

Stars of Scientific Thoughts in the Sky of Sanskrit Literatures

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Sanskrit is the refined language and its literatures are also refined. So, not only from India, but also from all over the world, the rivers of various types of knowledge has gathered and assembles in that ocean of literature. In this context the ancient dramatist **Bharata** perfectly said in his "Natyashastram" that –

"न तज्ज्ञानं न तच्छिल्पं न सा विद्या न सा कला ।

न स योगो न तत्कर्म नाट्यज्ञानं यन्न दृश्यतः" (Natyashastram -1/117)

The meaning of that sloka is, collecting the sources from mines of the four Vedas, Brahma created **Natyaveda** which is fulfilled in science, Arts, eruditions etc. Not only Drama, the whole Sanskrit literature is totally overcast by the canopy of all kinds of knowledge from its time of dawn. Among the all thoughts, in this article, I have collected only pebbles of scientific thoughts from the pervasive sea-shore of Vedas and other classical Sanskrit literatures.

a) Creation of Moon from the mind of man: In the **Purusha Hymn**, 10th Mandala of Rg. veda, sage Narayana says that -
"चन्द्रमा मनसो जातः" (Rg.10/90/13)

It says, the Moon was created from the mind. But it is thoughtful to us that, on which foundation stone putting his legs, sage **Narayana** climbed up to this type of seemingly unscientific thinking stair? In empirical observation it is not unscientific but here is an eternal scientific thought.

According to modern Anthropology, in presence of moonbeams GNRH secretion happens from Hypothalamus of human brain, again GNRH stimulates the secretion of Testosterone in case of Male and Estrogen and Progesterone in case of Female, the types of hormone which enhances human sexual urge. Apart from these, moonbeams influence secretion of other kinds of hormones which turn people of age group from childhood to old age, crime prone. In present, modern scientists experimented that, the natural rotation of the mind of the soldiers who lives in caves is 24hours and 50minutes which is equal to the time of rotation of the moon at the circumference of the earth. So the said thought of Narayana not only true but also more scientific that is proved, justified and substantiated by modern progress of science.

b) Cloning from the cell of living animal: The renowned scientists, named Wilmut and Campbell of the Roslin institute under the university of Edinburg in Scotland created a lamb through cloning process on 5th July 1996 and that was the first cloning creation. The name of that cloned mother was "DOLI". Generally, living bodies are formed through the division and reformation processes of sex-cells. But, in this case of cloning, the scientists created the child lamb which is identically same to its mother DOLI. This scientific process was well-known to the Vedic sages. The 111th Hymn of 1st mandala of the Rg.Veda says that –

"तक्षन् रथं सुवृतं विद्वानापसस्तक्षन् हरीन्द्रवाहावृषण्वसु ।

तक्षन् पितृभ्यामृभवोयोवद्वयस्तक्षन्वत् सायमातरं सचाभुवम् ॥" (Rg.1/111/1)

The meaning of this sloka is, chariot and two horses was created by the God for the Aswin for their travelling and at the same time the God created young father and mother from the old and dead father and mother for their calf. In this context the explanation of Sayana for this is notable –

"अपि च पितृभ्यां स्वकीयाभ्यां मातापितृभ्यां वृद्धाभ्यां युवद्यौवनोपसृजयः आयुः
ऋभवस्तक्षन् कृतवन्तः"

In this explanation, it is clearly mentioned that, young cow has been created from the old cow and seeing his father and mother the orphan calf was delighted because new cow was as like as their father and mother. It is also clearly mentioned in the 110 Hymn of 1st mandala of the Rg.Veda that, the said creation was from the body cell of the dead cows –

"निश्चर्मणऋभवोगामपिशतसंवत्ससृजतामातरं पुनः ।

सोधन्वनासः स्वपस्ययानरोजित्रीयुवानापितराकृणोतन ॥" (Rg.1/110/8)

Meaning of this sloka is, in ancient period, cow of a sage was dead and that cow's calf was crying. Seeing the doleful condition of that calf the sage gratified to the God by his austere worship. Then the God created that calf's father and mother from the back skin of that dead cows. In that context the Vedic explainer Sayana says that,

"हृद्विभवः यूयं चर्मणः चर्मणत्वचा तृतीयार्थे षष्ठी गां धंसुनिरपिशत निःशस्त्राश्चिष्टां
संयुक्तामकुरुत तदनन्तरं मातरं तां पुनर्बत्ससृजतामसृजत संश्लिष्टामकुरुत समगम्यतियावत्".

So, we can say that Cloning process was well-known to the Vedic sages.

C) Major ethereal components of the Sun: Modern science has already proved that, the Sun consists of three major components: Hydrogen (90%), Oxygen (8%) and Helium (2%). In the Sun, at the temperature of 13000000°C, through Thermo Nuclear Reaction, Hydrogen turns into Helium and vice-versa. About these two main gases the Yayurveda says –

अपां रसमुद्रयसं, सूर्ये सन्तं समाहितम् ।

अपां रसस्य यो रसस्तं वो गृह्णाम्युत्तमम् ॥” (Yajurveda -9/3)

In this hymn रसः means the material cause and अपः means water. Hence” ” अपां रसमुद्रयसं` means the main material cause of water i.e Hydrozen, because the science says 2atom of Hydrozen and 1atom of Oxizen creates 1molecule of water. So in the water chief material cause is Hydrozen and sage says this chief material cause of water is in the chief gas of the Sun. Again sage says” अपां रसस्य यो रसः `”, that means the material cause of the Hydrozen i.e Hilium. Scientists has also said that, Helium is caused from the Hydrozen and Hydrozen is produced from the Helium. Hence the Hilium is the material cause of the Hydrozen. So According to the Vedic sage Hydrozen and Hilium is the main gas in the Sun.

D) Newton`s Laws of motion: Sir Isaac Newton was born in the year of 1642 and the three laws of motion were first compiled by Isaac Newton in his Philosophiæ Naturalis Principia Mathematica (Mathematical Principles of Natural Philosophy), in 1687. Newton's first law states that every object will remain at rest or in uniform motion in a straight line unless it is compelled to change its state by the action of an external force. The second law defines a force to be equal to change in momentum (mass times velocity) per change in time and the third law states that to every action (force) in nature there is an equal and opposite reaction.

In 2nd century B. C Vaisesika Philosophy was formulated by the sage Kanada and in this philosophy he sates three definition of force. The first definition is” वेगः निमित्तविशेषापेक्षात् कर्मणो जायते” - that means the motion of an object changes by the action of an external force. The second definition is” वेगः निमित्तविशेषापेक्षात् कर्मणो जायते नियत दिक्क्रियाप्रवन्धहेतुः”. Which means, the motion of an object is proportionate and towards the external force. The third definition is” वेगः संयोगविशेषविकीरोधी”, that means action and reaction is equal and opposite. So, centuries before the birth of Newton, Kanada states those laws of motion. So, scholars should think into the matter about the actual and original discovery of those laws of motions, which are presently credited to Newton.

E) Velocity of Light: In the year of 1887, two scientists named Michealson and Morley say that, the velocity of light is 186300 miles per second. But in the 50th Hymn of 10th mandala of the Rg.Veda it is said that -” तरणिविंशदशतं ज्योतिष्कृदसि सूर्यं विश्वमाभासि रोचनम्” . and the interpreter of this Mantra, Sayana, says that -” तथा च स्मर्यत –योजनानां सहस्रं द्वे द्वे शते द्वे च योजने । एकेन निमिषार्धेन क्रममाण नमोऽस्तु ते” . The meaning of this explanation is, I bow for that the Sun who pass over 2202 Yojana of the way in the time of ½ Nimesha. According to the Vedic Mathematics 1 Nimesha is equal to. 228572 second. Hence ½ Nimesha is equal to. 114286 second. Again 1 Yojanam is equal to 9.6025 miles. So 2202 Yojanam is equal to 21144.705 miles. So according to the modern Mathematics

we can say that, the Sun pass over 21144.705 miles of the path in. 114286 second. Hence in 1 second the Sun will cross 21144.705 / .114286 = 185015.706 miles, which is too near to the modern science i.e 186300 miles per second.

F) Sound has its velocity: It is recognized by scientists that, the sound has its own velocity. This scientific truth is in the 2nd Hymn of 1st mandala of the Rg.Veda where sage says that –

”वायो तव प्रपृञ्चती धेना जिगाति दाशुषे, उरूचीसोमपीतये”. The meaning of this mantra is, having virtues of Soma, the sentences for Vayu deity should go to the priest and to the public for drinking Somarasa. Here” Dhena `means” Sound `end” Jigatee `means” to go`. So, sound goes and it was said by the Vedic Sage.

G) The Moon has not its own light: It is proved by the scientists that, the Moon has no light and it is lighted by the light of the Sun. This scientific truth is depicted by the Vedic sage in 50th Hymn of 10th Mandala of Rigveda. The interpreter of this mantra sage Sayana says that –

”रात्रौ हि अस्मद्येषुचन्द्रादिविवेषु सूर्यकिरणः प्रतिफलितः सन्तोन्धकारं निवारयन्ति यथाद्वारस्थदर्पणोपरिनिपातितः सूर्यरश्मयो गृहान्तर्गतं तमो निवारयन्ति तद्वदित्यर्थः” .

The meaning of the sentence is, the darkness of the earth is irradiated by the sunlight, reflected from the moon, likewise the mirror placed on the door reflects the light to enlighten the inside in the room. So, not only the moon has no self light, the sages knew about the reflection of light which is the subject of the Physics. In this context the sage of the Yayurveda says –

”सुषुम्नः सूर्यरश्मिः चन्द्रमा गन्धर्वः ।

अस्येको रश्मिः चन्द्रमसं प्रति दीप्यते” ॥ (Yaju -18/40)

Here sage says, The Moon be lighted by the ray of the Sun which is called” Susumna`. Again in the Niruktam, Yaska says that -” अदित्यतोऽस्य दीप्तिर्भवति” (Niruktam- 2/6) which means the Moon radiates by the Aditya, that is the another name of the Sun. So, we can say that Vedic sages were well aware of the aforesaid modern scientific thoughts.

H) Harmful Ultra-Violet ray of the Sun: The modern science says that, the Sun radiatse ultra violet ray and this is very harmful for the creatures. Before the modern science, in the 27th hymn of the Rig veda, sage said –

”वयः प्र पतान परुषादः । अथेदं विश्वं भुवनं भयाते” (Rg.10/27/22). that means, the ray of the Sun is very fearful and it is the eater of the animals.

I) Every atom has its attractive power: It is recognized by the scientists that, every atom has its own attraction to every atom. This theory is already proved by the Vedic sages previously. In the 152nd hymn of the Rig veda sage says -” एको अन्यत् चकृषे विश्वम् आन्वषक्” -” (Rg.1/52/24). According to the explanation of the sage Sayana, here” एकः `menas every atom,” अन्यत् विश्वम् `means another atom,” आनुषक् `means always and” चकृषे `Means to pull. So the complete meaning of this sentence is always every atom pulls to every atom.

J) Hydro-Electric Power: It is well-known that, electric is created from water, because our scientists proved it. But before the experiment of the scientists our Vedic sages proved it. In this connection, the Rig Vedic sages says -

“क इमं वो निण्यमश्निक्रिक्त्ति वत्सो मत्क्रिर्जनयतस्वधभिः ।

वह्वीनत्रिर्भः अपसमुपस्थत्रिहत्रि कविनिश्चरति स्वधत्रिन् ॥” (Rg.1/95/4)

In this mantra very clearly sage says, fire of electric is the son of the mother of water.

K) The Sun's has seven colour: The scientist have indentified the seven types of different colours of the Sun and the colour white is originated by the amalgamation of all those seven types of colours. In the 164th hymn of Rig veda sage says -” सप्तयोज्जन्तिरथमक्रिचक्रमक्रि अश्वो वहति सप्तनक्रि, which means there are seven horses attached with the chariot of the Sun of single wheel and it has seven names of one horse. In this context explainer sayana says -

”आदित्यमण्डलं सप्तयोज्जन्ति, सपर्णस्वभावाः सप्तसंख्या वा रश्मयः” .. So the Sun has seven horses, i.e seven colour and seven horses has one name, i.e seven colour changes into one colour by mixing.

L) Colloidal Mercury: In the” Naisadhacharitam`, canto-I, Novelist Sriharsha says” अयोऽधिकक्रि स्वरितत्वमिष्यतक्रि कुतोऽयसक्रि सिद्धरसस्पृशक्रिपि’, which means, by the association of mercury and iron a golden compound is created, in which iron is non-visible. According to chemical science, the attachment of mercury and iron creates colloidal mercury through Auto Catalytic Process in Tyndall Effect and this colloidal mercury is golden in colour and also it is a cover on iron where iron is invisible. So, undisputedly we can say that not only Vedic sages, but also the modern Sanskrit writers` are well-known about the modern scientific discovery or invention.

M) The Trees are Alive: Acharya Jadadish Chandra Bose said that trees are alive but before his birth our holy law book writer, named Manu in the first chapter of the” Manusamhita` says -” भवन्त्यक्रिखदुःखसमन्वितक्रि (Manusamhita-1/49), which means the tree has feelings and sense of joy and sorrow.

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