

PART ONE

Sabda Brahma

Science and Spirit of Language in India

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ABSTRACT

This article focuses on the development of science and philosophy of linguistics in India as branch of study in ancient India and its contemporary relevance for the study of language. Very few other countries can claim to have produced such an extensive literature in the field of communication in the ancient age. From the early investigations in phonetics in the Pratisakhya and Siksha, through the grammar of language in Ashtadhyayi and Mahabhasya, to the highest levels of spiritual consciousness of Sabda Brahman in Vakyapadia, Indian thought moved from the empirical to the transcendental, and from particular to the universal, enfolding a holistic and pragmatic view of language. It is argued in the article that the science and spirit of language in India was integrated with social and ethical values which are so relevant and vital for effective and integral communication at all times.

1. INTRODUCTION

There seems to be an impression amongst the scholars in the West, and following them some within the country, that India made little or no progress in the field of science and technology in the ancient times. This perception of relative lack of interest in India in the study of science is related to a corresponding perception of over-emphasis on philosophy and a culture of spiritualism in the country. Both the perceptions seem misplaced, and they seem to be based on a misunderstanding of the concepts of science and spirituality.

This impression is so widespread amongst western scholars that even an eminent scholar like A B Keith was of the view that: "In the great period of Sanskrit literature, at any rate, experimental science was at a low ebb, and little of importance was accomplished in those fields in which experiment is essential". (Keith, 408). Keith goes on to say that "a characteristic feature which in greater or less degree pervades the whole of scientific literature in India is the love of subdivision and of inventing

distinctions, with a tendency to lose sight of the broad and important lines of demarcation while concentrating on the minutiae". (ibid. p.410).

Recent researches in India and the West, however, have thrown light on convincing evidence to show that ancient India's achievements in science and technology were not insignificant, and even as Indian scholars went deeper into scientific analysis they kept their sights steady on the broad and important lines of synthesis. Joseph Needham, in his path breaking study of scientific and technological development in the non-Western civilizations observed that, "In recent decades much interest has been aroused in the history of science and technology in the great non-European civilizations, specially China and India, interest, that is, on the part of scientists, engineers, philosophers, and orientalists, but not, on the whole, among historians". (Needham, p.214)

Later, in his foreword to a similar study in India, Needham remarked that one of the most striking experiences of his life was connected with the ethical values to be attached to science, and he considered ethics to be needed today more than ever. In this context, he was happy to read about the ancient Indian concept of *rta*, the order of nature, its pattern and organization, self-originating and underlying all that happens. (Chattopadhyaya, p. vii)

The present article focuses on the development of science and philosophy of linguistics in India as branch of study that moved from the empirical to the philosophical and transcendental, from particular to the universal, from the early investigations in the *Pratisakhya*s and *Siksha*, through the grammar of language in *Ashtadhyayi* and *Mahabhasya*, to the highest levels of consciousness of *Sabda Brahman* in *Vakya-padia*. Very few other countries can claim to have produced such an extensive literature in the field of communication in the ancient age. It is argued in the article that the science and philosophy of language in India was integrated with social and ethical values which are so relevant and vital in effective and integral communication at all times.

2. SCIENCE AND SPIRIT

Science and spirituality are often seen as two incompatible approaches to reality. Science may be defined as a joint effort of humans to understand the world and prevent errors, using our senses and invented instruments to enhance our senses. This we call the experience of the world in its material aspects. Spirituality can be understood as an effort to understand the general principles of structure of the world through inner experience. There are a few requirements for such an epistemological framework to function. One is that consciousness is understood as complementary to its material substrate, the brain, and hence capable in principle of having its own access to reality. The other is that dogmatism, both on part of science and on part of religions is put aside and spirituality is understood as the hitherto neglected area of investigation that needs to become part of science as method of inner experience.

Science is most usefully seen as a collaborative effort of humanity to describe and understand the world and to prevent error as much as possible through systematic

inquiry and experimental verification. It is a collaborative effort cutting across national frontiers. The agent of science is not the single scientist, but the whole science community in the present and the past. This is often referred to as the empiricism of science or knowledge through experience. We understand the world by the collaborative efforts of experiencing it through our senses, trying to find out potential relationship between the events we observe, and theorizing these relationships. The process of experiencing using our sense organs and all those enhancements are telescopes, microscopes, particle accelerators, structures and unstructured interviews, radiography etc. This experience is usually directed at the material world, hence “outer experience”.

Because the scientific enterprise has been going on for some centuries now, we need to respect its history and the systematic inquiry that has established itself. It is important to understand science as ahistorical, collaborative effort of mankind that has created certain institutions, rituals and processes and thereby has given rise to a republic of science. CP Snow. One of the methodological hallmarks of science, as opposed to unsystematic experience of everyday life, is that it is systematic, installing processes that prevent error as much as possible. This requires that observations, experiences and theoretical structures designed to model relationships between observations are not just singular, but shared by others, or can in principle be shared by a community of competent observers. In practical terms this means that observations are not just singular, by shared by others, or can in principle be shared by others. In theoretical terms it means that models describing relationships between events or observations and giving explanations are consistent with the rest of current scientific understanding and inherently plausible. This requirement is often termed as objectivity.

In natural sciences the experimental method or empirical testing have become an important tool, but is only example of a method to prevent error. Other examples are peer reviewing process in scientific publishing, replication procedures in the production of data, and checking of empirical results against theoretical expectations.

The general trend of human thinking in the nineteenth century had been toward an increasing faith in the scientific method and its mechanistic, logical worldview. It led to a general disbelief with regard to those concepts and language which did not fit into the closed frame of experimental science. The importance given to Spirit in the study of physical phenomena in the Universe was never contested in ancient times, right up to the end of the 18th century. All his life, Newton was fascinated with the topic of Spirit. (Charon, p. 27). In the next century, the progress of science was pictured as a crusade of conquest into the material world. Utility was the watchword of the time, and the human attitude toward nature changed from a contemplative one to the utilitarian one.

This frame of enquiry was so narrow and superficial that it was not easy to find a place in it for the many concepts of human language that always belonged to its very substance, for instance, the concepts of mind, of the eternal spirit, or of life. One of the extreme consequences of this rigid frame of thought was the open hostility of science toward religion and philosophy and its loss of touch with that part of reality which is beyond the material world. (Heisenberg, p.137). Ideologies of scientific materialism and

communism used this rigid framework to try and transform the dynamic process of evolution of the world into a still and fixed picture.

In the twentieth century, the penetration of modern science into the world of atoms, hitherto closed to the eyes of man, was indeed an adventure that may be compared with the great journeys of discovery of the continents across the globe and the bold explorations of the astronomers in to the depths of celestial space. (Niels Bohr, p.14). It was discovered that inside the atom, the nucleus is nothing more than an oscillating field, wave of rhythm. Subatomic particles are shadows dancing in pure rhythm. At the ultimate core, at the heart of the world and the universe, there is no fixed form. Once again, there is only dance. (Leonard, p. 34). These revelations in modern science had far-reaching ontological and epistemological implications for our understanding of the world around and within us, as highlighted by several Noble laureates, renowned physicists and social scientists. (Einstein, 1952; Bohr, 1958; Heisenberg, 1962; Schrodinger, 1967; Prigogine, 1977; Charon, 1977; Bohm, 1980; Capra, 2015; Wendt, 2015; Burgess, 2018).

It came to be widely acknowledged that scientific concepts and theories covered only a very limited part of reality, and the other part beyond scientific explanation is infinite. It is now understood that both science and philosophy try to realize the truth of the oneness of things in the eternal spirit. Science dispels the darkness oppressing the mind, shows up the incompleteness of its own world, and philosophy prepares the mind for something beyond it. (Radhakrishnan, 2019, p.474). All the systems of thought in India accept the view of the great universal rhythm. The real is not the universe extended in space and time. There is something deeper than this, it is being not becoming-atoms and souls, or purusa and prakriti, or Brahman (Radhakrishnan, ibid. p.11).

Whenever we proceed from the known into the unknown we may hope to understand but at the same time we may have to learn a new meaning of the word 'understanding'. We know that any understanding for the common people must be based finally upon the natural language because it is only there that we can be certain to touch reality, and hence we must be aware with regard to the crucial role of natural language and its essential concepts. Therefore, we need to use the concepts as they have been used at all times. In this way modern physics has perhaps opened the door to a wider outlook on the relation between the human mind and reality. (Heisenberg).

It is an open secret that the pioneers of quantum mechanics, Bohr, Oppenheimer, Heisenberg, Einstein, de Broglie, and in particular Schrodinger were fascinated and inspired by Vedic philosophy. Schrodinger essentially regarded the Vedantic worldview as an adequate theory for quantum mechanics, "The unity and continuity of Vedanta are reflected in the unity and continuity of wave mechanics. This is entirely consistent with the Vedanta concept of All in One". (Burgess, p. 137). Albert Einstein believed that the true religion has been made more profound by scientific knowledge which contributes to a spiritualization of our understanding of life. (Einstein, p. 49). He echoed Swami Vivekananda's conviction that if we apply the scientific methods of investigation to religion, the essential parts of religion will emerge triumphant out of such investigation. (Ranganathananda, p. 19.)

A deep faith in the integrity and rationality of the universe and a yearning to understand the mysteries of the objective and subjective reality, enabled scholars and sages in India to spend years of solitary labor in disentangling the principles of human life. Only those scholars who had devoted their life to ends of such knowledge and understanding had the strength to remain true to their purpose in spite of countless failures. It is the integral vision of Indian scholars that has made philosophy comprehend several sciences which have become differentiated in modern times. (Radhakrishnan, 2008, p.11.).

It is in this context that we need to place and study the contributions of Vedic sages, Yaska, Panini, Patanjali, Bharat Muni, Bhartrihari, Abhinavagupta and others who are only a very few among hundreds of renowned scholars who represent the long intellectual tradition of science and spirituality of language in ancient India. (Belvalkar, 2015 p. 5-7). Vedic philosophy paved the way for science of linguistics in India, and their insights are still being understood and appreciated by modern scientists-physiologists, psychologists, neurologists and others.

3. SCIENCE OF RITUAL

The function of speech as a way of achieving success in life and integration of human existence with the supreme reality has remained a constant field of enquiry in Indian intellectual tradition, and speech has been identified with both the rational and spiritual aspects of reality. The marriage of sound and speech to consciousness constitutes one of the great philosophic achievements of ancient India. This transformative aspect of speech is founded firmly in the Vedic rituals of recitation and intonation. Speech is the Vedic Yoga: it unites the mind and the matter, the particular and the universal, the individual and the supreme reality. The Vedas are often regarded as abstract and mysterious sacred books. If there is one thing the Vedas are not, it is books. Vedas are oral compositions in a language that was used for ordinary composition; and were communicated by word of mouth like that language itself. In the hymns of the Rigveda a vocabulary had been already developed to deal with linguistic matter as grammar, inspiration, illumination and so on. (Staal, 2007, p.xv.).

The intellectual roots of the science of linguistics in India lie in the methods developed for framing rules for complex Vedic rituals. On a philosophical level, ritual is probably also the origin of a leading idea behind grammar as well as other disciplines such as yoga in ancient India: that human activities can be analyzed by explicit rule systems, and that performing those activities in awareness of the rules that govern them brings merit. These initial phonetic and phonological observations, which were piecemeal and ad hoc, were supplemented with similar observations pertaining to morphology, syntax and semantics, all combined in a single generative grammar of spoken Sanskrit. The main innovation was a methodology that developed the familiar concept of rule to the study of categories of rules, rule systems and rule order, which corresponded to mathematical formalization. (Staal, 1996, p.43). Conditions of empirical adequacy,

generalization, consistency and methodology, are easily met in the case of Vedic rituals and these should be regarded as experiments and works of science. (Staal, 1982, p.31).

The major works on phonetics in ancient India fall into two main categories of linguistic texts, *Pratisakhya*s and the *Sikṣas*. The former are phonetic treatises relating to the pronunciation of the four Vedas during the rituals. The *Sikṣas* on the other hand are, with some exceptions, less specifically related to a particular Veda, but in many cases supplement the teaching of the *Pratisakhya*s. Whilst it is likely that the *Pratisakhya*s are based on an early *Sikṣa*, some of available texts of the latter appear to be of later date than the former. (Allen, p.6-7). It seems there was a close interaction between *Sikṣa* and *Pratisakhya*, leading to advancement of both. Apart from these specifically phonetic works, numerous statements on phonetic matters are to be found in the grammatical works, more especially in Panini's *Aṣṭadhyāyī* and Patañjali's *Mahābhāṣya*.

In his pioneering study of the 'Phonetic Observations of the Indian Grammarians' Siddheswar Varma (1961) was able to establish that:

- The views of Indian phoneticians were not fanciful, but on the whole, sound and accurate observations, some of which may be helpful to modern philology.
- The language which they dealt with was not a grammarian's language but a living language which was in close touch with the experienced reality.
- The empirical adequacy of their observations regarding the pronunciation of Sanskrit is generally corroborated by (a) the phonetic structure of Sanskrit (b) the evidence of inscriptions (c) parallel linguistics.
- The *Pratisakhya*s were not "dead *Pratisakhya*s" composed for priests who had to be drilled into a proper recital of the sacred texts," but manifest a thrilling interest in the living phenomena of the language.

Very early in their explorations the Indian phoneticians looked into the mental or neural bases of speech. The introductory stanzas of the *Paniniya Sikṣa* are representative:

The soul, apprehending things with the intellect, inspires the mind with a desire to speak; the mind then excites the bodily fire which in turn impels the breath. The breath, circulating in the lungs, is forced upwards and it impinges upon the head, reaches the speech-organs and gives rise to the speech sounds. These are classified in five ways- by tone, by length, by place of articulation, by process of articulation and by secondary features. Thus the phoneticians have spoken: take careful heed. (Ghosh, Paniniya Sikṣa, 6-10, p.54)

The *Sikṣa* and *Pratisakhya*s received the attention of various later commentators. In so far as they were the bearers of a continuous tradition, they were able to augment and elucidate the laconic brevity of the aphorisms. With the benefit of hindsight it seems that these early Indian phoneticians spoke in fact to the twentieth century rather than to the Middle Ages or even the mid-nineteenth century, and many a statement which the commentators and even Whitney or Max Muller have failed to comprehend makes immediate sense to the phoneticians, the physicists, and the neuroscientists today.

Specific hymns dedicated to speech in *Rigveda* mention three stages in the development of language: (1) inarticulate speech, (2) primitive articulate speech, (3) language proper. (Verma 1938, p.1). In Chapter 10, hymns 71, 114 and 125 indicate the significance of speech in Vedic times. In these three extensive hymns, speech is considered as an unseen, all-pervading energy, producing, sustaining, and extending beyond creation. It is seen as coexistent with Brahma and behind every object in this universe. “Brahma is all pervasive and so is speech”(Saraswati, p.1069). It is remarkable that in the ancient hymns of the *Rigveda* a semitechnical vocabulary was already developed to deal with such linguistic matters as grammar, poetic creation, inspiration, illumination, and so on. (Coward, p.33).

It may be remarked at this point that statements in modern physics are in some way complementary to the concept of speech in these hymns of *Rigveda*. If we replace the word “*Vak*” by the word ‘energy’ we can almost reaffirm these statements from the point of view of modern science. Energy is in fact the essence that sustains life, is a source of all material things, and may be called the imperishable and fundamental cause for all change in the world. Energy is that which moves the air, the water, the sky, the earth, and the sun. It can be changed into motion, into heat, into light, and into sound. This comparison, however, should not be misunderstood to mean that Indian sages came to achieve same results as reached by modern science after centuries of experiments and mathematical calculations. (Heisenberg, 1959, p.29).

Speech has both phenomenal and spiritual power. “The hymns of the *Rigveda* as recited by the trained priest, have such power, because they consist of the right sounds in the right combinations (words-and, of course, these Sanskrit words) uttered in the right sequence and with the right intonation; and when they are so recited and accompanied by the right manual actions, they are irresistible. They are sure to accomplish the reciters purpose.” (Brown, 1958. p. 245). The underlying reality behind all apparent objects is the same as the hidden reality behind spoken word, it is pure and unconditioned by all forms and names. Knowledge of correct speech not only conveys meaning but also enables one to “see” reality. This is the meaning of the term *darsana* which literally means “sight”. This insight into reality sets Indian philosophy apart from modern western perspectives on language. (Coward, p.33).

Pure ecstatic practice and contemplation of phonetic sound echoing in the atmosphere through the sacred chant merged easily with the flow and sound of river, on the banks of which such chanting and contemplation took place. “With the river’s raging as the background to the rhythmic recitation of inspired hymns on the banks of Saraswati, the association with speech on the one hand and music on the other can hardly be overlooked”.(Ludvik, p. 35). The resonance of chanting in chorus came to be called *Nada*, and the river flowing by alongside came to be known as *Nadi*. (Berendt, p.16). Saraswati is the river of life-giving energy, the great flow of strength, thought and imagination. As she flows from the mountains to the ocean she becomes identified with song, dance and speech of the people living by the riverside.

In Japan, the concept of *Kotodama*, has been an important feature of the native Japanese language since ancient times. (Miller, 1977). To put it simply, *Kotodama*

means “word spirit”, Or “word soul”. It gives the impression that the ancient Japanese might have believed that words had magical powers, and by uttering appropriate words all things in the universe could be controlled. The belief in *Kotodama* indicates the people’s faith in words and sounds, which is expressed in praying for good fortune or for prevention of undesirable events. Verbal messages stemming from *Kotodama* belief are often seen in daily Japanese interaction, and people’s interpersonal sensitivity leads them to be careful of their word choice and speech in verbal communication. Japanese people’s use of pleasant language and gestures as a display of caring for others’ feelings reflects the *Kotodama* belief in which they feel some kind of spirituality (Hara, p.286).

Today we live in a world from which the spirit of the word has been abstracted and in a sense dehumanized, and therefore we experience some difficulty in understanding how powerful the spirit of words and sounds was for the deep and subtle oral culture of Vedic India and Japan. The poets and scholars in the two countries succeeded in transmitting the value and need to study the influence of sound phenomena on human thought and action by orienting the perceptions towards the inner acoustic space of the unseen. The high degree of perfection achieved in the control of human voice by the poets and scholars produced the ability to produce and differentiate between minutest intervals in speech sounds.

This sensitivity to microtones is an indication of the care with which ‘culture of sound’ was developed. It is still believed that such precision in the repetition of exact intervals, over and over again, permits sounds to act upon internal personality, transform sensibility, way of thinking, state of consciousness, and even moral character. In other words the integration of the physical and mental, rational and spiritual, individual and social, can be achieved through development of sensitivity towards phonetic elements.

In the Vedic literature language appears in relation to gods as well as humans, and occupies the entire width of a spectrum from being a divinity herself to being a means used by gods to create the world, and ultimately to being a means in the hands of the human beings to achieve their own ethical as well as social purposes. The *Rigvedic* ideal running through the non-linguistic and linguistic texts was the reverse of trying to have control or ‘command’ over language. The most important mother goddess, *Vak* or *Saraswati* – is a mystery which unfolds before only those who have the knowledge and faith.

4. GARLAND OF LETTERS

Speaking garland of letters may appear far from truth to those who consider art as arbitrary product of mind, while science may appear to them as true representation of objective reality. This Cartesian partition based on two-valued certainty of Aristotelian logic is misleading. The processes of both art and science include formal rules, classification, generalization, and consistency. Therefore, the two processes, while not strictly similar, are not very different either. “Both science and art form in the course of centuries a human language by which we can speak about the more remote parts of reality, and the coherent sets of concepts as well as the different styles of art are different groups of words in this language. (Heisenberg, p. 65). Viewed in this

perspective, the term used for the Sanskrit alphabet *Varnmala* is most appropriate as it also conveys the aesthetic and spiritual aspect of language.

Panini's *Ashtadhyayi* is considered as the foundation of all traditional and modern analyses of Sanskrit, as well as having great historical and theoretical interest in its own right. Western grammatical theory has been influenced by it at every stage of its development for the last two centuries. The early 19th century comparativists learned from it the principles of morphological analysis. Bloomfield modeled both his classic Algonquian grammars and the logical-positivist axiomatization of his Postulates on it. Modern linguistics acknowledges it as the most complete generative grammar of any language yet written, and continues to adopt technical ideas from it. (Kiparsky, 2002, p. 1)

Ashtadhyayi is formulated in a morphologically, syntactically, and lexically organised form of Sanskrit. To maximize brevity with a minimum of ambiguity, rules are compressed by systematically omitting repeated expressions from them, according to a procedure modeled on natural language syntax. Co-ordination and certain types of compounding are assigned standardized interpretations. And the nominal cases of the language are used in a conventional way to designate the elements of grammatical rules. From the viewpoint of their role in the linguistic system, rules can be divided into four types: (1) definitions, (2) metarules, (3) headings, and (4) operational rules. All the individual meta rules in the Paninian system are part of a larger whole, they all come together in the larger domain of language.

In fact, Panini's grammar represents a sentence as a little drama consisting of an action with different participants, which are classified into role types called *karakas*, which include: actor, goal, recipient, instrument, locative, and source. (Kiparsky, p.16). Panini's system envisages the structure of language as an evolving hierarchy of inter-category and intra-category relations, from the base of physical reality, the materiality of language, the intermediate levels of increasing consciousness till one reaches the highest level of consciousness - Sabda Brahman- where the linguistic phenomena loses its autonomy and merges in the larger cosmic reality. Paninian linguistics is therefore most scientific and most philosophic at the same time, it symbolizes the perfect blending of science and spirituality in India's linguistic tradition (Kapoor, p. 86). All words and meanings are different aspects of one and the same thing, strung together to form a beautiful garland of letters.

Bhartrihari later completely harmonized the grammatical speculations with Advaita philosophy. He believed that grammar, nearest to that Brahman and the foremost spiritual training is the most important subsidiary texts of the Veda. Grammar is a gateway to liberation, a cure to the blemishes of speech, purifier of all other disciplines. It is the first step on the ladder towards liberation, it is the straight Royal Road for those desirous of that goal. The soul which has passed beyond errors in grammar can observe the Brahman in the form of the Om. (Pillai, p. 2-4). While providing a complete, maximally concise, and theoretically consistent analysis of Sanskrit grammatical structure, Panini's *Ashtadhyayi* (ca. 500 B.C.) is valued more because it reveals the spirit of India, the Spirit. (Feddegon, p. 68)

Similar integration and evolution from the particular to the universal can be seen in Bharat Muni's *Natyashastra*. Believed to have been composed around 100 BC, *Natyashastra* is a theatrical and literary composition that reflects a world view and fundamental ideas which drew upon the well-articulated discourse in language and communication in Indian intellectual tradition. *Natyashastra* helps us to identify the sources on which the composition was based and the state of knowledge of linguistics at the turn of the millennium. Bharat Muni was not only familiar with the Vedas and their status in the Indian tradition, but was well aware of their content, substance and form. *Natyashastra* traces both the spoken word and the idea of the word from the Rgveda.

Natyashastra begins with salutation to *Brahma* and *Siva*, and the principles of theatrical presentation are attributed to *Brahma*. Several chapters in the *Natyashastra* are devoted to verbal presentation, local usages, rules on use of language, metrical patterns, gestures, and emotions etc. Specific rules on use of Sanskrit and Prakrit languages are detailed in chapters 17 and 18 as these are considered to be the body of the expression. At the same time rules on gestures and emotions given chapters 7-10, are considered important for clarifying the meaning of words. The language of *Natyashastra* shows an understanding of the use of different languages and dialects by different groups of people and throws light on recognition and acceptance of diverse people, languages and dialects. The ethno-linguistic data in *Natyashastra* is an important source for tracing the development of Indian languages from Vedic Sanskrit to classical Sanskrit, Prakrit and the dialects. It treats the subject of language and communication, like Panini, as rules, and each section is detailed in very refined analytical manner. The whole is analyzed into parts and each part is examined in depth with a view to again creating an interconnected and interpenetrated whole.

The presentation of the theatre was compared in *Natyashastra* with the performative act of Vedic yagna. The mention of sattva or mindfulness, and the importance of musical sounds, during the presentation, are instance of drawing upon the living and vigorous tradition of Vedas at that time. The smoothness and flow in representation is considered so important that it is even mentioned that there is no word without rhythm, and no rhythm without a word. Combined with each other they are known to illuminate the representation. (Ghosh, I, p.359). Elsewhere, the specific qualities of good composition and representation are described in detail and include: focus, simplicity, precision, relevance, cohesion, agreeableness, and smoothness. A representation containing simple words, intelligible to common man, using emotions, and accommodating and integrating people is considered good to be shared with the people. (ibid. p.434).

The integral unity of the manifest and the un-manifest world, and its communication through presentation is the core content of the classic text. It integrates the world of essence, the world of reflection and feeling, with that of structure and grammar. In *Natyashastra*, universality and specificity, abstraction and generalization, the structured and flexible are seen as interdependent and interpenetrating levels of communication. It considers a presentation good if it can communicate at varying levels to different audiences in culture specific and transcultural contexts. At the same time,

while being in finite time and place, it must have power to communicate beyond time and place. (Vatsyayan, 2016, p. 89-90).

Indian scholars postulated that communication has both phenomenal and metaphysical dimensions. Etymologists like Yaska, and grammarians like Panini and Patanjali, and playwrights like Bharat Muni were clearly concerned with everyday empirical world, but they did not overlook the umbilical relationship of the empirical and the spiritual. Bhartrihari began with a metaphysical inquiry into the nature and origin of language in relation to *Brahma*, but also explored technical grammatical points in popular language.

These scholars avoided two reductionist mistakes that western scholars like Aristotle made. First, they did not reduce language to the condition of merely convention based on factual referents. Second, they did not resort to metaphysical reductionism that so devalues human language that it becomes obscure mysticism. In Indian linguistic tradition, the study of a particular phenomenon and its exploration as a metaphysical unity are not mutually exclusive. They are both considered as parts of a systems view of life and language. (Coward and Raja, 1990, p.34).

5. SPIRIT OF LANGUAGE

While the seeds of the study of phonetics in India may be traced in the *Rig Veda*, and the study of the structure of language was authoritatively established in the *Ashtadhyayi*, a full-fledged statement and discussion of a philosophy and spirit of language was given in *Vakyapadiya*. (Pillai, p.12). There are rudiments of the doctrine of Sabda Brahman in sanskrit texts right from the Vedas, the Upanishads, and the Upanishads. An exhaustive postulation and discussion of *Sabda Brahman* is given in *Vakyapadiya*. (ibid.)

Bhartrihari begins his *Vakyapadiya* with metaphysical enquiry and then goes on to empirical study of phenomenal language. In the first section of the work called *Brahmakanda* are given the basic ideas concerning the concept of *Sabda Brahman*. In the second section called *Vakyakanda* the fundamental idea of the integral nature of the sentence is discussed. The third section is the largest, in it grammatical topics mostly concerning words and their meaning are discussed. This section is called *Prakarankanda*. All the sections are interrelated and connected and form an integral whole.

Bhartrihari's enquiry into the relationship of word and meaning in the *Prakarankanda* includes a clear analysis of the limitations and inadequacies of words to communicate all dimensions and levels of the dynamic reality. Verbal communication relates only to a part of an aspect of a reality. Thus no secondary word expresses reality completely. Words express aspects and parts of reality which are not autonomous, and the reality in its undivided wholeness and flowing movement can never be expressed by the popular words and concepts of language. (Iyer, 1971, p. 105). As the well-known Rigvedic hymn says, speech merely recognizes and gives meaning to manifold forms arising out of the waters of the infinite ocean of ultimate reality. (Kapoor, 2010, p. 5.)

The child and the scholar are in the same position as far as limitations and inadequacies of understanding and communication are concerned. Both understand and communicate only part of the reality. (Iyer, 1971, p.107.) The common words, therefore, are unable to express the cosmic nature of reality. Words express the reality of any object or event in a manner that may be a misinterpretation and misrepresentation of the reality of the object or event. "Words are based on cognitions which do not reveal the full reality and so present things in another form, not determined by their real form." (Iyer, 1971, p. 105-107).)

Therefore, in practice, the words and language is used on the basis of bounded rationality. Ordinary people do not follow the understanding that may have been reached by scholars and sages, they understand things superficially and accordingly engage in communication. The *Prakarnakand* was an attempt to explain and organize words as used by the common people. The notions of action, substance and quality and so on used by science of grammar are all worldly, and secondary notions. Ordinary words express the reality which appears in our cognition. They do not touch the undifferentiated and un-manifest reality, but move about in the world of differentiated and manifest reality. (Iyer, p. 120).

Just as a different perceptions reveal an object in an different form, similarly meaning is understood from words in various forms. A word-meaning intended in a certain way by a speaker takes different shapes in different hearers depending upon the comprehension of each. Although the same object is perceived, its perception varies from person to person, and even the same person perceives the same object in a different form on another occasion. The same person at different times and different persons at the same time understand the meaning of the same word in different forms due to the different ways of understanding (Pillai, 1971, p.69-72.)

When a word can give different meanings, how does one decide the most appropriate word in a particular context? Bhartrihari refers to a list of factors which can help in making a proper decision with regard to the meaning of a word. The list includes complementary aspects, unrelated aspects, relevance, contradiction, the meaning of another word, situation-context, evidence from another sentence, and the proximity of another word. From this it is evident that the form of a word by itself is not sufficient to provide the most appropriate meaning in a particular context. Meaning lies in the thought behind the spoken word and the word that is heard. (Pillai, p. 108).

When the word-meanings in a sentence are considered apart from the conventional way in which they have been used and then understood, a different flash of insight *Pratibha* may be produced out of such consideration. That flash of insight caused by a new connection of word-meanings is described as the most appropriate meaning of the sentence. It is by no means describable to others in such terms as "it is like this" Having been formed out of the functioning of one's thinking, its nature is not known beforehand even to the person.

Pratibha or insight emerges from the combination and fusion of the different word-meanings, without being logically and rationally thought out in precision, and it is comprehended as seemingly taking the form of the holistic connection of the word-meanings. The interconnection has no defined form, and may be known as having non-existent structure in the ultimate analysis. Such a flash of insight arises from recollection based on past experiences. This recollection could be invoked by introspection, practical activity, or by advice from knowledgeable persons.

Abhinavagupta further developed Bhartrihari's fundamental notion that language is the manifestation of the absolute un-manifest and homogenous reality. In Saiva philosophy language is the binder of the absolute and ordinary worlds, and the link between them because it shares the essence and nature of both which consists of *Spanda* or vibration of energy. Language is both bondage and liberation, from ordinary to the absolute reality, because it is a form of vibration of energy. Language is thus the power of insightful speech giving diversity of manifestation and access to the absolute and unified reality and (Kuanpoonpol, p.70). *Spanda* keeps ordinary people connected within and with others. But as they realize its essence, they see themselves as none other than the absolute reality. (Pandit, p. 70).

The concepts of *Pratibha* and *Spanda* even though not very precisely defined, seem to be more stable in communicating the spirit of language than the precise terms of scientific language, which are derived from only limited groups of phenomena. This is in fact not surprising since the concepts of natural language are formed by the immediate connection with reality; they represent reality which is never precise and static. The logical concepts and definitions correspond to the part of reality isolated in space and time. In this process of conceptualization and simplification the immediate connection with the multidimensional and multilevel reality may be lost. On the other hand, natural language may represent some parts of reality much more clearly than by the use of logical patterns, because it can influence thought in ways which are not always logical and analytic. (Heisenberg, 1959, p.139).

An indirect and secondary meaning of the word which passes through the mind only momentarily may contribute essentially to the understanding of its meaning. The fact that every word may cause many such diverse movements in our mind can be used to correlate different aspects of the reality and get a clearer understanding than is possible by the use of strictly and narrowly logical patterns. Poets have often objected to the emphasis on logical patterns which makes language less suitable for its purpose. (Heisenberg, p.115). Natural languages are not closed systems, they grow like living organisms, and possess unexplored and unknown powers. Creative and ingenious thinkers, like the *Rigvedic* and later *Upanishadic* sages, employed natural language to break open and extend the boundaries of expression to successfully communicate the hidden dimensions and levels of reality. (Matilal, 2014, p.151-155).

In recent years, researches in neuroscience have further confirmed the importance of broad concepts, rather than more specific and precise definitions, in providing insights into the nature of reality. Neurological evidence has shown that when listeners encounter a word or concept, a semantic field related to the word is activated in the

brain in which features properties and associations of that world are connected. In the left hemisphere of the brain a relatively smaller semantic field of associations is strongly activated which closely relate to the dominant interpretation or the current context. On the other hand, the right hemisphere weakly activates a relatively broader semantic field that includes associations distantly related to the word or context. In this way, semantically distant words needed to understand metaphors, draw inferences and appreciate the many nuances of discourse, can be accessed and integrated. (St. George, p. 1324).

The broader semantic relationship in the right hemisphere has one big advantage: The less sharply each word's meaning is specified, the more likely it is to connect with other words and concepts. This is a key ingredient for drawing inferences, extracting the essence, and comprehending symbolic language, and for insight and awareness. (Kounios and Bemman, 2014, p. 6). Harmony between the 'left brain' and the 'right brain' provides an overall grasp of what is known in formal, logical, scientific terms, and also intuitively, in vision, feelings, and imagination etc. (Bohm, p. xvi). Original and creative ideas emerge from coordination of well-defined language and concepts contained in the field of empirical study with less sharply defined words and concepts in the field of philosophy and arts. Science and spirit are then in harmony, as they are different yet complementary ways of considering the ultimate reality which is an undivided wholeness in flowing movement. (ibid. p.33).

6. DANCE OF SHIVA

There is remarkable continuity in the thinking of Indian scholars regarding speech and language. The common thread that runs through the major schools of Indian philosophy is the thought that human language has evolved from the interaction between the ultimate reality and the human existence. Diverse languages arise out of interplay between the world and ourselves, or more specifically between the spirit and the human being. The universal spirit is a reality as objective as any fact in natural science, and this ultimate reality brings out differentiated features of human existence which are in this sense eternal. The Sanskrit name for the word is *Akshar*, which means indestructible.

Language is communication, but more than that it is coordination between the human beings and between the ultimate and the immanent reality. It communicates information, but also a whole universe that is fluid, differentiated, ordered, transforming, all at the same time. The uncertainty and ambiguity of language is the source of all its richness. Since the meaning is uncertain, one must constantly fine tune language to remain in touch with the dynamic and multi-dimensional reality. The sustained efforts at understanding and interpretation lead to insights and meaning. Insight is an inspired thought which reveals in an instant the meaning of the entire communication. It makes order out of the uncertain and ambiguous language, and finds the way out of the maze. In flash that some have compared to a sort of vision, a connection is established between understood fragments and the entire idea is seen in clear light.

To sum up, the essential nature and significance of language in Indian thought is three fold: First, nature of language is in the image of the ultimate reality *Brahma* which is the source of all movement and order in the cosmos; Second, the purpose of language is to

connect and coordinate the mundane and the immanent with the transcendental; and Third, the place of understanding the meaning is within oneself. The interplay of these aspects of language makes it no less creative than the rhythm and dance of the smallest particles.

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PICTURE OF NATARAJA