

Review of *vedic* Literature from the Perspective of Physical and Human Geography

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Abstract

Vedas are earliest collection of Hindu scripture. The word Veda was originated from Sanskrit verb 'Vida' inane meaning to "to know". Vedas are collection of knowledge. Literatures, written on the basis of Vedas are called Vedic literature. Itihansas and puranas are also known as Vedic literature. Each and every dimension of geography is expressed in Vedic Literature very strongly. This paper simply tries to present the geographical issue expressed in different Vedic literature. Different research papers written about Vedic geography, books of Vedas and puranas are used as materials for the formation of this paper. Topographic explanation and their classification for regionalization is carefully presented in vedic literature such as Dwipas, Khandas and Barshas. River is praised as mother in Vedas and nature and behavior of river was known by Vedic people. Ricveda is full of praising river. Seasonality month and different weather is explained in different Vedas and vedic literatures. Six seasons and twelve months are explained in vedic literature. Fire, wind, water, earth are taken as different forms of god and praised as human environment interaction. People are discouraged for deforestation means not to destroy home of god. Quantitative and mathematical geography is another great feature of vedic literature. Measurement unit techniques of time and distance are very strong geographical representation of vedic literature. The measurement of time starts from 'pramanu' to 'mahayuga' and distance starts from 'pramanu' to 'kroscha'.

Key words: *Ved, Vedic, Purans, seasons, measurement, geography*

Introduction

Geography is a discipline devoted to study relationship between human and environment with reference to its location. It is taken as bridge between physical science and social science. It is also known as mother of science as all branches of science are originated from geography. It is oldest discipline among various disciplines as father of geography Eratosthenes first used the word 'geography' for study of earth in second century BC (Roller, 2010). Geography has passed various paradigms and ultimately reached the paradigm of science and technology which

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was originated as subject to describe the earth surface. Geographical ideas and knowledge are expressed in *Vedic* literature in different form. Directly or indirectly, geographical ideas are shared in *Vedic* and *Pauranic* literature. Different dimension of geography like geomorphology, climatology, human settlement, livelihood etc. are studied in *Vedic* literature.

Vedas are earliest literature of universe meaning to knowledge. The word *Veda* is rooted from the Sanskrit verb '*vid*' which means 'to know'. *Veda* explains origin of universe, origin of earth, livelihood strategies of human in *Vedic* period human adaptation to environmental situation, use of science and technology and so on. *Vedas* are earliest literature of universe meaning to knowledge. The word *Veda* is rooted from the Sanskrit verb '*vid*' '*Jnane*' which means 'to know'. *Veda* explains origin of universe, origin of earth, livelihood strategies of human in *Vedic* period human adaptation to environmental situation, use of science and technology and so on. The time of *Veda* is confined more than three lakh years before today (Dinanath Shastree). It is believed that *Veda* was originated from mouth of Brahma then moved through hearing and memorizing system (*Sruti* and *Smriti*). Brahma told *Veda* to Nerada told to *Veda* Vyasa (Krishna Dwaipayana) who codified *Veda* in graphic form. *Veda* Vyasa, grandfather of Kauravas divided a single *Ved* into four branches by name "*Ricveda Yajurveda, Samaveda and Atharveda*". Each *Veda* consists of four parts- the *Samhitas* (hymns), the *Brahmanas* (rituals), the *Aranyakas* (theology), and *Upanisadas* (Philosophy). The collection of hymns or mantras is called *samhita*. *Brasmanas* are ritualistic text and include percepts and ritualistic duties. The *Upanishadas* are the concluding and philosophical part of *Vedas* and therefore called *Vedanta*. The *Aranyakas* and *Upanishadas* are the concluding portion of *Brahmanas* which discuss the philosophic problems. Besides this Maharshi *Veda* Vyasa composed an epic *Mahabharat* as fifth *Ved* (*Pancham Ved*) greatest of the world in volume with one hundred thousand stanzas. He Wrote 18 great *Puranas* as *Panchamved* (Bhagvat. 1:4: 20). It means *Puranas* are also extracted from different *Veda* knowledge extracted from *Veda* may be extracted from *Puranas* also. Therefore, *Ppuranas* are also as important as *Vedas* are important.

Methodology

The paper is based on secondary information. Available relevant papers are reviewed to prepare the paper. Materials taken from internet are also included here. Original text of different *Puranas* is also taken as review material.

Result and discussion

Topographic explanation

Topographic description is silently rooted in all of the *Vedas* and *puranas*. Every event and phenomena discussed in *Puranas* are occurred in certain topographical feature. In *Puranas*, significance of different topographical features is described by many perspectives. Earth is divided into seven continents (*Sapta dwipas*) namely *Jambu, Plaksha, Salmali, Kusha, Krauncha, Shaka* and *Puskara* (Bhadwat, 5:16:2). Every *Dwipas* are rounded by oceans called *saptasagaras*. Among seven, the *Jambu Dwipa* is taken as holy and largest dwip. *Jambu Dwipa* is also divided into nine *Barshas* namely; *Ramyak, Kuru, Hari, Bharat, Ilabrita, Kimpurusha, Ketumal, Hiranyama* and *Uttarkurubarsha*. Every *barsha* is divided into many *Khanda* e.g. *Bharat Barsha* has *Ilabrata, Rewa Bharat* and *Himawat Khanda* (Bhagvat 5:16). Nepal is within *Himavat Khanda*. These *Khandas* are overlapping with each other according to their properties, for example *Bharat Khanda* and *Himavat Khanda* are overlapping. *Bharat Khanda* is named in terms of kingdom of great king Bharat and *Himavat Khanda* is named in terms of Himalayan mountain. In each *Barsha* so many mountains are there. The major mountains of *Bharatbarsha* are *Malaya Mangalaprastha, Mainaka, Trikuts, Rishabha, Kutak, Kollaka, Sahya, Devagiri, Rishyamook, Shreeshaila, Benkata, Mahendra, Waridhara, Windhy, Shaktiman, Rikshagiri, Pariyatra, Drona, Chitrakuta, Gavardhana, Raivataka,, Kukubha, Nila, Gokamokha, Indrakila* and *Kamagiri* (Bhagvat, 5:18).

Seasonality, months weather and climatic analysis in Vedas

Seasonality and months are also explained in *Vedic* literature. In *Rig Veda* six seasons and twelve months concept have been analyzed. *Vedic Saints (Rishis)* were conscious about winter solstice and related the advent of rainy season, for instance 'Indra opens the water content from south and that will be fallen over sea' (Luitel b, 2066). Regarding the seasons, *Ved-Vyasa* was concussing and he grouped months as one set of chronological seasons like, " *Jaistha* and *Ashar* are '*Grishma*' or summer related season" (Luitel, 2066a). '... *Shrawan* and *Bhadra* are '*Barsha*' or rainy related season' (Luitel, 2066a). '*Ashwin* and *Kartik* are *Sarat* or autumnal related season, (Luitel, 2066a). *Marga* and *Pausha* are '*Hemant*' or winter like season. '*Magha* and *Falgun* are *Shisir* or winter season' (Luitel, 2066a). Similarly, *Chaitra* and *Baishakha* are *basant* or spring season. The time of newyear is situated during spring season during which seasonal newness use to be seen everywhere including vegetation and climate. A year is classified into two '*Ayans*', an *ayan* is full of three season '*Ritus*' similarly a *Ritu* is full of two months. Thundering and lightening concept

was dealt in Veda (Luitel, 2066a). The relation between winter and paddy thresh was analyzed here (Luitel, 2066a). So, the weather knowledge of Vedic farmer was very scientific. The cause of rainfall is sun and this cause was first realized by Vedic people. 'The sun shine partly divided the wealth of *Indra* (rain) on land' (Luitel, 2066a).

River

River is another important feature of *Vedic* literature. *Vaidic* civilization emerged is river basin named Indus Valley. Hermits of *Vedic* age used to choose place of river beach for their meditation. They used to collect record of flooding time and duration of floods in rivers. Hermits of *Vaidic* age are taken as fluvial geographer because they had idea of flooding nature of rivers and associated landforms. They had taken water as Barundev and river as mother. They always worshipped river and water before using it. All the chapters in Ricveda are full of praises over river referred to as '*Sarasvati*'. It is described as 'Glorious, loudly roaring', "Strongly Flooding" (Luitel, 2066b); "mighty river with great floods", "most powerful among rivers, following from mountain to sea (Luitel, 2066b). They used to pray river "*Saraswati*" not to be violating, flooding, and harmful and not to destroy people's property because *Saraswati* River had nature of flooding. They had directly felt because town Dwaraka was on beach of *Saraswati* River. Besides this, all '*Asramas*' were made on river beach. People of *Vedik* civilization were conscious to make water resources clean and clear. In *Srimadbhagvat Mahapuram* book ten Lord Krishna had concealed the saris of Gopini as punishment of making water pollution by bathing nakedly in River *Yamuna* because polluting water resource was taken as big sin. Some rivers of *Vedic* civilization and present time are stated in Table 1.

Table 1: Rivers in *Vedic* period and present time

S.N	Rivers named in Ricveda	Sources of verses from Ricveda	Recent name	Recent address, country
1	Kubha	5 53 9	Kabul	Afghanistan
2	Krumu	5 53 9	Kurram	Afghanistan
3	Gomati	10 75 6	Gomati	India, Uttar Pradesh
4	Sarayu	10 64 9	Siritoi	India
5	Prayiyu	8 1 37	Bara	Pakistan
6	Yamuna\ Anumati	5 52 17, 7 8 19	Yamuna	India

7	Ganga\Janhawi	6 45 31	Ganga	India and Bangladesh
8	Sindhu	8 12 3,8 20 24	Indus	China India and Pakistan
9	Susoma	8 7 29	Sohan	Pakistan
10	Vitasta	10 75 5	Jhulam	Northern India, and Eastern Pakistan
11	Asikni	8 20 25	Chenab	India, and Pakistan
12	Parusni	8 75 15	Ravi	Northern India, and Eastern Pakistan
13	Vipas	4 30 11	Beas	Northern India, Himanchal Pradesh
14	Saraswati	2 89 3, 1 1 11, 1 3 8	Saraswati	India

Source: Pal, 2012

Human environment interaction

People of *Vedic* civilization were rooted by religious thinking. They used to take God as supreme power. They used to think that all living and nonliving beings are created by god and environment as representative of god. They had taken human environment relationship as relation with God. They took water as “*Barundev*” wind as “*Vayudev*” fire as “*Agnidev*” earth as “*Prithvimata*” Forest as “*Home of God*” and so on. They thought everything through religious perspective. They had discouraged deforestation not to destroy the home of god. They acted everything in the name of god for their wellbeing. The “*Shanti Mantra*” of *Shuklayajurveda* (36:17) preais natural entities like space sun earth water herbs vegetation to be calm, peaceful and sweet and not to be violating for joyful human life (Luitel, 2066a). All human activities of that period were run through deterministic approach. People of that phase took changing natural phenomena and violating them as great sin. Agriculture was major and important occupation for them. They took agriculture as *Uttam* trade as *Madhyam* and job as *Adham*. Barley and peddy were major crops at that time. Livestock farming was another famous human activity during *Vedic* civilization. Cow and horse are major domestic animals. Cow was worshipped as “*Gaumata*” and domesticated for milk which is very important for human health and horse was massively used for transportation directly and pulling chariot. During this Period territoriality was also developed as different kingdom. King was taken as powerful person of state and king used to protect state from enemies.

Different states were ruled by different kings like, Mathura by 'Kamsaa' Ayodhya by 'Ram' Lanka by 'Rawana' Magadha by 'Jarasandha' and so on.

Place attachment is another salient feature and cultural practice of Vedic civilization. They are very conscious about their places. As we see naming system of Vaidic practice can find that name to the new born baby is provided by calculating the Date of birth time and place, and position of stars and planet at birth time. It means name given from "ABAKAHADACHAKRA" to new born baby represents the various things of place.

Measurement system

During *Vedic* period measurement system was very systematic and logical. People in Vaidic period used to use materials used in everyday life as measurement tools like sticks, rope etc. Measurements were made to increase knowledge and understanding of the world they live. Measurement science is the basis of modern science and technology and consequently of modern civilization. The most necessary measurement in every walk of everyday life is length.

The length of human body parts was the basis for length measuring. The popular choice for length measurement were length and width of fingers, hands, hand spans, thumbs, cubits and body spans. But because of considerable variation in length and width of body parts of different person a piece of wooden stick rope and other materials were used as unit of length was one of the great ideas for length measurement.

The unit of length in Vaidic civilization included 'Dhanush' 'Krosha' and 'Yojana'. In Skanda Purana's *Sadachar Khanda* it is told that the toilet must be hundred Dhanush far from human settlement. Similarly, in fifth book of *Mahapurana Srimadbhagoat* the area of *Bharatbarsha* is stated one lakh *Yojana*. One *yojana* equals to four *krosh*. For measuring length and distance Chanakya has mentioned two type of *Dhanusha* namely, *Ordinary Dhanusha* consting of 96 *angula* (fingers) and *Garhaptya Dhanusha* consisting of 108 *angula* (fingers) (Shrivastav, 2017). Such measurement tools are used to measure road distance and individual land holding (Luitel, 2066c). The series of length measurement unit is stated in Table 2.

Table: 2: Measurement units of length

S.N	Vedic unit	Match with present unit
1	8 Pramanu	1 Rajahkana: dust particle coming from wheel of chariot
2	8 Rajahkana	Liksha': Size of egg of lice
3	8 Likssha	1 yookamadhya
4	8 Yookamadhya	1 Yavamadhya
5	8 yavamadhya	1 'Angula': approximately the width of finger (2 cm)
6	4 Angula	1 Dhanugraha (8cm)
7	2 Dhanugraha	1 'Dhanusmusthi' (16 cm)
8	3 Dhanugraha	1 Vitta (24 cm)
9	2 Vitta	1 Hasta (48 cm)
10	4 Hasta	1 Dhanush Or Danda (192 cm)
11	10 Danda	1 Rajju (19.2 m)
12	2 Rajju	1 Paridesh(38.4 m)
13	100 Paridesh	1 Krosh: approximately 3.84 km
14	4 Krosh	1 Yojana 15.376 km
Note: The smallest unit of length is 'Pramanu'.		

Source: Shrivastav, 2017

The unit Yojana was used differently in different case in *Pauranik* literature. The yojana is used to measure length and area.

Time measurement

Vedic time measurement system is oldest and scientific time measurement system. *Vedic* scriptures give us a wealth of information about different methods and techniques used in *Vedic* civilization for time measurement. This measurement system is not only complete but also very precise and accurate. The time measurement system in *Vedic* civilization is very excellent and it covers a range

from micro second to trillions of years including the cycle of universe. A time-based activity involves a time scale based on some system of measurement. All systems of time measurement are based on the time of revolution or rotation of various celestial bodies including the moon and the sun. People of pre-Aryan days were keenly interested in knowing the motion of heavenly bodies to predict solar and lunar eclipses and lunar month etc. There are 12 months each consisting of two paksh (14 days) according to the orbiting of the moon around the earth. The actual number of days in a month may vary by a day according to the position of the moon and the sun.

In *Vedic* and *Puranic* texts describe a system of time measurement starting with the time taken for twinkling of an eye and going up to the age of the creator Brahma, based on the solar/human year. During *Vedic* period, Indians had separate names for much smaller time intervals. The terms for smallest time interval and its multiples are shown in Table 3.

Table 3: Measurement unit of time

S.N	Vedic units	Match with present units
1	1 pramanu	26.3 μ s (micro second)
2	2 pramanu	1anu = 52.67 μ s
3	3 anu	1 trisrenu =158 μ s
4	3 trisrenu	1 truti = 474 μ s
5	100 Truti	1 Bedh = 47.4 ms
6	3 Bedh	1 Love= 0.1s
7	3 Love	1 Nimesh = 0.43s
8	3 Nimesh	5 Kshana= 1 kashtha 6.4s
9	15 Kashtha	1 Laghu= 1 Nadika= 1 Ghadi= 24 Minutes = 60 pals
10	2 Nadika	1 Muhurta = 48 Minutes
11	30 muhurta	1 day and 1 night (24 hours)

12	7 day and 7 night	1 Saptaha (1 Week)
13	2 saptaha	1 Paksha (Forth night)
14	2 Paksha	1 Month
15	2 Month	1 season
16	3 Season	1 Ayan
17	2 Ayan	1 Year (365 Days)
18	100 Years	1 Shatabdi
19	10 Shatabdi	1 sahasrabdi
20	432 Sahasrabdi	1 kaliyuga (432000 Human Years)
21	2 Kaliyuga	1 Dwaparayuga (864000 Human Years)
22	3 Kaliyuga	1 Tretayuga (1296000 Human Years)
23	4 Kaliyuga	1 satyayuga (1728000 Human Years)
24	10 Kaliyuga	1 Mahayuga (4320000 Human Years)
25	1000 Mahayuga	1 Kalpa (4320000000 Human Years) one day of Brahma

Source: Shrivastav, 2017

Conclusion

This paper tries to deal with geographical explanation within *Vedic* and Pauranik literature. Obviously, there are so many geographic elements discussed in *Vedic* literature. In this paper physical and human dimension of geography are tried to include. Knowingly or unknowingly peoples of *Vedic* Civilization were practicing geography. In *Vaidic* civilization geographical understanding, human environment is seen through religious perspective. Continents and topographic unites are very strongly presented in *Vedic* literature. Climatic change variation weather and season are obviously presented in *Vedas* and *Puranas*. However, such type of scientific truth and facts are of *Vedic* literature are ignored and neglected. All *Vedas* and *puranas*

are taken as only through religious perspective no other. Besides this it is concluded that Vedas and other Vvedic literatures are full of scientific knowledge of geography which is to be included in curriculum of universities for affective transformation of knowledge of Vedic geography.

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