

## Evolution of Indian Geographical thought, 6th Sem. Hons., CC-13

By Surajit Let

Lect-1

### EVOLUTION OF GEOGRAPHICAL THOUGHT IN INDIA

#### INTRODUCTION

India is the home of one of the earliest civilizations; it has been observed by number of scholars that in India geographical studies date back to those times. The contributions of Indian scholars by no means are less than that of Greeks, Romans and Chinese. The legendary works like Upanishads and Vedas led us to develop number of indigenous systems of knowledge. Surprisingly, most of the inventions and discoveries that are believed to have originated in the Western world have their roots in the ancient Indian knowledge which has 2000 years old legacy. Although the formal foundation was laid during the British period (1920s); this can be affirmed through the statement of James and Martin (1972) 'the new geography was transmitted by British to its colonies through universities'. In India the first geographical association was established in 1920 at Lahore where a college was established with under-graduate classes. And later on it was established in Aligarh in 1924 and in Patna in 1927; therefore geographical studies found their expression in India education system only in the early twentieth century. To understand the development and growth of this discipline in India one has to see the paradigmatic changes that this field has witnessed especially in last hundred years as well as the roots that lie in our ancient traditional knowledge.

#### The roots of Indian Geography in the Ancient Literature

In Hindi geography is called "**Bhugol**", where '*bhu*' means '*earth*' and '*gol*' means '*round*' that is **study of round earth** (Rana, 2013). The word *Bhugol* is derived from two Sanskrit words. It means that from ancient times Indian scholars considered earth to be round; a notion contrary to the other ancient civilizations which considered earth as a flat disc. This becomes evident when one dwells upon the fact that many scholars of that time had expertise in various disciplines relate to earth. Table 1 provides the information on different disciplines which were popular among these ancient scholars.

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**Table 1**  
**The Earliest Known Indian Scholars and Their Field of Interest**

Name	Field
Acharya Kapil (3000 BC)	Cosmology
Acharya Bharadwaj (800 BC)	Aviation technology
Baudhāyana, (800 BC)	Mathematics
Acharya Charak (600 BC)	Medicine
Acharya Kanad (600 BC)	Physics (Atomic Theory)
Acharya Sushrut (600 BC)	Medicine (Surgery)
Gautama Buddha (563 to 483 BC)	Philosophy
Pānini (400BC)	Grammar
Nagarjuna (100 AD)	Chemistry
Āryabhatta I (476–550 AD)	Mathematics & Astronomy
Varahamihir (499-587 AD)	Astrology & Astronomy
Brahmagupta (598-668)	Mathematics & Astronomy
Bhāskara I (600 - 680)	Mathematics & Astronomy
AdiShankara (788 AD - 820 AD)	Philosophy
Aryabhata II (about 920)	Mathematics & Astronomy
Sridharacharya (AD 991)	Mathematics
Brahmadeva (1060- 1130)	Mathematics & Astronomy
Bhaskaracharya (1114-1183 AD)	Algebra

Source: Rana (2013) *Evolution of Modern Geographical Thinking and Disciplinary Trends in India*, p.2.

The above table clearly shows that the ancient scholars in India made significant contributions to the discipline of geography through their works in philosophy, cosmology, astrology, mathematics, medicine and linguistics. These works have largely benefited the branches of regional geography, physical geography, climatology and practical geography. The ancient scholars such as Aryabhata-I, Bhaskaracharya, Brahmagupta and Varahamihira had contributed to astronomy where they have put forward theories and concepts related to the planetary positions, planetary movements,

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planetary forces, latitudes, longitudes and local time, directions or cardinal points, earthquakes and volcanoes, atmospheric observations with reference to seasons and its physical divisions along with related astronomical calculations. Example can be cited of works of Aryabhata; what Copernicus and Galileo suggested nearly 1500 years ago was originally propounded by him. Another example can be cited from the concept that from the Vedic times, Indians had classified the material world into five elements viz. Earth (Prithvi), fire (Agni), air (Maya), water (Apa) and ether (Akasha). These five elements or *Pancha Mahabhootas* have been identified with the various human senses of perception; earth with smell, air with feeling, fire with vision, water with taste and ether with sound. It is perceived that material world is composed of these panch mahabhootas and hence comprised miniscule particles of matter. The concept of atom (Parmanu) was also known to them; that suggested that there was a possibility even at an abstract level.

As during those times the means of communication were poor, the scholars had limited knowledge about the earth. In spite of that some description is available on the various regions of the world; these regions were known as the *dwipas*. Seven *dwipas* have been mentioned in the Puranas. These are Jambu Dwipa, Krauncha Dwipa, Kusha Dwipa, Plaksha Dwipa, Pushkara Dwipa, Shaka Dwipa and Shalmali Dwipa. Jambu dwipa formed the centre of Geography as a discipline was not developed at a formal level during ancient times; the earliest mention of geography is made in the 8<sup>th</sup> century Puranic text – Bhagwat Purana. Some information is also found in the epics of Ramayana and Mahabharata. The oldest Veda, the Rig Veda clearly states the idea of six directions - Purva (East), Paschim (West), Uttar (North), Dakshin (South), Zenith (Meru) and Nadir (Bhadvanala). The reference has also been made of vacuum that existed between the earth and the heaven (Antariksha). The thickness of the Antariksha was calculated as 12 yojans which is equal to 96 kms (1 yojan = approximately 8 kms). all these continents. India has been mentioned as *Bharatvarsha*. It extended from the Himalayas to Kanyakumari and consisted of regions like Saptasindhu, Himavat, Kailash Parbat, Vindhayans, Sahyadri. Rivers originating from the Himalayas like Ganga, Yamuna, Brahmaputra, Saraswati, Satudri (Sutlej), Asikni (Chenab), Vitasta (Jhelum),

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Arjikeya (upper part of Indus), Susoma (Savan), Sindhu (Indus), Kubha(Kabul), Gomati (Gomala), Krumu (Kurrum) along with the inland river like Narmada, Tapti (Tapi), Godavari, Krishna, Cauvery and Tungbhadra; all are mentioned in these ancient texts.

### Indian Geography during the Middle Ages

During the medieval period the geographical boundaries of the known world extended for Indians. They migrated to lands like Cambodia and even set up trade links with china on one end to Greece on the other. The most significant feature of this period was that the Indians came into contact with the Arabs. The influence became more prominent when the Muslims established their empire in India. One of the most important writings of this time is Al-Beruni's *Tarikh – i – Hind* where he describes the geography of India. Other scholars of this period include Al-Beruni, Ibn-Batuta and Abul Fazl. The contribution came through '*Kitab 'I Hind*' of Al-Biruni; 's Travels in India and China, a travelogue of Ibn Batuta; and '*Ain-i - Akbari*' the third volume of Akbarnama, of Abul fazl-i-Allavi.