A Study of Origin and Evolution of Indian Logic; With reference to Primary Sources

භාරතීය තර්ක ශාස්ත්‍රයේ ආරම්භය හා විකාශය පිළිබඳ අධ්‍යයනයක්; මූලාශ්‍රය ඇසුරින්

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මෙම පර්යේෂණ පත්‍රයෙන් භාරතීය තර්ක ශාස්ත්‍රය හා ඥානවිභාගය ඓතිහාසිකව විකාශය වූ ආකාරය සාකච්ඡා කරයි. ආදි වෛදික යුගයේ සිට උපනිෂද් යුගය සහ බෞද්ධ යුගය දක්වා ක්‍රමිකව භාරතීය තර්ක ශාස්ත්‍රය වර්ධනය වූ අයුරු මෙහි පැහැදිලි කරයි. මිනිසා සහ ලෝකය පිළිබඳ තර්කානුකූලව ආදි වෛදික සෘෂිවරුන් අධ්‍යයනය කොට ඇත. ආත්ම සංකල්පය වර්ධනය වීමෙන් ක්‍රමිකව කර්ම මාර්ගය හා ඥාන මාර්ගය විකාශය විය. ආත්මවාදය පසුකාලීනව ආත්මය පිළිබඳ අධ්‍යයන කරන විද්‍යාවක් බවට පත් වීම සහ එම විද්‍යාව තර්කය හා ඥාන විභාගය මත පදනම්ව අධ්‍යයනය කිරීම ආන්වීක්ෂිකි ලෙස හැඳින්වේ. ක්‍රමයෙන් විවිධ දාර්ශනික ගුරුකුල භාරතයේ ආරම්භ වීම තර්කය පිළිබඳ පාරිභාෂික වචන මාලා සහ තාර්කික ක්‍රමවේද ආරම්භ වීමට ඉවහල් විය. යතෝක්ර්ථ කරුණු හා උදාහරණ මූලාශ්‍රය අධ්‍යයන මගින් දක්වා භාරතීය තර්ක ශාස්ත්‍රය ඓතිහාසිකට වර්ධනය වූ අයුරු නිගමනය වශයෙන් සාකච්ඡා කෙරේ.

ප්‍රමුඛ පද: භාරතීය තර්ක ශාස්ත්‍රය, ඉතිහාසය, ආරම්භය, විකාශය,

Abstract

In this article it discusses the history of the gradual evolution of Indian logic and epistemology; discussion begins from the early Vedic period, continues until the Upanishad period and era of the Buddha. In the early Vedic period there are some epistemological teachings which are based on investigation of

the world and the man. The Karmamārga gradually turned up as Gñānamārga with the beginning of the study of the Atma; the science of soul (ātmavidyā) in later stage (650 BC -100 BC) renovated as science of inquiry (ānvīkṣikī) or theory of reasoning. Although, Ānvīkṣikī contained reasons supporting to the Vedic assertions, later it developed as a specific branch of theory of knowledge in Indian philosophy. Next, it illustrates different types of epistemological terms and theories used in primary resources of Indian philosophy with the purpose of elaborating historical development of the Indian logic. Finally, through the all above facts and examples concludes the historical development of Indian Logic.

Keyword: Indian Logic, History, Origin, Evolution

Introduction

In this research paper it investigates the facts and accounts that influence for the origin and evolution of Indian logic with reference to the different philosophical schools of India. The research problem here is that what are the primary sources reveal about the origin of Indian logic and epistemology? And, what are the theories of knowledge have reveals in those texts? The objective of the research is to study the facts and accounts of different resources related to the origin of Indian logic. This article is, specially, a data collection of origin and evolution of Indian logic, therefore, this is important for the students who study about the Indian logic and epistemology to get basic understanding of its origin.

Literature Review

The historical development of the logic of ancient, medieval and modern Schools of Indian philosophy greatly analysed by Vidyabhusan, S. (1920) in his book "A history

of Indian Logic (Ancient, Medieval and Modern Schools). In this book Vidyabhusan has paid attention to elaborate gradual development logical theories of different philosophical schools of India. The next scholar who comparatively has studied Indian logic and epistemology with Buddhist philosophy is Jayatilake K. N. (1963). In the book, "Early Buddhist Theory of knowledge, he analyses the historical evolution and epistemological theories of different tradition of Indian philosophy giving priority the early Buddhist texts. Besides the above books, A Source Book of Indian philosophy written by Radha Krishnan and Moore, (1967), Indian philosophy, Vol. I & II written by Radhakrishnan. S, (1931), and Bhāratiya Darśana by Baladeva Upadhyaya, Translated by Pannakitti, H. (1999) etc. also give enough accounts and evidences to study the origin and evolution of the Indian logic. There may be many others volumes and books which reveal about the development of the Indian philosophy and epistemology but the above mentioned books supply essential facts related to origin of Indian logic.

Research Methodology

The comparative method employs as the research methodology of the paper and data of primary and secondary sources related to the topic collected from the libraries and E-libraries.

Discussion

The metaphysical systems of early history of Indian Philosophy were directly related with the concepts, Atman and Brahman of the Vedic literature. The Vedas are the religious scriptures which are said to be recorded by various sages in different periods. The specific nature of the Vedas is most parts of them comprise to emphasize the eternity of the soul (ātman) and divinity of the Brahman. Vedas which come down about

1500 BC, generally believed to be as a divine revelation. There are three sections of the Vedic literature, 1) Upāsanā (Prayer), 2) Karma (ritual or sacrifices). 3) Jnāna (knowledge¬). The first section includes hymns that composed to pray the power of nature forces. The next part mainly comprises method of rituals and their results. The last one is most important section which based on the investigation of the soul. The investigation of soul is generally called as path of knowledge (Jñānamārga).

Many scholars believe that the theory of knowledge was related with sceptical characters in early history of Indian philosophy. Radha Krishnan, Moore (1967: 34-36) and K.N. Jayatilake (1963:25) have pointed out such sceptical statements of Vedic literature as the germs of origin of theory of knowledge. One of most famous sceptical expressions of Vedic literature they pointed out is Nāsadīya hymn. In this hymn it raises a question on the existence of Indra in sceptical way as follows, "Whether he is formed from that or does not form from that, he is the element of this creation. He exactly knows, whose eyes control this world in highest heave, otherwise sometimes he does not know." One of another hymns illustrates reasoning and arguments on the ground of origin and evolution of world, (Questions) -"What did originate first, either earth or sky, what did originate later, what is the reason for origin it, who does know it, tell those who have penetrative knowledge." (Answer) "The world (Universe) depends on itself, dependence is belong to its nature." These hymns reveal that Vedic sages, tried to get understand the nature of universe through the reasoning and debating. The above examples are some germs of epistemology that can be seen in early stage of Vedic literature (Rig-Veda).

These early epistemological theories influenced to develop the theory of knowledge in Āraṇyaka and Upanishad periods. Thus, the primitive beliefs, such as, worshiping of nature

forces, like, sun, moon, wind, lighting and raining etc. in Vedic period bifurcated into investigation of Ātman and Brahman, two main metaphysical characters of Upanishad period. The sages who went to forest in Sanyāsi period dedicated to investigate nature of the world by developing their mental concentration. Consequently, they found out two types of souls, as Personal soul (putgalātma or ātman) and universal soul (Viśvātma or Brahman). This basic investigation of nature of the world transformed to further development of path of knowledge (Jñānamārga).

In Upanishad period (900 B.C-600 B.C), the study of the doctrine of the soul was developed. For an example, in Kaṭhōpaniṣad (1934: 1.1. 20.1 . 2 18, 19) it explains the nature of soul as follows, "The soul distinct from the body, it is neither born nor died. Even though body was killed, soul is eternal and everlasting. Wise person never grieves who he understood soul as bodiless within body and unchanging among the changing things." Furthermore, Upanishad sages looked at the soul as a charioteer, who drives the chariot, thus, body is chariot and soul is charioteer, the mind is reins, the sense are the horse, and other surrounding objects their spheres of operation. Generally, soul is known as enjoyer when it combined with the body, mind and sense organs. The foolish indulges in pleasure and tangles in snare of death, but wise man understands eternity of the soul and never falls into suffering; the individual uninterruptedly circles in birth and death, until attain the Brahman-hood. These investigations of the soul in the Upanishad period, transformed into an important branch of investigation, usually known as Ātmavidyā (the science of soul) or Ādhyātma vidyā (the spiritual science) also known as Brahma Vidyā (divine science). Through the science of soul, it is expected to study and investigate the nature of soul and universe. This is considered to be as the first developed stage of ground of knowledge in Upanishad period.

The science of soul (ātmavidyā) in later stage (650 BC -100 BC) renovated as science of inquiry (ānvīkṣikī) or theory of reasoning (Vidyabhusan, S.1970: 4).   In Manusaṁhitā (1909: 7. 43) Ānvīkṣikī illustrates equivalent with ātmavidyā and Kauṭilya in Arthaśāstra (1924:1-2) pointed out four types of sciences, 1) Ānvīkṣikī is the first branch of science among the four. Remaining three are, 2) Traī (three Vedas), 3) Vārthā (commerce) and 4) Daṇḍanīti (polity). In this category Ānvīkṣikī has annotated as theory of reasoning. Vidyabhushan (1970:5) demonstrated distinction between Ātma-vidyā and Ānvīkṣikī thus, "The former embodies certain dogmatic assertion about the nature of the soul and the later contained reasons supporting those assertions." This statement reveals that the science of soul (ātmavidyā) is related with the study of metaphysical characters of Brahman teachings. To prove the reliability of Brahman teaching, Ānvīkṣikī provides logical basics and reasons. Although, Ānvīkṣikī contained reasons supporting to the Vedic assertions, later it developed as a specific branch of theory of knowledge in Indian philosophy. As it is mentioned in the above, Ānvīkṣikī has two aspects: study of soul and theory of reasoning. In later period Ānvīkṣikī developed into Darśana (philosophy) and Tarka (logic). This bifurcation of Ānvīkṣikī into philosophy and logic is the foundation of theory of knowledge in Hindu Philosophy.

There are different types of epistemological terms that were used for different purposes and the terms that used for the theory of knowledge in different periods have diverse names. The following are some terms that used in different periods, Ānvīkṣikī, Nyāyavidyā, Nyāyaśāstra, Hētuvidyā, Hētuśāstra, Nyāya, Tarka, Pramāṇa, Pramāṇa śāstra, Tarkavidyā, Vādavidyā and Yukti.

In Aitarēya Brahman the word 'Nyāya' used to denote
'the rule.' According to Bṛhadāraṇyaka Upanishad (1914:
3.6.16) the word 'Nyāya' means 'conclusion' or 'decision.' For
Manusaṁhita (1909: 8.3.10) 'Nyāya' means 'method' or 'theory.'
In Nyāya Philosophy (Nyāyasūtra, 1913:1.1.1) it used as 'path
of right understanding.' The terms, Hētuśāstra and Hētuvidyā
were used in Mahābhārata (Ādiparva adhyāya,1906: 1. 67)
for 'science of reasoning.' According to Rāmāyana, (2.37.21)
Mahābhārata (1906:13. 55.72) and Kauṭilya's Arthasāśtra (1924:
3. 2) Pramāṇa means 'path of right knowledge.'

In Kaṭhōpaniṣad (1934:2.9) the word 'Tarka' used
to emphasize the path of understanding of something. In
Gautamadharma Sūtra (1966:11) it is mentioned that Tarka
useful to understand right and wrong. The term Ānvīkṣikī used
in Mahābhārata (1906:180- 47) as name for logic. Thus, in the
history of Indian Philosophy there were different types of terms
in different volumes and philosophical schools to explain the
theory of knowledge. The above terms were not used only for
epistemological purposes but also they had been used for various
other religious and philosophical purposes.

The epistemology in western philosophy can recognize as
a separate subject, which was developed by various philosophers
in different periods. The western epistemology seems to have
not a connection with religion, but in the Medieval Period they
used epistemology for religious purposes. However, when
it focused into the Indian Philosophy, it would be possible to
realize that epistemology in India always related with religions;
they introduced epistemology, especially, for religious purposes.

Usually all the philosophical schools in India accepted
perception (Pratyakṣa) as valid ground of knowledge. Inference
(Anumāna), comparison (Upamāna), verbal testimony (Śabda)
etc. were used by each philosophical school.

In Taitarīya Upaniṣad (1.2) it mentions four types of theories of knowledge as, Smuṛti, Pratyakṣa, Aitihya and Anumāna. Āgama, Pratyakṣa, Aitihya and Anumāna have illustrated in Rāmāyana (5.87.23) In Carakasaṁhitā (1929:11.17/8.53) it mentions, Aptōpadēsa, Pratyakṣa, Anumāna, Yukti, Itihya, and Aupamya as means of knowledge.

In Chāndōgya Upaniṣad (1913: 5.2.2) it can be seen only perception (pratyakṣa) and in Maitrī Upaniṣad,(6.2) there is only inference (anumāna), but in Manusaṁhitā (1909:12.105)both perception (pratyakṣa) and inference (anumāna) accepted as valid grounds of knowledge. The above are some examples of theories of knowledge accepted by Vedic and Upanishad periods. The common feature of Vedic literature is that Vedic Munis highly accepted authority of Vedas as a ground of knowledge.

The nature and features of pre-Buddhist theories of knowledge has been clearly explained by the Buddha in Saṅgāravasutta (Majjhimanikāya, 1977: II.209). The whole explanation about thinkers who had accepted different types of theories of knowledge can be summed up as follows:

1. Traditionalists (Anussavikā)

2. Rationalists (Takkī, vīmaṅsī)

3. Empiricists (Samaññeva dhammaṅ abhiññāya)

For K.N. Jayatilake (1963:242) the first group of thinkers belongs to Brahman schools who accepted divine revelation (Anussava) as valid ground of knowledge. Early Upanishad sages and Ājivakās belong to the second group. They believed that the reasoning (Tarka) is the clearest way of understanding something. Brahmajāla-sutta (Dīghanikāya, 1975: I.1) gives enough examples and facts to understand the nature of

rationalists. The later Upanishad sages and Ājivakās were the empiricists, their theory of knowledge based on the direct personal perception which was gained through the meditation.

This is one of the clearest and shortest explanations that gives light to understand the theories of knowledge in pre-Buddhist period, but it should not be misunderstood that this is as only categorical explanation on theories of knowledge in pre-Buddhist India, there are so many other explanations too; they would be sometimes different from this categorization. Buddha himself introduced in Saṅgārava-sutta as one who accepted the experience gained through the direct personal knowledge as valid ground of knowledge which is based on the perception (paccattaṁ). K.N. Jayatilake in the book "Early Buddhist theory of knowledge" has clearly explained perception in details in relation to the early Buddhist discourses; according to him, the terms Janāti, Passati, Diṭṭhaṁ, Addakkhī, Dassana etc. in Pāli canon has been used to denote the perception. Further, he points out that the above terms used in Pāli canon to emphasize both the sensory and the supra-sensory perceptions. One of famous Suttas which explains the method of perception in Buddhism is Madhupiṇḍika-sutta, there explains method of gaining right perception through sense organs (Indriya). For an example, through contact of eye and forms there arises eye consciousness, the coming together of three is sense impression, sense impression is conditional feeling, and feeling is conditioned perception and so on. Thus, perception accepted as valid ground of knowledge in early Buddhism.

Not only perception but inductive inference (Anumāna) also has accepted as reliable theory of knowledge in early Buddhism. But Mrs. Rhys Davids (Vol. 8.133) mentions that there are no methods or theories about inference in Pāli canon. It is true to say that theories and methods of inference (Anumāna)

in the early Buddhist discourses are hard to find out. However, there are some details and facts which prove that Buddha has used word Anumāna and theory of Anumāna.
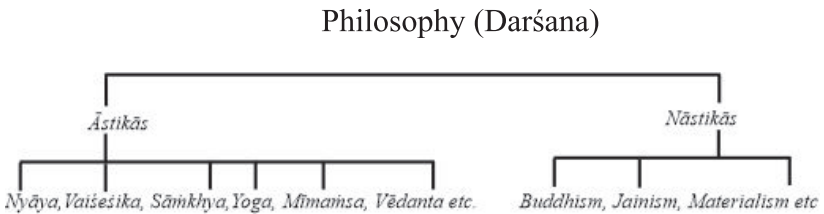
Anumāna-sutta (Majjhimanikāya,1979: I. 95) is the best example to show how Buddha has employed the word Anumāna and the theory of Anumāna for the purposes of explaining way of understanding ethical assertions. It is mentioned in Anumāna-sutta, "One should not do something to others what one does not like others to do you." This kind of knowledge is gained by oneself directly through the inference. Not only in Anumāna-sutta but also several other places in canon Buddha has used method of Anumāna, for an example, in Ñanavatthu-sutta (Saṃyuttanikāya, II,58) Saṅgītisutta (Dīghanikāya,1975: III.226)   and in Abhidhammapiṭaka it has used the word 'Anvaye ñanaṁ,' this word translated into English as 'inductive knowledge' by K.N. Jayatilake (1963:442) which is generally means inductive inference. The way of gaining inductive inference explained in Ñanavatthu-sutta is as follows: "Examine, certain types of incidents happened in past and compare them with same incidents that are happening in present, and then, infers such kinds of incidents will happen in future." It seems to be that method of gaining the above knowledge is related with method of inference.

Different types of terms have used in the early Buddhism for the theory of knowledge and reasoning. The word 'Pamāna' (pramāṇa) is appeared in Suttanipāta; it is mentioned there that there is no criteria to measure the nature of Arahat (attaṅgatassa na pamānamatthi). In Saṃyuttanikāya (II.235) Buddha has used the term 'Pamāna' which means measure, Degree, magnitude etc. Generally, Pramāna in Nyāya philosophy used for theories of knowledge. Takka and Vīmaṅsa are two epistemological terms that used in many places in Pāli canon to represent the logic

and reasoning. Especially, in Dīghanikāya and Majjhimanikāya the words 'Sammādiṭṭhi' (right understanding) and Sammāñana (right knowledge) also used for the epistemological purposes as well as ethical purposes.

Earlier, it is mentioned that the study of soul (Ātmavidyā) transformed into science of inquiry (Ānvīkṣikī) as well as the science of inquiry transformed into philosophy (Darśana). This is the gradual development of epistemology in Indian Philosophy. Thus, the origin of Indian Philosophy did not occur accidently; it is a result of gradual evolution of Vedic literature. However, the transformation of Vedic literature into philosophy, generally, considered as turning point of Indian Philosophy. S. Radhakrishnan (1931:II.17) accepted that the philosophical spirit of Indian originated in the age of Buddha and he emphasized that historical traditions of India influenced for development of philosophy.

The classification of Indian philosophy as Āstikās (Orthodox) and Nāstikās (heterodox) is common feature that can be seen among Hindu scholars. The philosophical systems that accepted validity of Veda was known as Āstikās and systems which excluded the acceptance of Vedic authority generally known as Nāstikās. This classification can explain through following diagram.

Philosophy (Darśana)

Āstikās — Nyāya, Vaiśeṣika, Sāṃkhya, Yoga, Mīmaṁsa, Vēdanta etc.

Nāstikās — Buddhism, Jainism, Materialism etc

Both S. Radhakrishnan (Ibid) and Baladeva Upadhyaya (1999, tr. 22) have explained different between Āstika and Nāstika schools. Both of them seem to be satisfied with the above classification and agreed with the Manu's statement, "Nāstikā is, he who despises Veda (Nāstikō Vēdanindakah)." With the evidence of this statement S. Radhakrishnan (1931: II.20) states, "The Āstika or Nāstika character of a system does not depend on its positive or negative conclusions regarding the nature of the supreme spirit, but on the acceptance or non-acceptance of authority of the Vedas." This is clear, since Nyāya and Vaiśeṣika schools accepted God as a result of inference. Furthermore, Sāṁkhya system cannot be listed under theism. But all those schools are categorized under Āstikās due to they accepted validity of Vedic authority. Jainism and Buddhism accepted concept of Kamma, but they criticized the Vedic authority, therefore, they grouped under Nāstikās. Cārvākas neither accepted god nor Kamma and they vehemently criticized the Vedic authority, therefore, they considered as strict Nāstikas.

It is clear that the origin and evolution of Indian philosophy (Darśana) occurred during two periods. The first period is formulation of Sūtras of each philosophical school and the second period is the composition of commentaries (Vṛutti) for Sūtras. Baladeva Upadhyaya (1999: tr. 25-26) mentioned that Sūtras were formulated during Vikram Pūrva 400 to Vikrama Purva 200, and composition of commentaries was occurred during Vikrama 300 to Vikrama 1500. The nature and feature of Sūtras were that they were very short, free of error, as well as only include essential fact, avoid unnecessary repetition and comprised very economizing words (Radhakrishnan, S. 1931:II.22). This mystical nature of sutras makes it uneasy to understand without commentary (Vṛutti). In the commentaries, it is explained in detail what is mentioned in sūtras.

Conclusion

Logic, its theories and methods gradually developed since early history of philosophy. Scholars believe that the Indian logic originated at the beginning of Vedic period. However, The Logic and its theories in Indian philosophy systematically developed with evolution of heterodox schools of philosophy. Especially, it systematically developed with the origin of Buddhism and Jainism. Later, philosophical schools like Nyāya, Vaiśeṣika, Sāṁkhya, Mīmaṁsa etc. contributed to developed Logic of Indian philosophy. Since, worshiping and praying of various natural forces in early Vedic period until the development of Ātmavidyā and Ānvīkṣikī, in Upanishad period all the teaching of Brahmanism, Jainism, Buddhism and Materialism directly or indirectly influenced to develop the logic and epistemology of Indian philosophy

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