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Indian schools of logic: A critical assessment

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Abstract

Logic is the most crucial component in the development and sustenance of any human civilization. It provides tangibility and structure to the thoughts which are nothing but the consequence of the influences of the various aspects of civilization itself. Indian civilization is highly enriched and Logic highly developed. The present paper is an attempt to highlight the various schools of Logic that prevail in the Indian society with an aim to critically examine the validity of each of the schools in light of the existing traditions in India. Secondary sources especially texts have been used to draw arguments for the current paper.

Key words: Logic, schools of Indian logic, nyaya, atma- paramatma, tarka

Introduction

Logic has always intrigued mankind for its sheer scope of immense arguments and discussions. It is the scientific study of 'reasoning'. Scientific here, does not mean anything related to the basic sciences. The usage is primarily more as an adjective meant to qualify the manner in which the study is undertaken. Indian logic, for that matter, has been differently viewed in different ages. Academicians have discussed Indian Logic as a system by compartmentalizing 'Buddhist logic' from it. (Randle 1930) and Stcherbatsky (1930) It not only diminishes the scope of the study but it also narrows the relevance of Indian Logic. It must be studied as the form of correct arguments and inference patterns, developed in India from the methodology of philosophical debate. (Matilal, 1998) [1] Therefore, it is generally accepted as a valid knowledge established either by means of perception (using the six senses) or inference.

The Schools of Indian Logic: An Overview

The development of logic over the ages can be classified into the following categories

- (a) Ancient (650 B.C. to 100 A.D)
- (b) Medieval (100 A.D. to 1200 A.D.)
- (c) Modern

The Ancient School

Being based on the Upanishads, it talks about the doctrine of soul. This school had a great impact on the development of Indian logic. It offers a subtle treatment of soul distinguishing carefully between knowledge and work. A person who has acquired knowledge proceeds after death to the region of Brahma through the paths of gods; while a person who has done merely useful work passing through the path of his forefathers reaches the moon; and a person who has neither acquired knowledge nor has done any useful work traverses a third path- the path of transmigration- an unending cycles of births and deaths. (Vidyabhushan, 2006)

The Upanishads which dealt with the soul and its destiny constituted a very important branch of study called *Aatmaa- vidyaa*, the science of soul, *Adhyatma- vidyaa*, the *Divine Science*. The science of soul was at a later stage called *Aanvikṣiki*, the science of inquiry. About 650 B.C. *Aanvikṣiki* bifurcates into philosophy and logic named as *darsana* and *hetu- vidya* or *tark- vidyaa* respectively.

However, *tark- vidya* was not received with favor by a certain section of the *Brahmanas*. *Valmiki* in his *Ramayana* discredits those who are indulged in the frivolities of the science of

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Logic. *Vyasa* in *Mahabharata*, relates the doleful story of a repentant *Brahmana*, who on account of his addiction to logic, was turned into a jackal in his next birth. Stories of inflicting of penalties on those given to the study of *Tark-Vidyā* are found in plenty in the *Skandapurāna* and other works.

Despite this, *Ānvīśikī* was held in very high esteem due to the authority that it attaches to the *vedas*. Kings were trained in logic and the entity of reasoning was acknowledged in the administration of justice. Kautilya in his *arthaśāstra* characterizes *Ānvīśikī* (logic) as the lamp of all sciences. It seems that the in favorable criticism to which *Ānvīśikī* had long been exposed, terminated practically in the first century A.D. when, under the name of *Nyāya- Sāstra*, it accepted the authority of the Vedas. This is the topic of discussion in the following paragraphs which roughly covers the period from 1 A.D. to 100 A.D.

In this period we find the growth of the name *Nyāya*. This word popular signifies 'right' or 'injustice'. The *Nyaya-Sastra* is therefore the science of right judgment or true reasoning. It is the science of inference for the sake of others, that is, it is the science of demonstration.

The first regular work on the *Nyāya- Sāstra* is the *Nyāya-Sūtra* or "aphorism on true reasoning" it is divided into five hooks, each containing two chapters called *āhnikas* (diurnal portion). It contains references to the *Sāṅkhya*, *Vaiśeṣika*, *Yoga*, *Mīmāṃsā*, *Vedānta* and Buddhist system of philosophy. The *Nyāya- stūra* consists of sixteen categories which comprises all the topics of the course debate. The categories are:

1. The right means of knowledge (*pramāna*)
2. The object of right knowledge (*prameya*)
3. Doubt (*samśya*)
4. Purpose (*prayojana*)
5. Example (*drastānta*)
6. Tenet (*sidhānta*)
7. Members (*avayava*)
8. Confutation (*tarka*)
9. Ascertainment (*nirṇaya*)
10. Discussion (*vāda*)
11. Wrangling (*jalpa*)
12. Cavil (*vitaṇḍā*)
13. Fallacy (*hetrābhāsa*)
14. Quibble (*chhala*)
15. Analogue (*jāti*)
16. The point of defeat (*nigrahasthāna*)

Perception, inference, comparison, and word or verbal testimony are the means of right knowledge. The soul, body, senses, object of sense, intellect, mind, activity, fault, transmigration, fruit, pain, and emancipation are the object of right knowledge. (Vidyabhushan, 2006) Doubt, which is a conflicting judgment, arises from the recognition of properties common to many objects or uncommon to many objects or from the irregularity of perception and non-perception. Purpose is the objective with which one proceeds to act. An example is the thing about which an ordinary man and an expert hold the same opinion. A tenet is the dogma resting on the authority of a certain school, hypothesis or implication. The members are the signaled by a proposition, a reason, and an explanatory example, an application of the example and statement of the conclusion. Confutation is to establish the validity of a thing by showing the absurdity of all contrary character. Ascertainment is the determination of a question through the removal of doubt, by the hearing two opposite

sides. Discussion is the adoption of these without deviation from the established tenets. Wrangling aims at gaining victory by means of quibbles and analogues. Cavil is a kind of wrangling which consists in mere attacks on opposite side. Fallacies of reason are the erratic, the contradictory, the controversial, the counter-questioned and the mistimed. Quibble is the opposition offered to a proposition by the assumption of an alternative meaning. Analogue consists the offering of opposition on mere similarity and dissimilarity that are founded. A point of defeat arises when one misunderstands or does not understand at all. (Raju, 2008)

Nyāya, as school of philosophy became popular and predominant because of three main reasons. The first was the intrinsic worth of the system which was acknowledged as most useful in carrying on processes of reasoning. In the second place we notice that having supported the authority of *vedas*, it was readily recognized and approved as a branch of learning. *Nyāya* adopted the *śaiva* cult that gave a positive stamp orthodoxy and brought unquestionable recognition.

1.3 The Mediaeval School of Indian Logic:

The special features of mediaeval logic are the termination of the ancient school, the formation of the mediaeval school and the influence of Jain and Buddhist ideas of logic. The ancient logic dealt with sixteen categories (discussed in the previous page) comprising heterogeneous elements as doctrine of salvation and the nature of soul etc. Inference, a kind of *pramāna*, (Matilal, 1998) ^[1] which was briefly noticed in the ancient logic, receives a full treatment in the mediaeval school. Numerous technical terms were coined and great subtleties were introduced in the definitions. The mediaeval logic thus formed is called *pramāna- sāstra* in Sanskrit which means the science right knowledge.

Logic, according to the Jains was called '*hetu*'. *Hetu* as identical with valid knowledge is stated to be of four kinds, viz:

1. Knowledge derived from perception.
2. Knowledge derived from inference.
3. Knowledge derived from comparison.
4. Knowledge derived from verbal testimony.
When '*hetu*' is used in the sense of inference, it is classified according to the following types:
5. This is, because that is
6. This is not, because that is
7. This is, because that is not
8. This is not, because that is not
The main categories, in the course of study of logic according to the Jain school are:
9. Valid knowledge (*pramāna*): This is the knowledge which ascertains the nature of what was uncertain to one's self.
10. Syllogism (*Vyāpti*): This is the inseparable connection between two terms.
11. Reason (*hetu*): Reason is divided as (a) perceptible and (b) imperceptible.
12. Example (*drṣṭānta*): For the sake of explaining matters to men of small intellect, the example becomes a part of inference.
13. Inference (*anumāna*):
14. Verbal testimony (*āgama*): This the knowledge of object derived from the words of reliable persons or scriptures in virtue of their natural fitness or suggestiveness.
15. Scope of valid knowledge (*viśaya*)
16. Fallacy (*ābhāsa*) The Buddhist school of Logic considered the following categories:

17. Valid knowledge: In opposition to the four *pramānas* of the *Nyāya-Sutra*, here we find only two *pramānas*, they are: perception and inference.
18. Reason (*hetu*): This is similar to the concept of ‘*hetu*’ according to the ancient school.
19. Example (*dr̥ṣṭānta*): In pointing out the connection of the reason with the major terms, one should state examples.
20. Negation (*apoha*): According to this doctrine, an entity is defined as being the negation of its opposites.
21. Analogues: (*Jāti*): The concept of analogues is similar to the concept of ‘*Jāti*’ in the *Nyāya-Sutra*.

Since the Brāhmanas did not differ so markedly in respect to their social practices from the Jains as they did from the Buddhist, their attack on Jain Logic was not as violent as that on the Buddhist Logic. In fact the logical theories of the Jains are in many instances akin to those of the *Brāhmanas*. The categories of logic as described in the *Nyāya-Sutra* are very much similar to the Jain school but differ significantly from the Buddhist school. (Vattanky, 2003) ^[6]

The Modern School of Indian Logic

In the Deccan regions of India, the decline of Buddhism commence in the seventh century A.D. The Brāhmanas, who survived them, organized their society on secure bodies. The treaties on logic, which were composed by them, borrowed their form from the work of the mediaeval school, while for their subject matter they went to back to the works of the ancient school.

The works so composed in the period were technically called “Prakaraṇas” or Manuals of logic. The manuals are remarkable for their accuracy and lucidity. Definitions of the terms are also the broad and accurate. The main categories of the cause of logic as identified in the manuals are:

1. Pramāṇa (valid knowledge): which can be classified into-
 - (a) Perception (pratyaksha)
 - (b) Inference (anumāna)
 - (c) Verbal Testimony (āgama)
2. Hetvābhasa (fallacy of reason): Which can be classified as-
 - (a) Unproved (asiddha)
 - (b) The contradictory (viruddha)
 - (c) The uncertain (anaikāntika)
 - (d) Non-tried or non-conclusion
 - (e) Mistimed or incompatible reason
 - (f) Non- erroneous contradiction
3. Example (udāharaṇa)
4. Verbal Testimony(āgama)
5. Emancipation (mokṣha)

The modern school of Logic opines that the soul is of two kinds, viz. the individual soul (aparaātma) and the supreme soul (para ātma). (Vidyabhusan, 2006) The individual soul, which has to undergo sufferings from the bondage of the world, attains final emancipation through the knowledge of the supreme soul. In the state of final emancipation the individual soul, being finally freed from misery enjoys eternal pleasure.

Conclusion

The ‘*tarka*’ is an essential component of Logic. But it does not provide any novelty in information. It only proves what has already been known by regular syllogism. The *Nyāya* and

the *Vaiśeṣika* do not understand *buddhi* as reason, as do the *sāṅkhya*, *Yoga* and *Vedānta*. It is only an adventitious consciousness that arises like a spark or light when mind (*manas*) comes into contact with the *aatman*. (Raju, 2008). In this article, the effort was to trace the history of development of logic in India. Logic came under the scrutiny of intellectuals as early as 650 B.C. surviving a span of more than 2600 years; the system of logic in India in its modern form is an assimilation of various other schools of logic. Retaining its essential components and transforming some parts in order to enrich them, the thoughts of the schools of Logic deeply influence the Indian society.

The belief in life after death, the concept of Karma and the efforts of the human soul to achieve union with the *paramātma* or *brahma* are the governing forces of the activities of human being in the Indian culture. Right from the time of birth to the time of death and even after death, man tries to gain the ultimate knowledge so that he could be freed from the bondage of birth and death.

The various idioms and proverbs, as prevailing in the present Indian society too reflect the influence of Logic. “Jahān āg hotā hai dhuān wahīn uṭhā hai” (Where there is fire there is smoke) is an example of the Jain system of Logic, because this is; ‘that is. The idiom “ānkhon dekhī aur kānon sunī” (seen through one’s eyes and heard through one’s ears) is based on the concept of *pramāna* or valid knowledge. “Ankh kā andhā aur nām nayansukh” (blind from eyes but known as the one getting the benefit of sight) is an example of far – fetched analogy. Logic, with the help of arguments tries to reach at the truth, establish the truth. The approaches can be different but the end result is the same to attain the ultimate truth, knowledge and the union with the *paramātma*.

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