G.S-11
The Concept of Light in Upanishads and Vedic Philosophy - A Comparative Study
N. K. Prasanna Nayaki, B. Sc., M. A.,
Lecturer in Sanskrit
Government Pre-University College,
Nagamangala 571 432

Vedas-unquestionably are considered as the treasures of knowledge. The deep study of Vedic literature makes to understand the nature and the evolution of the human thought processes. The Vedas contain the seeds and the roots of all sciences, traditional as well as modern. The study of Vedic texts present many concepts related to various modern sciences and technology in the fields of light, space, time, air, water, moon, stars, fire, sound etc. Upanishads, the essence of Vedas are the storage of spiritual knowledge. Here an attempt is made to analyze the concept of Light in Upanishads and Vedic philosophy with a comparative study. Salutations to the God Siva; who is considered as an eye of the world; the root cause for the processes of origination, transformation, existence and demolition; the authority for the knowledge base - the three prime Vedas (yajus) and (sima); adorned with the threefold qualities of nature (satva), (rajas) and (tamas) and who is considered as the threefold manifestation of the Brahman (brahma), (virä, u), (mrvā).

1. Introduction:
Thinking about the relation among the soul, mind, life and worldly things started even from the time of the origination of the mankind. Man considered as the most intelligent creature, has his mind always puzzled in knowing the truths of life. The Upanishads discuss these topics that are referred to as the highest truths of life. The Upanishads conclude Brahman as the Absolute.

In Shwethashwatara Upanishad it is cited as:
“He who Himself is without any colour imparts colour to all things with an unspecified purpose. He is the one who is both the end and beginning of all the worlds.”

This universal truth is expounded in every Upanishad in different ways. This is the essence of Vedic Philosophy.
Science and Philosophy are two faces of the reality. The facts which clarify the doubts through direct perceptions of physical efforts are considered to be the method of science in seeking the truth. When the doubts are left out from the approach of science to give salvations in knowing the reality, Vedic Philosophy provides a source of clarifications on such doubts and is termed as the spiritual knowledge. Thus science and spiritual philosophy together can bridge the gap of ignorance and illusion. Thus both the branches are considered to be complementsaries to each other.

2. The Concept of Light - A View through Upanishads with a Comparative Study:
‘LIGHT’ -the word would mean a source of illumination
eradication of darkness - (jyotisvarāpām) and removal of ignorance, the (ajañam). Light is an unique form of energy with which alone the world becomes visible. It is a prominent and interesting branch of Physics in the scientific studies. There are so many instances of sources of light, the sun being one of the strongest around. It is referred to in the Ramayana as -

The sun is expressed to be the vision of the world, to mean that his presence makes it to that effect –

In Upanishads, The sun is not only a source of light energy, but he is a symbol and manifestation of Brahman Himself. Solar energy is not an independent source, but is emerged from That Unique Spirit itself. Let me give some instances as seen in different Upanishads.

2.1 Ishaavasyopanishad:
With a golden vessel, the faces of Reality are covered over, You O Pooshan, uncover it so that I - devoted to truth - may behold Him.

Pooshan, your rays have covered the face of the Truth so brightly that I am unable to pursue it. Kindly remove that screen of golden veil so that I can see the majesty of that Real Truth - the Supreme Spirit. Here the golden rays are symbolized as wealthy treasures. When the Spirit or the Brahman is seen, Light of Reality shines, then it is told that the quality of wealth is revealed.

2.2 Kenopanishad:
Though sun is a source of light through which all manifestations are made visible, Kenopanishad says that Brahman itself is a ‘light’ of light and mere peeping through the eyes is not associated with light effect though it appears to be so. If the Spirit of Brahman withdraws its enlightening power, not only eye, even the rays of Sun cannot work -

What cannot be seen with the eye, but whereby the eye can see, know that alone to be Brahman, the Spirit - and not what people here adore.

2.3 Kathopanishad:
Brahman, likewise the way He is omniscience by virtue and still would not be attached to the miseries of the world - The sun, though considered to be the eye of the world, will not be stung by external illusions formed by the wrong cognitions.

2.4 Prashnopaonishad:
The Sun is considered as life and moon as matter. This has an illustrative analogy that matter is dependent on life, even as moon is dependent on the sun. The sun shines with its own light - while the moon receives its light from the sun. It is told that (rayi) -the matter, derives its existence from (pr, a).

In this Upanishad the story of the creation is maintained through the interaction of Sun - the life - and moon - the matter - the manifestation.

2.5 Taïtareyoanishad:
Taïtareyoanishad is famous for its dealing with the Social, the Intellectual and the Spiritual Education of the Vedic period. It is a good catalogue of educational systems like Grammar, Astronomy, Psychology, Environmental studies, Biology and a few others. It clarifies the broadness of knowledge in five folds (pauça;dhikaraa,). They are (adhíñkaa), (adhiyāutā), (adhividyā), (adhibpraja), and (adhityāmā). While referring to the (jyotisvarāpā), it is said

2.6 Chandogyopanishad:
Chandogyopanishad approaches the whole subject of Brahman through speech or more truly through sound. Here the state of mind is instructed to attain that position where the concentration centralises by saying the sacred word (AUM) indicated as (udgāthā). (AUM) is the purest symbolisation of Brahman; it is the sublime manifestation of Brahman. (AUM) is a representation of all knowledge, for (AUM) the syllable starts from begins from vocal chord, in the middle state and (ma) - concludes at the end of the lips. Thus it attains all practical audible possibilities of sound. Through the eradication of the ignorance, that is, the darkness, the knowledge shines like Sun. So sun is considered as (udgāthā), (praavarāpā), (tōjārē) in Chandogyopanishad.

2.7 Bhadaranyakopanishad:
Here the conversation of Yajnavalkya with Maitreyi, Kanyakayana, Ajāthasatru, Gargi and Shalakya - brings out the gist of Vedic philosophy. The concept of Aditya is told like this.

Yajnavalkya replies to Shalakya as - “Aditya is one whose components are framed by summing up of twelve months of an year, indicating that he is responsible for the changing of seasons. He is considered as the absorber of both the life-span of all creatures (yus) and the consequences of their works (karma-phalām) (ādān yānti) and named as (ādītā).” Further it is referred to that Aditya is not an entirely self powered light source, but shines only when the ‘Absolute’ does.

In the conversation of Gargi and Yajnavalkya, it is clarified that whatever seen in the entire universe is covered by the rule of that Absolute itself (aārāprāśana) Under the rule of that Absolute, the Sun and the moon are working in their status. Only under Its rule the minutes, hours, days, nights, fort-nights, months, seasons and years regularly occur.

The above narrations imply that Sun is not only a bright source of light, but also the symbol of Absolute, the Brahman Himself, having His Tejas working in different fields giving various names as (prabhākaraā), (ādītā), (savitā), (savyā), (khagaā), (ADVĀ), (gabhastimañ), (bhūnī), (svārārtī), (divākaraā) and many of the kind. From all these illustrations one can infer that the illumination from the light is a measure of how much (tōjas) the source is having.

3. Comparison of the Concepts of Light in the Science and Vedic Philosophy
A comparison is made of what is available in the concepts in Science and Vedic Philosophy on some of the matters related to Light.
1. In science, the light is looked at as an energy emitted from the materials under exited state. It implies that not all materials can have the light emitting out of them unless they have the special features.

In Vedic sciences, light is referred to as Tejas. Tejas is not available in all materials. It is available in such materials that are supported by special Spiritual and Divine properties.

2. In the property of propagation of light, the similarity can be observed as follows. In scientific observations, it has been observed that though light travels through several media, its propagation is not limited for a particular type of medium. This is a very unusual, rather unique behaviour of this form of energy and is applicable only to light. For instance, many other forms of energy like electricity, thermal conduction and sound require a medium for propagation.

In Vedic sciences, we find that the Tejas can really propagate with an extraordinary power to reach the target with a clear and undisturbed condition. This aspect is analogous to the observation of propagation of light described above.

3. In scientific observations, the light is broadly characterised as an electro-magnetic interference with is a wide-spectrum that covers both visible and invisible range. For instance, the visible light rays have chromatic and heating effects in normal conditions whereas the invisible infra-red rays, ultra-violet rays and X-rays have different effects on the environment and the life-style. The penetration strength is higher in some of these invisible rays.

Even in Vedic sciences, it is brought out that the Tejas emitted by a source of relatively lower level will not be as powerful as that emitted by a source of higher level. In Brhadaranyakopanishad, the clarification of the Absolute is an instance of this aspect. Here, (akāra, prajñā) of Parabrahman given by Jajnavalkya is a narration of clear distinction in the structure of Tejas, an explanation that was comprehensive enough to stun all other scholars, got accepted, and has remained unquestioned since then. In another reference in the Ramayana, it is narrated that Vishwamitra's strength was overpowered by the Brahma-Tejas of Vasishtha. Vishwamitra accepts and narrates -

This is an illustration of how the strength of Tejas differed among sources. It can be seen clearly that the Sun is a magnanimously influential source of light whereas the moon is far less influential on that scale but still plays a significant role in the human life.

4. In another aspect of comparison, one can see that the penetration of light depends on the property of the receiving object, though the source of light is same. This point has been upheld in both the fields of Science and Vedic Philosophy.

In the scientific observations, it is seen that for a selected light some of the materials completely absorb it, a few transmit - such as glass, some reflect - like mirror and so on. These observations indicate that the effect of penetration and absorption of the light depend strongly on the property of the receiving object. So the material property has a major role in the adaptation of the energy.

The intellectual and analytical mind is considered to be the base line to receive knowledge in the Vedic Philosophy. The spiritual knowledge will not shine unless the knowledge is properly exposed, acquired and applied. A Tejas, no matter how bright or strong it could be, it may be of no relevance if the receiver or the target is not fit enough to withhold it. In Vedic culture and Vedic philosophy it is repeatedly told that unless the recipient has a constant urge in persuading the required knowledge, the gain is either nothing or negligible. This is narrated in Brahma Sutra as -Iśééééēēē Vēēēēēēē (ath'it' brahmajas) -after attaining that qualified stage only a person can attempt to know Brahma.

These aspects reveal that it can be concluded that if not in all, many aspects of both Scientific Concepts and Vedic Philosophy agree fairly well.

Scientific knowledge is restricted to perceptive inferences. So it has a limitation because many things are neither can be visualised nor can be quantified by measurements. In this situation, Vedic Philosophy becomes an alternative directive. The general outlook from above said facts point out that there are limitations of the human perception in persuading a problem and philosophy being an essence of long standing experience, turns out to be another way of finding salvation for the such questions. No matter how much advancement in science has been in past several hundreds of years, man has sought to philosophical thinking consistently and the philosophical line has neither diminished in its expressive strength nor has lost its value. Its ability in answering and narrating has been recognised with the highest value, thereby complimenting what is being observed day-to-day in the scientific field. In this angle of view, they are complementing each other.

4. Concluding Remarks:

The one and the best way of looking scientific observations with a philosophical background in the event of light - as radiation or illumination or Tejas has been a comparative parameter and a good illustration of how Scientific and Vedic Concepts have many corollaries and concepts going hand in hand. So it could be conclusive to consider that Vedic sciences are accurate in thinking and their observations leave lesser doubts in the minds to adopt, rather than many approaches that are ad-hoc and help in bringing down substantially the voids of knowledge. It is necessary to recognise that collaboration of both the approaches to see that a more stable and comprehensive dissemination and adoption of knowledge is possible only when both Vedic Sciences and the current day Scientific Approaches are blended together.

A narration from Ashtavaktra Geeta:

I bow down in the peaceful personification of Tejas, who is a symbol of bliss, who's cleverly rising reduces all illusions into a dream.