AUM

The Vedas

(English Version of Veda-Vimarsh)

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AUM आ नो भट्टा: ऋतवो यन्तु

THE VEDAS

In ancient times, humanity had only one religion and one scripture — the Vedas. That alone gave the guide-lines for life and living. Then the world was one family and Bharat (India) was considered the world teacher. This was the fountain spring of all knowledge, science and its spread. Even numerals were taught to the world by Bharat. That is why numerals were known as *Hindse* (from Hind). Times changed. Misinter-pretations of the Vedas started. Prejudiced eyes began to see what did not exist in the Vedas; and thus the teachings of the Vedas got shrouded. Different people brought forth their versions and so there was complete fragmentation of the humanity into various faiths and sects. Inevitably the result was mental tension, mutual hatred, conflicts, and bloodshed.

Once again there arer better times. Enlightened people like Rishi Dayananda (1824-1883) have resurrected the Vedas and ushered in a new era. He has put forth a reassertion that the Vedas are the fountain spring of all true knowledge, and so urged for a return to the Vedic knowledge and way of life. His work on the essence of the Vedas deserves to be ascribed in golden letters. Not withstanding Rishi Dayananda's contribution, the ambiguities about the Vedas -- some deliberate and some because of ignorance still persist. Therefore, it is but appropriate to dilate on certain basic questions.

Need for Revelation

How does man acquire knowledge? Philosophers have

given a lot of thought to this. According to some western philosophers, man acquires knowledge spontaneously and for this he needs no help. Many among these regard empiricism as the fountain-head of knowledge. According to Locke, however, mind is like a blank paper and knowledge is acquired through sensation and reflection. Berkeley and Hume have also endorsed this view. But if it is accepted that mind is like a blank sheet, then it becomes non-functional. This is a psychological fallacy because mind is dynamic and every second thought arise. Descartes, Spinoza and Leibniz attribute knowledge to reason. On the other hand, Aldous Huxley concludes that "Rationalism itself is not a perfect instrument for the understanding of life." The German philosopher Kant feels that empiricism and mind alone are not competent in themselves to give knowledge about proper conduct.

In fact, these views are only partially correct. Without a teacher, one cannot acquire knowledge. The following observations authenticate this view:

- 1. Today man has acquired enough knowledge to go to the moon but at the same time there are people from the Nigrota community in Andaman who are incapable of even counting. Those who could count upto ten are considered knowledgeable about numbers. But excavations have yielded iron implements proving that those people were not always ignorant. They were civilized people at one time and their present condition is because of the absence of a teacher. Therefore, Rishi Dayananda has rightly observed in Rigvedadibhashya-bhumika (Vedotpatti Vishya): "At the beginning of the creation if God had not preached the Vedas, then till date none would have had the real knowledge of religious matters."
 - 2. When A.W. Kinglake was passing through the

deserts of Egypt, he met a man named Sheikh who was not aware that time has been divided into hours, minutes and seconds. Nobody had ever told him this.

- 3. The offspring of even multi-lingual parents cannot learn any language spontaneously without a teacher. They have to be taught. Therfore schools are established to educate the children. It is thus evident that mere experience and wisdom are no substitute for a teacher, in acquiring knowledge.
- That knowledge cannot be acquired without a teacher is also born out by the fact that no illiterate person has ever made a scientific discovery.
- 5. In the first decade of twentieth century, a boy named Sammu was born in Ambala district of the present day Haryana state. He was sent to school to learn Urdu. He had just learnt the alphabets that a person from the author's ancestral village Tangore (district Kurukshetra) took him in as a servant. He was kept there like an animal. He was deliberately deprived of all knowledge and was made to act like an animals. Later, Sammu remained a servant for years in a nearby village (Jharoli Khurd). Members of his employer's family were high officers in police and army but Sammu was taught nothing and he used to go round practically naked. He would even urinate where ever he was sleeping. He did not know the name of his employer or his village. He was virtually an animal in human garb.
- 6. In order to know the real language of man, king Asur Banipal of Syria, king Semetical of Alexandria, king Fredrick Second, James the Fourth of Scotland and Akbar put recently born children under the charge of dumb nurses in the forests. These children could not learn anything except the sign language. After these experiments, these kings came to the conclusion that there can be no knowledge without a

teacher

It is, therefore, clear that man has the capability of imbibing failing which Sammu would not have learnt Urdu alphabets but in the beginning a teacher is essential. Of course after some initial learning, knowledge can be expanded through wisdom and experience. As no germination is possible without a seed, so knowledge must precede experience. Thus Dr. Russell Wallace writes: "There is, therefore, no proof of continuously increasing intellectual power."

At the beginning of the universe, in the absence of a structured knowledge in human beings, God himself gives enlightment for human welfare. As God has granted the sun to aid the eyes, similarly for wisdom, knowledge was provided. As every artisan gives instruction about the use of things made by him, similarly it is essential that in the beginning of the creation, knowledge should be imparted by God about the use of things created by him. God is just, therefore it is important that man must be made clear about sins and good deeds so that he has an explanation of reward or punishment according to *karma*. God gives knowledge of all this through the Vedas.

Certain philosophers have also felt the need of revelation. According to Plato: "We will wait for one, be he a God or an inspired man to instruct in religious duties and to take away the darkness from our eyes." Kant says: "We may well concede that if the Gospel had not previously taught the universal moral laws in their full purity, reason would not yet have attained so perfect an insight of them." In fact the knowledge required for attaining moksha cannot be acquired only through soul and nature. God's guidance is required for the same. Patanjali in his Yogasutra (I.26) declares God as the first teacher of all the teachers:

स एग पूर्वेगामपि गुरु: कालेनानवच्छेदात्।

Identification of Revelation

All faiths consider their religious books as the revealed scriptures. But by simply saying so, nothing is proved.

लक्षणप्रमाणाभ्यां वस्तुसिद्धिः न तु प्रतिशा माशेण।

In order to arrive at a conclusion, the scholars depend on the following criteria:

 Revelation should be at the inception of the universe because no system can run without knowledge. Furthermore, if God gives his knowledge after the elapse of some time, it is injustice to the ignorant. Therefore, the German poet Goethe has aptly said that God revealed His knowledge during the dawn of the universe.

Koran and Bible are relatively recent. The Vedas are the most ancient. Those belonging to other religions also accept this reality. MaxMuller says: "The Vedas may be called primitive, because there is no other literary document more primitive than it...no one would venture to measure in years."3 "In the Aryan world, Veda is certainly the oldest book."4 Another western thinker has remarked that the Hindu scripture, Rigveda, is the oldest book in the world.5 Professor Heeren asserts: "The Vedas are without doubt the oldest works composed in Sanskrit. ... Even the most ancient Sanskrit writings allude to the Vedas as already existing."6 Endorsing this view, Rev. Morris Philip records: "After the latest researches into the history and chronology of books of Old Testament, we may safely now call the Rigveda as the oldest book, not only of the Aryan race but of the whole world."7

2. Revelation can only be at the beginning of the universe. Therefore, there can be no history in it. But in the Bible, there is the history of the Jews of Palestine and the Koran is full of the scenes of Arabia and stories of Adam,

Jesus, Moses and David etc. The Vedas are the only one which have no history of any country or race or times. No doubt Vishvamitra, Vasishtha, Urvashi and such words do find mention in the Vedas. Consequently, western writers have made an attempt to impose history on the Vedas. This is an obsession with certain Indian writers also. The fact, however, is that in due course of time, many things have been named after the words occuring in the Vedas. But to build history on seeing these names in the Vedas is not valid. It would be as absurd as some body called Ram Chander today claiming that Dasharatha named his son after him millions of years ago, and Ramayana is only about him! As a matter of fact, these words that occur in the Vedas are neither proper nouns nor descriptive of individuals but connote certain attributes because तर (comparative degree) and तम (superlative degree) can be suffixed only with adjectives and such words occur very often in the Vedas such as कण्वतम (Rig. I.48.4, X.115.5) and इन्द्रतम (Rig. I.182.2). Had Kanva and Indra been proper nouns, तम (superlative degree) could not have been suffixed.

Some words have been used in different mantras with different meanings. As an illustration, take the word Vasishtha. It occurs a number of times in the Vedas. For example:

शतं या भेषजानि ते सहस्रं संगतानि च। शेष्टमास्रावभेषजं वसिष्ठं रोगनाशनम्॥

Atharv., 6.44.2

"Out of the hundreds and thousands of medicines available, the best and curative is *chulana*". Here the word Vasishtha does not denote an individual but it is the name of a herb. In the 54th mantra of the 13th chapter of Yajurveda, Vasishtha means *prana* (breath). In Shatpatha Brahmana (VIII.1.1.6) also, this word has been used in this sense: प्राणो वे विसष्ठ ऋणि: meaning breath is Vasishtha rishi. In one of the mantras of Rigveda (VII.33.11), Vasishtha indicates water.

Many words denote different things in different contexts. A word having different meanings is the embellishment of language. These words are yaugika and not laukika or rurhi.8 These have contextual meaning. Their real sense is understood by considering their root meaning. This cannot be treated as an evidence of history in the Vedas. Even MaxMuller who holds the opposite view about the Vedas had to admit that "Names are to be found in the Vedas as it were in a still fluid state. They never appear as appellatives, nor yet as proper nouns."

3. Revelation is for the intellect (wisdom). Therefore, it should conform to the principles of wisdom. The light of revelation is for unveiling the mysteries of creation. Therefore it should not clash with the principles of the universe. Admittedly, only that book of geography is the best which is according to the geography.

In the Bible, many things are contrary to wisdom and the principles of creation. That is the basis of conflict between science and Christianity. One shudders to think of the atrocities perpetrated on the scientists whose researches were not in conformity with the Bible. There is no mention of America in the Bible. Therefore, the king of Portugal did not give any aid to Columbus for the discovery of America. According to the Bible, the earth is flat and stationary, and the sun revolves. Contrary to this, science has proved that the earth is round and revolves round the sun. Italian mathematician and physicist Galileo (1564-1642) was persecuted by the Inquisition for his opinion that the sun and not the earth, was the centre of the planetary world. He was sentenced to rigorous imprisonment for ten years. He died in jail. Poor Bruno was sprinkled with oil and burnt to death on 16th February, 1600. After hearing the Inquisition verdict, Bruno, however, smiled and said: "It is with greater fear that you pass sentence upon

me rather than I receive it."

Similarly Koran (Manzil 3, Sipara 13, Surat 13, Ayat 2, 3, 17, 26) makes an interesting reading. Here "God is the one who hath raised the sky without pillars, you can see it. Then stayed in heaven, He made sun and moon do his bidding. It is He who hath laid the earth. He causeth water to descend from heavan and the rivulets flow according to their respective measures." Several such instances may be quoted.

There is nothing against logic and laws of nature in the Vedas. Rishi Kanada rightly says in Vaisheshika Darshana (6.1.1):

बुद्धिपूर्वा वाव्यकृतिवेदि।

Take an example. The Vedas assert that the earth revolves round the sun. Yajurveda (III.6) says:

आयं गौ: पृश्निरऋमीदसदन्मातरं पुर:। पितरं च प्रयन्तस्व:हु

In the eighth chapter of Satyarth Prakash, Rishi Dayananda quoting this evidence from the Vedas, has written: "This hemisphere alongwith water goes on revolving round the sun in the sky. Therefore the earth

revolves." Dayananda has translated gau (गी) into earth (गूमि) according to Nirukta and Nighantu.

गौरिति पृथित्या नामधेयम् यद्दूरं गता भवति, यच्चास्यां भूतानि गच्छन्ति।

Nirukta, 2.5

गौरिति पृथिवी नामसु पठितम् Nighantu, 1.1

Mahatma Devi Chand has translated this mantra as under: "The earth revolves in the space. It revolves with its mother, water in its orbit. It moves round its father, the sun." Thus both rotation and revolution of the earth are explained in this mantra.

The same fact is stated in a few more mantras. Atharvaveda (12.1.52) says:

वर्षेण भूमि: पृथिवी वृतावृता

"In one year, the earth completes its revolution."

Consequently, W.D. Brown has rightly said: "It is a

thoroughly scientific religion, where religion and science meet hand in hand. Here Theology is based upon science and Philosophy."10

- 4. Revelation should be in conformity with the nature and attributes (qualities) of God. Rishi Dayananda writes in seventh chapter of Satyarth Prakash: "As God is holy, omniscient, just merciful and of hallowed attributes, character and nature, so any book of which the subject matter is in perfect accord with the attributes, character and nature of God is the creation of God; and none else."
- 5. Pandit Lekhram writes in Kuliyat Arya Musaffir: "Revelation should be in such a language which is superlative because God in his qualities excels all human beings." Linguists concede that the languages other than Sanskrit are incomplete. In these languages, you write something and decipher something else. Only Sanskrit is complete and scientific. According to Bopp: "Sanskrit is more perfect and copious than Greek and Latin. At one time, Sanskrit was the one language spoken all over the world." As a matter of fact, Sanskrit is the mother of languages. The American scholar Will Durant opines: "India was the motherland of our race and Sanskrit the mother of Europe's languages." Therefore, the language of the Vedas is the best and complete.
 - 6. The Vedas themselves proclaim revelation.

तस्माद्यशात्सर्वंहुत ऋचः सामानि जशिरे।

छन्दांसि जिन्नरे तस्माद्यजुस्तस्मादजायत।। Yaj.31.7 "Rigveda, Yajurveda, Samaveda and Atharvaveda are the

creation of the universally worshipped Almighty God." देवस्य श्लोकं सवितुर्मनामहे Rg. 7.82.10

"We respectfully venerate the Vedas of the creator of the universe."

The word Veda is derived from the root विद् and

so it means knowledge. But the literal meaning of Bible is a collection of books. Koran (1.1.1) itself declares:

आरम्भ साथ नाम अल्लाह के क्षामा करने वाला दयालु

"To begin with the name of God forgiving and kind." Commenting on this, Swami Dayananda writes in Satyarth Prakash: "The Muslims say that the Koran is the word of God but this verse conveys that somebody else is to be credited with it; for had it been the word of God, then instead of 'Begin in the name of *Allah*,' it would have said: Begin with a sermon for human beings."

The authenticity of the Vedas is accepted by various authorities (acharyas). Maharshi Kanada considers the Vedas as self-sufficiently authoritative:

तद्वचनादाम्नायस्य प्रामाण्यम्। Vaish., I.1.3

Kapila says in Sankhya Darshana (V.51):

निजशवत्यिभाव्यवते: स्वत: ग्रामाण्यम्।

"The Vedas are self-sufficiently authoritative being the creation of God."

Nietzche has given fulsome praise for Manusmriti. He describes it as" a work which is spiritual and superior beyond comparison, even to name in one breath with the Bible would be a sin." The Manusmriti also acknowledges the authority of the Vedas.

नास्तिको वेदनिन्दक:।

"One who blasphemes the Veda is an atheist."

वेदोऽहालो धर्ममूलम्।

"The Veda is the root of all dharma."

शुति स्मृति विरोधेतु शुतिरेव गरीयसी।

"If there is difference between the Smriti and the Veda, only the Veda is the final."

According to Atri Smriti, there is no treatise greater than the Veda. नारित वेदारपर शारतम्।

In Shatpatha Brahmana (XIV.5.4.10), Maharshi

Yajnavalakya tells his wife Maitreyi:

एवं वा अरेऽस्य महतो भूतस्य नि:श्वसितमेतद्यद्दग्वेदो यजुर्वेदः सामवेदोऽशर्वाङ्गिरसः " O Maitreyi! Rigveda, Yajurveda, Samaveda and the Atharvaveda are born of God effortlessly like the breath."

The Sikh scripture – Guru Grantha Sahib, also sings the glory of the Vedas. It recognises that the Vedas are revealed by God. These are four in number and the revelation took place in the conscience of the four rishis. Futher, it asserts that the study of the Vedas is better than that of innumerous books. The Vedas are not false, but false is one who does not ponder over it.

ओंकार वेद निरमए।

-राग रामकली महला 1, आँकार शब्द 1

चारे दीवे चहु हश दीए एका एकी वारी।

-बसन्त हिंडोल, महला 1, शब्द 1

चारे वेद होए सिंचाआर।

-आसा दी वार महला 1, वार 13

अंसरुय ग्रन्ध मुखि वेद पाठ।

-जपुजी 17

वेद विराआन करत साधुजन भागहीन समझत नहीं खालु।

-टोडी महला 5, शब्द 26

वेद कतेब कहहु मत झूठे, झूठा जो न विचारे।

-राग प्रशाति कढीरजी, शब्द 3

Swami Dayananda – the only Vedic scholar of his times, has gone to the extent of writing in Satyarth Prakash (third chapter): "Of these (books other than the Vedas) also, those which appear to be contradictory to the Vedas, should be rejected; for the Vedas being made by God, are infallible and self-sufficiently authoritative, that is to say, the Vedas are their own authority."

So on the basis of these reasons and evidences, it becomes clear that the Vedas are the books of knowledge revealed by God.

Revelation

The Veda is the eternal knowledge of God. In the beginning of the creation, God revealed Rigveda, Yajurveda, Samaveda and Atharvaveda in the conscience of the four sages, Agni, Vayu, Aditya and Angira respectively. "As God is all-powerful and all-pervading, he stands in no need of mouth and other vocal organs to impart the Vedic knowledge to souls; for letters are pronounced with the mouth and tongue to inform persons different from one-self, but not to inform one's ownself. There is a great deal of business of thinking and pronunciation of words going on in the mind without the mouth and the tongue." 13

The Vedas address many subjects but the four principal ones are science, karma, devotion and knowledge. Usually Rig, Yaju, Sama and Atharva are enumerated in this order. Rishi Dayananda has explained and justified this order in Rigvedadibhashya-bhumika (Veda-utpatti Vishya) accordingly.

From the beginning of the creation till today and from Brahma upto us, all the true knowledge that is heard has been termed as Shruti. A Samhita alone is known as the Veda. Brahmana grantha or anyother book is not treated as the Veda. Rigveda has ten mandals, one thousand and twenty eight suktas and ten thousand five hundred and fifty two mantras. There are one thousand nine hundred and seventy five mantras in forty chapters of the Yajurveda. Samaveda contains one thousand eight hundred and seventythree mantras in its three archikas. In the twenty kands, seven hundred and thirtyone suktas of Atharvaveda, there are five thousand nine hundred and seventy seven mantras. Thus the number totals to twenty thousand three hundred and

13

seventy seven mantras in all the four Vedas.

The Rishis did not compose the Mantras

Some people opine that the *rishis* (seers) composed (created) the mantras. They are highly mistaken. The seers did not compose the mantras. They only realised and expounded the meanings of the Vedic verses. In Nirukta, Yaskacharya defines rishi as under:

ऋगयो मना द्रष्टार:

Thus "rishi is one who understands the meaning of the mantra." According to no Vedic dictionary can a rishi be described as one who composed the Veda mantras. Traditionally for the sake of memory, the name of a rishi came to be identified with the mantra which he realised. But that does not make him the composer.

Many mantras are attributed to more than one seer. Almost one hundred rishis are identified with just one sukta of Rigveda (I.6.66). Does that mean that for this one sukta, a hundred rishis sat together to compose it? Even otherwise, for the same mantra different rishis were at different times. Therefore, it does not stand to reason that they simultaneously composed a mantra. Because it were the rishis who interpreted the mantras, therefore it is understandable that for the same mantra there were various rishis at different times.

Revelation at different Times not Possible

One school of thought is that the Lord gave light at the time of creation and then as need arose there was revelation at different times in the shape of Bible and Koran. This misconception has done a great harm. It has the following defects:

1. The knowledge of the Almighty should be

complete. But revelation from time to time means that there were some flaws and gaps which had to be completed later on. If this is granted, it raises doubts about God being all-knowing (सर्वा). There is room for improvement in the acts of jiva who knows less (अल्प्ज). Take the example of a lamp. When man made an earthen lamp, he had niether any clue about the future needs of man; nor did he has the ability to make a perfect lamp. But gradually knowledge grew and there were improvements as dictated by needs. It is quite possible that the electric lamp may also have to be improved in the future. But the sun which the all-knowing God had made at the time of creation is fully adequate for the needs of mankind even today. Similarly God has no need to bring changes in his revealed knowledge because in the very beginning of the universe, he gives perceptions according to all-times needs of humanity. It is only the lesser knowing beings who improve their books. Therefore, revelation is not changeable. Atharvaveda (X.8.32) says:

पश्य देवस्य काव्यं न ममार न जीर्यति

"Observe the poetry of God (the Vedas) because this knowledge neither gets destroyed nor exhausted."

2. If it is granted that at the beginning of the universe revelation was partial and God reveals from time to time, then some people in the name of God will cheat the gullible and will do all kinds of undesirable things. In this context, one example may be enough:

According to Brahmo Samaj, the bride should not be less than 14 years of age and the bridegroom not less than 18 at the time of marriage. But its famous leader Keshav Chander Sen married his daughter less than 14 years to the almost 16 years old son of Maharaja of Cooch Behar. This was just like a hedge destroying the field. Consequently, Brahmo Samajis opposed it. 15

To silence them, "Keshub claimed to be guided in the matter by *adesh* or commandment from God...He declared the marriage as an effect of Divine commandment."¹⁶

Here the obvious question is: Is there no truth in other scriptures? And if there is even an iota of truth in them, then what is the harm in accepting the truth from those books? In reply to this, Rishi Dayananda writes in Satyarth Prakash (chapter 3): "Whatever is true in them is from the Vedas and the Vedic literature and the untruth is theirs.... Whoever seeks the truth in these books will get bogged down with untruth. Therefore scriptures with falsehood should be abandoned like poisoned grain. असत्यिमश्रं सत्यं दूरतस्याच्यमिति। The argument of Dayananda is so convincing that writing more may be meaningless.

Source of all True Knowledge

The Vedas have the seed of all true knowledge, but not of history. It preaches monotheism. The Vedas assert that God is one. Brahma, Vishnu and Mahesha are not considered as three different Gods but three names of one and the same God only. There are no stories of Gods, Godesses or human beings in this scripture. The names of Pauranik Gods have, no doubt, been taken from the Vedas. But this does not endorse their worship. The mention of agni, vayu etc. in the Vedas does not mean different nature gods, but refers to the almighty God. In fact "Vedas, the sacred books of the primitive Aryans, are the purest record of the highest form of monotheism possible to conscience."17 There is no mention of idol worship, incarnation, the oneness of soul and God etc. in the Vedas. Nor are there any mantras related to sorcery. In several mantras of the Rigveda (I.37.5; I.164.40; IV.1.6; VII.68.8; IX.1.9; X.46.3 etc.), cow has been

mentioned as अध्या i.e. one who should not be killed. Therefore there is no mention of animal sacrifice in the yajnas in the Vedas. The Vedas do not have anything that is unscientific, mutually contradictory or against natural laws.

Some Misconceptions about the Vedas

It is evident from logic and evidences that the Vedas are revelation. Learned men of the contemporary times have bowed before the Vedas. When the great French philosopher Voltaire was presented a copy of the Yajurveda, he remarked: "It was the most precious gift for which the West had ever been indebted to the East." Mons. Leon Delbos opined: "There is no monument of Greece or Rome more precious than the Rigveda." Thoreau, a famous American thinker of his times said: "What extracts from the Vedas I have read, fall on me like the light of higher and purer luminary which describes a loftier course through stratum-free from particulars, simple and universal." Even then read certain derogatory remarks of some writers for the venerable Vedas:

"I remind you again that the Veda contains a great deal of what is childish and foolish, though very little of what is bad and objectionable...Many hymns are utterly unmeaning and insipid."

F. Max Muller 19

"The Vedas are the imagination and creation of human beings. It provides useful material for the lovers of history and those who are interested in the primitive human civilization."

Rahul Sankrityayan²⁰

In fact prior to Rishi Dayananda, the Vedas were described as the gibberish of children and songs of shepherds. But why? There must be some reason. There seem to be the following reasons for this fallacious thinking:

17

1. The Indifference of Indians

The past has been for some time a time of decline for Bharat, the world teacher. The dependent nations lose love for their country, language, religion and culture. Therefore our indifference to our religion and culture was natural. The Vedas became objects of worship only. They were not studied at all. Thus it was impossible to motivate others towards the Vedas." Raja Ram Mohan Roy was in London and saw Friedrich Rosen at the British Museum busily engaged in copying manuscripts of Rigveda. The Raja was surprised and told Rosen that he ought not to waste his time on the hymns, but that he should study the Upanishads." Maharshi Manu says:

योऽनधीत्य द्विजो वेदमन्यः कुरुते शमम् स जीवशेव शृहत्वमाशु गच्छति सान्वयःङ्क

"That one who neglects the Vedas and labours elsewhere, he along with his family degenerates." But Raja Ram Mohan Roy describes study of the Vedas as the wasteage of time. What a fall!

2. The Object of the Foreigners

Among the western scholars who studied the Vedas, the names of F. MaxMuller, R.Griffith, H.H. Wilson, Winternitz, A.A. Macdonell and Weber are notable. All these gentlemen were confirmed Christians and were, therefore, unable to evaluate the Vedas impartially. Their principal aim was not to research into the Vedas but the propagation of Christianity. In order to achieve their objective, they interpreted the Vedas to re-affirm their pre-conceived convictions. This was all pre-meditated.

Among those who were behind this conspiracy was Thomas Macaulay. He was again a committed Christian. He was decorated with the title of Lord in recognition of his services to the church and the British empire. His main objective in making

English the medium of instruction in India was that nobody from the elite should remain committed to Hinduism. For the success of his mission, Macaulay wanted to attack the Vedic dharma from all angles. Therefore, he needed someone who could translate the Vedas according to his (Macaulay's) convictions. His search yielded F.MaxMuller. They met on 28th December, 1855. This was an unfortunate day for the Vedic dharma. This single meeting did more harm to the Vedas than the combined efforts of many people. MaxMuller was not prepared to sell his talent for money but the 55 years old politician Macaulay was too clever for the inexperienced 32 years old youth MaxMuller. Macaulay tempted him with money and fame and also intimidated him. Resourceless MaxMuller was drifting here and there in obscurity. Possibly he was not greedy but he needed resources. And fame is the weakness of youth.After all MaxMuller was an ordinary person. He could not resist temptation and so he decided to pawn his talent, scholarship and pen before Macaulay.22 For this, he got money from the East India Company. This trick was played in the garb of friendship with India.

Another person, Colnol Boden, established Boden Chair in Oxford University with his funds. He recorded in his will on 15th August, 1811:"That the special object of his (Boden's) munificent bequest was to promote the translation of the scriptures into Sanskrit, so as to enable his countrymen to proceed in the conversion of the natives of India to the Christian religion."²³

The basic objective of the foreigners was the propagation of their religion. Therefore, criticism of the Vedas was natural. They translated the Vedas with a view to establish the supermacy of the Bible. MaxMuller wrote to his wife in 1867: "This edition of mine (of the Rigveda) and the translation of the Veda will hereafter tell to a great extent

19

on the fate of India and on the growth of the millions of souls in that country. It is the root of their religion, and to show them what the root is, I feel sure, is the only way of uprooting all that has sprung from it during the last 3000 years." In a similar letter to Duke of Argyle, the Secretary of State for India, he wrote on 16 December, 1868: "The ancient religion of India is doomed and if Christianity does not step in, whose fault will it be?" 25

This is the type of thinking in the influence of which the Vedas were translated, then how can one expect justice with the Vedas? The translations by Sayana and others were used as a tool to achieve their objective. Sri Aurobindo has rightly observed: "The historical element admitted by Sayana was readily seized on and enlarged by new renderings and new explanations of the allusions in the hymns developed in an eager hunt for clues to the primitive history, manners and institutions of those barbarous races." Therefore the views of Western writers are unacceptable because of their narrow-mindedness and bias.

3. Foreigners' Knowledge of Sanskrit

As we have to break stones to obtain gold, similarly in order to arrive at the essence of books we have to research into these works. In order to arrive at correct meanings, it is necessary to know that language well. It is very difficult to know the gist of a book without a grip on the language. Huxley has rightly observed: "Those who do not know the ABC of Greek or Latin, how can they comment on the dramas written in that language." This is one reason that the translations of the Vedas by western scholars are not authentic because they did not have the requisite knowledge of Sanskrit. It would be pertinent to mention a few events:

In 1937 Pandit Dharamdev Vidyamartand asked Professor Thomas, Head of Sanskrit Department Oxford University who was chairing the Oriental Conference in Trivandrum: "Can you speak in Sanskrit?" He replied in English: "How I wish I could speak in Sanskrit fluently like you, but unfortunately I have no practice." Similarly Mahatma Narayan Swami records that an Indian scholar went to England and met Professor Macdonell but the latter could not talk to him in Sanskrit.²⁷

Is it possible for the people with such sketchy knowledge of Sanskrit to translate correctly the Vedic mantras which have such deep meaning? Never. They could not understand the language and syntax of the Vedas. Nor did they follow the ancient Vedic etymologists. They took the oridinary (laukika) meanings, and adopted stories from latter literature and built up Vedic mythology and history. All the Rishis and Munis, ancient authors and commentators without exception, regard all Vedic terms to be yaugika.... This principle, the European scholars have entirely ignored, and hence have flooded their interpretations of the Vedas with forged or borrowed tales of mythology, the stories and anecdotes of historic and pre-historic personages."

They considered the Vedas as the history of the early Aryans. In their view, the primitive Aryans were uncouth, devoid of morality and worshippers of the nature instead of God. They just could not accept the fact that the idol-worshippers of today were highly cultured people of progressive views at that time. Therefore according to them, the Vedas believe in polytheism. Yajnas advocate animal sacrifices. They also publicized that ancient Aryans were non-vegetarians. They consumed liquor in the name of Soma and also gambled. Western scholars studied the Vedas with this prejudice. Therefore, they were unable to understand the underlying sense of the Vedas. After labouring for over twenty years with the Vedas, MaxMuller himself admitted: "No one who knows anything of the Veda would think of attempting a translation of it at present. A

21

translation of the Rigveda is a task for the next century If by translation we mean a complete and satisfactory and final translation of the whole Rigveda...not only shall we have to wait till the next century for such a work, but I doubt whether we shall ever obtain it."30 But it is distressing that inspite of this, Professor MaxMuller continued to work on this translation. Prof. Boulanger, the editor of Russian edition of Max Muller's The Sacred Books of the East, held: "What struck me in MaxMuller's translation was a lot of absurdities, obscene passages, and a lot of what is not lucid... As for as I can grasp the teaching of the Vedas, it is so sublime that I would look upon it as a crime on my part, if the Russian public becomes acquainted with it through the medium of a confused and distorted translation, thus not deriving for its soul that benefit which this teaching should give to the people"31

Therefore, western scholars were not fully competent to translate the Vedas accurately. To corroborate this, we shall take the following mantra (Rig. I.2.1):

वायवायाहि दर्शतेमे सोमा अरंकृता:। तेगां पाहि शुगी हवम्क्क

Muir translated it as under: "Come, O Vayu, these Somas are prepared. Drink of them; hear our invocation." The English rendering of this mantra by Wilson is also similar: "Vayu pleasant, to behold, approach. These libations are prepared for thee, drink of them; hear our invocations." But Pandit Guru Datta Vidyarthi has given its real meaning as under:

"The air is a light, mobile, tremor-communicating, effluvia-carrying medium...The atmosphere furnishes the plants with air and food, and preserves the equilibrium between the vegetable and the animal kingdoms...It makes our sounds and all others, as well, heard."

34

How different are these two in meaning!! The renderings by Muir and others are completely insipid.

The Role of Indian Scholars

Sekond Swami, Venkat Madhva, Mahidhara, Uvvat, Sayanacharya and other Indians were not rishis. Though they recognised the Vedas as revealed scriptures but their translations are full of vulgarity, animal sacrifices in yajnas, idol worship, unfounded history and other such faults. They are full of narrations against logic and laws of nature and thus lead one to the conclusion that the Vedas are worthless. Sayana's writings are the best known in this context. For him, the Vedas are just a text for rituals. He lost the true essence of the Vedas by simply translating what is relevant for yajna and has thereby narrowed the true meaning. Just reducing it to the conduct of yajna is a very unfortunate contribution of Sayana. In fact, Sayana and Mahidhara were unable to translate the Vedas adequately and lost their true meaning. The translation of the Vedas into English, French and German languages by the western scholars are based on Sayana and Mahidhara. These translations can thus be held responsible for bringing distortions into Vedic meanings. Rishi Dayananda rightly states in Rigvedadibhashyabhumika: "When the translations of these people (Sayana and Mahidhara) are not authentic then what can be said about European renderings for which these formed the basis?" In fact, the root cause of evil are these inaccurate, unscientific and faulty translations.

Sri Aurobindo observed: "It is the final and authoritative binding of the Veda to this lowest of all its possible senses that has been the most unfortunate result of Sayana's commentary. ... Sayana's commentary put a seal of finality on the old misunderstanding which could not be broken for many centuries. And its suggestions, when another civilisation discovered and, set itself to

23

study the Veda, became in the European mind the parent of fresh errors...The outcome is a representation of the Rishis, their thoughts, their culture, their aspirations, so narow and poverty-stricken, that, if accepted, it renders the ancient reverence for the Veda, its sacred authority, its divine reputation quite incomprehensible to the reason." Bloomfield exclaimed: "Vedas are the yajna mantras of a primitive race." Sayana's commentaries are so worthless that the reputed Vedic scholar Pandit Brahm Dutt Jigyasu maintains: "If Sayana's writings translated in Hindi, English, Urdu or any other language are placed in educational institutions, then barring a few committed individuals there will be a unanimous cry that the Vedas are the babbling of uncouth people."

Dayananda and the Vedas

In such dark days, Rishi Dayananda Saraswati at the instance of his Guru Swami Virjananda Dandi started his crusade against anarshagranthas written by ordinary men and reasserted that the teachings of the Vedas should prevail. He agreed neither with Sayana nor the foreign scholars. For him, the Vedas are the word of God, the treasure house of all knowledge and for the benefit of mankind. They are not the monopoly of any caste, creed or gender. It was Rishi Dayananda who first published the Hindi translation of the Vedas. To Rishi Dayananda alone goes the credit of making the Vedas available to the whole mankind.

The entire life of this sage of India was for the Vedas. He was a seer, a mantra drashta and a great devotee. And so he was competent to interpret the Vedic hymns. He had concentrated in trance and imbibed the great mysteries of the Vedas. He had great intuition. He had complete command over the Sanskrit language. His study of the Vedic literature was superb. During the early days of his undertaking the translation of the Vedas, he

records in *Bhrantinivarana* on 7th November, 1877: "As per my conviction and research, I consider about three thousand treatises from the Vedas to *Purvamimansa* as authentic." How vast and deep was the study of that seer!! While most of the commentators had made the mistake of interpreting the Vedic words as commonly understood, this seer gave the contextual and root meanings of these words. It is a great contribution of the Rishi in this field. His commentary follows the Vedas, the Vedangs, Shatapatha Brahmana etc.

Almost all neutral scholars unanimously concede the logic and Vedic knowledge of Swami Dayananda. Recognising as "the remarkable attempt by Swami Dayananda, the founder of the Arya Samaj, to establish the Veda as a living religious scripture," yogi Aurobindo writes: "Dayananda's interpretation of the hymns is governed by the idea that the Vedas are a plenary revelation of religious, ethical and scientific truth. Its religious teaching is monotheistic and the Vedic Gods are different descriptive names of the one Diety.....Dayananda took as his basis a free use of the old Indian philology which he found in the Nirukta. Himself a great Sanskrit scholar, he handled his materials with remarkable power and independence."36 Aurobindo further declares: "In the matter of Vedic interpretation, I am convinced that whatever may be the final complete interpretation, Dayananda will be honoured as the first discoverer of the right clues.... He has found the keys of the doors that time had closed and rent asunder the seals of imprisoned Fountains."36 T.L. Vasvani opines:"Swami Dayanand Saraswati was in the first place, India's eye opener to the wisdom of the Vedas. I know none in modern India who was so great a scholar as the Swami."

Rishi Dayananda himself writes in Rigvedadibhashyabhumika: "Nothing unauthentic is written in this Vedic commentary. As a matter of fact, this commentary will follow the same lines as have been customary with the rishis and munis from Brahma to Vyasa. This Bhashya will amend all those comments and commentaries which are contrary to the spirit of the Vedas and because of which discrepancies have crept in. My endeavour is to present the world with the true meaning of the Vedas so that the world becomes aware of what they stand for."

Rishi Dayananda got barely ten years for Vedabhashya. In the last decade of his life (1931-1940 Vikrami), he toured more than half of India, did religious preaching, spent his time in devotion to God, held seminars, established Sanskrit schools and wrote almost twenty five big and small books which included the Vedabhashya. The manuscript of this labour runs into not less than twenty thousand pages.

Rishi Dayananda planned to write commentary on all the four Vedas. In 1933 Vikrami, he thus wrote Chaturvedavishya Suchi in Sanskrit. In the same year, he wrote Rigvedadibhashya-bhumika. This treatise was first published in sixteen fascicules. Its publication started in Chaitra Samvat 1934 and was completed in Vaisakh 1935 (May 1878). This is his the only introduction to the commentary of all the four Vedas. This treatise is very essential to understand the style of commentary of Rishi Dayananda. Therefore, he had announced in an advertisement: "If anyone wants only the Vedas, they would not be provided but the commentary can be had separately on payment of Rs.5 only." 37

Rishi Dayananda published an exposition of the first sukta of the Rigveda (alongwith Gujarati and Marathi translations) as a sample of his Vedic commentary in Samvat 1931 Vikrami. It is not available any more. Again

on the lines of this Vedabhashya, a second fascicule was published in 1933 Vikrami at Lajres Press, Benares. This has the translation of the first nine mantras of the first sukta and one mantra of the second sukta of the Rigveda.38 The Rishi also gave a befitting rejoinder to the criticism of his bhashya by Mahesh Chandra Nyayaratna and others. Then on Magh Shukla 6, Samvat 1934 Vikrami corresponding to December 11, 1877 (Tuesday), Swami Dayananda Saraswati started work on Rigvedabhashya. Thirty seven days after on Paush Shukla 13, Samvat 1934 (17th Janauary, 1878) Thursday, he undertook Yajurvedabhashya which was completed in about five years on Magh Krishna 1, Samvat 1939 Vikrami.39 Work on Rigveda commentary also progressed simultaneously. Rishi Dayananda had expressed the hope in Bhrantinivarana: " If by God's grace I continue to enjoy good health and I live to see the commentary on the Vedas completed then, no doubt, it will be like sunlight in the Aryavarta." But he had just managed to complete the translation upto the second mantra of the sixty first sukta of the seventh mandal of Rigveda that he succumbed to poisoning due to a bitter conspiracy. During Rishi Dayananda's life-time only fifty one fascicules each of both the commentaries could be published. The rest was published after his death.

Rishi Dayananda's books Rigvedadibhashyabhumika and Vedabhashya are available both in Sanskrit and Hindi. When many known scholars could not pick up courage to assist in this great task, the Rishi had to assign the work of editing the Hindi version to Bhimsen, Jwala Dutt and the like. However, about Bhimsen he opined: " He is honest." "His knowledge is limited to grammar etc. which he has studied. About the rest he is innocent like a child." "His language is very inadequate." "The books edited by Bhimsen are full of errors......He is careless." "Bhimsen's services have been dispensed with because of his incompetence." "He is a bad worker and ill natured also." Rishi Dayananda held similar opinion about Jwala Dutt also. He wrote in his letters: "I did not know that you had so much immaturity where correction work is concerned." "There remain a lot of errors in editing and proof reading." "Both of them (Bhimsen and Jwala Dutt) are alike. As is *Bhootnath*, so is *Pretnath.....* They are shirkers." "Not well versed in grammar." "Jwala Dutt is also naughty, arrogant and full of anger (like Bhimsen)." "He does not now write proper language. He is careless. His language does not match the subject matter." etc. 41

Sayana had the patronage of a king and MaxMuller was backed by the state. In contrast, there was just Dayananda and his God. No resources, not even a library. With a few ordinary collaborators and in spite of numerous preoccupations, he could achieve so much, is a matter of great surprise.

The Influence of Rishi Dayananda

In his assertions, Rishi Dayananda has rejected the interpretations of both Indian and foreign commentators like Sayana, Mahidhara, MaxMuller, Monier Williams, Wilson etc. He used to send his commentary to contemporary foreign scholars. It was not easy to challenge MaxMuller and company. At that time, those with western education (like Raja Radhakant Dev, Devendranath Thakur, Swami Vivekananda etc.) and the organizations like Brahmo Samaj were all full of praise for MaxMuller and the like. With the commendable endeavour of the Rishi, the thinking changed. Those foreigners who were blowing the Vedas with all their might failed in their ne-

farious efforts. They started getting cautious in publications.

MaxMuller who considered the Vedas fit only for the uncivilized, after reading Rigvedadibhashya-bhumika wrote a book entitled. 'India: What can it teach us?' almost as a remorse. In that MaxMuller admits: "I maintain then that for a study of man, or, if you like, for a study of Aryan humanity, there is nothing in the world equal in importance with the Veda. I maintain that to everybody who cares for himself, for his ancestors, for his history, or for his intellectual developement, a study of Vedic literature is indispensible." 43

Max Muller and Monier Williams faithfully and regularly followed Rishi Dayananda's enunciations of the Vedas. Monier Williams was himself present in Bombay on 5th March, 1873 for the Swami's lecture and they had a dialogue. Max Muller could not personally meet Rishi Dayananda in his life time but he was so deeply influenced by his scholarship and activities that he wanted to write his biography. He also invited the Rishi to England. The same Max Muller who spent the greater part of his life and almost a lakh of rupees to prepare the version of Sayana's Rigveda Bhashya now declares Dayananda's Rigvedadi-bhashyabhumika as the ultimate volume and writes: "We may divide the whole of Sanskrit literature beginning with the Rigveda and ending with Dayananda's Introduction to his edition of the Rigveda, his by no means uninteresting Rigveda-bhumika, into two great periods."44 Max Muller also wrote to the President Arya Samaj, London on 7th July, 1888: "I fully sympathise with the Arya Samaj movement. Arya Samajis should not remain content with what Swamiji did but should continue with the work which he left unfinished."

29

Not only Max Muller but several other scholars had also begun to subscribe to Rishi's views on the Vedas. N.B. Pavgee opines: "The Veda is the fountain-head of knowledge, the prime source of inspiration, nay the grand repository of Divine wisdom and even eternal truth."45 In another work of his, he concedes to this extent that "The Vedas contain many things not yet known to anybody, as they form a mine of inexhaustible literary wealth, that has still remained unexplored."46 Similarly the Belgium Nobel Laureate Maeterlinck writes: "Only the gaze of the clairvoyant directed upon the mysteries of the past, may reveal un-uttered wisdom which lies hidden behind these writings (the Vedas)."47 Morris Philip admits that "We are justified, therefore, in concluding that higher and purer conceptions of the Vedic Aryans were the results of a primitive Divine Revelation."48

Vedas and Science

Rishi Dayananda believes that there is scientific knowledge in the Vedas. In this context MaxMuller writes, "For Swami Dayananda, not only is everything written in the Vedas the whole truth but he went a step further. In interpreting the Vedas he succeeded in convincing others that everything worth knowing was available in Vedas and modern inventions are also described there." Several modern scholars hold similar views about the Vedas. P.N. Gaur writes, "The Rigveda deals with the theorems and experiments, while the process of preparing the reagents and apparatus is recorded in the Yajurveda which is in fact, a laboratory guide." Doctor Rele concedes: "Our present anatomical knowledge of the nervous system tallies so accurately with the world given in the Rigveda that a question arises in the mind whether the Vedas are really

religious books or whether they are books on anatomy and physiology of the nervous system."⁵¹ As per Sir William Jones, "From the Vedas are deduced the practical arts of surgery, medicines, dancing, archery and architect under which the system of mechanical art is included." Jacolliat writes in his wonderful book: "Astonishing fact! The Hindu Revelation (the Vedas) is of all revelations the only one whose ideas are in perfect harmony with modern Science."⁵² Thus in the post Dayananda era, the scholars have started conceding that there is scientific thinking in the Vedas. To substantiate this, let us take a few examples:

1. There is a mantra in Rigveda (I.50.9). सूरो रथस्थ नपत्यः

Here the sun is called स्र because it gives universal light. The word ratha (रष) is derived from the root रंह and it means 'to cause movement.' The planets revolve and therfore they have been termed as ratha (रष). The exact translation of planet is ratha (रष), because planet is derived from the latin world 'Planeta' which means 'wanderer.' Here नपत्य: means 'not allowed to fall.' Even Sayana concedes:

नप्त्यः न पातियःयः याभिर्युक्ताभि रशो याति न पतित ताइशी। meaning that those that do not allow it to fall are called नपत्यः Therefore सूरो रथस्य नपत्यः means that the sun does not allow the planets of this solar system to fall.

At another place, it occurs in Rigveda

उक्षादाधार पृथिवीमुतद्याम्।

'The sun is holding earth and other planets in the sky.'
Atharvaveda also endorses it in the following words:

स्य्येणोत्तिभता द्यौ:

How is the sun holding these planets? This has been answered thus in the Yajurveda (33.43):

आकृष्णेन रजसा वर्त्तमानो निवेशयग्ञमृतं मर्त्यं च। हिरण्ययेन सविता रथेना देवो याति गुवनानि पश्यन्।

It is clear from this mantra that the sun by its power of attraction keeps hold on the earth and other planets of the solar system.

Elsewhere in Yajurveda it has been said वृगभो दाधार पृथिवीम्

meaning that the varisbha bears the earth. 'Bull' is one of the meanings of the word varisbha. Taking an irrelevant meaning and commonly held belief, the Pauraniks gave credence to the view that the earth rests on the horns of the bull. However, Yask giving the meaning of varisbha has written

वृगभः कस्मात् वर्गयिता अपाम्।

'Varisbha is the one who causes rain'. The sun evaporates water and converts it into vapours and thereby into clouds. These clouds cause rain. Thus varisbha here means 'the sun'. And so this hymn reveals that the sun holds the earth.

2. Newton was the first one to prove that the white light of the sun was composed of a combination of the rays of seven colours. But this principle had already been enunciated by the creator of the universe in the Rigveda (1.50.8, 9). The eighth mantra here reads:

सप्त त्वा हरितो रथे वहन्ति देव सूर्य। शोचिष्केशं विचक्षण। 'O Lord Surya! seven types of rays take your light to the planets.' The next mantra is

अयुक्त सप्त शुन्ध्युवः सूरो रशस्य नग्त्यः तागिर्याति स्वयुक्तिगिः। 'The surya which keeps the planets from falling integrates seven types of rays'.

In the eighth mantra, the word harit (हरित:) occurs. This comes from the root इ which means 'to take away.' Sun rays take away water and liquids. That is why, these are known as हरित: According to Nighantu, हरित: have

been described as the horses of the sun.

हरित इत्यादित्याश्वानां संज्ञा हरित आदित्य स्येति।

Ashva (অম্ব) is from the root ashu, it therefore means 'one who moves with great speed.' Therfore horse is also known as ashva (অম্ব). But in the Vedas, ashva is metaphorically used for light, energy, heat etc. After all what is the speed of the poor horse? On the other hand, speed of light is 186000 miles per second. That is why Nighantu has described harit (ছবিব:) as the rays i.e. those which take the sun light with great speed.

In the nineth hymn, शुन्तुवः means one that purifies. From this, it is evident that the ancient Aryans were familiar with the scientific fact that the sun rays have the property of destroying pollution and purifying the atmosphere. We are inhaling oxygen and exhaling carbon dioxide. The sun rays convert carbon dioxide and water in the presence of chlorophyll into carbohydrates. Thus through this process, called photosynthesis, the plants get their food and air gets purified. This activity is not possible in darkness. That explains the increase of 12 per cent carbon dioxide in the atmosphere at night as compared to day. One ten thousandth part of solar energy on the earth is getting consumed in this process alone.⁵³

Thus in these two mantras, it has been explained that the sun with a combination of seven types of rays creates white light. Another hymn of the Rigveda states

अमी ये सप्त ऋश्मयस्तः॥ मे नाशिरातता

'Seven types of rays combine in me like nerves in the navel.' Atharvaveda (7.107.1) says:

अव दिवस्तारयन्ति सप्त सूर्यस्य रश्मयः

meaning 'the seven rays of sun make the day.' This basic fact is so prevalent in the Vedic literature that seven rays (सस रश्मि) have become symbolic of the sun. Yaskacharya

सप्त ऋषय: रश्मय: आदित्ये

'सस रश्मय: are sun rays.' Sun is also known as सहस्र रश्मि (of thousand rays). Therefore, सस रश्मय: indicates not seven rays but rays of seven colours. These have been thus described in Chhandogyopanishad (8.6.1):

असौ वा आदित्य: पिंगल एग शुक्ल एग नील एग पीत एग लौहित:।

Here all the seven colours are not mentioned because blue, yellow and red are the primary colours. All the other colours are made only by their combination. However, as the true meaning of the above mentioned two mantras pertaining to surya sukta (सूर्य सूक) has not been understood properly, therefore a Pauranik tale is rampant that the sun is in his chariot which is being pulled by seven horses.

3. Now take an example from the chemical sciences. Cavendish had proved that two parts of hydrogen and one part of oxygen combine with the help of electricity to make water. According to Pandit Guru Datta Vidyarthi, the same fact has been stated in the following mantra of Rigveda (I.2.7):⁵⁴

मिःगं हुवे पूतदक्षां वरणं च रिगादसम्। धियं घृताचीं साधन्ता।

4. There is a mention of medical sciences also in the Vedic literature. Straious germs have been considered the cause of several diseases. The classes of germs such as yatudhan, kimidin and rakshasas are described in the Atharvaveda (1.28.1). Certain other classes of germs are mentioned in the second mantra of the second kanda of the thirty first sukta of Atharvaveda. There is mention of the germs producing cholera, eczema etc. in the fourth mantra of the same sukta. In the fifth mantra, it is mentioned that these germs live in mountains, forests, medicines, animals and water, and enter our body with food and liquids. Even Yajurveda (16.62) mentions

the fact that the germs enter the body with food and water. Atharvaveda (2.32.1) records that the rays of the rising and setting sun kill the germs which thrive in darkness. *Bacillus Colli*, for example, breaks into two species in about twenty minutes. Thus if conditions are favourable then in just eight hours, 16 million germs will be borne, and the total weight of the germs so produced in twenty four hours will be 14,000 maunds. But due to the heat of the sun and unfavourable conditions, these germs can not multiply that fast.

There is mention of mathematics also in Vedic literature. Take Atharvaveda (13.4.16-21):

न द्वितीयो न तृतीयश्चतुर्थो नाप्युच्यते। न पञ्चमो न गष्टः सप्तमो नाप्युच्यते। नाष्टमो न नवमो दशमो नाप्युच्यते। स एग एक एकवृदेक एव।

These mantras say that God is one and not two, three, four, five, six, seven, eight, nine or ten. Thus numerals from one to ten are mentioned in these mantras. Apart from counting there is evidence of multiplication and addition also in the Vedas. Yajurveda (17.2) describe multiples of 10 upto 10^{18} (das sankh). It is marval to count upto that limit. Possibly in other languages, big numbers are described only as multiples of thousand or hundred thousand. Yajurveda (18.26, 27) mentions the numbers formed by addition or subtraction of two and four. Rigveda (10.130.3) and Atharvaveda (8.9.2) make a mention of the circumferences of a circle and the triangle respectively.

Therefore the seeds of all basic sciences are there in the Vedas. The Vedas are niether verses inspired by the fear of the objects of nature nor affirmation of blind faith. The Vedas preach the eternal truths, and unravelling the truths and mysteries is possible through the path shown by ancient sages. Only then we get an idea of how rich is the heritage to which we belong. This confidence saves us from superstition and blind faith. It also saves us from controversies of different religious faiths and gives us a place of pride in the world community which we

amply deserve. May God give us the strength to follow to path of the Vedas.

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