance in the actual path of life and living is possible with the co-operation of the two kinds of knowledge when they are complementary and directed towards integral wisdom of light. That there was light behind the shades of darkness was clearly known to the Vedic Seers and with their sure thoughts they worked out into the dawn of lift and light with active and full blown.

गूढं ज्योतिस्तमसः पितरोऽन्वविन्दन् । सत्यमन्त्राऽजनयन्नुषासम् ॥

Their emblem was the emergence of the Aditya in the midst of the lap of the Mother Aditi, the splendid glow of the rising Sun. The twilight holds the uniting reins of the White and Dark galloping horses of the lights of the day and of the night, the twin powers of the day and of night.

The dawn therefore gives us the birth of the light of the form the dark womb of the night. Night and Light are complementary to help birth and progress in knowledge and of its application in all kinds of activities. The dawn is, therefore, said to furnish us with new life.

एषा नव्यमायुर्दधानः गुढ्वीतमो ज्योतिषा अबोधि।

Veda is distinctly clear that here is a

universal warmth of the Fire of Agni in the heart of the universe as the source of the source of the life of all existence of even the solar energy and radiation under three concentric covers, and sustaining the three regions of existence and all their multiplications and manifesting apartments.

धर्मा समन्तात् त्रिवृतं व्यापतुः

The early states of the fully developing nature into many manifestations is also aware of the warmth, of this Fire of Life, while passing through the embryonic stages in the pregnant mother,

तयोर्जुषिृं मातरिश्वा जगाम।

The early states of the full developing deeper functioning of nature not only in the many manifestations, is also aware of this spiritual life, or of Fire of Life, while working in the embryonic stages of functions of deep developments within the pregnant mother.

तसां निचिक्युः क्कयो निद्वानं।

The deep-seeing seers alone are cognisant of this truth which is indicated in the deepest levels of Yajna constitution and operation through their manifestation in the manifesting stages of the central Fire, the secret of which the deep seers alone are aware.

परेषु या गुह्येषु व्रतेषु।

The workings of this Fire of creation is expressed through three attending manifest powers of "Treta" Agni

तिस्रो देष्ट्राय निरृतीरुतासते।

for the preservation of the developing Fire of Life into an individual and warding off of the death of the developing life in the mother and the universe and their presence and functioning in cognised only by the deep seeing and sharp-knowing seers, that have their places in the constitution of the creating Yajna. They are Mitra, Varuna and Aryama. From the Fire of the primal Agni, his Chaitanya is revealed in the form of knowledge of Brahma which flows into the fourfold moulds as flowing floods of knowledge as Sarasvati, the youthful beauty of a young lady as the resident mother of sciences with the four brads of her hair with the softness of ghee.

चतुष्कपर्दा युवतिस्सुपेशा घृतप्रतीका वयुनानि वस्ते।

The wise Suparnas remain within her womb and are born of her. The primal Agni first releases her wisdom and remains unmanifest in them. He releases two powers first from himself as Mitra and Varuna and Aryama further on and even as Bhaga at the doorway of the Dawn into the highest regions. It is Mitra and Varuna that bring down the forms of air, gases and vapours, and their showers into the manifest ocean of the universe. They are, therefore, known as the seed giving Vrishabhas or as Lords of such shower, on the humans on the earth and all their activities thereon. सम्राजा वृषभा दिवस्पती पृथिव्याः मित्रा वरुण विचर्षणी ।

They are next only to Agni, who thereafter

draw their powers from the waters as her twin children and are being nursed by the waters themselves for further creation and many other controlling powers as their longest reins (भूरिपाशाः). It is they that create the Brahmanda, the undivided Aditi, the mother of the Gods in the creative waters as the one Aditi, the primal wise mother and Daksha as the intelligence of the waters that created the Anda. The waters are therefore known as the parents of Daksha and Aditi for vast creation (दक्ष पितर:). Wise Suparnas remain within the flood of the wise waters as the mother of wisdom as Sarasvati तस्यां सुपर्णा वृषणा निषेदतुः One great Suparna remains extended in the wise waters first emerges from the Anda of the creative waters of mother Sarasvati एकस्सुपर्णः स समुद्रमाविवेश स इदं विश्वं भुवनं विचष्टे। Him the mother of wisdom addressed and he addressed the mother. तं मातारेढ़ि स उ रेढ़ि मातरम् I The wise waters are therefore said to be the source of all creation including Aditi and Daksha. The waters were originally created by un-manifest Agni himself. The great Suparna is the manifest of Agni himself, manifest from

his entire extension in his own wise waters. The waters therefore are also known as the parents of Daksha and Aditi. The waters are wise independent creative powers. They are generally known as the female mothers of creation, स्लियस्सतीः but they are also known to contain the masculine powers ता उपुंस आहुः The great truth of the statement of the two ideas of the masculine and the feminine powers as consistent unity is understandable only to the thoughtful visionary of the seers of wisdom. If mother is the basis of creation, father is also the source of creation as the seed supplier. The father and the mother coexist in the wisdom of the original waters of cosmic intelligence. The seer alone can cognise the truth of this statement which is the truth of showing the water alone as the secret source of all creation.

Therefore it is equally wise to say that Aditi came from the intelligence of Daksha or Daksha came from Aditi, the mother of creation. दक्षाद्वाऽदितिः अदितेर्वादक्षः the first manifestation of the great Suparna from the primal Agni is through the extensive wisdom of the oceanic waters of wisdom and all other subsequent emanations of creation are from the one Aditi, the great mother. The one Suparna is capable of the entire knowledge and is ever present in every one and all quarters of existence, for, with his powerful wings he has known all regions and is fit to declare the truth of all regions of Diva, Antariksha as well as of Prithvi to give good life and knowledge of all and is therefore known as the leader of all and giver of their life विसुपर्णो अन्तरिक्षाण्यख्यद्रभी रवेपा असुरः सुनीथः ।

The blessing of Vedic seer has therefore the urge for all to sing out the song of the life of the highest consciousness concealed in the most harmonious and benevolent poetry and song of music of the Rigveda as Samaveda which happily lends itself to be most delightfully sung out into the elaborate extensions of bliss and peace of the psalms of Samaveda.

इमां कल्याणीं वाचमभिविश्वे गृणन्त।

Let all humanity ever sing out into music

the sense, light, delight and harmony of this informing instruction of Vedic wisdom, learning and music of the culture of life of the Mandra tunes of consciousness as well as of the utmost utterances into the highest tones of the loftiest stages of Udgidha from the depths of the Pranas into the ultimate Rhythm. Veda is the knowledge of the science of Life of which the person of man is the concrete composite representation of the Purusha presents the three states of the Kshara, Akshara and Uttama Pursha whose entire and full stature and status is represented by the concept of the Veda Purusha i.e., the revelation of dedicated study, knowledge and enjoyment of the highest stature of being and becoming. Sometimes the individual splendour of the band of Adityas, may take us away from each other of them or from the bounds of their own regions into the next expanses of space allowing more and more places for our grasp and the scope of freedom of the regions themselves. Indra and Vishnu increase their spheres thus and supply more scope and freedom

इन्द्राविष्णू अकृणुतमन्तरिक्षं वरीयः।

and provide greater scope and provision for freedom, improvement and increase opportunity for comfortable and best life and living.

जीवसे नो रजांसि।

They thus increase the scope of life and their regions for the sake of the extension of creation, sustenance, law and development of ordered life in discipline amidst their constant work of improving and perfecting the Yajna of existence and extension, providing for the dawn of greater life with space, the light of a greater Sun and the great splendour of the ever creating Agni.

उरू यज्ञाय चक्रधुरू लोकं जनयन्ता सूर्यमुषासमग्निम् ।

They increase the space of their regions for their beings to reside happily well and to improve to the full, in the new extension of creation into a novel of the universe. The Rubhus named Rubhu, Vibhava and Vaaja are the three offsprings and offshoots of the self-centred circle of the universe named as the sons of the excellent vault of the heaven, Sudhanva. They provide the requirements of the gods, the Devas, with the implements of life and dress as also the arms needed for the wars of their cosmic region against the possible encroachments of the powers of chaos that surround the Devas immensely. For such purposes the Rubhus supply war implements of weapons as well as chariots with visors and helmets for Indra etc.

रथं ये चक्रुर्हरी।

They created the eating bowls for the seers or the Chamasa Patra around which they keep their watch for opportunities of food. They supplied the eating vessel for the seers of Rishis, and Pana patram, the drinking vessel for Indra. They also renew the lives of the forefathers into regenerations with the help of light rays; atmospheric waves etc. And thus helped the regeneration of Devas, Rishis etc.

शत्या कर्त पितरा इवाना:।

Ribhu is closely associated with Indra and his work. Vibhava is in close contact and relationship with the requirements of Varuna and Vaaja is concerned with helping the work of all the Devas. Strictly understood, Ribhu is the intelligence for light, Vibhava is Vidhyut or electrical energy and Vaaja is the power of energy, pure and simple. In a similar way the Maruths and Vayus are the general Powers of the Rodasi, the middle atmospheric region, bounded by the two regions of the earth and heaven on either hand. They are generally used and commanded by all prominent governors and commanding Devas like Indra, Rudra, Varuna etc. The powers of the Prithvi are the Vasus forming the wealth of (the physical) existence (of Nature) while the powers of Diva are called Adityas born of Aditi, the mother of light, and the powers of the Rodasi or Antiariksha are called the bands of Rudra to make the terrestrial and celestial powers meet and mix up in the Antariksha and thus influence the pranas of all creatures of the universe into all expansive developments. The

rudras in the constituted beings are eleven in number and they correspond to the pranas of man and are called the eleven Rudras, i.e., the five pranas of the five sense organs, and the five pranas of the organs of work, with the one prana of the mind as their internal common plan behind all the ten physical and sense organs and mind. They work out the functions of all the important powers that have a wide range of activities over the entire regions of the cosmos and of the microcosm. As Visve Devas, they take part in the common work of all the regions of existence. All the Vasus, Rudras and Adityas take their combined parts in producing the vak or speech which is known as the milk, and the cow is also known as the mother of the Rudras, daughter of the Vasus, and sister of Adityas and thus she takes part on behalf of all the Devas and serves them as their milk-cow of speech:

माता रुद्राणां दुहिता वसूनां स्वासा आदित्यानाम् . . . ।

Let none hurt this innocent and direct supplies of milk with their petty-minded consideration

गामनपगां मा वधिष्ट दभ्रचेताः।

The great primal Agni works on the universe in its three main regions as the Pavaka, the purifying Fire among Vasus, as the Sankara in the Antariksha among the fighting Rudras of all enemies of life in the middle region and as the all-enveloping Vishnu among the Adityas. The powers therefore are classified as Vasus, Rudras and Adityas.

Just as Pavaka is the leader of Vasus, and Sankara of Rudras, Vishnu is the leader of the Adityas. But he is not only the leader of Adityas of Diva but also of the region of Prithvi and of the Rodasi or of Antriskha. He is therefore called Trivikrama moving and ruling over three regions. He is therefore known as increasing beyond all measure.

परो मात्रया तन्वा वृधान:।

No being in the past nor in the present could conceive of the vastness of his great

power of extension:

न ते विष्णो जायमानो न जातो देवमहिन्मः परमन्तमाप ।

For the entire and proper functioning of the coordinated teamwork of the powers of Yajna, he has increased the extent of the universe and set up Agni, the dawn and the sun for the purpose of helping the beings:

उरु यज्ञाय चक्रथुः।

Let your increase be effected by the voice (and word) of invocation (वर्धन्तु त्वा सुष्टुतयो गिरों मे) May you be pleased. Oh! Vishnu, Improve our well-being:

यूयम् पात स्वस्तिभिस्सदा नः। वषट् ते विष्णवास आकृणोमि तन्मे जुषस्व I am making a place of residence for your stay.

शिपिविष्ट हव्यम्।

Vishnu moves quickest in the wide regions, the outermost 'Uru' and is therefore

known as the quickest wanderer 'Urugayaha'. Light itself is the very name of this most ancient one:

त्वेर्षं हि अस्य स्थविरस्य नाम।

His rays of light are extensive, longest sharp-pointed and very penetrating. It is in his three great regions that all the parts of the universe remain extensive, and extending.

यस्योरुषु त्रिषु विक्रमणेषु अधिक्षियन्ति भुवनानि विश्वा।

His three regions are fully nourished and sweetly fed beyond all want and decay and are fully fed and satisfied:

यस्य त्री पूर्णा मधुना पदानि अक्षीयमाणा स्वधया मदन्ति।

It is there that his highest region shines in his supreme splendour with his quickest march:

अत्राह तदुरुगायस्व वृष्णः परमं पदमवभाति भूरि।

The great spring of the sweet waters of life

is in the mighty region of Trivikrama:

विष्णोः पदे परमे मध्व उत्स:।

It is from there that the great one is ever ready to meet and fight any contingent danger to the cosmic universe as a youthful fighter of every nook and corner, with his great form beyond all measure

बृहच्छरीरो विमिमान ऋकभिर्युवा कुमार: प्रत्येत्याहवम्।

The seer prays Vishnu to let the mind of the seer be informed of any change effected in the margins between the cosmos and chaos as a result of his fight with the gigantic demons of the chaos against their inroad over the borders, without any hiding of the fact and changes:

मा वर्पो अस्मदपगूह एतत् यदन्य रूपः समिधे बभूथ ।

The universe is thus the unity of diverse aspects, regions etc. unified and supplied water by a common conscious spring of sweet food of nourishing waters of the streams of life, wisdom through which he has released his chaitanya and remained extended in the flood of his waters of wisdom, keeping the flood warm with the warmth of life; knowledge and all necessary powers of immortality:

अप्स्वन्तरमृतमप्सु भेषजम् अपां प्रशस्तये देवा भवर्दाध वाजिनः।

A system of paths extending through the regions of the vast regions is laid and watched over with protection by the wise Pusha both in the higher as well as the lower regions:

प्रपधेपथामजनिष्ट पूषा प्रपधे पृथिव्याः प्रपथे दिवः।

There is the outermost circle extending along the outermost margins of Aditi with the twelve divisions of the zodiac having Agni as its centre and the seven hundred and twenty radii of days and nights as the radiating Rudras, the sons of the purfying Pavaka, encircled by the outermost circumference of space as Vishnu. A perfect unity exists amidst all the regions with Agni as the central Pavaka, Rudra and Vishnu as their leader of Vasus,

Rudras and Aditays. The whole globe of the universe of all dimensions has a unity in the one Atma of the whole of existence, keeping the unity of all in him as the centre and the infinity of all as the perfect unity of all reality. Agni is the first centre of this unity and Vishnu all-embracing as the outermost circumference. He can unfold himself into the universe and infold the universe into the heart of Agni, the Atma ever remaining in his boundless and everlasting Chaitanya. The Atma evolves into all and works out all functions in all capacities and creates all अहं रुद्रेभिश्वरामि, अहमादित्यै, अहं मित्रावरुणोभा विभर्मि, अहमिन्द्राग्नी अहमश्विनोभा विभर्मि।

The Atma of Reality can create whatever it needs and controls them all, a terrific one or a deep knowing seer:

यं यं कामये तं तं उग्रं कृणोमि तमृर्षिं सुमेधाम्।

This unity of the Atma of all existence is called Agni, who unfolds and infolds himself as his will as the supreme controller, not by any external urge in the conscious will of its power of unity of control:

आनीदवात स्वधया तदेकं...

Beyond the range and control of that unity of the universe, nothing could exist in isolation.

तस्मादन्यन्नापर: किंचनाऽस।

The infinity of powers is contained in the unending and abiding unity of infinite Chaitanya of the Atma, the primal Agni. This unity of existence is in the Ritam the harmony of all states, stages, shades of facts in the unific maturity of all Dharmas from one Dharma as all the petals of the flower are from the one heart of the bud of it. It is therefore clearly stated to be moving between the extreme points of the changes of directions of active pendulum. Ritam is an an ever expanding ocean at one extreme point, and Satyam is the ever manifesting fact of phenomena of light moving towards its extreme noumena into the concrete shape of the form of the active Sun at a single atom of the ocean of harmony. Ritam and Satyam are

both true at the two extremes of movement when reached.

ऋतमर्षन्ति सिन्धवः – सत्यं ततान सूर्य:।

The oceanic spheres of the regions are ever expanding at one end of the wave and the minute atomic particles are the culminations of the phenomenal oceanic existences towards their noumena into concrete particles. The concepts of Ritam and Satyam are therefore pointed out to be properly conceived and cognised at the level of the summits of two extremes of one wave of truth highly and intently developed Tapas.

ऋतं च सत्यं चाभीद्धात्तपसोऽध्यजायत।

Below their level comes the concept of the night as the great interval.

Thereafter comes the agitating ocean of light, coming into manifestation. Only afterwards come the Sun and the Moon as in the previous periods of creation on a part with the view of the creating form of Surya,

सूर्याचन्द्रमसौ धाता यथापूर्वमकल्पयत् –

in the one spiral development of the two extreme levels. The warmth of life and consciousness are represented at different levels marked by the states of Akasa or the expanse of space containing the elements of sound, light air, vapours and finest particles like dust, and as concrete condensed particles of light in the form of the Sun. In the expanding stages of abstract space the light of Akasa is the most tangible state, while towards the close of the continually manifesting and concretising stage, is marked by the form of the visible Sun. Really it is the same light whether extended into the oceanic expanse of the abstract extension of light into the form of the Sun through the phenomena of the waves of light. Therefore, it is stated in Rigveda that Ritam and Satyam are the subject and most vivid forms of Reality containing all the contents of all the states of existence. The oceans of water, air, light and space are exhibiting the expansions of Ritam, and the specific light is developing the form of the

tangible Sun.

Between the states of the ocean of Akasa and of the concrete condensation of the form of the Sun, there is only the same set of contents of Reality in two states at the two extremities of the one spiral extension. Sometimes it is stated in the Upanishadic language that the abstract spiritual is the source of concrete existence, while at other times, the concrete is the source of the abstract as

सदेव सोम्येदमग्र आसीत् or असद्वा इदमग्र आसीत्

where Sat and Asat point the relative states of the greatest unity. Therefore, it has to be reconciled and explained by the statement.

सत्यं चानृतं च सत्यमभवत्।

The state of the particles and of the expanse of oceanic space of no particles contain all the stages of light element of Prakruti. They are all surcharged with the power of consciousness of the natural, pure and original Ego and the determination of the power of the will with the clarity of the intelligence of the mind.

To extend and to concise and maintain the unity of their basic consciousness through all stages of manifestation maintained by the waters of Chaitanya which are released to maintain in them all the powers of intelligence and knowledge as the ocean of the revealing flood of light

महोऽर्णः सरस्वती।

The waters are said to contain the powers of immortality and even of rectitude-

अप्स्वन्तरमृत मप्सु भेषजम्।

The powers, the Devas above, who are bred and brought up in the waters themselves are capable of knowing the full capacity of the water -

अपां प्रशस्तये देवा भवथ वाजिनः।

The blue waters of the surging oceans with their ever continuing waves of life pulsations on the earth, in the water, in the air, in floods of light, Vidyuth, in clouds and vapour particles in the vast space of the sky are the storages of all powers in the all-pervading ethereal floods of water which were at first released by from his Agni own Chaitanya or Consciousness. The concept of the waters, their flow as Sarasvati, their role as the medium of the flood of creation as Savitri, and their song of voice as Gayatri, the hidden silent music of harmony of Ritam, represent the main powers of waters as the flood of life with renovating and renewing ripples of Pranava from the warmth of the flood of universal Agni, inherent in the warm flood waters of blood without any aid of extraneous fuel or other source of heat-

अनिध्मो दीदयदप्स्वन्तर्यं विप्रास ईदते ।

The wise seers worship and depend on the warm waters themselves as their guide and controller, and look upon the waters for their guiding wisdom from Agni. Concepts like these are quite clear and true notions based on the facts of the sciences of radiation as the foundations of their scientific knowledge.

Veda is thus a great system of scientific thought both of concrete and of abstract facts which once guided the life and culture of a great section of mankind. We have therefore to approach Veda with a broad view and liberal attitude without pride or prejudice of an age or race to make a survey and synthesis of its findings of various truths of the earth, atmosphere and heavenly regions of existence, and to know how they utilised them with their uproar inviting the human attention.

We must note that we have to collect, select and ponder over facts from the maze of concentrated literary forms of Rig Vedic poetry, through the strange regions of prosody and of music of praises and of ecstacy. It is from the truths of this cultural Yajana of the original Veda that the present Yajur Vedic Samhitas were compiled for the assistance of our Yajnic performances, and are explained by their Brahmanas, Aryankas and

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Upanishads which were composed and guided by Kalpa Sutras, Brahma Sutras, Dharma Sutras and the Smritis of Dharma Sastras. The language itself of the sixth and seventh mandalas of Rigveda in particular is most ancient, archaic and very abstruse belonging to the most ancient Rishis. We have mainly to cull out facts from Rig Vedic language and remarks and notices scientific facts which may easily be considered quite modern, suggesting and ancient parallel to the trend of modern scientific developments. It is a wonder why we have at present in our Indian astronomy accounts and discussion of only luminous planets while the Vedic seven accounts are off ten important planets with Uranus, Neptune including Pluto also, corresponding to Indra, Varuna and Soma. It significant to note that the present is astronomical science has of late included them in the modern planetary accounts and inferences of their influence of radiation on the particles of earth imparting to them powers of varying radiations on the earth, atmosphere as well as of the luminary skies. In their strange movements of their coming nearer and going

farther from their routine paths extending over hundreds of miles, they may not have the same radiating influences at all on the world, when they go far away from their normal orbits, and yet when they are nearest they might have been actively influencing the world of facts with their active radiator powers as at present. They might require ages of time before they approach their nearer paths from their most distant deviations, after long periods of aeons. It is possible that the ages succeeding those of Vedic culture should not have had the experiences of what are called the new planets by modern astronomers, Uranus, Neptune and Pluto, as they now do i.e. of imparting powers of radiation to the stellar and atmospheric regions. So those ages that succeeded the Vedic aeons should have left off their attention over these planets. The Vedic accounts of the great Adityas of Mitra, Varuna, Yama and Soma are replete with the radiating influences of these planets. The knowledge of the Vedic sciences and their remarks of scientific facts of the earth, air, oceans and the sky of the immediate planets and of the distant feeble stars have been

explained not merely as parts of the nearer Yajna of the immediate universe of facts but they also include the distant nebulae and the faint stars of the immediate and ultimate regions into the unity of one mighty Yajna that includes the "Krusanah" and surrounds both the immediate and the ultimate sections of the worlds into the greatest unity of the mightiest Yajna of total reality as a great unit united by golden sheen of chains.

अभीवृतं कृशनैर्विश्वरूपं हिरण्य शम्यं यजतो बृहन्तम्।

The creative Savita standing in a golden universal chariot, drawn under the sheen of golden horses with the golden reins controlling the march of the horse powers of the light of the day and of the night on either side into the dawn of twilight as twin horses giving the prospect of the brilliant glory of Vedic wisdom

आस्याद्रयं सविता चित्रभानुः कृष्णा रजांसि तविषीं दधानः।

Who can say in what region of the great

universe the great Suparna is illuminating and declaring to the world with the speediest flight of his wings? Who can say with surety where and in what region is the sun shining at a given moment -

विसुपर्णोऽन्तरिक्षाण्यख्यद् गभीरवेपा असुरः सुनीथ: । केदानीं सूर्यः कच्चिकेत कतमां द्यं रश्मिरस्याततान

When the Savita with his inevitable golden sheen comes near and reigns over the universe, surveying every region of it in his daily march over all regions, with rare gems in his hold for rewarding the presence of the offerer with his gifts and blessings -

हिरण्याक्षः सविता देव आगात् दधद्रत्नानि दाशुषे वार्याणि।

Returning from the dark regions and introducing into it all the mortals and the immortals, the creative Savita comes surveying the whole universe and moves through all regions, athwart, above and below, drawn by his golden hued horse –

आकृष्णेन रजसा वर्तमानो निवेशयन्नमृतं मर्त्यं च। हिरण्मयेन रथेन सविता देवो याति भुवनानि पश्यन्। याति देव: प्रवता यात्युद्वता याति सुप्राप्यं यजते हरिभ्याम्।

It is really wonderful to note how the Vedic people made use of their knowledge of the world of all the tints, of all the planets to contribute for the safe survival of their life and of all mankind in all generations of humanity. The fundamental conceptions of Veda, of life, knowledge, of movements and progress into space, time with their notions of the universe of planets, their ideas of the quick march of light as Asvins, the twin horses of the light of the day and of the night, along with their values, individually and relatedly, are all of great comprehension and intimately associated into a system of mutual relations in the march of the universe and of the moving man in the universe, as also the march of pranas in the heart of the movements of man as a miniature Yajna of life.

जगत्याम् जगत्

In the midst of a system of relative movements, all presided by the Supreme presence and guidance-

ईशावाश्यमिदं सर्वं यत्किंचिज्जगत्यां जगत्।

The movements of time, light, energy and power are of an immense scale. The concept of the waters or Akasa is itself of a highly scientific nature amidst many others. The waters are brought about by the united relationship of the twin powers, Mitra and Varuna, at the time of Yama's third firmament of Adityas, along with the appearance of thunders and lightening of vidyuth associated with the formation of drops of water, their collecting into clouds and their gliding or 'skannam' of droplets from above, and their fall and flow as streams on the earth into the rivers and oceans and entering the sky again signifying the wise activities of the floods of Sarasvati; representing the continuous flow of Chaitanya as the eternal flow of consciousness of the primal Agni as the centre and source of the life of the universe. As the

creative mothers, the waters are made to represent the flood of homogeneity into multiple forms of facts and of phenomena. These forms also Diti contain Agni as the immanant, unmanifest, giving the Agni, the manifestation of birth, as the divine waters themselves, which contain immortality and rectitude to all in whom it also spreads to give and sustain life as Jeevanam, the maintainer of life. Men are therefore said to have been wealthy in having the ready accessibility to the rich powers of the divine waters.

Similarly light is a variety of this Agni and contains many powers as aids to the celestial Rubhus, the engineers for implementations out of their light, electricity or Vidyuth, air, vapour etc. for creative and manifesting powers of implements, vehicles and arms. The terms Aditi and connote the ideas of cosmic and microcosmic unity and diversity of existence. They are pointed out as closely inter-related, while Aditi denotes the unity or motherhood of creation. Daksha represents the inherent intelligence and skill that is behind the manifestations of creation, in other words,

and Purusha. The journeys Prakruti mentioned in the Veda are not merely on land and waters alone, but are also in the midst of the air and light of the high skies, covering the ultimate regions of pure space and of the regions of particles of varied dust, and even the interplanetary journey. Rubhu, Vibhava and Vaaja are said to be light, electricity and energy respectively which enter into the process of the making and working of varied creation of machinery and are the mobile powers of all regions. The watery vapours in the sky are said to be pregnant particles of vapour and steam in the sky and also subtle powers of attraction, repulsion, exhibiting magnetic and electrical sources of even radiation from the particles of fiery spark like the Ulkas, lights of flame and flashes in the sky in the fine water vapours moving in the high unbound spaces of the sky are considered to be moving about in whirls like pregnant dames developing and carrying within them the greatest of the forms of powers of Agni as the forms of his prime powers of magnetic and electrical energy

उरौ महान् अनिबाधे ववर्धापो अग्निं । तस्य ज्येष्टं महिमानं वहन्तीः परियन्ति वह्नीः ।

The vast oceanic regions of the many levels of space of the sky, of light, of air, of vapours and clouds, as also small smoky particles known as Rajas around the seven planets called the Adityas, are also known as the mighty seven oceans as mothers, the planets being known as the seven sons of seven oceanic spaces. All these regions have to be comprehended and brought into one assortment of the universe and its powers are thus latent or potent showing out their dynamism and activities. The counterparts of all these cosmic aspects are also recognised as having their parts in the framing of the forms of inanimate as well as animate life by their convergence into the cool dark-regions to give rest and respite while the average starry heavens and also the feeble shady sheen of the groups of the nebulae called "Krusanaha" at the end of their far groups. Savita is stated to be as revealing and releasing the world from the heart of light into the dusk of the night,

कृष्णो रजसा द्यं भृणाति ।

The ancient seers have understood long ago that there is light in the heart of darkness also and with their right knowledge and efforts they revealed that the light has its home in the heart of darkness and revealed the light hid in the darkness –

गूढं ज्योतिस्तमसः पितरोऽन्वविन्दन् । सत्यमन्त्राऽजनयन्नुषासम् ॥

The influence of the movements of the Sun and of the other planets and stars over the terrestrial world and of the individual constitutions were protective and directive as mobile chariots for distant journeys in the expansive regions of the Earth. Similarly in an extended sense, the whole world is said to be the vast and ever moving chariot of space as the biggest Vimana, the great all-inclusive vehicle in the airy and stellar regions of the sky, amidst immense space, the greatest ocean of reality itself with its graded waves of differing lengths, ranges and speeds of light, pranas and movements of life, light and of

sound- अनारंभणे तदवीरयेथां अनास्याने अग्रभणे समुद्रे।

Amidst which the primal twin powers of Agni called the Asvins, convey the fluent and safely moving chariot of the Sun who works on as the Sun of life in the vast ocean carrying Bhujyu, the fiery consumer of food and even of the consumed food itself in their vehicles in the circulating waters to the entire constitution of man and its constituents, even in the shape and form of the corpuscles, in the oceans of blood channels with their interlinked relations of the nerve connections

यदश्विना ऊहथुः भुज्युं शतारित्रं नावमा तरियवसाम्।

The pulsating twin waves of pranas i.e. Nasathyas, the twin motor powers of pranas functioning through the nose as breath keeping up life movements, thoughts and their functions through the nostrils to carry on the lively son of life continuously even for days and nights of life on end. The great vehicle of the universe is working on the vast coordinated Yajnas of life and existence with

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the speed of infinite horse power. Each solar system is a great working vehicle with one manifest and incessant power of life, the Sun, the real and endlessly working horse of the power of life, the Sun the real incessantly working horse with its seven names in the seven regions of one chariot -

रथमेक चक्रंएको चक्रो वहित सप्तनामा।

The movements of Suparna, born of the Brahmanda of knowledge with its fully developed wings, move on through the regions of Antariksha and of Diva, through all the dhanvas or arcs or arched paths through the regions of higher spaces (arches) moving above, below and in the middle of the Rodasi in the midst of Ulkas or Sparks, flares and flashes of electricity in the regions of the sky and among strange phenomena, along the ranges of the polar nights.

Agni the origin of all intense activity is silently and calmly functioning as the silent mind peacefully brooding over the plan of his working in the brain during the calm night like the oldest unmanifest dame, Lopamudra, the silent dark night as the ancient mother of infinite dawns of the days called Samudra, the manifest day of lights, slowly giving birth to the dawn and the Sun as the son born of the dawn in turn just as the dawn is born of the night.

Agni is the one source of the ocean of existence and of the wisdom of the waters, released at the dawn of creation with full potencies of infinite values of existence forming many channels and directions and paths for their incessant flow, as the path of the Adhwarakrit.