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Dedicated to Commemorate the 75th Years of India's Independence. Editorial for a Special Issue on Indian logic

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Abstract:
This special issue on Indian logic consists of nine research papers dealing with different aspects of Indian logic by nine distinguished authors. It is divided into three sections, such as Nyāya logic, Buddhist logic and Jaina logic. The papers deal with the issue of inference and allied concepts from both historical and conceptual considerations. Indian logic followed linguistic model and thereby in India it gives the foundation of epistemology and the development of philosophy of language.
Keywords: Nyāya logic, Buddhist logic, Jaina logic.

Bertrand Russell named his book *History of Western Philosophy* and by this he indirectly admits that there are philosophies originated and developed in non-Western culture. Though even in 1971 Anthony Flew made an exclusively 'sweeping remark' as "… philosophy, as the word is understood here, is concerned first, last and all the time with arguments. It is, incidentally, because most of what is labelled *Eastern Philosophy* is not so concerned – rather than any reason of European parochialism – that this book draws no materials from any source east of Suez" [1]. B. K. Matilal's comment on Flew is relevant here. He said, "One is bound to be shocked to read such a gratuitous remark from Mr Flew at a time when philological and Indological researches have made considerable progress and some reasonably good books are available in Western languages" [2]. Similarly, when we talk about 'Logic' we wrongly mean logic developed *only* in Western cultural sphere. It is now an admitted fact that there is logic in non-Western cultural sphere and logic plays a dominant role in the development of India's culture.

Indian logic has some distinctive characters that distinguish it from the Western model of logic. J. M. Bocheński [3] is right when he says that in two cultural spheres logic has been developed rigorously – Western cultural sphere where logic followed mathematical model and Indian cultural sphere where logic followed linguistic model and thereby in India it gives the foundation of epistemology and the development of philosophy of language. It is indeed true that classical Indian philosophers were not interested in pure deductive systems or formal language. On the other hand, they were interested in "discovering the epistemic and empirical basis of logic, by their study of the theory of knowledge and the theory of evidence called *pramāṇaśāstra* (which was more akin to the inductive method based on observation and intuition of supporting example)" [4]. Kamaleswar Bhattacharya observed, "Unlike the Western, the Indian new logic did not construct an

'artificial language,' consisting in a system of symbols, but formulated its definitions and solved various logical problems with different combinations of concepts in natural language" [5].

When we deal with Indian logicians' account of inference we do not see a clear distinction between deductive and inductive inference. In Western logic deductive inference deals with the conditions that enable us to arrive at a conclusion from a premise or a set of premises and in inductive logic we try to arrive at a general proposition on the basis of some instances. In deductive inference we look for formal validity only but in inductive inference our concern is material truth. B. N. Seal, in his *The Positive Sciences of the Ancient Hindus*, says that in the Indian account of inference we find an attempt to combine features of both formal and material truth.

> *Anumāna* (inference) is the process of ascertaining, not by perception or direct observation, but through the instrumentality or medium of a mark, that a thing possesses ascertain character. Inference is, therefore, based on the establishment of an invariable concomitance (*vyāpti*) between the mark and the character inferred. The Hindu inference (*anumāna*) is, therefore, neither merely formal nor merely material, but a combined Formal-Material Deductive-Inductive process. It is neither the Aristotelian Syllogism (Formal Deductive process), nor Mill's Induction (Material Inductive process), but the real Inference which must combine formal validity with material truth, inductive generalization with deductive particularisation… [6].

There are similarities between the Nyāya syllogism and the Aristotelian syllogism. But there are striking dissimilarities between the two. Instead of formulating inference as a 'clear-cut-form' of deduction (without caring for material truth), as is usually seen in the Aristotelian syllogism, in the Nyāya theory of inference both induction and deduction are synthesised – inductive and deductive reasoning are inseparably blended; they are treated as the two sides of the same coin, two aspects of the same process. Inference, for the Nyāya, is "neither from a universal to the purely particular nor from the particular to the universal, but from the particular to the particular through the universal." The major premise which contains universal relation between major term and middle term in Aristotelian syllogism is simply assumed and not a result of induction from the known example. But the explanatory example (*udāharaṇa*) in Nyāya syllogism is gained through induction of the known examples. Again, Aristotle did not construct syllogism in the form of inference, rather he formulated syllogism in the form of implication containing – "If … then" relation. In contrast, the Nyāya formulates a theory of inference which may roughly be sketched in the form "This … Therefore". Furthermore, in the Aristotelian syllogism the minor term and the major term are disconnected with each other directly in the premises, although they are indirectly connected by the middle term. In the Nyāya syllogism we have seen that all the three terms 'stand synthesised' in the *upanaya* (the application of the rule to the present instance). The Nyāya syllogism is a development upon pre-Aristotelian works of Indian heritage through a process of "elimination and critical modification of some elaborate models" of Indian texts [7].

It is interesting to see how some modern thinkers on logic are expressing a different opinion from Euro-centrism and, like Russell, are openly recognising the value and importance of non-Western logic in general and Indian logic in particular. Andrew Schumann is one of such western thinkers who edited a collection of research papers in the book titled *Logic in Religious Discourse* in 2010 (Ontos Verlag) where he included three papers by three distinguished authors on Indian logic. This year the Editorial Board of the journal *Studia Humana* has decided to publish a special issue on Indian logic. The following pages contain aspects of Indian logic consisting of Nyāya, Buddhist and Jaina logic. The Nyāya view of inference as a causal means of knowledge differs from the Buddhist view of inference on the ground that the former is *vyāpti-centric* (i.e., law of universal concomitance between *probans*/reason and *probandum* is called *vyāpti*) whereas the latter is *hetu-centric* (reason-centric).

Since all the papers have abstracts and keywords the editor of this special issue does feel it necessary make any specific remark for the guidance of the readers except about some general

features. Some of the papers are devoted to the historical development of logic in any specific school of Indian philosophy, while others are critical and comparative studies with the similar Western approaches. Some of the papers are textual expositions of the epistemological issues relating to logic and language. We have every hope that this special issue on Indian logic will be appreciated by the scholars. The guest editor of this special issue is thankful to the individual authors for their valuable contributions and cooperation. He is also thankful to Professor Andrew Schumann, the chief editor of the journal.

I am indebted to Professor Rajaneesh Kumar Shukla, Hon'ble Vice Chancellor of Mahatma Gandhi International Hindi University, Wardha (India) for encouraging and helping me in different ways. This special issue on Indian Logic is **dedicated to commemorate the 75th years of India's independence**.

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The Concept of Anumāna in Navya-nyāya

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Abstract:
According to the Navya Naiyāyikas, inference is the knowledge, which is produced out of consideration. But what is to be understood by the term 'consideration' or '*parāmarśa*'? According to them, *parāmarśa* or consideration is the factor through the operation of which the inferential conclusion can be attained. *Parāmarśa* has been defined as the knowledge of the existence of the *hetu* or reason in the *pakṣa* or subject, which reason is characterized by its being concomitant with the *sādhya*, the knowledge in the form of *parāmarśa* is actually caused by the knowledge of invariable concomitance of probans (*hetu*) with the probandum (*sādhya*) and the knowledge of the existence of the hetu in the subject (*pakṣa*). It has been said by Viśvanātha that the cognition of the existence of probans or *hetu* in the subject of inference along with the cognition of the prabans or *hetu* as pervaded by *sādhya* is called *parāmarśa* (*pakṣasya vyāpyavṛttitvadhīḥ parāmarśa ucyate*). The invariable co-existence in the form 'where there is smoke, there is fire' is known as *vyāpti* or invariable concomitance. Here the invariable co-existence (*avyabhicārī sāhacarya*) between the probans and probandum (i.e., smoke and fire) is the definition of *vyāpti*. The term 'co-existence' means remaining in the same locus of the probans with the probandum, which is not the counter positive of the absolute negation existing in the locus of the *hetu*. To Gangeśa, the knowledge of the co-existence of the probans and probandum along with the absence of the knowledge of deviation of the probans is the cause of ascertaining *vyāpti*. Repeated observations, of course, sometimes act as a promoter (*prayojaka*) in ascertaining *vyāpti* by removing the doubt of deviation. The doubt of deviation can be removed sometimes by *Tarka* or sometimes by the absence of the collocation of causes of doubt, which is called *svataḥsiddhaḥ*. Gangeśa admits *sāmānyalakṣaṇā* as a *pratyāsatti* in ascertaining *vyāpti* between smoke-in-general and fire-in-general. To him, the super-normal connection through universal (*sāmānyalakṣaṇā pratyāsatti*) has got a prominent role in ascertaining *vyāpti*. If somebody challenges about the validity of the syllogistic argument in the form "The mountain is fiery as it possesses smoke" (*parvato vahnimān dhūmāt*), the philosophers of Nyāya and Navya-nyāya persuasion will justify the same with the help of five constituents (*avayava*-s). The process is called *parāthānumāna* (syllogistic argument for making others understand). The constituents of a syllogism are proposition

(*pratijñā*), reason (*hetu*), example (*udāharaṇa*), application (*upanaya*), and conclusion (*nigamana*).

Keywords: *anumāna*, *parāmarśa*, *vyāpti*, *vyāpāra*, *sāmānyalakṣaṇa*, *avayava*.

The characteristic features of an object are revealed through cognition just as the nature of an object is revealed through the light of a lamp. This cognition is of two kinds: recollection (*smrti*) and presentative knowledge (*anubhava*) [1]. Recollection or *smrti* is a kind of knowledge which is produced by the trace (*saṁskāra*) alone [1]. All cognitions other than memory is called the presentative knowledge or *anubhava* which is, again, divided into two categories: valid (*yathārtha*) and invalid (*anyathārtha*) [1, p. xix]. A valid cognition always represents the real character of the object and an invalid cognition does not represent the real character of the object [1, p. xix]. A valid presentative cognition which is technically known as *pramā* is of four kinds: perception (*pratyakṣa*), inference (*anumiti*) comparison (*upamiti*) and verbal testimony (*śābda*). Its special cause or instrument (*karana*) is also of four kinds which are known as perception (*pratyakṣa*), inference (*anumāna*), comparison (*upamāna*) and verbal testimony (*śabda*) [1, p. xx]. The cognition which is produced from the contact of the sense organ with an object and which is not caused due to words *(avyapadeśya*), which is, again, invariably related to the object (*avyabhicāri*) and certain (*vyavasāyātmaka*) is called perception. Perception is the immediate knowledge of present object through a sense organ [5, 1.1.4]. We can attain the perceptual knowledge of an object directly without taking help of previous knowledge of an object, e.g., when we perceive a jar, we can know it without taking any help of inferential or any other sources of valid knowledge. In other words, Gangeśa is of the opinion that perception is a cognition, the instrumentality of which is not another cognition (*jñānākaraṇakaṁ jñānaṁ pratykṣam*) [3], [5, 1.1.5]. So, perception does not depend on other cognitions. Without perception no other instrument of valid cognition is possible. Perception is different from inference, comparison and testimony, which are not produced by the sense-object-contact. Though perception is the fundamental basis of all kinds of knowledge yet other sources of valid cognitions like inference etc. play an important role in our everyday life. We can know only the present object through perception. But in order to know the past, future and remote objects as well as present and near object we have to depend on inference. Gaṇgeśa has given the definition of inference after perception an account of the fact that inference is dependent on perception – ("*Pratykṣopajīvakatvāt pratykṣānantaraṁ vahuvādisammatatvādupamānāt prāganumānaṁ nirūpyate*") [3, (inference-part), 1].

Inference is the knowledge in which perception must be present as an antecedent. So, inference is mediate knowledge of an object. Inference can reveal those objects that are not within the reach of our sense organs. With the help of inference, we can know definitely the existence and the nature of an object, which is doubtful [7, p. 263].

According to old logicians, inference is followed by 'something' which is expressed by the term 'Tat' [5, 1.1.5] Here the term 'tat' refers to perception without which inference is not possible at all. In the case of inference, the perception of the probans and the invariable co-existence between the probans and the probandum are highly essential, [5, commentary on 1.1.5] e.g., the syllogistic argument in the form: 'The mountain is fiery as it has got smoke.' The real ground of this inference is not the perception of smoke alone, but the knowledge of the invariable co-existence between smoke and fire is also ground.

According to the latter logicians, inference is the knowledge, which is produced out of consideration ("*Tacca vyāpti-viśiṣṭa-pakṣadharmatā-jñāna-janyaṁ jñānamanumitistatkaraṇaman-umānam*" [3, p. xxv], [3, p. 2]. But what is to be understood by the term 'consideration' or '*parāmarśa*'? According to them, *parāmarśa* or consideration is the factor through the operation of which the inferential conclusion can be attained [2, pp. 99-100]. *Parāmarśa* has been defined as the knowledge of the existence of the *hetu* or reason in the *pakṣa* or subject, which reason is characterized by its being concomitant with the *sādhya.* In a valid syllogistic argument in the form "The Mountain is fiery as it has got smoke," the cognition in the form "The Mountain has got

smoke which is pervaded by fire" is consideration [3, p. xxv] (*parāmarśa*) which is the intermediate cause *(vyāpāra*) [2, p. 99] in attaining inferential knowledge of fire.

But what is to be understood by the term intermediate cause or *vyāpāra*? It has been defined in the following manner.

That which, being produced by a particular object, becomes the producer of some entity produced by the same (i.e. first) particular object, is called *vyāpāra* or intermediate cause (*tajjanyatva sati tajjanyajanako vyāpāraḥ*) [1, p. xxviii]. As consideration (*parāmarśa*), being produced by knowledge of *vyāpti,* becomes the producer of inference which is again produced by knowledge of *vyāpti*, it is considered as an intermediate cause (*vyāpāra*) of inference [6, p. 47]. The knowledge of *vyāpti* is taken as the special cause of inference [2, p. 99]. But what is to be known by the term "special cause or *karaṇa*"?

The uncommon cause associated with the intermediary is called special cause or *karaṇa* (*vyāpāravadasādhāraṇaṁ karaṇam*) [1, p. xx]. Here knowledge of *vyāpti* which is associated with the knowledge in the form of consideration (*parāmarśa*) is the special cause of inference or instrument to inference.

In the syllogistic argument, "The Mountain is fiery as it has got smoke on it," there are five mental or psychic processes. At first, we have to gather the knowledge in the form: "where there is smoke there is fire" in various places like kitchen etc., this invariable relation between smoke and fire is called *vyāpti.* After sometimes it has been found that the smoke is arising from the mountain having an uninterrupted connection with the surface of the mountain (*avichhinnamūla dhūmarekhā*). This is the second step in attaining inferential knowledge. Then recollection of the knowledge in the form "where there is smoke there is fire," i.e., *vyāpti* (*karaṇa*) is necessary and after that we attain the knowledge in the form: "The mountain has got smoke which is invariably connected with fire." This knowledge is known as consideration (*parāmarśa*) after which the conclusion in the form "The mountain is fiery" can be drawn [2], [8 (commentary on the verse 66), p. 99].

In the above process of inference, the knowledge in the form of *parāmarśa* is actually caused by the knowledge of invariable concomitance of probans (*hetu*) with the probandum (*sādhya*) and the knowledge of the existence of the *hetu* in the subject *(pakṣa*). It has been said by Viśvanātha that the cognition of the existence of probans or *hetu* in the subject of inference along with the cognition of the prabans or *hetu* as pervaded by *sādhya* is called *parāmarśa* (*pakṣasya vyāpyavṛttitvadhīḥ parāmarśa ucyate*) [2, p. 99]. It may also be explained in the following way. The cognition of the existence of a *hetu*, which is characterized by *vyāpti,* is called *parāmarśa* (*vyāpti-viśiṣṭa-pakṣadharmatā-jñānam parāmarśaḥ*). It is called an intermediate condition of inferential cognition (*vyāpāra*). Because such cognition being produced through the earlier cause, i.e., *vyāpti* becomes the producer of inference. To Viśvanātha this is an invariable step for the attainment of inferential cognition.

The Mīmāṁasakas do not think that such a step is at all essential for attaining inferential cognition as it has got no new information other than the conjunction of the two, i.e., the cognition of the existence of *hetu* in the *pakṣa* (*pakṣadharmatājñāna*) and the cognition of the *hetu* as pervaded by *vyāpti (vyāptiviśiṣṭa*). The conditions of *vyāptijñāna* (the knowledge of invariable concomitance) and *pakṣa-dharmatā-jñānam* (i.e., the cognition of the existence of the probans in the subject) are accepted as essential isolately, but so far as *parāmarśa* is concerned, it is, according to them, quite uncalled for. In the syllogistic argument in the form: 'The mountain is fiery as it has got smoke (*parvato vahnimān dhūmāt*) and "wherever there is smoke, there is fire" (*yatra yara dhūmastatra tatra vahniḥ*). In this case, the inferential cognition follows from the knowledge of the invariable concomitance and the knowledge of the existence of *hetu* in a *pakṣa* (*vyāptijñāna and pakṣadharmatājñāna*). An individual who does not have these two conditions cannot attain the inferential cognition that the mountain has got smoke. Hence these two cognitions have to be admitted as the necessary conditions for having inferential cognition. They are not merely necessary, but sufficient also, according to the Mīmāṁsā-thinkers, to produce the inferential state. It being so, the postulation of an additional condition called *parāmarśa* or the cognition in the form-

"The Mountain has got smoke pervaded by fire" seems to be unnecessary. The Mīmāṁsakas do not say indeed that such an additional cognition is never found as instrumental to the emergence of the inferential state. But they emphasize that, since it is not a uniform antecedent, it cannot be regarded as one of the necessary conditions for *anumiti* [2], [7, p. 99]. The Naiyāyikas claim that even there such cognition has to be admitted for the sake of logical economy (*lāghava*). They explain that there is such a thing as *parāmarśa* leading to an inferential state and that if *parāmarśa* has to be admitted even for once as a condition for some inferential cognition, then for the sake of a unified causal theory it should be admitted as a uniform condition for all inferential cognitions (*nanu vyāpyatāvacchedaka-prakāreṇa vyāptismaraṇaṁ pakṣadharmatājñānaṁ tathā lāghavāt parāmarśa-hetutvenāvaśyakatvācca evaṅca dhūmo vahnivyāpyo dhūmavānścāyamitijñāna-dvayādevānumi-tirastu*) [5, p. 442].

According to the Nyāya, cognition like *parāmarśa* has to be admitted as a necessary condition for all inferential cognitions. In the case of a person inferring the existence of fire in a hill on the strength of the smoke coming out of the mountain and remembering that, wherever there is smoke, there is fire, the ensuing *parāmarśa* is of the nature of an immediate cognition. But an individual may infer the presence of fire on the mountain on hearing from others that the hill in question has smoke, which is invariably associated with fire. In this case the inference undoubtedly caused by his verbal knowledge mentioned earlier, which is again of the nature of *parāmarśa.* If *parāmarśa* is admitted as a necessary condition for a particular inference, why is not accepted in all cases? Hence the Naiyāyikas have accepted a uniform condition called *parāmarśa* for inferential cognition for the sake of logical economy (*lāghava*). Moreover, there would arise a possibility of inferential cognition from the statement "The Mountain is smoky" (*parvato dhūmavān*), because the cognition of the existence of a *hetu* i.e., smoke (in *pakṣa*) characterized by 'smokeness' which has become the limiter of the pervadedness (*vyāpyatāvacchedakībhūtaprakāraka*) is very much present here. It cannot be said that the cognition of the existence of the *hetu* (in *pakṣa*), which is characterized by the limiter of the pervadedness, which is known, becomes the cause of inferential cognition. For, if the above criterion is accepted, there would arise the possibility of attaining inferential cognition from the knowledge of *vyāpti* attained by an individual called Caitra and from the cognition of the existence of *hetu* in *pakṣa* attained by another individual called Maitra [5, p. 442].

If it is said again that the cognition of the *hetu* characterized by the limitor of the pervadedness attained by an individual and the cognition of the existence of *hetu* in *pakṣa* attained by the same individual become the causes of the inferential cognition by the same individual, there would have to be accepted innumerable forms of causal relations, because different or individual form of causal relation has to be accepted for the inferential cognition drawn by each individual. In order to avoid such complication a solution is suggested by Viśvanātha. The cognition of *hetu* (in a *pakṣa*), which is characterized by *vyāpti* attained through the relation of inherence, can produce an inferential cognition through the relation of inherence. Hence there does not arise the question of innumerable causal relations [5, p. 442].

If it is said that the cognition of the existence of innumerable causal relations, and the cognition of *hetu* characterized by *vyāpti* (*vyāptiprakārakaṁ jñānam*) are taken as an independent cause of inferential cognition, then two forms of causal theory would have to be accepted. If it is taken for granted, there would arise inferential cognition from two independent cognitions in the forms: "The smoke is pervaded by fire" (*vahnivyāpyo dhūmaḥ*) and "the mountain is possessing light (*ālokavān parvataḥ*), as there are two cognitions mentioned above. The latter cognition is described as *pakṣadharmatājñāna* (the knowledge that probans exists in the *pakṣa)* because 'light' (*āloka*) which is like smoke is pervaded by fire" [5, p. 483].

In order to avoid this problem, the Naiyāyikas prefer to admit a qualified cognition which is a unitary whole in the form '*vyāptiviśiṣṭa-paksadharmatā-jñānam*,' i.e., the cognition of the existence of *hetu* (in *pakṣa*), which is characterized by *vyāpti*. If there is at all any defect of *gourava,* it is of virtuous type (*phalamukha gaurava*), as it does not become an impediment to the

attainment of inferential cognition ("*Kāraṇatāgraha-daśāyāṁ phalamukhagauravasya siddhyasiddhi-bhyāmadoṣatvāt*") [5, pp. 503-504].

Hence the knowledge of *vyāpti* is considered as highly essential in order to attain inferential knowledge. And that is why, the question about the nature of *vyāpti,* the special cause of inference, has been raised by Gangeśa Upādhyāya in the beginning of his famous book *Vyāptipaňcakam* [3, p. 29].

The invariable co-existence in the form – "where there is smoke, there is fire" is known as *vyāpti* or invariable concomitance [3, p. xxv]. Here the invariable co-existence (*avyabhicārī sāhacarya*) between the probans and probandum (i.e., smoke and fire) is the definition of *vyāpti.* The term 'co-existence' means remaining in the same locus of the probans with the probandum, which is not the counter positive of the absolute negation existing in the locus of the *hetu* [1, p. xxvi]. As for example, "The mountain is fiery, as there is smoke" (*parvato vahnimān dhūmāt*). In this particular syllogistic argument, smoke has been taken as probans, the locus of which is mountain in which there is the absolute negation of a jar. The counter positive or absentee (*pratiyogī*) of this absence is the jar itself, and the non-counter-positive of it is fire. The co-existence of smoke with such type of fire is called *vypāti* [3, p. 100], [8, p. 258].

In an invalid syllogistic argument having the form "The mountain is smoky as there is fire on it" (*parvato dhūmavān vahneḥ*). 'Fire' has been taken as probans. One of the loci of the probans is 'the red hot iron ball' in which there is the absolute negation of smoke. The counter-positive of it (but not the non-counter positive) is the smoke, which is the probandum. So, the definition of *vyāpti* cannot be applied in this invalid inference [8, p. 258]. Though there is diversity of opinion among the philosophers of the different schools in respect of the definition, function and nature of *vyāpti* or invariable concomitance, all of them are of the view of that inference is not possible without proper knowledge of *vyāpti* or invariable concomitance which has been considered as a special cause (*karana*) of inference by the logicians. To Gangeśa, the knowledge of the co-existence of the probans and probandum along with the absence of the knowledge of deviation of the probans is the cause of ascertaining *vyāpti* (*vyabhicāravirahasahakṛtaṁ sahacāradarśanaṁ vyāptigrāhakam*) [3, p. 210]. As the knowledge of deviation counters the knowledge of *vyāpti,* the absence of it should be considered as the cause of ascertaining *vyāpti* (*vyabhicāragrahasya vyāptigrahe pratibandha-katvābhāvah kāraṇam*) [8 on verse 137].

The repeated observations of the co-existence between *hetu* and *sādhya* cannot be regarded as the cause of *vyāpti*. For, *vyāpti* may sometimes be ascertained by a single observation of the co-existence of a *hetu* and a *sādhya* in a particular locus if the knowledge of deviation does not arise (*bhūyodarśanaṁ tu kāraṇaṁ vyabhicārāsphurtau sakṛddarśane'pi kvacidvyāptigrahāt*) [8, p. 532] as we find in the case "It has this-colour, as it has this-taste" (*etadrūpavān etadrasāt*). In this case the knowledge of *vyāpti* is in the form "This-taste is pervaded by this-colour" (*etadrasah etadrūpavyāpyah*) of which 'this-taste' is a qualificand and 'the pervasion determined by this-colour' is a qualifier. From the single observation of the coexistence of the two in the above-mentioned inference the knowledge of *vyāpti* is ascertained. As it is ascertained from the single observation of the existence of the two when there is the absence of the knowledge of deviation (*vyabhicāra*), the repeated observation cannot be the violation of the rule – "the method of agreement in absence" (*vyatirekavybhicāra*).

What is to be understood by the absence of the knowledge of deviation (*vyabhicārajňānaviraha*)? It is an absence whose counter-positiveness is limited by the property of being knowledge existing either in the definite knowledge of deviation or in the cognition of deviation in the form of doubt. The knowledge of deviation may be attained sometimes definitely but sometimes not. If in a case of inferential procedure *vyāpti* or invariable relation, not being known definitely, gives rise to the slightest doubt about it, it should be described as the knowledge of deviation. Hence "the cognition of the absence of deviation" (*vyabhicārajňānaviraha*) requires certain knowledge of *vyāpti*, which is free from doubt. The cognition in which the probans is known as qualificand (*viśeṣya*) and the co-existence of the probans with the probandum in the same substratum as qualifier (*prakāra*) is to be known by the term '*sahacāragraha*' (the knowledge of

coexistence) (*sahacāragrahaśca hetuviśeṣyaka-sāmānadhikaraṇya-prakārakaṁ jñānam*). It can be explained with the help of the following instance. In the cognition – "Smoke is coexistent with fire in the same locus" (*dhūmah vahnisamāṇādhikaraṇah*) the 'smoke' (*dhūmah*) is the qualificand (*viśeṣya*) and "the coexistence of the smoke with the fire in the same substratum" (*vahnisamānādhikaraṇa*) is the qualifier (*prakāra*). By the term '*sahacāragraha*' such an apprehension should be taken into account. Both the knowledge of existence of the probans and the probandum in a particular locus and the absence of the knowledge of deviation are the causes of ascertaining *vyāpti* (*tadubhayamapi vyāptiniścaye kāraṇam*). Repeated observations, of course, sometimes act as a promoter (*prayojaka*) in ascertaining *vyāpti* by removing the doubt of deviation (*vyabhicāraśamkāvidhūnanadvārā bhūyodarśanamupayujyate*) [8, p. 532].

There are two kinds of knowledge – the definite knowledge and the knowledge in the form of doubt. The doubt of deviation may arise in some cases from the doubt of extraneous adjunct and sometimes from the knowledge of some common attributes like co-existence etc. along with the absence of the knowledge of the specific characteristic features of them. The doubt of deviation can be removed sometimes by *Tarka* or sometimes by the absence of the collocation of causes of doubt, which is called *svataḥsiddhaḥ*.

> *jñānam niścayaḥ śaṁkā ca. Sa kvacidupādhisandehāt, kvacid viśeṣādarśanasahitasādhāraṇadharmadarśanāt, Tadvirahaśca kvacid vipakṣabādhakatarkāt, kvacit svatahsiddhaḥ eva* [8, p. 532], [3, pp. 210-211]. "*Svataḥsiddhaḥ iti tarkam vinā anyena prayuktaḥ*" [4, p. 217].

If doubt is not dispelled through repeated observation of the co-existence between *hetu* and *sādhya*, the method of *tarka* is to be resorted to (*yatra tu bhūyodarśanādapi śaṁkā nāpaiti tatra vipakṣabādhakatarko'pekṣitah*). *Tarka* is the end of doubt (*tarkaḥ śaṁkāvadhiḥ*), as it is dispelled through the application of this method [3, pp. 219-224]. *Tarka* is a kind of hypothetical reasoning (*āropa*). It is an imposition of the pervader through the imposition of the pervaded (*vyāpyāropeṇa vyāpakāropah*). It is of two types-determining the definite nature of an object *(viṣayapariśodhaka)* and removing the doubt of deviation (*vyabhicāraśaṁkānivartaka*). The former is in the form: "If it does not possess fire, it would not possess smoke" (*yadyaṁ vahnimān na syāt tadā dhūmavān na syāt*). It determines the certainty of the existence of fire in a particular locus. In this context through the absence of the *āpādya* or the consequence (i.e., by the absence of the negation of smoke) the certainty of the existence of the absence of the *āpādaka* (the absence of the negation of fire) is ascertained. Through the knowledge of the existence of smoke the existence of fire is ascertained. In this way the doubt as to the existence of fire on the mountain in this context may be removed by applying this type of *tarka.* The observation of the co-existence is to be taken as the cause of ascertaining causal relation (*kāryakāraṇabhāva*) between smoke and fire (*yadyam vahnimān na syāt tadā dhūmavān na syāt, kāraṇaṁ vinā kāryānutpādāt*) [8, (on verse 137), p. 225]. The latter type of *tarka* is in the following form: "If smoke be deviated from fire, it will not be caused by fire" (*dhūmo yadi vahnivyabhicārī syāttarhi vahnijanyo na syāt*). If the first part is true, the second part would also be true. But it is experienced that the second part is not true in so far as we do not get any smoke, which is not caused by fire. From the falsity of the second half the falsity of the first half is determined. *Tarka*, being a mental construction, is useful for removing doubt and hence it is otherwise called *āpatti* i.e., imposition of the undesired through which a desired standpoint is established. It is a kind of indirect method through which the truth is ascertained. If the negation of p is proved as absurd, it would automatically follow that p is true. *Tarka* cannot be applied to all cases where doubt stands on the way of our knowledge. If there does not arise any doubt due to some contradiction (*vyāghāta*), inference can be drawn without the application of *tarka.*

The doubt of deviation (*vyabhicāraśaṁkā*) does not arise in the *vyāpti* existing inside *tarka*, because it would lead to the involvement of contradiction in respect of one's own activity (*svakriyāvyāghāta*) and hence there does not arise any necessity of another *tarka*. It is a fact that an individual is allowed to doubt as long as there does not arise any contradiction in respect of one's

own practical activity. He is not allowed to entertain doubt about *vyāpti*-relation existing between smoke and fire, because he seeks fire to get smoke without any hesitation in the empirical level. Had he possessed a slightest doubt as to it, he would not have sought fire for smoking. The existence of doubt in this context will contradict one's own activity. Thus, habitually a man takes food to satisfy his hunger and takes the help of language to make others understand his desire etc. (*yadi hi kāraṇaṁ vinā kāryaṁ syāt tadā dhūmārthaṁ vanhestṛptyarthaṁ bhojanasya va niyamata upādānaṁ tavaiva na syāditi*) [8, p. 225], [3, pp. 219-224]. If there is a case where an effect is produced without any cause, the effect would be doubted as having any cause or uncaused (*ahetuka*). If this doubt persists, it would surely lead to contradiction in respect of one's own action (*svakriyāvyāghāta*). In fact, such doubt, if nourished, surely leads to contradiction, which is undesirable. Hence it is better not to entertain doubt (*yadi hi kvacit kāraṇaṁ vinā kāryaṁ bhaviṣyati tadāhetuka eva bhaviṣyatīti tatrāpyaśaṁkā bhavet tadā sa svakriyāvyāghātādapasaraṇīyā*) [8, p. 225]. One's own activities indicate the absence of doubt in them. For, the activities are regarded as impediment to a doubt. In spite of this if someone goes on doubting without caring to the fact of self-contradiction, it would be taken as a pathological one. Hence the phenomenon of doubting would be taken as an object of doubt.

Gangeśa admits *sāmānyalakṣaṇā* as a *pratyāsatti* in ascertaining *vyāpti* between smoke-in-general and fire-in-general. To him the super-normal connection through universal (*sāmānyalakāaṇā pratyāsatti*) has got a prominent role in ascertaining *vyāpti*. When it is asserted that all men are mortal, it means that the character of being mortal is true not of this or that man only but all men existing in past, present and future. Such cognition of morality is not possible by ordinary contact of sense organ with the object on account of the fact that all men are cannot be physically present before my sense organ. Hence, a super-normal connection with the aid of universal has been admitted by the Naiyāyikas. When a human being is perceived as such, the universal 'humanity' in him is also perceived simultaneously. The normal perception of humanity is the medium through which all human beings or the class of human beings is perceived.

With the aid of such supernormal connection through universal the invariable relation (*vyāptisambandha*) can be established between two objects. Such relation existing between all cases of smoke and fire cannot be known through the normal way of seeing. The cognition of the coexistence between a particular smoke and a particular fire leads to the perception of their corresponding universals i.e., smokeness and fireness. With the help of these an invariable relation between smoke-in-general and fire-in-general existing in three times can be established. In this context the universal 'smokeness' serves as a *pratyāsatti* through which we get all the cases of smoke. Generally, doubt arises concerning all cases of smoke and fire existing in different place and time that are beyond the range of our sense organs. Any type of doubt presupposes the knowledge of its object. Hence an object must be known previously to justify doubt and the previous perceptual knowledge of all cases of smoke is highly essential. This is possible through universal (smokeness). This is another way of justifying *sāmānyalakṣaṇā*, which ultimately assists in ascertaining *vyāpti* in the way mentioned above. It runs as follows in the text: *Vyāptigrahaśca sāmānyalakṣaṇāpratyāsattyā sakaladhūmādiviṣayaka* [3, p. 253]. *Prasiddhadhūme vahnisam-bandhāvagamāt kālāntarīyadeśāntarīyadhūmasya mānābhāvenājñānāt. Sāmānyena tu sakaladhū-mopasthitau dhūmāntare viśeṣādarśane saṁśayo yujyate* [3, p. 254].

In this case the term *lakṣaṇa* means *svarūpa* or nature. The connection in which universal becomes the nature is called *sāmānyalakṣaṇa* (*sāmānyam lakṣaṇaṁ yasya ityarthaḥ*). The definition, if taken into account, everybody would have acquired the knowledge of all cases of smoke through the connection of smokeness, which is eternal and remains in all smokes through the relation of inherence. But in actual life such cognition is not possible. Hence a different type of definition is proposed. By the term '*sāmānyalakṣaṇasannikarṣa*' we mean the universal, which has become a qualifier in the knowledge of which the object connected with sense organ is a qualificand (*indriyasambaddhaviṣayaka*). In the case of a particular manifestation of smoke the 'smoke' has become a qualificand connected with sense organ. In such 'smoke' the property or universal 'smokeness' inheres as a qualifier (*prakārībhūta*). All the cases of smoke existing in past, present

and future can be perceived through super normal connection through smokeness existing in a particular smoke (*tatra dhūmatvena sannikarṣena dhūmā ityevam rūpa-sakaladhūmaviṣayakam jňānam jāyate*) [8, (on verse 69), p. 111].

In the case of inferential cognition, the knowledge of all cases of smoke is essential. In the smoke, which is perceived, there is certainty about its relation with invariable concomitance with fire. Without the acceptance of such *sannikarṣa* the doubt regarding the invariable concomitance of smoke with fire, which is beyond the reach of the sense organ, cannot be explained. When a particular smoke, fire and their coexistence are known, the universals like smokeness and fireness are known simultaneously. Through these universals all individuals become objects of our knowledge. In such cases universal becomes a supernormal relation or *pratyāsatti*.

If somebody challenges about the validity of the syllogistic argument in the form "The mountain is fiery as it possesses smoke" (*parvato vahnimān dhūmāt*), the philosophers of both the old school of Nyāya and the new school of Nyāya or Navya Nyāya persuasion will justify the same with the help of five constituents (*avayava*-s). The process is called *parāthānumāna* (syllogistic argument for making others understand). The constituents of a syllogism are proposition (*pratijňā*), reason (*hetu*), example (*udāharaṇa*) application (*upanaya*) and conclusion (*nigamana*).

1. Proposition (*pratijňā*): The mountain is fiery (*parvato vahnimān*)
2. Reason (*hetu*): because it possesses smoke (*dhūmāt*)
3. Example (*udāharaṇa*): Whatever is smoky is fiery, as a kitchen (*yatra dhūmastatra vahniḥ yathā mahānasaḥ*)
4. Application (*upanaya*): So is the mountain (*tasmāttat tathā*)
5. Conclusion (*nigamana*): Therefore, the mountain is fiery (*parvato vahnimān*) [3, pp. 656-761].

In the above-mentioned case the proposition and the conclusion are the same apparently. But it should be borne in mind that proposition is mere an introduction of what is going to be proved while conclusion is the result of the whole inferential process.

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Buddhist Logic and its Development: Some Remarks

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Abstract:
There are two major ways in which Buddhist logic is developed. The first one is represented by Nāgārjuna-Candrakīrti tradition through the use of dialectics and the second way of development is found in the works of Diṅnāga and Dharmakīrti through the use of *hetu* (probans). This second way of logic has further been developed by the works of Jinendrabuddhi and Ratnakīrti. The paper is an attempt to show the historical development of epistemic logic as developed by the Buddhist philosophers and their relevance for our time.
Keywords: *catuṣkoṭi*, *niṣedha*, paraconsistent logic, causal relation, identity relation, uniform concomitance, *svalakṣaṇa*.

1. Introduction

From the debating model of the *Kathāvatthu* (in Pāli) to the Vaitaṇḍic *prasaṅgapādāna* of Nāgārjuna-Candrakīrti tradition there is an interesting phase of the development of Buddhist logic that later on leads to meta-logical interpretation of 'negation' which, according to some modern logicians, is very close to para-consistent logic of today. It is said to be a logic which is free from 'consistency-phobia.' This is one kind of development of Buddhist logic in the early stage and the concern of this stage is more on epistemology through dialectics for refutation of counter-thesis. This may be called the stage of 'No Thesis Argument.' No effort is seen there to introduce formalism and to defend one's own position. This phase is based on the dialectics that works through four-cornered negation. However, though it does not deny the empirical validity of *pramāṇa*, it denies any claim in favour of its independence. This speculative networking of *pramāṇa* is based on uncritical acceptance of mutually conflicting ideas and on critical analysis nothing is found as absolute, independent and categorical.

Another phase of the development of Buddhist logic starts with the works of Diṅnāga on the nature of *liṅga* or sign and the sign-signed relation. It has the interest of leading to epistemological issues as focused in *Pramāṇasamuccaya*, which provides the ground work for the development of Buddhist epistemology in a new direction. Later on, Dharmakīrti (c. 600 – c. 660 CE) gave the master-stroke that provided the momentum through *Pramāṇa-Vārttika* and *Pramāṇa-Viniścaya*. He was considered in those works as a Sautrāntika Buddhist philosopher although in later days he contributed much in the development of Yogācāra or Vijñānavāda school of Buddhist philosophy. But Dharmakīrti's work on logic is also very important for understanding the

epistemological blossoming in later Buddhist epistemology. His *Nyāyabindu* (*Essence of Logic*) seems to be a condensed form of the main issues of *Pramāṇa-Vārttika*. He has also done hair-breath analysis of Reason or *Hetu* in his *Hetubindu* (*A Drop of Reason*).

However, before Diṅnāga, as said earlier, Nāgārjuna developed a kind of meta-logic in 2nd century A. D. All the three – Nāgārjuna, Diṅnāga and Dharmakīrti – were masters of different streams of Buddhist logic and they made Gautama's Nyāya logic as their *pūrvapakṣa*, the thesis for refutation. Nāgārjuna and Dharmakīrti belong to different Buddhist schools of philosophy and they have different ontological positions too. For Nāgārjuna, everything is devoid of intrinsic nature (*niḥsvabhāva*), that is to say, everything has conditional and inter-dependent existence. But Dharmakīrti holds that a real thing is *svalakṣaṇa*, a unique particular, and even the concomitant invariable relation for inference is grounded on the intrinsic nature of the things related by it. So, it appears that both Nāgārjuna and Dharmakīrti influenced the development of Indian logic in two different directions. Of course, Dharmakīrti's works have much affinity to Diṅnāga's logical thinking and this way of development of the Buddhist epistemology contributed much to philosophy of language that works through the signifier-signified relation in Jinendrabuddhi and introduction of binary oppositions by Ratnakīrti in *Apoha-siddhi*. Of the afore-said three important logicians of the Buddhist school – viz. Nāgārjuna, Diṅnāga and Dharmakīrti – Nāgārjuna develops a logic for understanding philosophy through meta-philosophical analysis of concepts which is otherwise known as *prasaṅga* (dialectical method of contextual refutation), *prasaṅgāpādāna*, a special kind of *reductio ad absurdum* argument using simple negation (*prasajya-pratiṣedha*). This is also known as *catuṣkoṭi-niṣedha* – 'four-cornered negation' and the problem of self-referential statements is the main charge that is being raised against Nāgārjuna by his philosophical opponents. The case of Dharmakīrti is little bit different. Since the Buddhist logic develops out of refutation of the Nyāya logic and Dharmakīrti's exercise of logic, like that of Diṅnāga, centres around 'probans' (*liṅga/hetu*, sign, reason), let us have a brief presentation of Gautama's view on inference and 'probans' (*liṅga/hetu*).

History of philosophical thought in India shows that Buddhist logic has been developed not in isolation but in a continuous process of borrowing from the logical thought by other thinkers and later on through criticism of Nyāya philosophers. Nāgārjuna develops his logic through the point-to-point refutation of *Nyāyasūtra* of Gautama in *Vaidalyasūtra* (which is also known as *Vaidalyaprakaraṇa*). However, in this short paper I propose to discuss the issue with reference to Nāgārjuna and Dharmakīrti only and leave any detail discussion on Diṅnāga for another paper.

It is better to begin with the Nyāya view of inference, because the Nyāya view is treated as the main *pūrvapakṣa* (thesis under refutation) by all logicians belonging to the Buddhist school.

2. A Brief Account of Gautama's View

Gautama in the *Nyāyasūtra* speaks of three types of inference based on three types of *liṅga-liṅgī* relation [10, p. 64]. Vātsyāyana elaborates these with examples. The first of these is called *pūrvavat*, the second is called *śeṣavat* and the last of these is called *sāmānyatodṛṣṭa* inference. The first one of these inferences is from the cause to the effect based on the causal relation between *liṅga* and *liṅgī* (the probans, the sign and the probandum, signified). From the rising of the black cloud as cause we can infer the effect that it will rain. The second one is the inference from the effect to the cause. When we see that there is current and fullness of the river with water we infer that there was rain in the upper region of the river in question. The third one is not causal in this sense. It is based on invariable concomitance which is, whether causal or non-causal, is not determined on the basis of the particular instances of the *hetu* and the *sādhya*, but is understood at a more general level. From the perception of an object at some place which was earlier in some other place is now inferred as due to the movement of that object in question. Each of these forms of inference, according to Vātsyāyana, however, may be illustrated in two ways. We have already explained one way.

2.1. The Alternative Way

Let us now see an alternative way. Here the word *pūrva* means "two objects *x* and *y* were previously perceived" as invariably connected. Now "an object similar to one of these is perceived. From this is inferred an object similar to the other, though the object thus inferred is not perceived now" [10, p. 65]. In this alternative version of inference the word *Śeṣavat* stands for residual usually called in Bengali *pariśeṣa*. When all the possibilities are eliminated what remains is called *pariśeṣa*. Suppose, I am to know in which class 'sound' belongs when I know that features of being existent and non-eternal qualify it. Does it belong to the class of substance, or quality or action or universal or unique individuality? All these are possible alternatives. Now let us eliminate one after another. We cannot call it substance, because in order to be so it must have been an inherent cause and being single it cannot satisfy the condition of being substratum of quality and action as inhering in many. We cannot call it action, because subsequent sound causally arises out of it. The defining features of neither universal (*sāmānya*) nor unique individuality (*viśeṣa*) are fit to it. Now what remains only the possibility of being a quality? From this it is established that sound is a quality. About the third form of inference Vātsyāyana says that when both *liṅga* and *liṅgī* (probans and probandum) are not perceptible, the *liṅgī* is inferred from a *liṅga* which has the same feature "with any other object." The existence of self may be inferred from the existence of desire etc. We know that desire etc. belong to the class of quality. So it must have a locus called substance. And the self is the substratum of desire etc. Now the third one is called *sāmānyatodṛṣṭa anumāna*. Ordinary way of defining it is that it is an inference based on the *liṅga* (probans) which is neither a cause nor an effect. According to Vātsyāyana, the first way of defining the *sāmānyatodṛṣṭa anumāna* by Gautama has been discussed earlier. But a Naiyāyika like Uddyotakara says that this earlier version of *sāmānyatodṛṣṭa anumāna* is, in fact, a special case of *śeṣavat anumāna*. But the alternative way of defining *sāmānyatodṛṣṭa anumāna* by Vātsyāyana cannot be accused of this. In this case both the probans and the probandum are imperceptible. But the probandum (*liṅgī*) is cognized from a probans (*liṅga*) "having the same nature with any other object" [9, p. 66]. Inferring the existence of the self from the existence of desire etc. is cited as an example of *sāmānyatodṛṣṭa anumāna.* The self is the substratum of desire. Desire is a quality and a quality has substance as its substratum where it resides. In *pūrvavat anumāna* the invariable relation that holds between *liṅga* and *liṅgī* is an object of direct perception. It is just contrary in the case of *sāmānyatodṛṣṭa anumāna.* According to Phaṇibhūṣaṇa, Vātsyāyana's this mode of defining *sāmānyatodṛṣṭa anumāna* is also subject to difficulties as suggested by the later Naiyāyikas like Uddyotakara and Vācaspati Miśra. Without the application of *śeṣavat anumāna* (residual inference), according to them, the very instance of inferring the existence of the self from the existence of desire etc. remains incomplete. For the sake of logical parsimony the details of argument are not discussed here.

But the later Nyāya scholars since Gaṅgeśa have given emphasis on invariable or uniform concomitance of *hetu* (probans) with *sādhya* (probandum) as the sufficient condition for defining *vyāpti*. In other words, the role of causal relation of the earlier Nyāya is now reduced to a relation of uniform or invariable concomitance. It is adequate to infer the presence of *x* from the presence of *y if and only if* (hence forth, *iff*) we uniformly see together *x* and do not see *y* without *x*. If in the presence of *x* always there is presence of *y*, it is called a case of *anvaya (tat sattve tat sattā*) and if, on the other hand, in the absence of *y* always there is absence of *x*, then it is called a case of *vyatireka* (*tadasattve tadasattā*). This is, in short, the Nyāya view of inference.

3. Nāgārjuna-Candrakīrti Tradition

When we speak of the development of Buddhist Logic, we try to see how the development of logic does differ on account of difference in ontological presuppositions of the schools of Indian philosophy. But we also see difference among philosophers of the same school in broad sense. Different streams, to speak of Buddhist Logic, have been developed throughout a few centuries. Inference (*anumāna*) is considered as the foremost object of discussion in logic. A model of

logically-warranted inference can be traced in the Buddhist debating manual titled *Kathāvatthu.* Another type of the development of logical warrantee emerges out of the debate having the feature of 'refutation only' (*vitaṇḍā*). This is also a development of the philosophical method of Sañjaya, a senior contemporary of Gautama Buddha and that method is often called 'the method of eel fish' (*amarāvikṣepavāda*) [2, pp. 453-457]. This technique has been enriched by Nāgārjuna who interpreted the concept of 'negation' as a 'commitment-less-denial' (*prasajya-pratiṣedha*) to support his philosophical position called 'emptiness' in a technical sense. It may be called a system of logic having many possible values.

Among the Buddhists, again there are two dominant trends – one developed by Madhyamaka philosophers who engage themselves more on philosophical foundation of Logic, an analysis of modality of the world of experience keeping in mind also the meta-level understanding of language. For them, if something is claimed as necessary, it must be possible, though if something is possible it is not necessarily necessary. The role of *modal operators* is more important in understanding philosophy through language, because only through these we can have an access to the actual world or the ontology of experience and accordingly we can plan our program for future in contextual consideration of the actual state of affairs. Obviously, such logic cannot allow any exclusive or absolutist claim based on pure assumption and therefore the so-called law of Excluded Middle has no appeal to this logic. Here some modern logicians have tried to see in it some elements of what is called *Para-consistent Logic* today. They call Nāgārjuna (c. 150 CE) as the forerunner of *Para-consistent Logic* [3, p. 16]. But I am not sure about such possibility. What I understand by Nāgārjuna's use of 'negation' is meant for refutation of opponents' views and it is used for criticizing every thought for leading one to thoughtlessness. It is not another thesis called the thesis of 'ineffability' beyond four-cornered negation. It is a case of simple negation where one is not compelled to accept the counter-thesis. There is exclusive division of 'is' and 'is not'. But this type of logic in its rudimentary form can be traced to Sañjaya's theory of logical escapism, *amarāvikṣepavāda* in Sanskrit and *amarāvikkhepavāda* in Pāli [7, pp. 105-109]. Sañjaya was a senior contemporary of Gautama Buddha and Suppiya was his disciple. It is said that Pyrrho, the Greek dialectician was a student of Suppiya (Supriya in Sanskrit) at Taxila [1, p. 328]. In Nāgārjuna, however, we see a developed form of 'four-fold negation' of Amarāvikṣepavādins.

Like Sañjaya-Nāgārjuna line of using 'consistency-phobia-free' logic. It is against all kinds of orthodoxy and puritanism in logic. Orthodoxy and puritanism are based on exclusive position which denies the explanation of the actual world. Actual world is beyond our absolutistic and deterministic scheme of logic. This use of logic is based on mere speculation and not on critical judgement about the actual world. In other words, there is no single set of programs or problems in the possible world. So any relational use of negation cannot explain the world of experience with its set of deterministic values. The crux of so-called inconsistency lies with the basic assumption of explaining the world with a single set of programs where both 'P' and 'not-P' cannot be accepted as theorems. But a system of Logic which is tolerant to the so-called 'inconsistency principle' can accept both 'P' and 'not-P' as they respond to two sets of individual context, *prasaṅga* in Sanskrit.

Naturally in such an approach the concept of 'negation' has a very important role. It is to be noted here that in all logical approaches the use of negation colours the school's epistemological claims and ontological positions. Different logical systems have been built up depending on different senses of use of the concept of 'negation'. In a two-valued system of logic the relation of a thesis, 'P' and its negation, i.e. 'not-P', is exclusive and thus if you negate 'P' then it is necessary to accept the counter-thesis 'not-P'. But for the user of "pure and simple" (*prasajya-pratiṣedha*) negation there is no such necessity, because he believes in 'context-bound negation' and in such a use of negation when you negate a thesis 'P', it is possible to negate 'not-P' also. In actual world nothing is absolutely determined and fixed in our knowledge situation. The world of 'unknown' is 'larger' than the world of 'known'. Among non-exclusive and innumerable possibilities 'P' represents only one and 'not-P' one more and the sum-total of 'P' and 'not-P' does not cover the scope of 'all'. That is why, in refutation of the Nyāya claim with regard to *pramāṇa* and *prameya*, Nāgārjuna has used the Sanskrit word '*niṣedha*' (negation) and also from the refutation of doubt to

the refutation of the point of defeat (*nigrahasthāna*). The word *niṣedha* is ordinarily translated into English as 'negation.' But the word 'negation' is used as *propositional negation* called in Sanskrit *paryudāsa pratiṣedha* as well as 'simple negation' called in Sanskrit *prasajya pratiṣedha,* (*aprādhānyaṁ vidheryatra niṣedhe pradhānatā prasajya pratiṣedho sau kriyayā saha yatra ñān/prādhānyaṁ hi videheryatra niṣedhopradhānatā/ paryyudāsa sa vijñeyo yatrottarapadena ñān//*) [11, p. 298]. In the first type of negation, if we negate 'P' as false, we are compelled to admit 'Not-P' as true. But in 'pure negation' we negate something without any commitment, that is to say, without any possibility of admitting 'the counter-thesis.' Here Nāgārjuna's use of the Sanskrit word *niṣedha* is to be understood in the second sense of negation, that is to say, as 'refutation – pure and simple.' Nāgārjuna's view of four-cornered negation is important, because it is a necessary condition for understanding his philosophy. For him, the denial of the law of excluded middle does not invite any contradiction.

4. Diṅnāga

As different from this meta-logical approach another dominant stream of Buddhist logic was initiated by Diṅnāga who approximately flourished the 5th Century A. D. (c. 480 – c. 540 CE) and his followers. A parallel logical system to the Nyāya logic is developed by him where both deductive and inductive ways of reasoning are presented in a novel way and that logical way has much contribution to the development of *pramāṇaśāstra*, epistemology in India. In the history of Buddhist logic the period from c. 400 – 1100 is considered as the most creative period. Diṅnāga developed logic in two works namely *Hetucakraḍamaru* and *Nyāyamukha*. The text of these works, we are told, are not available in Sanskrit and survived only in Tibetan translation as 'gtan tshings kyi hkhor lo gtan la dbab pa.' Pandit Bodhisattva and Bhikṣu Dharmāśoka are popularly known as the Tibetan translators. *Hetucakraḍamaru* is also known as *Hetucakranirṇaya* [14, pp. 16-19]. Here Diṅnāga has three concerns – *hetu, anumeya and dṛṣṭānta* – probans, probandum and example. He dealt with in detail three distinguishing marks of hetu. He has developed three types of *liṅga*, the inferential sign which is popularly called '*trairūpya*' in Sanskrit. "There will be the presence, the absence as well as both the presence and the absence (i.e. presence in some part, while absence in another) of the *hetu* in the *anumeya* (that which is to be proved, probandum). If there be the presence of *hetu*, the conclusion will be correct, while the absence thereof will make it invalid. If there be both the presence and the absence (of the *hetu* in the *anumeya*) the conclusion will be doubtful just like an invalid one… There will be the presence, the absence as well as both (of the *hetu*) in the *sapakṣa* (that which is analogous to the *pakṣa – anumeya* or the object of inference). And similarly in the *vipakṣa* (that which is opposed to the *pakṣa*) there will be the presence, the absence, as well as both the presence and the absence of the *hetu*. So there will be three classes of the threefold *hetu* (i.e. nine varieties in all)" [7, pp. 16-17]. The distinguishing marks that characterize the *hetu* are as follows:

"1. It should be present in the case (object) under consideration. 2. It should be present in a similar case or a homologue. 3. It should not be present in any dissimilar case, any heterologue" [7, p. 6]. Out of epistemic interest Diṅnāga has formulated *hetucakra*, a wheel of reason with the use of two conditions, namely, *vipakṣa* and *sapakṣa*. The wheel consists of a set of nine different possibilities satisfying some conditions for a case of sound inference, but only two of them can satisfy all the three conditions necessary for a sound inference. Let us represent all these possible cases [14, pp. 19-29]. (1) *Hetu* (*probans*) is present in all the cases of both *vipakṣa* and *sapakṣa*; (2) *Hetu* (*probans*) is present in no case of *vipakṣa* but in all cases of *sapakṣa*; (3) *Hetu* (*probans*) is present in some cases *vipakṣa* and in all cases *sapakṣa*; (4) *Hetu* (*probans*) is present in all cases of *vipakṣa* is but in no case of *sapakṣa*; (5) *Hetu* (*probans*) is present in no case either of *vipakṣa* or *sapakṣa*; (6) *Hetu* (*probans*) is present in some cases of *vipakṣa* but in no case of *sapakṣa*; (7) *Hetu* (*probans*) is present in all cases of *vipakṣa* and in some cases of *sapakṣa*; (8) *Hetu* (*probans*) is present in no case of *vipakṣa* and in some cases of *sapakṣa*; (9) *Hetu* (*probans*) is present in some cases of *vipakṣa* and in some cases of *sapakṣa*.

Matilal represents them in the following table and in the given table the sign '+' stands for 'all', the sign '±' stands for 'some', and the sign '–' stands for 'none' [7, p. 8].

1 + *vipakṣa* + *sapakṣa*	2 – *vipakṣa* + *sapakṣa*	3 ± *vipakṣa* + *sapakṣa*
4 + *vipakṣa* – *sapakṣa*	5 – *vipakṣa* – *sapakṣa*	6 ± *vipakṣa* – *sapakṣa*
7 + *vipakṣa* ± *sapakṣa*	8 – *vipakṣa* ± *sapakṣa*	9 ± *vipakṣa* ± *sapakṣa*

There are nine possible cases. But none other than the serial numbers 2 and 8 can satisfy the three necessary conditions for a *good reason* (sign), and the conjunction of these three necessary conditions constitutes a sufficient condition. When the reason is a *pseudo-reason*, we cannot have a sound inference. This is certainly an improvement in the development of Buddhist logic in India [7, p. 8].

There are nine possible cases in Diṅnāga's *hetucakra* (*circle of probans*) and this theory of three forms of sign is technically tied up with his theory of meaning "exclusion" (*apoha*). The word 'logic' may be used here to mean that 'a sign is the sufficient logical assurance about the correctness of the resulting inference' [7, p. 7]. Another work of Diṅnāga titled *Nyāyapraveśa* is also important to begin one's study of Diṅnāga. But for the application of his logic or inference we are to look into *Pramāṇasamuccaya*, the celebrated work on Epistemology.

According to J. M. Bocheński [4, p. 13], in two cultural spheres logic has been developed rigorously – Western cultural sphere where logic followed mathematical model and Indian cultural sphere where logic followed linguistic model – and thereby in India it gives the foundation of epistemology and the development of philosophy of language [2, p. 35]. In Indian cultural sphere again, there are two dominant varieties – one developed by the Nyāya School, which often comprises non-artificial language or clarifications of natural language with various concepts. Their use of logic is based on the assumption of two exclusive ontological categories – positive and negative (*bhāva* and *abhāva*). Their description of the world is based on 'relation as real.' Like Naïve realists of the West, they assume certain conceptual categories. On the other hand, the Buddhist philosophers have tried to develop a *modal* view of Reality and thereby they are interested in analysing the actual state of affairs. There is nothing called substance, everything is in the state of modes. Therefore, consideration of modality and context is understood here in a dialectical process of reasoning. The success of a philosophical claim depends upon the highest possible explanation it can give considering the context. Their interest lies in pragmatism.

I shall now elaborate the arguments of Dharmakīrti for the development of the Buddhist logic by way of criticizing the position of Naiyāyika Gautama.

5. Dharmakīrti's Critique of the Nyāya View of Inference

Now let us see how Dharmakīrti refutes the Nyāya view, specially the view of early Nyāya. For Dharmakīrti, the Naiyāyikas could not give any cogent argument in favour of their theory of inference. In other words, they fail to explain the ground for admitting uniform concomitance of *hetu* and *sādhya* (*probans* and *prabandum*). If *x* is to be an invariable mark for *y*, from the presence of *x* we can infer the presence of *y* and if this is admitted then it must also be admitted that both *x* and *y* are related by their intrinsic nature [5, p. 16]. Now if *x* is present while *y* is absent then presence of *x* cannot be called a sufficient condition for the presence of *y*. For *y* it is an instance of deviation. But non-deviation is the necessary condition of *vyāpti* in accordance with its defining

features (*lakṣaṇa*). That is why, Dharmakīrti in his *Nyāyabindu* objects that if *x* and *y* are not related by their intrinsic nature, then we are to admit that '*x* deviates from *y*.'

According to Dharmakīrti, two conditions namely, causal relation, and identity of essence are individually necessary conditions but conjointly sufficient condition for the non-defective defining features or the *lakṣaṇa* of being a relation by intrinsic nature [11, p. 16]. For Dharmakīrti, causal relation and identity of essence are two possible relations. Suppose, there is no necessary tie between A and B; in that case, we cannot say that A is invariably concomitant of B. This amounts to say that A is not necessarily identifying stamp of B (*tad-apratibanddhasya tadavyabhicāra-niyamābhāvāt*) [5].

Let us now see the development of the debate between Nyāya scholars and Dharmakīrti. For the former, there is no necessity to say here that h and s are universally tied up. But for Dharmakīrti, h and s are related universally and this is a necessary relation. It does not amount to say that all inferences admitted by the Nyāya are unsound – *kārya- kāraṇa-bhāvād-vā svabhāvād- vā-niyāmakāt avinā-bhāva-niyamo'darśanān na, darśanāt* [6]. Let us take an example. Suppose *x* is endowed with a particular taste say *y*, since *x* is endowed with a particular color called *z*. Here *x* stands for the *āśraya*, locus, *y* is the *liṅgī*, the probandum and *z* is the *liṅga*, the probans. The concomitance is of the form: for anything *x* if *x* has *z* then *x* has *y*. Now we cannot say that *z* and *y* are causally related. We cannot also say that there is the relation of essential identity between the two. This does not mean the unsoundness of this inference. Dharmakīrti only shows that both *y* and *z* are co-effects of *x* [3, p. 17]. Let us now see how it is explained by Dharmakīrti. About essential identity Dharmakīrti says that such a relation holds between a genus and a species, and "even between a genus and a member of the genus" (*rūpādināpi hi rasādder-avinābhāvo na svataḥ kintu svakāraṇāvyabhicāradvāraka iti tatkāraṇotpattirevāvinābhāvanibandhanam*) [5].

It may be noted that according to Diṅnāga, there are two types of inference for one's own understanding (*svārthānumāna*) and for 'others' understanding (*parārthānumāna*). The issues concerning epistemology and psychology apart from logic are the primary concern of the first one and the issues concerning 'demonstration' or evidence in the process of language use in order to convince others is the primary concern of the second.

The first is grounded on the intrinsic nature (*svabhāva*) of the *liṅga* (probans) and the second is based on the *liṅga* (probans) which is causally connected to "the property to be confirmed (*tad-utpatti*)" [3, p. 18] In addition to these two types of inference Dharmakīrti deals with another type of inference in the *Nyāya-bindu* which "shows that some property is not present in the given locus (*anupalabdhi*)" [16, p. 109]. As an example of the third type of inference we may say that because no book is apprehended (*anupalabdha*) upon this table now, there is no book upon the table in question. This type of inference is a development upon the earlier types conceived by Diṅnāga and Matilal praised it as 'more useful' [3, p. 18].

It is often argued that 'This is a tree, since this is a *siṁśapā*. Here 'this' is the locus, being a tree is the *liṅgī* or *sādhya*, and the *liṅga* or *hetu* is *siṁśapā*. Now 'being a tree' is the *viśeṣaṇa* (adjective) of the genus (*jāti*) and 'being a *siṁśapā* is the *viśeṣaṇa* of the species of the tree. 'Tree' is a class say, 'Y' and under this class *siṁśapā* is a species or sub-class. X cannot belong to *siṁśapā* species if it does not belong to the class of tree, Y. In this sense there exists a necessity of the relation of identity between X and Y. But question arises: How a Nyāya philosopher would view this version of inference proposed by Dharmakīrti?

Here a Nyāya philosopher would argue that 'This is a *siṁśapā*, since it is a tree.' Here 'this' is the locus, *pakṣa*, and 'being a *siṁśapā* is the *liṅgī* or *sādhya*, and 'being this tree' is the *liṅga, hetu* (probans). For a Nyāya philosopher, this 'tree-ness' is *viśeṣaṇa* and this is also the *svarūpa*, the very nature of this tree. Here Dharmakīrti would also say that 'being a *siṁśapā* 'tree-ness' is the *svabhāva* of not only of this tree but of all *siṁśapā* tree' [3, p. 18] and we cannot ignore, according to Dharmakīrti, the essential identity of all *siṁśapā*-s and trees, a relation that necessarily holds between species and a genus.

Here the Nyāya philosopher differs from Dharmakīrti. For him, the word *svarūpa* stands for 'own nature of a thing'. Dharmakīrti makes a difference between something as it is, and that thing

as it is known. This may indirectly inspire the later Nyāya philosophers to develop a very important concept called '*avacchedaka*', the distinguisher. The Nyāya philosophers have given emphasis on the importance of the law of universal concomitance between prabans (*hetu*) and prabandum (*sādhya*) whereas the Buddhist philosophers have given emphasis on the importance of prabans (*hetu*) in their respective theories of *anumāna* (inference). In other words, the Nyāya view is *vyāpti-centric* whereas the Buddhist view is *hetu-centric*.

6. Concluding Remarks

However, it is interesting to see how this development of logic differs because of difference in ontological presuppositions. Accordingly, we see difference among philosophers of the same school in broad sense. Though both Nāgārjuna and Dharmakīrti belong to Buddhist School of Philosophy, they differ in their ontological positions. For Nāgārjuna, everything is devoid of intrinsic nature (*niḥsvabhāva*). Nāgārjuna's dialectics (*prasaṅga*) as a method of de-conditioning might be a distant precursor of Derrida's method of 'Deconstruction' which functions through a sense of 'defference' (i.e. a peculiar combination of 'differ' and 'deffer'). Never the less, Dharmakīrti holds that a real thing has *svalakṣaṇa* and even the concomitant invariable relation for inference is grounded on the intrinsic nature of the things related by it. Both Nāgārjuna and Dharmakīrti influenced the development of Indian Logic in two different directions [3, p. 18]. For the Nyāya, the main focus is on the notion of universal concomitance (*liṅga-liṅgī-saṁbandha*) for the ancient school and *vyāpti-saṁbandha* for the new school of the Nyāya philosophy). But for the Buddhists, especially for Diṅnāga and Dharmakīrti, it is the nature and role of reason, probans, *hetu* that occupies the central position in their epistemic logic and this has immense influence in understanding language and meaning in the writings of Jinendrabuddhi (8th Century A.D) and Ratnakīrti (10th Century A.D). In his *Mahāvaiyākaraṇa-kārikā-vivaraṇa-pañjikā* Jinendrabuddhi refers to Diṅnāga's *Pramāṇasamuccaya* and says that a word becomes meaningful only with comparison and recognizing a difference and therefore only by positive or negative description by itself is not enough to be understood. Binary opposition of affirmation and negation works together in understanding the meaning of a word. Language does not create meaning of any object; rather the chief concern of language is to uncover the meaning of object. When I say 'human being' to uncover its meaning I want to mean that since human being is not a tree, not a hill, not a river, not a cow, so I want to mean by human being by using the word 'human being'; here it works through a comparative process of 'acceptance-rejection'. Any word in order to be meaningful presupposes it's opposite, negative word and therefore any claim of universality regarding the meaning of a word is subject to doubt. So from the analysis of reason, *hetu* there is a gradual development of Buddhist epistemic logic to philosophy of language which is expressed in the use of signifier-signified-relation. This might remind us Ferdinand de Saussure's Semiology. We know that Th. Stcherbatsky's two volumes of *Buddhist Logic* were published in 1930. There might be a possibility of looking at this work by the 20th century French thinkers.

The contribution of Buddhist epistemological logic to the arena 'Semiology' is yet to be explored. Th. Stcherbatsky in his *Buddhist Logic* (volume 2) has devoted a substantial portion in Appendix IV to Jinendrabuddhi [13, pp. 384-400]. And Sign = signifier-signified relation, according to Jinendrabuddhi, is not universal, not permanent but 'context-bound.' The relation between signifier and language is not a necessary universal relation as there is universal necessary relation between a creeper (*latā*) and its leaf (*patra*). Analysis of this kind of development in Buddhist Logic from Diṅnāga to Jinendrabuddhi deserves another full paper. May I leave that excursion for another such occasion?

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The Buddhist *Pramāṇa*-Epistemology, Logic, and Language: with Reference to Vasubandhu, Dignāga, and Dharmakīrti

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Abstract:
As the title of the present article shows, it highlights the three philosophically integrated areas – (1) *pramāṇa*-epistemology (theory of comprehensive knowledge involving both perception and inference), (2) logic (although a part of *pramāṇa*-epistemology, it has two modes, namely, inductive reasoning and deductive reasoning), and (3) language (or semantics, i.e. the double negation theory of meaning, which falls under inference). These are interconnected as well as overlapping within the Buddhist mainstream tradition of the process philosophy as opposed to the substantialist philosophy. The same is the case with the three celebrated Buddhist thinkers – Vasubandhu, Dignāga (also spelt as Diññāṇa), and Dharmakīrti – who develop their radical and critical views focusing on these areas in historical-cum-philosophical order. It is worth noting that within the same mainstream Buddhist tradition, each one of the three thinkers picks up the problematic issues from their predecessors – from the Buddha to their immediate predecessors respectively – for their solutions against the backdrop of the two conflicting mainstream traditions – Buddhist and non-Buddhist. The central focus of these thinkers is first to identify the crucial issues, doctrinal principles, terminology, and methodology in their own ways and conceptual frameworks, which generate not only the mutual conflicts in the course of dialogues but also strengthen their positions by means of their new radical ideas, innovations, terminologies, methodologies, and doctrinal principles. As a result, the three selected areas and their crucial issues are explained, elaborated, and interpretated for better understanding. All of which are rooted in the Buddha's path of wisdom, ethics, and liberation from the human predicament (*duḥkha-nivṛtti*). In this grand project of the deepest concerns, the Buddha utilized multiple strategies like understanding and controlling the problematic nature of the mind (Pāli *citta, manasa*) and its concomitance (Pāli *cetasika*, *dhammā*) by means of the concentrative meditation (Pāli *jhāna*, Sanskrit (hereafter Skt., *dhyāna*), cultivation of knowledge (Pāli *vijjā*, Skt. *vidyā*) and conduct/moral purity (Pāli *caraṇa*, Skt. *ācaraṇa*), destruction of afflictions/defilements (Pāli *kilesa*, Skt. *kleśa*), critical and logical thinking with valid arguments, and so on. His disciples also treat him as the possessor of valid method, arguments, meaning, practice, and purpose (Skt. *pramāṇabhūta*, the term used by Dignāga). He believed in the common humanity as the community of sufferers and the autonomy of every

human being (Pāli *attakāra*), but strongly rejected the hierarchy of humanity on the basis of caste, birth, and dogmatic religious identity. For these reasons, following the Buddha and his celebrated followers like Vasubandhu, Dignāga, and Dharmakīrti, my task in this article is how to clearly and elaborately discuss the above identified issues and theories, first to understand them for myself and then logically prove the whole process of knowledge and the designed purpose through communication to those who have the intention to hear and understand the framework of common language for their benefits. I wish the readers like students and young teachers benefit from my research work. Further, since my learning of the Tibetan language is zero, but comfortable in Sanskrit and Pāli, I have been heavily dependent on three great modern thinkers who have widely written independently and also translated the Buddhist Tibetan texts, which were translated from the original Sanskrit texts now lost, into English in the areas of Buddhist epistemology, logic, and semantics. These modern scholars are Masaaki Hattori, Shoryo Katsura, and Richard Hayes. Besides them, I have also little benefitted from some other scholars who have worked in the same areas.
Keywords: scepticism, nominalism, phenomenalism, idealism, representationalism, naïve realism, critical and external realism, Sautrāntika, Yogācāra, *pramāṇa*, *svalakṣaṇa*, *sāmānyalakṣṇaṇa*, *pratyakṣa*, *anumāna*, *svārthānumāna*, *parārthānumāna*, *anyāpoha*, *a-vinā-bhāva*, *vyāpti*, *svabhāvapratibandha*, *arthakriyā*, *tadutpatti*, *tādātmya*, *anutpatti*.

1. Introductory Statement

A systematic epistemology, logic, and philosophy of language began a century or two before the common era, i. e. the Christian era, first by Gautama's Nyāya school of thought in the aphoristic style with four formal structural limbs or components – namely, valid cognition also called knowledge (*pramā*), object of knowledge (*prameya*), source of knowledge (*pramāṇa*), and resultant knowledge (*pramāṇaphala*). This gave rise to different theories of knowledge (*pramāṇavāda*) depending on the different conceptual and categorial frameworks of different Indian schools of philosophy, and different sets of the sources of knowledge (*pramāṇa*), four of which are prominent as propounded by the realist Nyāya system, such as, perception (*pratyakṣa*, i.e. direct knowledge), inference (*anumāna*, i.e. indirect knowledge but basically based on direct knowledge), comparison (*upamāna*), and trust-worthy word or testimony (*śabda*), each one of which passes through epistemological and logical processes, which involves direct cognitive experience, requisite factual conditions with ontological and causal relations, cognizer's past cognitive experiences, reason, evaluation, and judgment, etc. Nevertheless, there are many other schools like Mīmāṁsā and Vedānta, which have their own different additional sets of sources of knowledge. Despite these conflicting approaches, each *pramāṇa*-theory in general claims to serve human purpose of welfare (*lokakalyāṇa*), which in the Buddha's schema is rooted in two basic doctrines, namely, the Four Noble Truths and the Middle Path, following the *pramāṇa*-epistemology of truth and validity with discrimination between falsity and invalidity. So far as the Buddhist inferential logic (*anumāna*) is concerned, it tacitly follows the conceptual, ontological, and categorial framework of the realist Nyāya system, a staunch opponent of Buddhism, which is considered strategically useful for conventional purposes in Buddhist logic.

However, in another way, despite traditional opposition and divide between the Vedic – Upaniṣadic and other Brāhmaṇic systems on the one hand and on the other, the Śramaṇic traditions (Jainism, Buddhism, and Cārvāka), which do not accept the authority of the Vedas, there is another type of philosophical divide on the line of 'essentialism and substantialism (*ātmavāda*)' and 'non-

essentialism and non-substantialism (*anātmavāda*).' Similarly, there is still another type of distinction, i.e. between the process philosophy of Buddhism (cf. *anityatā*, i.e. non-permanence, ever changing nature of reality) and the non-process philosophy (cf. *nityatā*, i.e. static or permanent nature of reality) of other schools.

Further, for our understanding in the present context, it is imperative to know that the Buddhists in general follow the basic doctrinal principles, which underly all kinds of Buddhist theories. These foundational principles were actually established by the Buddha himself, namely,

(1) **The most basic dynamic principle**: The universal law of the dynamic principle of dependent arising (Pāli *paṭiccasamuppāda*, Skt. *pratītyasamutpāda*), which the Buddha spiritually realized in the process of his wisdom (*bodhi*) and this deepest intuitive experience proved to be the most fundamental breakthrough to know the mysterious dynamics of the Cosmic Nature. In other words, in the case of the Buddha, it was an opening opportunity to know the dynamic nature of the reality as it is (Pāli *yathābhūtañāṇadassana*), which underlies every formation of the empirical reality in the domain of the Nature, whether mental or physical. This dynamic process, which involves multiple but unified and harmonious causal conditions, generates an integrated continuity at every unique eventual moment, from past to present to future until a particular chain breaks down and another begins under a different set of causal conditions. But in every case, the process forms a spatio-temporal phenomenal continuant as a mode of reality for the layman in the conventional world. However, whereas the dynamic principle is the ultimate truth for the Buddha's wisdom, the phenomenal or conventional truth marks the world of common man's ignorance (Pāli *avijjā*, Skt. *avidyā*) which creates this phenomenal world by means of conceptual thought and perception.

(2) **The second invented principle**: This principle was invented by the Buddha following the preceding dynamic principle of dependent arising covering both the sentient and the insentient beings. The Buddha identifies three characteristics of the reality (Pāli *tilakkhaṇa*, Skt. *trilakṣaṇa*), namely, impermanence (Pāli *aniccatā*, Skt. *anityatā*), non-substantialism (Pāli *anattā*, Skt. *anātmatā*), and the existential predicament (Pāli *dukkhatā*, Skt. *duḥkhatā*), which underly the life of the sentient beings like the human beings, whereas the first two applies to the insentient beings like table and stone. Note that all these happen within the domain of the dynamic nature of the Cosmic World.

(3) **The third invented principle**: This principle covers Four Noble Truths (Pāli *ariya-sacca*, Skt. *ārya-satya*) designed on the pattern of the therapeutic method by the Buddha – (i) the first truth marks that there is an ubiquitous fact of existential suffering (Pāli *dukkha*, Skt. *duḥkha*); (ii) the second truth is that there is an ubiquitous cause of existential suffering, which is grounded in the affliction of craving (Pāli *taṇhā*, Skt. *tṛṣṇā*) as well as in the unified trio of attachment/greed/lust/covetousness (Pāli *rāga, lobha, abhijjhā*), hatred/anger (Pāli *dosa*), and delusion/ignorance (Pāli *moha, avijjā*); (iii) the third truth marks that there is a way of elimination of the cause of existential suffering (Pāli *dukkha-nirodha*, Skt. *duḥkha-nirodha*); and (iv) the fourth truth is that there is the ultimate treatment of these causal afflictions by means of practice in the eightfold sequential progressive order designated as the Noble Eightfold Path (Pāli *ariya-aṭṭhaṅgika-magga*, Skt. *ārya-aṣṭāṅga-mārga*), through which the interested practitioner also attains the state of soteriological liberation (Pāli *nibbāna*, Skt. *nirvāṇa*).

(4) **The fourth invented principle**: This principle is called the middle path (Pāli *majjhimā paṭipadā*, Skt. *madhyamā pratipat*), which as a spiritual ethical doctrine leads to the enlightenment as well as to the liberation from suffering. It also underlies each stage of the noble eightfold path (Pāli *ariya-aṭṭhaṅgika-magga*, Skt. *ārya-aṣṭāṅga-mārga*) and alternatively it reorganizes this path into three categories – virtues (Pāli *sīla*, Skt. *śīla*), concentration (Pāli/Skt. *samādhi*), and insight of truth or wisdom (Pāli *paññā*, Skt. *prajñā*). Besides, this principle not only steers clear the two extremes, namely, sensual lust and self-torment, but also acts as extinction of the existential suffering/dissatisfaction on the one hand and on the other, as antidote it arouses mental peace, discernment, awakening, and the achievement of the ultimate goal of liberation (Pāli *nibbāna*, Skt. *nirvāṇa*).

These four doctrinal principles established in the Sutta literature are the foundations of all varieties of the Buddhist perspectives. Subsequently, the scholastic Abhidharmic literature, both Pāli and Sanskrit, systematically organized, analyzed, explained, and interpretated the issues contained in the Buddha's preaching at different times and contexts.

Moreover, the radical Sanskrit Abhidharmic doctrine of momentariness developed on the logical interpretation of the concept of non-permanence or impermanence (*a-nityatā*) within the conceptual framework of the process philosophy, which gave rise to various perspectives among the Buddhist schools, namely, Theravāda, Sarvāstivāda – Vaibhāṣika, and Sautrāntika. Ultimately the Sautrāntika perspective – "the moment disappears as soon as it appears without duration" – ended in the radical culmination of the analysis, which conceptually established the fluxional character of the reality of both kinds, mental and physical. But this was not the end of internal disputes. The Mādhyamika Nāgārjuna and Asaṅga – Vasubandhu's pair jumped into this dispute by developing their own conflicting perspectives, such as Nāgārjuna's metaphysical essencelessness (*niḥsvabhāvatā*, *dharmanairātmyavāda*, *sarvaḍṣṭiśūnyavāda*) against realism of all varieties and the *pramāṇa*-theories on the one hand and on the other, Yogācāra – Vijñānavāda. Further, we must note that the preceding doctrinal principles become the background of the theories of the systematic Buddhist *pramāṇa*-epistemology, ontology, logic, language, and meaning, which are highly complex and intriguing because they contain multiple non-substantialist doctrines; naturalistic processes, terminologies, and methodologies, such as, duality of ultimate ontological reality and conceptually constructed reality; empiricism and spiritual worldviews; intrinsic and extrinsic processional domains; cognitive-conative-emotive psychology; conditioned and conditioning causal factors in the fluxional processes; experiential phenomenology; cognitive awareness; necessity of mental and moral developments; reductionist analysis; epistemological evidence-centric reasoning; debate between scepticism and seeking certainty in respect of valid-knowledge claims; methodology of association (*anvaya*), dissociation (*vyatireka*), indispensable relation (*avinābhāva*), pervasion (*vyāpti*), and natural relation (*svabhāvapratibandha*) in terms of relation; restriction of the particle 'only' (*eva*), other modes of methodology like implicative negation (*paryudāsa-pratiṣedha*) and non-implicative negation (*prasajya-pratiṣedha*); varietes of inferential inductive and deductive logic; inferential character of word-meaning known as double negation theory; semantics and hermeneutics; and so on are significant for my purpose but the lack of space restricts me to elaborate these issues in detail.

Now let us come back to the theme of the present article, which has three interrelated components, all of which have been functional right from the Buddha's spiritual journey since the time when he was still called Siddhārtha Gautam till he became awakened (i.e. *buddha,* acquired wisdom), delivered discourses, and accordingly practiced in his behaviour (mental, vocal, and physical) throughout his life until his demise (*mahāparinibbāna*). The entire development of the Buddhist literature, during and after the Buddha, shows that it is imbued with the elements of the *pramāṇa*-epistemology, logic, ontology, ethics, soteriology, methodology, and so on which can be explored in the early canons of the Three Baskets (*Tipiṭaka, Tripiṭaka*: the Vinaya, the Suttas, and the Abhidhamma), followed by the commentarial (mainly Buddhaghosa of the seventh century) and the scholastic Pāli and Sanskrit literature in historical order, the *Prajñāpāramitā*, Mādhyamika school of Nāgārjuna (first–second centuries CE), the Abhidharma tradition of Vasubandhu, and Yogācāra – Vijñānavāda of Asaṅga, Mahāyānist Vasubandhu, Dignāga (480–540 CE), Sthiramati, Śaṁkarasvāmin, Īśvarasena, and Dharmakīrti apart from self-commentaries (*Svavṛtti*) and various other commentaries by different classical writers. It is interesting to know that all of these differing modes and interpretations of the Buddhist sects have explicitly declared to have been rooted in the Buddha's Sutta literature. It is to be noted that in each developmental era, there have been changes in the language, terminology, methodology, doctrines, and modes of interpretation. In modern era, many radical and critical changes in many ways and foreign languages on the same pattern, have come to light in the vast new literature. However, in the present case, my main focus will be on the three ingenious Buddhist thinkers, namely, Vasubandhu, Dignāga, and Dharmakīrti in the historical order of the classical philosophical development in respect of the present theme. Needless to say,

for a Buddhist scholar, the greatest advantage today is the availability of vast literature in respect of the restoration of the lost Buddhist Sanskrit texts from Tibetan versions and the secondary sources in the form of translation and interpretation with modern terminology, methodology, and comparison between Buddhism and Western philosophy by the Western contemporary thinkers.

Further, it would be appropriate to cite some of the great contemporary thinkers, mostly non-Indians, who have explored the Buddhist philosophical ideas and created new perspectives in their writings – especially related to epistemology, logic, and semantics – not only through the available Sanskrit texts on these views, but also through their deep studies, translations, and interpretations of the Tibetan versions of those Sanskrit texts, which are now lost in their original forms. I am mentioning selective some of those prominent thinkers, whose writings are highly useful for my present article: Masaaki Hattori, Shoryo Katsura, Richard Hayes, Brendan Gillon, John Dunne, Claus Oetke, Tom J. F. Tillemans, E. Steinkellner, and R. W. Perrett. Among these, for my purpose, there are three Hattori, Katsura, and Hayes (in some cases jointly with Brendon) whose classical philosophical writings on epistemology and logic of Dignāga and Dharmakīrti are highly enlightening with clarity and authenticity in the matter of translation from the Tibetan sources and the brilliant interpretation with comprehensive critical comments.

2. Background to Dignāga: The Suttas and the Abhidharma

It is of great importance to begin at the beginning with the Buddha's two most fundamental discourses, namely, the *Ariyapariyesana-sutta* (which contains the description of his autobiographical details of his spiritual journey delivered later than his first discourse, namely, the *Dhammacakkapavattana-sutta* (which contains innovative revolutionary doctrinal principles as explained above in brief). In the former Sutta, the Buddha talks of certain crucial as well as disturbing experiences, disagreement with his co-meditationists, designing the effective meditative formula to radically transform and cultivate the mind, virtuous behaviour to care for the suffering humanity, and the dilemma whether to preach his Dhamma focused on creating the compassionate social atmosphere. In the process of his spiritual sojourn from one place to another, the Buddha had exposed the dangerously dogmatic character of the existing multiple religious views and beliefs, which were also called *dhamma* (plural *dhammā*) by him but they were unwarranted for liberation from suffering, rather they had the potentiality of creating more suffering because of false belief and ignorance. Thus, he calls his *Dhamma* as "sailing against the current (*paṭisotagāmī*)," which is the most unique revolutionary path that goes against all other opinions (*diṭṭhi*), religions, conceptual disciplines (such as epistemology, metaphysics, spirituality, ethics, etc.) with dogmatic characteristics, which lack the path of awakening and ethical practices to help the common humanity to be liberated from the existential predicament. It is for these reasons that a number of Buddha's discourses are deeply sceptical about the efficacy of these perspectives, because they go along the current (*anusotagāmī*) without awakening or wisdom, virtues, meditative practices, purity of mind, loving kindness, compassion, sympathy, equanimity, and so on, which are essential for every sufferer to cultivate his/her own potentiality to mitigate his/her own suffering as well as helping others to overcome their own suffering.

This spiritual schema of the Buddha is strictly followed in some or other ways by each Buddhist stream of thought and the disciples, such as (i) Vasubandhu' Abhidharma and Yogācāra – Vijñānavāda; (ii) Dignāga's intention to maintain the purposeful restriction of limitless scope and thus he concentrated on reshaping the Buddhist traditional doctrines, for which he continued critically examining the various forms of Buddhist assumptions, epistemological and logical formulations, language, and semantic views along with his noticing scepticism and nominalism in them on the one hand and finding the same problems in the non-Buddhist opponents' views, which were critically examined and rejected on the other; and (iii) Dharmakīrti's revisiting of Dignāga's various problematic theories, which required correction in terms of Dharmakīrti's principle of natural causality, epistemology, logic, semantics, language, ontology, mind-only theory, scriptures, other's mind, and rebirth. As a result, Dharmakīrti is both empiricist in the worldly matters and

idealist in achieving the transcendental goal. Again, in other words, whereas Dignāga explicitly reconsiders and resurrects the implicit unorganized and developed ideas and theories of his Buddhist predecessors and critically examines and rejects his opponents' unwarranted dogmatic worldviews and theories, Dharmakīrti on the other hand adopts cautiously the ideas and theories of his predecessors like Sautrāntika realism and Yogācāra – Vijñānavāda idealism/phenomenalism with the critique of both Dignāga and the non-Buddhists on the same issues and thus he resurrects with radical innovations of his own theories. Moreover, Dignāga, a disciple of Vasubandhu, sincerely takes thorough advantages of Vasubandhu's insightful ideas, sharp arguments, and methods specifically found in the latter's numerous texts like *Abhidharmakośakārikā-bhāṣya* with Sautrāntika realistic perspective, *Vijñaptimātratāsiddhi* with idealistic/phenomenalistic Yogācāra – Vijñānavāda perspective, and many logical texts like *Vādavidhi* and *Vādavidhāna* concerning the logical rules applied in debates. As a result, Dignāga wrote a number of innovative texts like *Nyāyamukha*, *Ālambanaparīkṣā*, and the most mature text *Pramāṇasamuccaya-vṛtti*, a mature text consisting of *pratyakṣa-pramāṇa*-epistemology, *anumāna-pramāṇa*-logic, and *apoha*-semantics. Dharmakīrti is not only a promoter and commentator of Dignāga, but also a creative writer of his own innovative ideas, which not only resurrects the Buddhist logic of Dignāga but also dominates through his influence on the Indian logic as a whole. Moreover, to be noted, Dignāga's famous and insightful post-Dharmakīrti commentator Jinendrabuddhi uses Dharmakīrti's epistemological and logical ideas to resurrect Dignāga's various theories.

3. Vasubandhu's Influence on Dignāga's Logic

We have seen above that in two areas, namely, Abhidharma in early Buddhism (Hīnayāna) and Yogācāra – Vijñānavāda in later Buddhism (Mahāyāna), Dignāga has been tremendously influenced by Vasubandhu. Further, Vasubandhu has written two separate texts in the third area of dialectics-cum-logic for debates, namely, *Vādavidhi* which was criticized by Dignāga in his *Pratyakṣa-pariccheda* of *Pramāṇasamuccaya* because it was found to be lacking the Buddhist perspective, but Dignāga recognized Vasubandhu's second text, i.e. *Vādavidhāna*, as mature with the Buddhist approach, which seriously influenced Dignāga so much so that "He wrote a commentary on the *Vādavidhāna* of Vasubandhu. In composing the *Nyāyamukha*, he seems to have followed the pattern of Vasubandhu's work on logic. In many others of his works, we can point out the influence of Vasubandhu's Sautrāntic and Yogācāric thoughts" [30, p. 3; also see 31]. In this way, Dignāga became well conversant with Vasubandhu's creative writings and methods as a whole. Thus, these three areas proved to be robust foundations of the development of Dignāga's radical ideas throughout his academic career. Since the dialetics or debate schema was inner-directed for a group of a few participants, contrary to it, he decided to focus on the limited scope of the study of knowledge within the system of *pramāṇa*-formulation in the areas of epistemology, logic, and semantics with radical transformation so that this task suited the Buddha's *pramāṇa*-centric insights (*pramāṇabhūta*) for interested general audience. Further, just as Vasubandhu's *Viṁśatikā* gave way to Yogācāra idealism/phenomenalism and mind-only theory, Dignāga wrote *Ālambana-parīkṣā*, which proved to be the foundation of his most mature *Pramāṇasamuccaya* with *Svavṛtti*. Hattori [30, p. 3, n. 16] writes: "In the *Ālambanaparīkṣā*, Dignāga proves that the object of cognition (*ālambana*) is nothing other than the appearance of an object in cognition itself. On the basis of this conclusion, he expounds the theory of self-cognition (*sva-saṁvitti*) in the *Pramāṇasamuccaya*."

It is worth remarking to know that despite his predecessor Vasubandhu's texts possessing comparative clarity in expression of the doctrines and the methods, Dignāga has not learnt to follow them to provide clear and better explanation of his views so that his learners and commentators can sufficiently understand his elliptic theories. For this reason, Dignāga's writings are considered enigmatic and problem generating, although he shows his ingenious philosophical insights in developing his innovative ideas. In the Preface to Hattori's pioneer and path-breaking work [30] – in his translation of the first chapter (*Pratyakṣa-pariccheda* with *Svavṛtti*) of Dignāga's *Pramāṇasamuccaya* (*Compendium of the Unity of Valid Ideas*) – which is endowed with the highest

clarity and the exceptionally rich annotations, Ingalls exposes Dignāga's deliberate elliptical style for maintaining extreme form of brevity, which excessively creates numerous grammatical, syntactical, semantic, and hermeneutic problems in his Sanskrit text *Pramāṇasamuccaya* containing almost 200 verses, because of which his own insightful commentators like Jinendrabuddhi face confusion, not to talk of the common readers, besides Buddhist scholars, and thinkers, to understand his epistemological, logical, and linguistic intention and views. More so, it is a fact that many of his original texts in Sanskrit are lost including the *Pramāṇasamuccaya* with its *Svavṛtti* and such texts are not completely restored either from the Tibetan version into Sanskrit or translated into English. Even if some of them are translated into English or restored into Sanskrit, they are not perfect in a strict sense, not to talk of most of the modern scholars' understanding of Dignāga's texts except few ones. Again, Dignāga's brevity appears as if he is addressing his views to his intimate small group, not to his general scholarly audience/students. Ingalls' (Editor's Foreword) further observations [30, vi-vii] make the issues clear:

> There was no attempt, at least until some centuries after Dignāga's time, to set forth philosophical ideas in a fully explained exposition that a general reader might understand. For in Dignāga's time there were no general readers; such persons as could read had been trained in very special disciplines, first in Sanskrit grammar, and then in ritual exegesis, philosophy, law, or some such field. Now, the more inner-directed a group's communication, the more elliptical will its expression be. Persons who have lived with each other many years, who have passed through the same education and had many of the same experiences, need mention only the briefest selection of thought and their companions can conceive the whole vision and can set it in order with other visions just as it was ordered in the speaker's mind. One may observe this ellipsis in the conversations of man and wife, in the shop talk of artisans, and in the communication of workers engaged in any specialized research. One finds it in a peculiarly impenetrable form in the writings of Dignāga.

In the same vein, I try to summarize Ingalls' further remarks that (i) Dignāga's Self-commentary (*Svavṛtti*) could not go beyond his limited inner circle, which was accustomed to his brevity to understand his intention, arguments, and innovative ideas; (ii) in his *Svavṛtti*, instead of elaborating with clarity his own positions on *pramāṇa*-epistemology, for example, in the very first chapter, *Pratyakṣa-pariccheda*, he doubly engaged himself in criticizing the perception-theory of his own teacher Vasubandhu's fault-laden text *Vādavidhi*, about which Dignāga in his *Pramāṇasamuccaya*, did not believe that this text would be authored by an ingenious scholar like Vasubandhu, but he appreciated his second excellent text *Vādavidhāna*, which deeply influenced him. In his *Pratyakṣa-pariccheda*, Dignāga elaborated his own view much less than he polemically criticized the non-Vijñānavādin opponents, namely, Nyāya, Vaiśeṣika, Sāṁkhya, and Mīmāṁsā; (iii) Dignāga radically changed the mainstream *pramāṇa*-formulation of Indian logic in general as well as he limited the nature and scope of knowledge; (iv) on the negative side, despite being under the influence of Dignāga's celebrated commentator like Dharmakīrti, Dignāga's promoter Jitendrabuddhi could not overcome Dignāga-generated serious difficulties because of which Jinendrabuddhi left many problems unexplained; (v) Hattori knew all these difficulties in the situation of the absence of Dignāga's original texts and so he adopted the methods of applying square brackets to fill in the syntactical gaps on the one hand and on the other, employing the technique of annotations, twice the length in both cases.

Moreover, as we know, Dignāga's immediate predecessor and teacher was Vasubandhu, who was one of few ingenious thinkers in the Buddhist tradition. He wrote a number of texts both in the early humble Hīnayāna and the later great Mahāyāna traditions covering the three prominent Buddhist areas, two belonging to early tradition – namely, (i) Sarvāstivāda – Vaibhāṣika which was established in his *Abhidharmakośa-kārikā*; (ii) but its doctrines were vehemently refuted and the Sautrāntika doctrines were established in his *Abhidharmakośa-kārikā-bhāṣya* in its place by him;

and (iii) his *bhāṣya* facilitated the development of Mahāyāna Buddhist tradition of Asaṅga's Yogācāra –Vijñānavāda. Dignāga was deeply and widely influenced by the latter two areas, namely, (i) early Vasubandhu's Abhidharma philosophy so much so that he wrote *Abhidharmakośa-Marmadīpa* and (ii) later Vasubandhu's Yogācāra – Vijñānavāda texts, which covers four different areas with different interpretations by modern scholars – phenomenological idealism, phenomenalism, nominalism, and mind-only. Further, Vasubandhu's *Vijñaptimātratāsiddhi* containing two tracts, namely, (1) the *Viṁśatikā*, which criticizes realism of early Buddhism giving way to the Yogācāra perspective in the *Triṁśikā* including *Trisvabhāva-nirdeśa* apart from many more independent texts and commentaries in this area. It is to be noted that he also composed two texts in the areas of the rules of debate, epistemology, and logic as mentioned above. But Dignāga broadened the latter two areas only, namely, epistemology and logic. His works also show the influence of Buddhist Nāgārjuna and many non-Buddhist thinkers such as Grammarians like Pāṇini, Patañjali, grammarian philosopher Bhartṛhari, Sāṁkhya, Nyāya, Vaiśeṣika, and Mīmāṁsā in the course of modifying his doctrines and methodology for both purposes of strengthening his position as well as refuting his adversaries. Some classical thinkers like Dharmakīrti and Jinendrabuddhi in a sense highlight the negative side of Dignāga's philosophical evolution and scattered innovative ideas, because with the passage of time he created multiple problems, which caused extreme kinds of difficulties in understanding his finally established position, although he struggled hard at the end of his career to unify his scattered ideas and theories in his most mature text the *Pramāṇasamuccaya* and *Svavṛtti*.

However, Dignāga's radically systematic formulations of *pramāṇa*-centric epistemology, logic, and language are applied by him for the sake of cultivating and promoting the spiritual purpose. Alternatively, this schema is supposed to aim at following the pattern of the practice of the Buddha's way of overcoming the primary concerns of the achievement of freedom from the suffering or the existential predicament (*duḥkha-nivṛtti*) and acquisition of the lasting peace (*nirvāṇa*). Again, it is imperative to know and fulfil the preconditions by means of practice on the path of the Buddha to achieve this goal. The first step in this process is to expose and eliminate the dangers of ignorance, irrationality, superstitions, speculative thought, and dogmatic beliefs, because they have the potentiality of creating more suffering, and then to use the appropriate strategy to overcome them. In this way, Dignāga establishes his final philosophical-cum-soteriological position in his *Pramāṇasamuccaya* and *Svavṛtti*.

In this context, Hayes [19, p. 5] quotes Ernst Steinkellner's [39, p. 11] summary of Vetter's remarkable statement suitable in the present context:

> Valid cognitions (*pramāṇa, samyakajñāna*) are a necessary presupposition of meaningful human action. The Buddhist's actions are oriented towards the goal of emancipation. This goal and the path towards it have been shown by the Buddha. The Buddha thus offers a goal and guidance for human activity that cannot be derived from ordinary means of cognition, i.e. perception and inference. However, that he is an authority for this has to be proven, for faith alone is an insufficient motive to be a Buddhist. The words of the Buddha can be accepted as an authority only when it has been demonstrated that they are words of somebody who shows through his conduct that he does not lie, and who because of the development of his experience has something to tell us that cannot be mediated to us in another way. For the last goal of human actions, which also is the only point of orientation for everyday human practice, has to be indicated by such an authority, since it is never immediately present – or it would not be a "last goal."

4. The *Pramāṇa*-Epistemology of Dignāga

Epistemology is generally considered to be a comprehensive theory of knowledge, which is structured in the *pramāṇa*-formulation with four integrated components as discussed above: (i)

instrument/means/ways of the process of knowing (*pramāṇa*), (ii) valid cognition (=knowledge, *pramā*), (iii) the object to be known (*prameya*), and the resultant cognition arising from the process of knowing (*pramāṇaphala*). This systematic formula was innovated against the background of the traditionally unsystematic logical debates on various philosophical issues so that all participants with different doctrinal perspectives argue in favour of their positions and disagree with their adversaries. It was commonly adopted by all Indian schools of thought except Nāgārjuna who challenged the *pramāṇa*-system for his own reasons because he saw conflicting approaches, which create sceptic attitude and harm the Buddha's path of overcoming the human suffering. Nevertheless, all schools including Buddhism and Vedānta follow the realist Nyāya schema at the practical conventional level (*vyāvahārika-sat*) even if their deeper epistemological and metaphysical doctrines are beyond the conventional reality (*saṁvṛtti-sat*) because they are rooted in the ultimate reality (*paramārtha-sat*).

The *pramāṇa*-epistemology, which is an umbrella theory of knowledge, structures its own conceptual and categorical framework so that it can cover within its own domain all means of knowing. Note that the perceptual knowledge is the root of all other sources of empirical knowledge, but mind that perception itself has two modes – empirical (*laukika*) and transcendental (*alaukika*). The latter does not involve external objects and sensory faculties, rather it is meditational or intuitive in the Indian sense. Further, the *pramāṇa*-epistemology raises questions and issues in respect of knowledge (*jñāna*, *pramā*, *vidyā*) such as necessity of knowledge, nature (*svarūpa*), origin (*utpatti*), criteria of validity, maintaining non-erroneousness in the process of knowledge, types (*saṁkhyā*), object (*ālambana*, *viṣaya*, *gocara*), result (*phala*), knowledge of resulting cognition (*phalajñāna*), and ascertainment (*jñapti*). These are conventional issues and their accomplishment, which precede the successful human values (*puruṣārthasiddhi*) with two discriminatory options of non-acceptable (*heya*) or acceptable (*upādeya*) cognitive result. This is technically called *pramāṇavāda*. Besides, the Indian epistemologists also talk of the theory of truth (*prāmāṇya*, *pramātva*) in different ways, which aims at the analysis of the criteria of truth if there is any and the way of apprehending the truth, which is the differentiating characteristic of knowledge episodes (*pramā*). Perrett [35, p. 51] writes:

> The central issue that the theory of the apprehension of truth (*prāmāṇyavāda*) addresses intrinsically (*svataḥ*) or extrinsically (*parataḥ*): in other words, whether a cognition and its truth are apprehended together, or whether it is only through a second cognition that one apprehends the truth of the first cognition <...> The Buddhist logician Dharmakīrti <...> defines truth pragmatically in terms of 'successful activity' (*arthakriyā*). All parties in the debate, however, accept that coherence and workability are at least marks of truth.

Further, all kinds of Buddhist experience, concept, and philosophical theory – whether ontological, epistemological, logical, linguistic, ethical, and soteriological in which semantics and hermeneutics are foreshadowed – are structured and developed within the radical dynamic process philosophy of impermanence or non-eternity (*anityatā*), which is logically developed into fluxional momentariness (*kṣaṇabhaṅgavāda*) and non-substantialism (*anātmatā*) or non-essentialism, all of which are rooted in the Buddha's dynamic law of dependent/conditioned arising (*pratītyasamutpāda*). These are the two basic characteristics of reality. Dignāga absolutely believes in the authoritative wisdom of the Buddha (*pramāṇabhūta*), that is, he knows the absolute truth of reality as it is (*yathābhūtañāṇadassana*), which (i.e. wisdom) is the means of valid cognition, since the Buddha's knowledge is always based on the critical investigation and test of reality, truth, and the pragmatic practice. At his personal level, Dignāga is convinced about the Buddha's authority, wisdom, saying, and doing. Rather, he is actually doubly convinced about these qualities of the Buddha, which are not just out of reverence. With this intention, he first critically examines the Buddha's own statement, method, and practice, because the Buddha himself insists on his disciples not to take them for granted without examination. Now in every aspect of his spiritual project,

Dignāga critically examines it – semantically, hermeneutically, and methodologically – and only after finding it valid and truthful he adopts the Buddha's doctrines and practice and he develops his own innovative ideas. In this context, Dignāga formulates a guiding principle in a verse, which is quoted in the *Tattvasaṁgraha*, *kārikā* 3587 (also quoted in Kamalaśīla's *Pañjikā*, [7, p. 15]; see [30, p. 73, n. 1.1]):

> *tāpāc chedāc ca nikaṣāt suvarṇam iva paṇḍitaiḥ /*
> *parīkṣya bhikṣavo grāhyaṁ mad-vaco na tu gauravāt //* (*kā*. 3587)
> Translation: O [Venerable] Monks, [note that] the wise one should agree with my statement only by testing its validity, not out of reverence to me, just as a goldsmith accepts the purity of gold only by testing it in fire, cutting it, and carefully testing it on a touchstone.

Again, this verse shows that Dignāga's method of testing before he accepts the truth of a statement whether it is conventional, spiritual, or scriptural only by testing it through critical examination, which is the way of the Buddha's attitude of truthfulness and virtuous behaviour – mental, vocal, and physical practice. Dignāga claims that he strictly follows the Buddha's method of testing a view epistemologically, logically, semantically, and pragmatically regarding the validity of the truth of knowledge and the ultimate reality. Dharmakīrti too follows this method sincerely and elaborately. Like many other claimants, Buddhist or non-Buddhist, the Buddha and his followers including Dignāga and Dharmakīrti maintain that the valid knowledge is an indispensable factor for attainment of the soteriological goal. That is why, it is necessary that the *pramāṇa*-epistemology must be critically examined to ascertain the truth of knowledge. John Dunne [10, p. 16, n. 4] makes a significant comment on the crucial issues of a *pramāṇa*-theory:

> Matilal understands *Pramāṇa* Theory to be based upon what he calls the "Nyāya method." He notes that this method "aimed at acquiring evidence for supporting a hypothesis <...> and thus turning a dubiety to certainty" <...> [46, p. 69]. He also notes, "The goal of the Nyāya method is a *nirṇaya*, a philosophic decision or a conclusion which is certain." Even a cursory glance at the literature within this style of discourse shows that its philosophers were concerned with certainty (although we will see in chapter 4 that certainty need not entail veridicality). It is important to note that for these philosophers, the pursuit of certainty requires some initial doubt (*saṃśaya*) or desire to know (*jijñāsā*) as its motivation. See NBh [*Nyāyasūtra-bhāṣya*] (35) ad NS [*Nyāyasūtra*] 1.1.1, *nānupalabdhe na nirṇīte 'rthe nyāyaḥ pravartate kiṁ tarhi saṁśayite 'rthe*. Dharmakīrti (for example, PVSV [5] [*Pramāṇavārttika-svavṛtti*] ad PV [4] [*Pramāṇavārttika*] 1.46) also maintains this view (*Square brackets are mine*.)

Secondly, Dignāga is deeply influenced by Vasubandhu's Abhidharmic scholasticism, which establishes the critical realism of the Sautrāntika school, which denies any duration of a moment, which means 'a moment disappears as soon as it appears' and the idealism/phenomenalism of Yogācāra – Vijñānavāda, whereas the Sautrāntika Abhidharma maintains the duality of two modes of truth: (i) Ultimate Truth (*paramārthasat*, *dravyasat*), which is dynamically subtle, spatio-temporally unstructured, infallible, indeterminant, non-conceptual, and irreducible; and (ii) conventional truth (*saṁvṛttisat*, *prajñaptisat*), which lacks wisdom, conceptuality, phenomenality, seemingly spatio-temporal structure, and determination. Thus, Vasubandhu distinguishes between these two exclusive truths and explains them:

> Text: Vasubandhu [1, p. 890] [also see 19, p. 109]:
> *yasminn avayavaśo bhinne na tadbuddhir bhavati tat saṁvṛtisat. tadyathā ghaṭaḥ. tatra hi kapālaśo bhinne ghaṭabuddhir na bhavati. yatra cānyān apohya dharmān buddhyā tadbuddhir na bhavati, accāpi saṁvṛtisad veditavyam. tadyathā ambu. tatra hi buddhyā*

rūpādin dharmān apohyāmbubuddhir na bhavati. teṣv eva tu saṁvṛtisaṁjñā kṛteti saṁvṛtivasāt ghaṭāmbu cāstīti bruvantaḥ satyam eva āhur na mṛṣā. ity etat saṁvṛtisatyam.
ato anyathā paramārthasatyam. tatra bhinne 'pi tadbuddhir bhavaty eva. anyadharmāpohe 'pi buddhyā tat paramārthasat. tadyathā rūpam. tatra hi paramāṇubhinne vastuni rasārhān api ca dharmān apohya buddhyā rūpasya svabhāve buddhir bhavaty eva. evaṁ vedanādayo 'pi draṣṭavyāḥ.

Translation [19, 95–96]
That is conventionally real of which there is no perception when it is broken into parts. An example is a water-jug, because when that is broken into shards there is no perception of a water-jug. And that should also be understood as conventionally real of which there is no perception when one has mentally sorted other properties out. An example is water, because when one has mentally sorted such properties as material form out, there is no perception of water. But conventional designations are applied to those very things, so one who says on the authority of convention that there is a water-jug and there is water is speaking the truth rather than a falsehood. And, so this is a conventional truth.

The rigorously real is different from that. That is rigorously real of which there does arise a perception even when it is broken and even when there is mental abstraction from other properties: An example is material form *(rūpa),* because when that object is broken into atoms and even after sensible properties are sorted out by the intellect, the perception of the essence *(svabhāva)* of material form does arise. Feelings can be viewed in the same way.

5. Vasubandhu on Inferential Logic

The origin of systematic epistemology and logic of Buddhism lies in Vasubandhu's three texts mentioned below followed by his disciple Dignāga who developed Vasubandhu's ingenious ideas on the basis of his creative and innovative insights by exploring his three areas – (i) Sautrāntika's critical realism; (ii) Yogācāra phenomenalism and idealism or the theory of mind-only; and (iii) his two logical texts *Vādavidhi* and *Vadavidhāna*. These three areas of Vasubandhu proved to be indispensable and useful for Dignāga's numerous works. The creative period between Vasubandhu and Dharmakīrti includes both Buddhist and non-Buddhist thinkers, who apply the method of critical examination against each other in debates and writings. In-between and in post-Dharmakīrti period a number of commentaries and independent texts were also written, all of which amazingly enriched the areas of epistemology, logic, and language. Here it would be better to cite the names of some of the prominent thinkers with their relevant works in the historical order, namely, (i) Buddhist Vasubandhu's *Vādavidhi*, *Tarkaśāstra* and *Vāda-vidhāna*; (ii) Dignāga's *Nyāyamukha* and *Pramāṇasamuccaya*; (iii) Buddhist Śaṁkarasvāmin's *Nyāyapraveśa*; (iv) Naiyāyika Uddyotakara's *Nyāyavārttika*; (v) Vaiśeṣika Prasastapāda's *Padārthadharmasaṁgraha*; and (vi) Dharmakīrti's *Pramāṇavārttika*, *Hetubindu*, and *Nyāyabindu*. Oetke [35] has discussed the mutual dialogue of these thinkers on logic, especially on the theme of the theory of three-criteria of reason (*trairūpyaliṅga*) in historical, philological, and hermeneutic manners applying the modern methodology. It is important to know as Gillon [15, p. 197] observes:

> The study of inference in India is not the study of valid reasoning as reflected in linguistic or paralinguistic forms, but the study of under what conditions certain facts require the existence of some other fact, or under what conditions knowledge of some facts permits knowledge of some other fact, or under what conditions acceptance of

some facts permits acceptance of some other fact. At the core of the study of inference in India is the use of a naïve realist's ontology.

It is a fact that even the Buddhists adopt this kind of ontology, particularly the empirical realist Nyāya-Vaiśeṣika's seven kinds of ontological categories (*padārtha*) – substance (*dravya*), quality (*guṇa*), action (*karma*), universal/generality (*sāmānya*), particularity (*viśeṣa*), inherence (*samavāya*), and non-existence (*abhāva*) – and the theories of logic (i.e. *anumāna*-epistemology) within the world's multiple forms of reality ranging from the subtlest reality of the atoms (*avayava*) to the reality of the universal (*sāmānya*), although at the conventional truth level (*saṁvṛttisat*, *prajñaptisat*), not at the ultimate truth level (*pramārthasat*, *dravyasat*). In this way, the Buddhists divide the world into two forms as per the demand of their process philosophy rooted in impermanence/momentariness (*anityatā*, *kṣaṇabhaṅgavāda*) and non-substantialism (*anātmatā*).
The basic aim of Indian logic is to differentiate between good reasoning and bad reasoning depending on the expression of arguments, in some or other way of the forms of language, written or vocal, which may lead to genuinely good arguments with truth in conclusion or to bad arguments with untruth in the conclusion. However, in each case, the Indian logicians use 'an argument from analogy' to be followed by 'an argument from a similar form,' for communication to others in syllogistic manner. With this brief observation Gillon [16, pp. 311–312] explains Vasubandhu's contribution to the Buddhist logic in his three texts lost in original Sanskrit but preserved in Tibetan or Chinese – (*Rules of Debate* (*Vādavidhi*), *Treatise on Reasoning* (*Tarkaśāstra*), and *Precepts of Debate* (*Vāda-vidhāna*) – which contain insightful and innovative ideas for Dignāga to develop his own creative ideas by improving Vasubadhu's imperfect theory of logic. Gillon [*Ibid*.] summarizes Vasubandhu's innovative foundational ideas, which I have quoted and at some places paraphrased and rearranged, as follows:

(1) *Rules of Debate* (*Vādavidhi*):
- Vasubandhu selects various necessary technical terms and defines them, namely 'thesis' (*pratijñā*), "which comprises a term denoting the argument's subject (*pakṣa*) and a term denoting the property to be established (*sādhya*) in the subject. He also identifies the term for the ground (*hetu*), which, in the argument, is ascribed to its subject" [*Ibid*., p. 311].
- "He explains that the ground bears the relation of *indispensability* (*a-vinā-bhāva*), literally, not being without, or being *sine qua non*) with respect to the property to be established" [*Ibid*.]. Vasubandhu's notion of the relation of *indispensability* (*a-vinā-bhāva*) will be elaborated separately below.
- "Finally, he identifies a term denoting a corroborating instance (*dṛṣṭānta*) which illustrates the indispensability relation borne by the ground to the property to be established" [16, pp. 311–312].

(2) *Treatise on Reasoning* (*Tarkaśāstra*)
- Vasubandhu coins a new term, namely *tri-rūpa-hetu*, i. e. three characteristics/ criteria/ conditions of a logical reason/ ground (*hetu*).
- "The first condition is that the ground (*hetu*) or H, which should occur in the subject of an argument (*pakṣa*), or p."
- "The second is that the logical ground (*hetu*), or H, should occur in things similar to the subject (*pakṣa*)."
- "And the third is that the logical ground (*hetu*), or H, should not occur in things dissimilar from the subject (*pakṣa*)."

(3) *Precepts of Debate* (*Vāda-vidhāna*): Unfortunately, this text is lost.

6. Vasubandhu's Principle of Necessary Relation (*Avinābhāva*)

By now it is obvious that the Buddhist logic (*anumāna*-epistemology) is experientially, psychologically, pragmatically, and formally (i. e. syllogistically) programmed to give rise to a new

knowledge for both self and communication to others within the conceptual framework of common-sense realism. In Buddhism, each episode of new knowledge, whether perceptual or inferential develops through a process of multiple homogeneous conditions facilitated by the dynamic principle of conditioned or dependent arising (*pratītyasamutpāda*). In another sense, logic aims at the valid arguments. But the question is: How do we begin with the process of logic (*anumāna*)? The answer is we confront with different kinds of experiences, some of which compel us to reflect on them. One kind of experience is cognizing very often the smoke-fire cooccurrences in a kitchen or a forest, etc. together. But it also happens that we cognize a body of smoke arising from the kitchen when we are outside the kitchen or cognize smoke arising from a specific context like a mountain without cognizing the fire. For a common man this is not a surprise and he takes it for granted that the smoke is not separate from the fire in the mountain. Such experiences accumulate in our memories. Thus, this is an easy way of inferring fire in the mountain, but not in a place in which smoke and fire cannot occur together, for instance, in a lake or sky far away from the source. However, for an investigator it is a matter of reflection so that a systematic explanation of a valid inferential knowledge can be acquired. To start with a process of inference, a logician like Vasubandhu identifies some technical terms already in practice by the predecessors, namely, argument's thesis/hypothesis (*pratijñā*), argument's subject (*pakṣa*), a term denoting a property to be established (*sādhyadharma*), ground/reason/evidence (*hetu*, *liṅga*). But in such a case, Vasubandhu feels uneasiness because these terms and the inferential process do not give a proper account because there is a lack of the logically reasoned certainty. To solve this problem, he innovates a term, namely, *a-vinā-bhāva*, which means not-being-without, i.e. a principle of necessary relation between the ground and the property to be established (See [16, p. 311]).

Nevertheless, Frauwallner in his article "Vasubandhu's Vādavidhiḥ," [12] restores from Tibetan version the two most important definitions of the relation of *indispensability* (*a-vinā-bhāva*), which are elaborately discussed by Oetke [34, pp. 11–16, 108–117]. I am quoting these two definitions below:

> Def. I: *tādṛgavinābhāvidharmopadarśanaṃ hetuḥ*
> "The (logical) reason is the pronouncement of a property which does not occur without a such (= which is inseparably connected with a *probandum*).
> Def. II: *nāntarīyakārthadarśanaṃ tadvidho 'numānam*
> "Inference is the observation of an object not occurring without [the *probandum*] for someone who knows that."

Oetke explains clearly the meaning of these definitions in his words:

> Both the linguistic form of these definitions and the subsequent comments on them in the text suggest that according to the author a prerequisite for the existence of a logical reason or an inference is that an entity has been mentioned or observed which fulfils the following condition: It never occurs that the entity in question exists somewhere but the thing which has to be proven or to be inferred does not exist at the same time.

7. The *Pramāṇasamuccaya*: Dignāga's Mature and Final Text

Hattori [30, p. 12] in his pioneer and foundational work – *Dignāga, On Perception: being the Pratyakṣapariccheda of Dignāga's Pramāṇasamuccaya* (*-Vṛtti*) – has restored the first chapter (*Pratyakṣapariccheda-vṛtti*) from its Tibetan version into Sanskrit and then translated it into English with vast annotations. He treats the *Pramāṇasamuccaya with vṛtti* [2] as "a systematic exposition of epistemology, logic, and language/semantics." As the title shows, Dignāga's *Pramāṇasamuccaya*, a text on *Pramāṇa*-epistemology in different modes, especially concentrated on dealing with the complex but pragmatic issues of knowledge for the sake of general readers, shows that it is a text containing (*samuccaya*) the unity of his earlier and final validated ideas

elaborated in its six chapters. Note that it is also a polemical text against the adversaries. Another great modern scholar following the study of a part of PS(V) of Hattori's book [30] is Richard Hayes [19] who has a larger philosophical approach to Dignāga's *Pramāṇasamuccaya* covering the detailed background in the range from the Suttas to the Abhidharma literature and finally moves to Dignāga's broader and critical study of the same text with its partial translation of two important chapters from Tibetan into English by Hayes [19], namely, Chapter II: On Reasoning (*Svārthānumāna* and *Parārthānumāna*) and Chapter V: On the nature of signs in language (*apohavāda*, a double negation theory) apart from his studies on Dignāga's earlier texts and such pre-Dignāga's themes like Buddhist scepticism, nominalism, phenomenalism, and so on exploring them through the Buddha's Suttas, Nāgārjuna's *Mūlamadhyamakakārikā*, Vasubandhu's *Abhidharmakośakārikā-bhāṣya* and *Vijñaptimātratāsiddhi* (a Yogācāra text), and Dignāga's theory of knowledge based on the *Pramāṇasamuccaya* with *Svavṛtti*. All these studies of the two great modern thinkers, besides researches of some other prominent thinkers like Frauwallner, Katsura, and Steinkellener, show that Dignāga has widely benefitted from and adopted his predecessors' ideas to develop of his comprehensive radical project on the theory of knowledge. Further, Hayes has also written some long research articles on Dignāga's celebrated commentator Dharmakīrti in collaboration with Gillon [21]. Most of these materials are very relevant for my present article, which is focusing on the issues of epistemology, logic, and semantics in brief as its title shows. I am listing below some of the brief observations made by Hattori [30, p. 11], which mark Dignāga's ingenious and radical ideas imitating the Buddha's radical ways of thinking and practice, the valuable ideas of his predecessors and own earlier ideas, all of which mark the three areas of epistemology, logic, and language:

1. Dignāga's innovation of a short but brilliant formulation of the logical ideas concerning the valid and invalid reasoning in his text *Hetucakraḍamaru* included in his other important text *Nyāyamukha*. During that time this formulation was utilized as a dialectic method for the purpose of defeating the adversaries in limited contexts.
2. But Dignāga decided to ignore this approach because it was for smaller groups and so for general readers he concentrated on the development of a theory of knowledge in a broader sense in PS (V) [2].
3. In the first chapter of PS (V) [2], in the area of *pramāṇa*-epistemology, in a radical way, he invented the radical formula of *pramāṇādhinaḥ mānasiddhiḥ* (proving the object of knowledge, *prameya*, by means of knowledge, *pramāṇa*) against the remaining opponents' formula of *meyādhinaḥ mānasiddhiḥ* (the means of knowledge, *pramāṇa*, is determined by the object of knowledge, *prameya*,). Another point is that Dignāga maintains the exclusive duality of (i) perception (*pratyakṣa*) limited by mere pure sensation as a particular (*svalakṣaṇa*) without structure and conceptual tag and (ii) inference (*anumāna*) endowed with structure, concept, and universal (*sāmānyalakṣaṇa*) manipulated by the dynamics of mind (*kalpanā*).
4. Two modes of inference or logic: inductive inference or 'inference for one-self (*svārthānumāna*) endowed with personal psychological characteristic and deductive or syllogistic inference (*parārthānumāna*) for communication to others.
5. In the area of language or semantics, Dignāga treats the function of language – word, meaning, and communication – as a variety of inference, which is not an independent means of knowledge.

8. Structure of the *Pramāṇasamuccaya*

The title of Dignāga's present text carries two words, *pramāṇa* (meaning: a means of acquiring new knowledge of two exclusive kinds – perception and logical reasoning) and *samuccaya* (meaning: a collection; in other words, the unity of his earlier and latest ideas developed in his such prominent texts as *Abhidharmakośa-Marmadīpa*, *Ālambanaparīkṣā*, *Hetucakraḍamaru*, and *Nyāyamukha*, among which the *Nyāyamukha* was utilized maximum by Dignāga). This was how his mature final book, the *Pramāṇasamuccaya*(*-svavṛtti*) was composed. Thus, he fulfilled his primary concern of establishing his *pramāṇa*-theories with powerful innovative ideas. But he had another serious

concern as well, that is, he wanted to refute other dogmatic *pramāṇa*-theories, which were based on speculative postulations. Here it should also be noted that Dignāga was influenced by many more sources, apart from the Buddha's Sutta literature and his teacher Vasubandhu's texts such as *Abhidharmakośa-kārikā*, its *Bhāṣya*, *Vijñaptimātrātasiddhi*, *Vādavidhi*, *Vādavidhāna*, and many other texts in which he has developed multiple philosophical perspectives relating to Sarvāstivāda–Vaibhāṣika, Sautrāntika, Yogācāra–Vijñānavāda, rules of debate, and logical reasoning. On the other hand, he has been influenced by other Buddhist and non-Buddhist sources, which are mentioned by Hattori [30, p. 3, n. 17) based on Frauwallner's researches:

> The *Prajñāpāramitāsaṁgrahakārikā* summarizes the contents of the *Prajñāpāramitāsūtras* in thirty-two topics, of which the main ones are (a) sixteen varieties of voidness (*ṣoḍaśavidhaśūnyatā*), and (b) ten kinds of mind-distraction *(daśa-vikalpa-vikṣepa);* (a) is expounded in the *Madhyāntavibhāga,* ch. I, and (b) in the *Mahāyānasūtrālaṁkāra* (XI, k. 77), *Mahāyānasaṁgraha* (ch. Ill, T. 1594, vol. XXXI, p. 140a), and *Abhidharmasamuccaya* (T. 1605, vol. XXXI, p. 692c). The *Yogāvatāra* corresponds to the *Mahāyānasūtrālaṁkāra,* ch. XIV. The *Trikālaparīkṣā* is based upon the *Vākyapadīya,* III, xiv (*Sambandhasamuddeśa*) (See Frauwallner [12]).

Thus, Dignāga took full advantage of the relevant works of his predecessors, Buddhist or non-Buddhists, which proved to be the foundation of the creative development of his own views and in the process of composing his final text: the *Pramāṇasamuccaya with his own commentary* (*Vṛtti*) on the one hand and ruthlessly refuting his adversaries on the other. Here I try to explain in brief Dignāga's innovative radical ideas, which structure the design of his present text within the epistemological-logical-semantic conceptual and categorial framework. To begin with, he designed his innovative *pramāṇa*-theory, which he engineered how to establish the formulation of a *pramāṇa*-doctrine (*pramāṇavyavasthā*). To clarify his *pramāṇa*-epistemology, he presents a radical dictum as mentioned above: *pramāṇādhinaḥ prameyādhigamaḥ*, meaning: "the acquisition of a new knowledge of a targeted object is based on the means of knowledge (*pramāṇa*)." This is radically opposite to other non-Buddhist schools of *pramāṇa*-theories whose epistemological dictum is: *prameyādhinaḥ pramāṇasiddhiḥ*, meaning: "it is the object of knowledge (*prameya*), which determines the means of knowledge (*pramāṇa*)" as, for example, we find in Nyāya epistemology. Dignāga's this strategy has a grand purpose for clear and genuine way of understanding the *pramāṇa*-theories, which is the method of the Buddha who himself is a wise one in the matter of the ultimate *pramāṇa*-expertise (*pramāṇa-bhūta*).

Again, Dignāga divides *Pramāṇasamuccaya* into six chapters with his own commentary (*Vṛtti*), which categorizes into four broad integrated areas, namely, (i) the problems of perception (*pratyakṣa*), i.e. the theory of new knowledge in the first chapter; (ii) the problems of logic (*anumāna*) in four chapters – two, three, four, and six; and (iii) the problems of semantics – nature, function, communication, and word-meaning (*śabda-artha*) in respect of language (containing refutation of the ontological status of universal) – which is technically called *anyāpoha*-method in strategy (i.e. double negation theory) considered to be not different from inference (*anumāna*). Dignāga presents these chapters in a systematic manner of exposition, radical innovative ideas, powerful arguments to establish his position, and critical examination and refutation of his non-Buddhist opponents (Nyāya, Vaiśeṣika, Sāṁkhya, and Mīmāṁsā whose ideas are based on postulations) including Buddhist Vasubandhu's *Vādavidhi* (see chapter I for details) for the reasons that their different assumptions and theories create mutually conflicting situations, especially in respect of the nature (*svarūpa*), number (*saṁkhyā*), object (*viṣaya, gocara*) and result (*phala*) of the *pramāṇa*-epistemology, logic, and semantics. In this context, Hattori [30, p. 76, n. 1.9] explains Dignāga's four pointed views:

> Dignāga's theory is unique on each of these four points: (1) He recognizes perception (*pratyakṣa*) and inference (*anumāna*) as the only two means of cognition, and does not

admit verbal testimony (*śabda*), identification (*upamāna*), etc. as independent means of cognition; see below, n. 1.11; (2) He characterizes perception as "being free from conceptual construction" (*kalpanāpodha*), and does not recognize determinate perception (*savikalpaka-pratyakṣa*) as a kind of perception; see below, n. 1.15; (3) He sharply distinguishes the particular (*svalakṣaṇa*) and the universal (*sāmānyalakṣaṇa*), which are respectively the objects of perception and inference. He denies the reality either of the universal as an independent entity or of the particular as qualified by the universal; see below, n. 1.14; (4) Rejecting the realist's distinction between the means and the result of cognition, he establishes the theory of nondistinction between the two; see below, n. 1.55.

9. Dignāga, and Dharmakīrti on Perception

Note that Dignāga's radical perception-theory necessarily requires to be clearly understood with respect to its own conditions, which give rise to eventual perception in a natural process governed by the universal law of dependent arising on the one hand and the mind's immediate creativity to unify the series of non-eternal and non-substantial unique cognitive events/awarenesses in the form of a continuant, which in turn gives rise to a particular concept or a class, judgment, or thought, which is structured in a static spatio-temporal form on the other. In the process-philosophy framework, it is a continuing process of the principle of 'conditions and conditioning;' in other words, every moment of reality is constituted by multiple homogeneous conditions, which in the next duration-less eventual moment change into a new set of homogeneous conditions on the model of a continuously flowing river. In this way, the mindless nature's dynamics continues going. But when the human mind's creative activity under ignorance structures the spatio-temporal formation, the conventional perspective of the same dynamic nature's real world becomes a man's phenomenal world. This generates two forms of reality and truth – Ultimate truth (*paramārthasat, dravyasat*) and conventional truth (*saṁvṛttisat, prajñaptisat*); the latter is laden with the unreal universal characteristics in contrary to the Nyāya view of the ontological status of universe. This is a critical realist Sautrāntika's view established in Vasubandhu's *Abhidharmakośa-bhāṣya* by refuting the Sarvāstivāda – Vaibhāṣika's form of realism in the *Abhidharmakośa-kārikā*, which maintains seventy-five elements of existence comprising of three non-conditioned (*asaṁskṛta-dharma*) and seventy-two conditioned (*saṁskṛta-dharma*), which are reduced to forty-three and the remaining thirty-two rejected by Sautrāntika. Further, whereas the Sarvāstivāda – Vaibhāṣika interprets a moment with four stages (origin/*utpatti*, duration/*sthiti*, degeneration/*jarā*, and destruction/*vināśa*), the Sautrāntika interprets a moment as 'without duration and degeneration,' and maintains simultaneity of origin and destruction, that means 'a *dharmic* moment disappears as soon as appears' (*yatraiva utpattiḥ tatraive vināśaḥ, Abhidharmakośa-bhāṣya-vyākhyā* of Yaśomitra; see *Abhidharmakośa-bhāṣya- vyākhyā*).

Against this background, the Sautrāntika as a radical realist explains the cognitive process, which starts with the interaction between an external physical object (*bāhyārtha*) and a sensory faculty, say eyes, resulting in a pure eventual sensory awareness, i.e. mere sensation, without any conceptual structure, which is considered by the Sautrāntika a type of representation of the dynamic physical object. Subsequently, this presentation is believed by the mind as an external object. Moreover, this interaction generates, within a cognitive field, a fluxional series of data or information, each of which is passed in the mode of an image on to the passive mind. Up to this level, everything is natural (i.e. *prakṛti* based). Next, being a radical realist, the Sautrāntika interprets that there is a resemblance (*sārūpya*) between the two sides, which has the direct pragmatic value. But when the series of unique but homogeneous eventual sensations are not discriminated separately by the mind because of its incapacity, these sensations are naturally converted into a continuant, which in turn is converted into a concept, which is further identified with a specific matching universal. This cognitive process still continues into the domain of language of a person who has the capacity of linguistic expression, which is rooted in the notion of

conceptual universal, which in turn falsely or by means of superimposition denotes the targeted external object. In the same continuation, the concerned person's natural capacity of mental creativity gets activated in the mode of logical reasoning, good or bad. Thus, the psychological-cum-logical human mind, in diversified and conflicting ways, goes to any extent of mentally constructed beliefs, arguments, judgments, and biases far away from the ultimate truth. This is the conventional level of truth (*saṁvṛtti*) in this very world. This conventional world (*saṁvṛtti*) is in some contexts pragmatically factual (*tathya-saṁvṛtti*) as in the case of a jar containing water which can quench the thirst, but in some other contexts it may be erroneous or mistaken thinking (*mithyā-saṁvṛtti*) when a thirsty man sees water at a distance in place of a mirage in the desert and believes that it will quench his thirst, but when he reaches there, he is disillusioned. Note that the Sautrāntika perspective of realism goes in favour of the conventional truth.

But for Vasubandhu, in the schema of the Sautrāntika realism, there is an interaction between the external world (*bāhyārtha*) and the external sense, which results in the generation of the sensory data and then subsequently the inner mind comes into play of the process. However, ultimately Vasubandhu was not satisfied with Sautrāntika realism and its representationalism for various reasons. Let us know the meaning of its representationalism, which is appropriately explained by D. N. Shastri [38, p. 41]:

> According to this theory, external objects are not apprehended directly and immediately, but through the cognitions of these objects. The objects transfer their forms to their cognitions, and the cognitions, having thus acquired the forms of the external objects, become their representatives. We have thus a representative perception of objects, and not a direct one. Hence the theory is called representationism. External objects, not being perceived directly, are only inferred from their cognitions to which they impart their forms. Orthodox Indian writers, in their compendia of philosophical systems, have ascribed this theory to the Buddhist Sautrāntika school.

Further, at this stage, Vasubandhu thinks to abandon the Sautrāntika perspective and move to Mahāyāna Yogācāra – Vijñānavāda. However, it is most important to explore the inner world of the problematic mind, which has double roles: first, it creates the diversified complex phenomena falsely considered to be the ultimate reality, which leads to bondage in the case of the cycle of birth-death-rebirth (*saṁsāra*) because of which there is no possibility of eliminating the suffering (*duḥkha-nivṛtti*) and second, when the mind becomes self-reflexive about its own problematic nature, it decides to purify itself from the bonding defilements and ignorance (cf. *kleśāvaraṇa* and *jñeyāvaraṇa*) by treading the Buddha's path of concentration (Pāli *jhāna*, Skt. *dhyāna*), purification of mind and morality. Nevertheless, since the Sautrāntika external realism has the severe tendency of attachment to the external world, Vasubandhu sees an opportunity in the Mahāyāna Yogācāra–Vijñānavāda tradition of Asaṅga to establish the path of detachment. For this reason, he starts working on his new radical project, which aims at proving the external world as mere phenomena (*vijñaptimātra*) in his text *Vijñaptimātratāsiddhi* containing two tracts, namely, *Viṁśatikā* which refutes the theory of external realism and *Triṁśikā* which psychologically transforms the mind and establishes the doctrine of phenomenalism or a variety of idealism which steers clear the path of soteriological freedom (*duḥkha-nivṛtti*, *nirvāṇa*), but for some it is interpreted as subjective idealism comparing to Berkeley which I do not accept.

With this brief background, it would be beneficial if one discusses at least in brief the radical *pramāṇa*-epistemology of the theory of perception as found in Dignāga's *Pramāṇasamuccaya* (*Vṛtti*) and his celebrated commentator Dharmakīrt's *Pramāṇavārttika*, *Nyāyabindu*, and *Hetubindu* with lots of revisions and elaborations of Dignāga's ideas along with his own innovative ideas. As usual, following the Buddha and his immediate predecessor Vasubandhu, Dignāga is radical in limiting to only two exclusive means of knowledge on logical ground, that is, perception (*pratyakṣa*) and inference (*anumāna*) and respectively their two exclusive objects of knowledge, that is, (i) self-defined structureless particular object (*sva-lakṣaṇa*)

which marks pure sensation (*saṁvedana*) as perception without any conceptual construction and expressibility (*nirvikalpaka, avyapyadeśya*), and (ii) the universal as knowable (*sāmānya-lakṣaṇa*) which marks its general characteristic as in the case of colourness (*varṇatva*) by means of the creative activity of the mind. As I understand, a particular spatio-temporally extensionless sensation is a moment, which is the causal product of a cognitive process (*pratyakṣa-pramāṇa*) and it is also considered an object of direct cognition (*pratyakṣa-jñāna*), awareness, or experience. Since it is durationless, it disappears as soon as it appears, it is not grasped by the mind at the same moment even though its operation is so quick so that it can superimpose (*yojanā*) its conceptual structures (*kalpanā*) like judgment, general characteristics or categories like proper name (*yadṛcchā-śabda*), genus-words (*jāti-śabda*, common nouns), quality-words (*guṇa-śabda*, adjectives), action-words (*kriyā-śabda*, verbal nouns), and substance-words (*dravya-śabda*). In this elaboration of the above characteristics, both concepts and their corresponding words are mutual in application. Thus, on the logical basis, Dignāga precisely defines perception as "perception (*pratyakṣam*) is devoid of (*apoḍham*) mental construction (*kalpanā*) – (*pratyakṣaṁ kalpanā-apoḍham*).

These are the two radical exclusive aspects, particular aspect and general aspect, physically real and mentally unreal respectively, but both of them give rise to radically opposite awarenesses in the forms of particular sensation and general universal so much so that the two are completely incompatible and so cannot occur simultaneously in the same context. This theory is technically termed "pramāṇa-vyavasthā." Thus, Dignāga strictly confines to no more than two exclusive means of knowledge (*pramāṇa*) and two exclusive objects of knowledge unlike many other schools of thought, particularly the naïve realist Nyāya – Vaiśeṣika views of universal (*Pramāṇavārttika-bhāṣya*: *na hi sva-sāmānya-lakṣaṇābhyām anyat prameyam asti* – quoted in Hattori [30, p. 79, n. 1.14]). In the same vein, Dignāga approves that by the rule of nature *sva-lakṣaṇa* as a knowable object (*viṣaya, prameya*) is equated with direct perception (*pratyakṣa*) and by the similar rule *sāmānya-lakṣaṇa* as a knowable object (*viṣaya, prameya*) is equated with the indirect way of knowing (*anumāna*), i. e. in the case of logical reasoning (Cf. *svalakṣaṇa-viṣaya-niyataṁ pratyakṣaṁ, sāmānya-lakṣaṇa-viṣaya-niyatam anumānam* [Ibid.]. Further, in another way, those non-Buddhist systems whose *pramāṇa*-theories, say, Nyāya system with four means of knowledge (*pratyakṣa, anumāna, upamāna,* and *śabda*), which maintains that the same knowable object (*prameya*) can be cognized by anyone of them. This *pramāṇa*-theory is technically termed "pramāṇa-samplava."

Dharmakīrti is a celebrated commentator of Dignāga. He widely shares the innovative ideas and methods of Vasubandhu and Dignāga and at the same time in many ways, he maintains his revisionary approach towards Dignāga. Dharmakīrti, both explicitly and implicitly, maintains his doctrinal principles of (i) anti-realism, i.e. rejection of substantialist Nyāya variety of realism; (ii) contrast between the causal dynamics of the ontological real (*sva-lakṣaṇa*) and the conceptual universal, thought, and language (*sāmānya-lakṣaṇa*); (iii) the Sautrāntika form of ubiquitous fluxional momentariness, duality of external and internal worlds, and representationalism; (iv) Yogācāra idealism or phenomenalism or mind-only theory; (v) fluxional nature of consciousness giving rise to the phenomena of experience and awareness, falsely taken as a static self; and (vi) soteriological liberation based on the realization of selflessness. Hattori [30, p. 80, n. 1.14] summarizes the structure of Dharmakīrti's system of thought in his own way in the following passage:

> Dharmakīrti sets up the following criteria to distinguish *sva-lakṣaṇa* and *sāmānya-lakṣaṇa: sva-laksana* (a) has a power to produce effects (*artha-kriyāśakti*), (b) is specific (*asadṛśa*), (c) is not denotable by a word (*śabdasyāviṣayaḥ*), and (d) is apprehensible without depending upon other factors such as verbal conventions, while *sāmānya-lakṣaṇa* (a) has no power to produce effects, (b) is common to many things, (c) is denotable by a word, and (d) is not apprehensible without depending upon other factors such as verbal conventions; see *PV* [*Pramāṇavārttika*], III, 1-2.

> Dharmakīrti adds further detailed discussions to prove the unreality of *sāmānya*, and states that *sva- lakṣaṇa* alone is the object to be cognized in the ultimate sense; see *ibid.*, Ill, 53d: *meyaṁ tv ekaṁ sva-lakṣaṇa.* That there are two sorts of *prameya* implies that *sva-lakṣaṇa* is apprehended in two ways, as it is *(sva-rūpeṇa)* and as something other than itself *(para-rūpeṇa),* but not that there is real *sāmānya* apart from *sva-lakṣaṇa.* Thus, the distinction between *sva-lakṣaṇa* and *sāmānya-lakṣaṇa* is the result of a changed perspective; see *ibid.,* Ill, 54cd: *tasya sva-para-rūpābhyāṁ gater meya-dvayaṁ matam.*

It is most significant for our purpose in this context is to quote Dharmakīrti's radically explicit and powerful doctrine of causality (*arthakriyā*), which marks the most significant criterion of reality and proves to be the foundation for the establishment of many ontological and epistemological doctrines. Nagatomi [42, pp. 31–32; quoted in [9, p. 66], explains the double meanings of *arthakriyā*:

> 1. In its ontological sense, it means causal efficacy. In this sense, *arthakriyā* is a criterion of reality. Dharmakīrti says: "That which is able to perform a function exists ultimately." Only objects able to participate causally in the production of other phenomena are real.
> 2. In its epistemological sense, *arthakriyā* means to fulfill a practical purpose. As Dharmakīrti says in *Drop of Reasoning* [*Nyāyabindu*]: "Since correct [that is, valid] cognition is a prerequisite for achieving all human purposes (*artha*, *don*), I shall explain it." Valid cognitions correctly identify objects and provide a cognitive basis for our successful activities. Real objects are called *artha* because they are the aim of practical activities such as cooking and burning. *Artha* are not objects of theoretical knowledge, but practical objects. They are to be known in terms of whether they affect us positively or negatively.

10. Dignāga and Dharmakīrti on Inductive and Deductive Reasonings

Some modern scholars may hold their opinions that logical reasoning is more pragmatically meaningful and useful than the theory of the structureless ultimate reality and its private perception or pure sensation. But for the Buddhists, the *pramāṇa*-epistemology is greatly purposeful in life. Nevertheless, it is interesting to know that two radical and innovative logical thinkers – Nāgārjuna and Vasubandhu – have cast their wide influences on Dignāga who in turn proved to be a much more radical and innovative thinker and so he has founded first a new highly systematic formulation of logic of both varieties, namely, inductive reasoning (*svārthānumāna*) and deductive reasoning (*parārthānumāna*), and two other new theories, namely, "the theory of 'pervasion' (*vyāpti*) of probans by probandum, which guarantees the successful proof or inference, and the semantic theory of 'exclusion' (*apoha*), a similar kind of inferential logic, according to which a word expresses its referent indirectly by excluding the contemporary set of the referent" [27, p. 8]. In the same vein Katsura [*Ibid*.] observes:

> The reason why Dignāga is called the 'Father of New Logic' is that he was the first Indian logician to combine and systematize the two different traditions of logic in India, viz. the tradition of debate (*vāda*) through the five-membered proof (*pañcāvayava*) and that of epistemology which was focused upon the valid means/sources of knowledge (*pramāṇa*). Unlike his successor Dharmakīrti, Dignāga does not seem to have been much interested in doctrinal debates. Rather he appears to have tried to establish a new system of logic which can be utilized by philosophers of any school and with any doctrinal belief or metaphysical conviction, whether they are Buddhists or non-Buddhists.

In Dignāga's process philosophy, the *Pramāṇasamuccaya* deals with different types of process mechanism, broadly in two exclusive categories, namely, perceptual process and inferential process. The latter has three different but interrelated processes, thus in total there are four modes of process mechanism. On the one hand, the first one, i.e. perception as sensation arising from the operation of a sense faculty, is received in the direct and conceptually structureless form, but the remaining three on the other hand are apprehended through conceptually structured through general thought processes, namely, (i) Process of Inductive Reasoning (*svārtha-anumāna*: inference-for-oneself, a private inferential cognition; (ii) Process of Deductive Reasoning (*parārtha-anumāna*), a communication to another; and (iii) Process of Linguistic Communication or the Semantic Theory of Exclusion (*anyāpoha*, exclusion of the other). The first two are the separate two modes of inferential logic, and the third one is indirectly structured (in terms of the linguistic realm: *śabda-artha*, word-meaning) on the pattern of inferential logic. These three have their own conceptual structures, which are required to be discussed separately, although they are considered to belong to the same family. Now, it is the right time to discuss these modes of process:

(1) Process of Perception (Pratyakṣa)

To analyze and understand the process of perception for a private person, it is important to know the nature of the physical world and the constitution of the human being, mainly consisting of the external physical body endowed with external five operational sense faculties (eyes, nose, ears, tongue, and skin) and their supply of different kinds of information or data, in the process of mutual interaction. These information or data are produced in the following forms, depending in the contexts, separately or in combinations: colour and form (*rūpa*), smell (*gandha*), sound (*śabda*), taste (*rasa*), and touch (*sparśa*). Subsequently, in natural manner, they are passed on to the internal mental faculty, which first grasps them passively, but thereafter immediately it becomes operational to conceptually structure these data depending on the situation. The process of perception and the resultant sensation, which is the product of multiple active homogeneous conditions, all of which in unified manner give rise to sensory experience but are immediately taken over by the operation of mind to superimpose conceptual judgment and make active a process of thought, which is imbued with Yogācāra critique of realism to pave the way for formulations of the eight modes of mental/ phenomenal/ psychological/ experiential consciousness (*vijñāna*) in the Yogācāra system – five kinds of *pravṛtti-vijñāna*, one *mano-vijñāna*, one *kliṣṭa-manasa*, and one *ālaya-vijñāna*, which are divided into two categories, diachronic and synchronic mechanisms. These principles in some or other underly the epistemological, inductive reasoning, and semantic character of language. But these are not applicable to the naked sensation. In this sense, it is exclusively separate from the analysis of conceptual and universal formations.

(2) Process of Reasonings (Svārthānumāna and Parārthānumāna)

Inference (*anumāna*) is an indirect and general way of knowing the general attributes (*sāmānyalakṣaṇa*) in contrast to a direct way of knowing the peculiar unique attributes (*svalakṣaṇa*) of the fluxional things through which a cognizer comes to know a hidden second kind of property, say, a body of fire, possessed in the same locus. In this case, both properties are general in characteristics. This process can be understood like this: From the observed smoke located in the mountain to the hidden fire located in the same mountain. But there are certain questions: What kind of relationship is between the smoke and the fire? Is there any cause – effect relationship between them in Dignāga? What is the nature of pervasion (*vyāpti*) between them? Is the observation of the so-called legitimate evidence sufficient for an inferential knowledge? What are the criteria of the so-called legitimate evidence (smoke)? For Dignāga, all such questions have already been raised and answered in one or other way from Buddhist or non-Buddhist thinkers.

Now it is necessary for Dignāga to answer these questions containing the epistemological and logical concepts and issues to be utilized for rule-based engagement in debates, inductive reasoning, deductive reasoning, and semantic theory of language. It is true that he has been throughout innovative, creative, and systematic in his writings, especially in his final mature text *Pramāṅasamuccaya* with *Svavṛtti*, but he has not solved all sorts of key issues, some of which are listed below, which are mostly properly managed by his celebrated commentator Dharmakīrti. Hayes [19] and Katsura (in his various articles; see bibliography) tried to explain Dignāga's response to these central issues, but they find him not satisfactory in many cases. The following logical terms and concepts will be explained while discussing Dignāga's theory of the Inductive Logic:

(i) Observation (*darśana*) of legitimate evidence as sign (*liṅga*, *hetu*), a property (*dharma*) located in the property-possessor/locus/object of inference (*pakṣa*, *dharmin*);
(ii) Purpose to formulate three criteria of the sign (*trairūpya-liṅga*) to ascertain a valid knowledge and the use of the restrictive (*avadhāraṇa*) particle 'only' ('eva');
(iii) The subject of property (*sādhyadharma*, *liṅgin*) located in the property-possessor (*pakṣa*, *dharmin*);
(iv) The nature of relationship of (*sambandha*) among *liṅga*, *liṅgin*, and *pakṣa*;
(v) The nature of pervasion (*vyāpti*) as relationship;
(vi) The cause-effect relationship;
(vii) The principles of inductive reasoning, namely, *anvaya* and *vyatireka*, applied to both inductive reasoning and the semantic theory of language.

It is to be noted that Dignāga and his predecessors are very fond of using the term 'observation' in different contexts. Hayes [19, pp. 240–241] explains 'observations' (*darśana*) in the present situation as follows:

> <…> Dignāga concludes that the presence of awareness of a sign, which awareness is a key element in inference, goes without saying once one has mentioned the sign itself. It is noteworthy that in most discussions of matters of logic and epistemology in classical Indian philosophy, psychological issues are never far in the background and are often brought into the foreground for special attention. In contrast to some trends in modem Western thought, where there has been a concentrated effort on the part of some to avoid psychologism, the classical Indians were relatively unconcerned with drawing careful boundaries between purely logical and purely psychological questions.

Moreover, in the second chapter of the *Pramāṇasamuccaya* with its *Svavṛtti*, Dignāga divides the means of inference (*anumāna*) into two separate modes – (i) Inductive Reasoning or the means of inferential knowledge through the process of inference for oneself, that is, for an interested person (*svārthānumāna*) and (ii) Deductive Reasoning or the Syllogistic Reasoning (*parārthānumāna*), which aims at communicating or explaining this new knowledge with its process to a public person who has the ground of the common language and the potentiality to understand the whole logical process and states of affairs or fact involved in this. The Reductive Reasoning begins with the observation of a logical evidence or sign (*hetu*, *liṅga*) by a person who is privately aware of the same and takes it for granted on the basis of the past experiences and the logical reasoning with sufficient conditions in respect of the observed sign, which is located in a genuine locus (*pakṣa*), which is a principal, foremost, and forerunner factor of the inferential process, not on the basis of unwarranted factors, in the general way. On the ground of the evidential sign being endowed with specific characteristic or property (*dharma*), the cognizer discerns an inferential object (*liṅgin*) endowed with a specific property, which is located in the same locus, which is the property-possessor (*dharmin*, *pakṣa*) of both properties, which qualify the property-possessor. This is the state of affairs of existential situation. But this is not sufficient for the sign to guarantee certainty to complete the process of inference and ensue the resultant knowledge. For this reason, following his

predecessors, Dignāga formulates three criteria/ characteristics/ conditions (*trairūpya-liṅga*) to be fulfilled by the evidential sign to be successful for the acquisition of new knowledge. But there is still certain vagueness about the epistemological and logical meanings of observation and the relationship among the integrated organs of the inferential process. The Buddhist logicians do make efforts to overcome these problems by innovating different terminologies to mark a kind of relationship in case of different thinkers such as Vasubandhu's concept of not-without-which (*a-vinā-bhāva*; i.e. inseparable), Dignāga's concept of pervasion (*vyāpti*), and Dharmakīrti's concept of essential-relationship (*svabhāva-pratibandha*). The latter is the most successful term in explaining the concept of relationship (*sambandha*) along with the cause-effect relationship.

The *Trairūpya* Formulae

It is well known that there were a number of different versions of the *Trairūpya* Formulae in pre-Dignāga period. "The most standard version seems to be (i) *pakṣadharmatva*, (ii) *sapakṣe sattvam*, and (iii) *vipakṣe 'sattvam* <…> . however, [elsewhere in PS-Vṛtti, it indicates] that Dignāga intended to insert the restrictive particle '*eva*' in the formulae of the second and the third characteristics" [26, p. 246]. In another article, Katsura (PS 4.6); see [29, p. 137] in brief, maintains that Dignāga's *trairūpya* formulae can be summarized in three different terms, namely, *pakṣadharmatva*, *anvaya*, and *vyatireka*., which can be explained as follows:

(i) *Pakṣadharmatva*

According to PS (V) (4.6) [2], the beginning of the process of Inductive Reasoning starts with the perceptible observation (*darśana*) with presence, wholly or partly, of the evidential sign (*liṅga*, *hetu*, e.g. smoke) rising from, or seen located in the 'object to be inferred' (*anumeya*, *pakṣa*, e.g. mountain). In this case, alternatively, it is said that there is a compatible relationship between the sign's property (*dharma*, *hetu*) and the property-possessor the 'object to be inferred' (*dharmin*), because the sign (*liṅga*, *hetu*) qualifies the inferable (*anumeya*) in whose location the second property, e.g. fire (*liṅgin*, *sādhyadharma*) is also seriously expected as per the past experiences of the cognizer somewhere else on the logical basis that there is an invariable relationship (*a-vinā-bhāva* in Vasubandhu and *vyāpti* in Dignāga) between the sign (e.g. smoke) and the subject of inference (e.g. fire). This fulfils the first condition or criterion of the three-criteria-sign as a valid inferential sign (*pakṣadharmatva*). The second point is that to strengthen his reasoning, the cognizer recalls his previous experiences of the evidential sign, e.g. smoke, on the same pattern (*tat-tulya*) in a kitchen somewhere else, but its absence will be found in the 'absence of the property to be inferred' (*asat*, e.g. a lake). This marks the confirmation of the second criterion (*anvaya = sapakṣa*, a positive concomitance, similar association) on the one hand, and on the other, the third criterion (*vyatireka = vipakṣa*, viz. negative concomitance, *vipakṣa*, dissimilar dissociation). Katsura [29, p. 137] summarizes the preceding passage: "In short, an inferential mark possessing the three characteristics (*pakṣadharmatva*, *anvaya* and *vyatireka*) can produce the ascertainment of a certain state of affairs regarding an object to be inferred."

(ii) *Roles of Anvaya* and *Vyatireka*

It is a common knowledge that every modern scholar of Buddhist logic follows the article of George Cardona [8] – "On reasoning from Anvaya and Vyatireka in Early Advaita" – who designates these terms as "Indian Principle of Inductive Reasoning." The following significant passage is highly useful for my present article, which is quoted by Katsura [26, pp. 249–250]:

> Indian thinkers have used a mode of reasoning that involves the related presence (*anvaya* 'continued presence') and absence (*vyatireka* ['continued absence']) of entities as follows:
>
> (1) a. When X occurs, Y occurs.

b. When X is absent, Y is absent.

(2) a. When X occurs, Y is absent.

b. When X is absent, Y occurs.

If (1a, b) hold in all instances for X and Y, so that these are shown consistently to occur together, one is entitled to say that a particular relation obtains between the two. Either (1a) or (1b) alone will not justify this, and a claim made on the basis of either can be falsified by showing that (2a) or (2b) holds. One relation that can be established by (1) is that X is a cause of Y. A special instance of the cause-effect relation involves the use of given speech units and the understanding by a hearer of given meanings. If (1a, b) hold, the speech unit in question is considered the cause of one's comprehending a meaning, which is attributed to that speech element.

In the same continuation, Katsura [29, p. 137] quotes and translates a statement made by Dignāga (PS 4.6, borrowed from his *Nyāyamukha* V.13), which highlights the contents of the 'inference for others' (*parārthānumāna*), which shows the integrated relation of the two modes of logical reasoning:

> *svaniścayavad anyeṣāṁ niścayotpādanecchayā/pakṣadharmatvasambandhasādhyokter anyavarjanam//* [29, p. 137, n. 6]
>
> Translation: "[In 'inference for others' (*parārthānumāna*, 'proof' in short, on the other hand,] with a desire to produce for others the same ascertainment (*niścaya*) as we ourselves have obtained, we refer to (1) [a reason's (*hetu*)] being a property of the topic (*pakṣa*) of a proposition (*pakṣadharmatva*), (2) [its inseparable] relation (*sambandha*) [with that which is to be proved] and (3) the [proposition] to be proved (*sādhya*). Other items should be excluded [from the members of a proof]."

Katsura [29, p. 138] makes another very significant comment on Dignāga's statement: "Thus the purpose of a logical proof (*parārthānumāna*) is to produce in the opponent the same kind of ascertainment that is obtained by the proponent through an inference (*svārthānumāna*). This indicates a close parallelism between an inference and a proof." Unlike the process of inductive reasoning based on the *trairūpya* formulae ascertaining the new valid knowledge, the deductive reasoning is a logical proof consisting of propositions, which aims at the communication of this newly acquisitioned valid knowledge to a desired person endowed with the required understanding. As a matter of fact, this process is a repetition of the *trairūpya* formulae by means of recollection by the speaker who transfers the whole inductive process to the mind of the hearer through the application of the general rules, because this repetition is not a particular process (*svārthānumāna*). Thus, the logical proof (*parārthānumāna*) is taken in a metaphorical sense (*upacāra*).

(3) *The Semantic Theory and Method of "Other's Exclusion" (Anyāpoha)*

Dignāga on Anyāpoha

In this section, I discuss the semantic theory of exclusion of others (*anyāpoha*) established by Dignāga and his celebrated commentator Dharmakīrti. The *anyāpoha*-theory is uniquely the most innovative and radical contribution to the Indian epistemology, logic, and language in general and specifically in Buddhism. He develops this theory in the Fifth Chapter of the his *Pramāṇasamuccaya* (*-vṛtti*), titled "Anyāpoha-pariccheda," that is, a "semantic theory of other's exclusion" or a "Buddhist theory of verbal cognition," which aims at solving the complex problems of the substantialist ontological status of the universal (*sāmānya, jāti*) and to investigate into the problems of word-meaning (*śabda-artha*), which were created by the external/objective realists like Nyāya – Vaiśeṣika and Mīmāṁsā who maintain that a word directly refers/denotates an external/objective reality whether individual like tree with spatio-temporal structure or universal like treeness inherent in all trees. Thus, a word 'tree' gets its identity of a natural class 'treeness'

through universal (*sāmānya*, *jāti*), which qualifies all individual trees. This necessary natural relationship between the two is maintained by necessary inherence-relation (*samavāya-sambandha*). In this natural way, the individual tree's structure is defined. Now the question is how one indivisible universal inseparably inheres in multiple numbers of trees. This complex issue raises numerous other problematic issues. For this reason, such ontological categories (*padārtha*) – for example, in Nyāya–Vaiśeṣika naïve realism, according to the Buddhist logicians like Dignāga and Dharmakīrti – are based on postulations and so they are unreal, unknowable, and non-existent. Hayes [19, p. 183] succinctly presents below Dignāga's critique of universal (*sāmānya*, *jāti*):

> Diṅnāga argues that such an entity is logically impossible on the grounds that the two predicates "indivisible" and "resident in a plurality of individuals" are incompatible. The full line of reasoning goes as follows. A universal's residence in an individual must be either complete or partial, that is, either the entire universal resides in an individual or only part of it does. If a universal **U** resides in its entirety in given individual **u1**, then it does not reside at all in individuals **u2**, **u3**, **u4**, <…> **un** and thus fails to be resident in a plurality of individuals. If on the other hand the universal is conceived as residing only partially in each of its individual instances, then it loses its indivisibility, for it then has as many internal divisions as there are individuals in which it supposedly resides.

Further, the verbal cognition (*śabda*) is considered by many non-Buddhist schools as an authentic and valid means of knowledge (*śabda-pramāṇa*), which Dignāga rejects as an independent *pramāṇa*, not different from inference (*anumāna*) and so the process of verbal cognition (*śabda*) is very much similar to the form of an inferential process. We have seen in the above discussion that as per the process philosophy, opposite to the substantialist theories of the non-Buddhists, Dignāga maintains only two *pramāṇas* – direct perceptual knowledge as sensory perception (i.e. *pratyakṣa* as *saṁvedana*) and indirect inferential knowledge (*anumāna*). In the former case – the object of knowing is self-defined, particular, eventual, structureless, inexpressible ontological reality (*svalakṣaṇa*), and just the opposite in the case of non-Buddhists – the object of knowing is characteristically general and conceptually structured (*sāmānyalakṣaṇa*). This position marks the exclusive duality of real and conceptual. Thus, we have earlier seen that in the backdrop of *pratyakṣa* and *anumāna*, *svalakṣaṇa* and *sāmānyalakṣaṇa*, peculiar attribute and general attribute, and sensation and inference, which are jointly exhaustive, and so there is no third independent means or object of knowledge. On this line, Dignāga's entire theory of *pramāṇa*-epistemology, logic, and semantics in his *Pramāṇasamuccaya* (*-vṛtti*) has developed. Further, denying the opponents' claims that the verbal cognition is acquired from the linguistic symbol or sign (*śabda*) and is an independent means of knowledge, Dignāga in the very first *kārikā* of PS, V (quoted in the *Tattvasaṁgraha-pañjikā*, mentioned in Hattori [30, p. 78, n. 1,12] asserts his position:

> *na pramāṇāntaraṁ śābdam anumānāt tathā hi tat/*
> *kṛtakatvādivat svārtham anyāpohena bhāṣate//*
> Translation [32, p. 139]: That [means of cognition] which is based on word in not [an independent] means of cognition other than inference. Because it [viz., a word] expresses its own object through the exclusion of the other [things], just as [inferential mark (*liṅga*)] "*kṛtakatva*" (producedness) or the like [establishes the object to be proved through the exclusion of what is not a possessor of that inferential mark].

Dignāga's theory of "other's exclusion' (*anya-apoha*, *anya-vyāvṛtti*) is not a simple doctrinal principle, rather for correctness of meaning, it is a universal method to be necessarily applicable to both unstructured particulars and structured individuals (*vyakti*, like tree or cow) endowed with numerous properties like substance-hood (*dravyatva*) and quality-ness (*guṇatva*). These individuals, unlike conceptually unstructured particulars, are nothing but the unity of the multiple ontological particulars (*bheda*) like sensations (= *svalakṣaṇa*). Subsequently, the mind's operation

superimposes unity on this followed by the creation of various conceptually structured properties or categories (= *sāmānyalakṣaṇa*) like substance-hood (*dravyatva*), quality-ness (*guṇatva*), generality (*jāti*), and relation (*anubandha*). In the inferential process, for example, the move from the observed smoke (*liṅga*) to the hidden inferable fire (*liṅgin*), located in the same compatible locus like mountain, the cognizer's focus is fixed on the specific property, i.e. only a part of the object, of each of the two, even if they have other properties, which cannot be the objects of knowledge in this case. This analysis shows that the process of verbal communication is not different from the process of inference. Note that the entire inferential process involving the conceptually structured components is completed in a general way, which falls in the conceptual domain (*sāmānyalakṣaṇa*). In this process, Dignāga presents two originally remarkable ideas:

(i) Every individual object has multiple properties but we cannot know them in entirety in inferential process and it is also that the remaining properties are not compatible in a specific context; and

(ii) To be semantically precise, it is necessary that the "process of other's exclusion" (*anya-apoha*) is used as a method. It is important to know that this method is being applied throughout by Dignāga in his *Pramāṇasamuccaya*(*-vṛtti*).

On the first point, I quote below a very significant *kārikā* of Dignāga with its explanation by Hattori [30, p. 91]:

> *dharmiṇo 'neka-rūpasya nendriyāt sarvathā gatiḥ/*
> *svasaṁvedyam anirdeśyaṁ rūpam indriya-gocaraḥ/*
> When one cognizes a pot possessing blue color *(varṇa),* round shape (*saṁsthāna*), and other properties *(dharma),* this cognition is not produced directly by his sense-organ. The properties of an object are to be admitted as the products of conceptual construction. An object comes to be recognized as being of blue color only when it is excluded (*vyāvṛtta*) from non-blue things, and this process of the exclusion from other things is nothing other than conceptual construction. In the same manner, that object comes to be recognized as being of round shape, or as possessing the properties P, Q, etc., according to whether it is excluded from non-round-shaped things, or non-Ps, non-Qs, etc. Thus, many different properties of the object are mentally constructed through these exclusions from other things, and consequently the object comes to be conceived as the possessor of many properties. By the sense-organ, however, one perceives the object in itself (*svasaṁvedya*) and not in all its aspects (*na sarvathā*), i.e., as a possessor of such and such properties. (Also see Hayes [19, p. 252]).

Dharmakīrti

I have discussed above that like other Buddhist disciples, Dignāga venerates the Buddha as the possessor of ultimate valid knowledge or wisdom (*pramāṇabhūta*), which underlies his every discourse and practice. In the same vein, Dharmakīrti also accepts in his own way the Buddha's *pramāṇa*-authority in his discourse. For this reason, Dharmakīrti recognizes the significance of justified scriptures. However, in the very beginning of his *Pramāṇavārttika*, chapter I: *Pramāṇasiddhi* (verse 5b), Dharmakīrti expresses his primary concerns following the Buddha's main task of eliminating the suffering of the sentient beings in general and human beings in particular (*duḥkha-nivṛtti*) by means of overcoming the root-motivating causes, namely, passion (*rāga*), hatred (*doṣa*), and intellectual confusion (*moha*). For this purpose, he composes his text to eliminate this confusion (*śāstraṁ mohanivartanam*), which generates ignorance (*avidyā*), which in turn causes suffering (*duḥkha*). According to Dignāga and Dharmakīrti, this inbuilt problem can be overcome only by means of *pramāṇa*-epistemology, logic, and semantics, which are endowed with the possibility of acquiring valod knowledge followed by moral practices. (Also see Chapter III: *Svārthānumānapariccheda*, verses 222–223, on the same issues; [Dunne, [10, pp. 53–54, n. 2].

Further, on the mechanism of perpetuating suffering, Dunne [*Ibid*., 60; also see Gillon15] explains these two verses, which focus on the principal source of suffering, namely, the dogmatic belief in the permanent soul (*satkāyadṛṣṭi*), equivalent to ignorance (*avidyā*) and self-clinging (*ātma-sneha*):

> As I have mentioned earlier, the explicit purpose of Dharmakīrti's philosophy is to free beings from suffering, and when we relate his soteriology with the hierarchy of views discussed above [*Ibid*., pp. 53–54], we can see how soteriological concerns inform Dharmakīrti's philosophical method. On Dharmakirti's view, suffering arises from self-clinging (*ātma-sneha*), a disposition caused by *satkāyadṛṣṭi*, the belief that one's psychological aggregates (*skandha*) are the locus of an *ātman* or absolute self that exists above and beyond those aggregates. Thus, to eliminate suffering, one must eliminate self-clinging, and to eliminate self-clinging, one must eliminate *satkāyadṛṣṭi*.

However, despite being a radical genius thinker, Dharmakīrti not only proves to be extremely difficult for both his commentators and the modern Buddhist thinkers to understand his grammar, style, and intention, because of confusions and circularity in respect of his doctrinal principles, arguments, and methodology. Being himself a victim of these perplexing problems in Dharmakīrti's writings, John Dune [Ibid., 246] makes hard efforts to solve them in his prestigious book and he also gets support from the remarkable summarized observations of Steinkellner [43, p. 328] as follows:

> Describing this underlying circularity as "conceptual," Steinkellner summarizes it schematically:
> 1. Our ordinary valid cognitions (*pramāṇa*) establish the authority of the Buddha's teaching (*buddha-vacana*),
> 2. the validity of our cognitions (*prāmāṇya*) is understood as their reliability (*avisaṁvāditva*),
> 3. reliability depends on successful activity (*puruṣārtha-siddhi*),
> 4. all human goals are determined by the ultimate goal (*nirvāṇa*),
> 5. the "ultimate goal" is indicated by the Buddha's teaching (*buddha-vacana*).

It is well known to all thinkers of Dignāga and Dharmakīrti that the style of their writings is elliptical, terse, and sparse. About Dharmakīrti's style, there are two very strong negative comments (quoted in Dunne, 10, 4): (i) Hayes [18, p. 319): "<…> the tortuous writings of this highly complex thinker." (ii) Hayes and Gillon, [21, p. 69, n. 1]: "Dharmakīrti's style is so terse that it is not always immediately clear what philosophical points he intends to make." In my opinion, the best method of clear understanding of a text's intention, issues, and development of the argument is to begin at the beginning against the historical backdrop, (i) the Sutta literature containing the Buddha's way of developing and practicing the formulae of the spiritual path resulting in the attainment of the wisdom (*bodhi*) and his discourse (*buddha-vacana*); (ii) the progressive move through the Abhidharma (both Pāli and Sanskrit), and to be dependent on the most systematic and scholastic writings in the area of Abhidharma, which contains the encounter between Sarvāstivāda–Vaibhāṣika and Sautrāntika schools, by early Vasubandhu (cf. *Abhidharmakośa-kārikā-bhāṣya*) on the one hand and (iii) on the other, early Mahāyāna Mādhyamika Nāgārjuna, and later Vasubandhu and Asaṅga's Yogācāra tradition, along with their commentators whose interpretations with simplicity make the original texts easier for understanding. John Dunne [10] follows this strategy which helps him understand the *Pramāṇavārttika* of Dharmakīrti through its two early commentators' clear interpretations, namely, Devendrabuddhi and Śākyabuddhi. In continuation, Dunne [*Ibid*., p. 5] identifies three features of their style of reasoning, which he encountered in the process of his study of these three texts, to make his own expression understandable and explainable: (i) Systematicity or systematic approach, which maximum reduces terseness and confusion; (ii) strategy of correcting inconsistencies and incoherence; and (iii) straightforwardness and bluntness so that no wrongness is made. Two more confusing styles or methods of reasoning of Dharmakīrti are "Hierarchy of

Discourse" and "Ascending Scale of Analysis" (also called "Sliding Scale of Analysis"). "Dreyfus notes that the choice here is largely a "pragmatic" one that focuses upon both the audience and the purpose of discussing such issues" [See 9, pp. 99 and 104; also see 10, p. 53].

Now, towards the end, I want to focus on the following three important issues – (1) Dignāga's Lapses and Difference with Dharmakīrti; (2) Dharmakīrti's doctrinal principles and categories; and (3) Dharmakīrti's *pramāṇa*-epistemology.

(1) *Dignāga's Lapses and Difference with Dharmakīrti*

It is well known that Dignāga was accepted by Dharmakīrti as his model genius Buddhist epistemologist and logician, but he found numerous missing crucial issues and questions, which Dignāga should have anticipated for the benefit of his contemporary and next generation thinkers and readers. Since Dignāga was a follower of the Buddha and his process philosophy, he had become a staunch anti-realist and so he was vehemently criticized by the realists like Naiyāyika Uddyotakara and the Mīmāṁsaka Kumārila Bhaṭṭa, who raised highly problematic issues and questions concerning his views. Subsequently, Dharmakīrti, who had become Dignāga's trusted genius commentator, took these problems seriously to solve them and thus he applied two-pronged strategy in order to defend and deeply modify Dignāga's views. For this, he followed a revisionary method for radical reinterpretation of Dignāga's epistemology, logic, and semantics.

Katsura [24], [25] has discussed some crucial lapses, which are committed by Dignāga in these matters. I try to summarize them below:

- Dignāga introduced the idea of 'pervasion' (*vyāpti*) as a foundational inseparable relation between probans (e. g. smoke) and probandum (e.g. fire) for the purpose of 'universal discourse,' which was accepted by all types of logicians. But Dharmakīrti's charge is that Dignāga never explained how this logical relation could be established and justified and how it could be universalized. To overcome these and many such problems, Dharmakīrti innovated the doctrinal principle of essential relation (*svabhāva-pratibandha*), which provides the universal foundation for inferential reasoning. See Katsura [24]
- Dignāga was deeply focused on inductive method through association (*anvaya*) and dissociation (*vyatireka*) formula in order to establish the relationship between *hetu*/*liṅga* and *sādhya*/*liṅgin* on the one hand and on the other between *śabda* and *artha* (its object) [see 24, p. 139].

In this context, Katsura writes [24, p. 140]:

> <…> Dignāga is clearly aware of the fact that it is impossible to establish the *anvaya* relation (association, agreement in presence) between a particular linguistic item (or a verbal symbol) and all of its objects, which reflects the core of the difficulty faced by any inductive method. As to the *vyatireka* relation (dissociation, agreement in absence), he seems to believe that it can be established on the basis of mere non-observation (or non-perception, *adarśanamātra*) of a counterexample. In view of Dignāga's general principle of the essential identity between the verbal communication and the inferential process, the above interpretation should not be restricted to the former; the same must apply to the latter. Thus it is clear that Dignāga's theory of pervasion has no strong claim for universality and that it is of a purely hypothetical nature.

- Dignāga does not care for answering the question how to relate the perceptual realm with the conceptual realm [Ibid., p. 138].
- In spite of being a significant passage "A name really designates objects qualified by the exclusion of others" (*śabdo 'rthāntaranivṛttiviśiṣṭān eva bhāvān āha*/) (PS, V, Verse 36), which is accepted by the post-Dignāga logicians like Dharmakīrti and Jñānaśrī, Dignāga fails to anticipate this issue to delineate the theory of *apoha*. See Katsura [25, p. 138].

In the same continuation, Dharmakīrti traces Dignāga's weaknesses in respect of his philosophical programming and raising problematic issues and dealing with them, either he ignorantly did not answer the opponents' questions arising from them or did not answer them appropriately and sufficiently, or neglected the critiques by his opponents. Second, Dharmakīrti adopted revisionary method to modify and elaborate Dignāga's entire system of "*pramāṇa*-epistemology, logic, and semantics" by incorporating his own new ideas in hierarchical order, pragmatism, and strategies. Now, it is very important that we must know Dharmakīrti's new categories, meanings, and their applications in right contexts with effective strategy. Note that the modern thinkers of Dharmakīrti have mixed interpretations, positive and negative in different contexts. I present brief statements on some of these philosophical issues and categories.

Dharmakīrti on Vyāpti and Svabhāva-pratibandha: Dharmakīrti's perceptual and conceptual doctrines are rooted in the nature's laws of causality (*prakṛtyā*) and the facts of conditions. These underly his conceptual framework of the process philosophy, which covers his views on ontology, epistemology, and the nature of mental operations through which perceptual reality (i.e. particulars, *svalakṣaṇa*) and conceptual unreality (universal, *sāmānyalakṣaṇa*) are unified for the development of the conventional perceptual judgments. This marks the pragmatics of ontology, epistemology, and semantics. We can also say that perceptual cognition (*pratyakṣa*) is the root of conceptual cognition (cf. *pratyakṣapṛṣṭhabhāvīvikalpa*). Since the Buddhist process philosophy is developed on the functioning of the Nature (=*prakṛtyā*), Dharmakīrti has grounded philosophical programme in the Nature's lawful systematic functioning. In this system, the principle of causality is continuously active as we find in the Buddha's discovery of the universal law of dependent arising (*pratītyasamutpāda*). This means each event is designated as a dynamic thing, the series of which marks the complex causal conditions of a unique production of a thing and in the same continuation immediate conditioning for the production of the next structureless episodic thing. Thus, we can clearly understand the questions of 'what and 'how' only when we rightly understand the causal mechanism of the dynamic Nature through observation, which, for example, helps us explain the ontology of an individual body of smoke as evidence (*liṅga*, *hetu*) and another individual body of fire (*liṅgin*, *sādhya*) in the common locus (*pakṣa*) and the mutual essential inseparable relationship (*vyāpti*) between the first two. This process is considered endowed with certainty that there is a natural causal relationship between them, which can never be violated. This can be explained as "smoke is the effect of the cause of fire," and so the fire is considered as the pervader (*vyāpaka*) and the smoke as pervaded (*vyāpya*). This assumption pragmatically proves to be valid in this case, because the assumption proves to be pragmatically true in similar cases (*anvaya*, positive concomitance), but the dissimilar cases (*vyatireka*, negative concomitance) in the same context are ruled out in the sense that the location of the smoke and fire are not found in a lake. The same principle can be justified, in general, limited to only such smoke-fire-pervasion cases. Again, according to Dharmakīrti's new idea, even if one example is found valid in any such individual or instead, a few more such cases for examples would be sufficient for validity. In both cases, they would be supported by the concept of universality. This methodical way of inferring the inferable object rejects the realist Naiyāyika's way of establishing validity by means of repeated observations (*bhūyodarśana*), because the latter is doubtful about the possibility of certainty in the inferential process.

Further, it is interesting to note that *anvaya* and *vyatireka* have implicitly the *vyāpti* characteristics, but they can be explicitly designated as *anvaya-vyāpti* and *vyatireka-vyāpti*. Dunne [10, p. 28, n. 36] explains these logical concepts:

> My own preference for *anvaya*, when understood to mean *anvayavyāpti*, would be "entailment." This term captures both the metaphorical sense ("following along") and the logical sense (strict or necessary implication) of the term as it was used by *Pramāṇa* Theorists of Dharmakīrti's time and after. For *vyatireka* (when used in the sense of *vyatirekavyāpti*), I would recommend "restriction," since the intention here is to show that occurrences of the predicate are necessarily restricted to occurrences of the

evidence. One of the problems with translations that involve the English word "negative" (as in "negative concomitance") is that *vyatireka* is not necessarily stated as a negation. See for example, Dharmakīrti's formulation of *vyatireka* in PVSV [*Pramāṇavārttikasvapajñavṛtti ad* PV [*Pramāṇa*vṛtti]1.1 (G[noli]:2.13: *vyāpasya vā tatraiva bhāvaḥ* (= HB [*Hetubindu*]:2.7-8)." [*Square brackets are mine*.] For HB see [6] and for Gnoli [5].

(2) *Dharmakīrti's Fundamental Principles and Categories*

- Ontological commitment to the most foundational doctrine of momentariness, which marks the Sautrāntika view of momentariness.
- Causal efficiency (*arthakriyāśakti*) of the dynamic reality (*svalakṣaṇa*, particular) as the object of perception (=sensation), which is the root of unreal conceptual universal as the object of inference (*sāmānyalakṣaṇa*) and it is the most basic foundation of *pramāṇa*-epistemology, logic, and semantics for the utilization of acquisition of valid knowledge (*saṁyagjñāna*) and attainment of human values (*puruṣārthasiddhi*), whether desirable or undesirable.
- Pragmatism: The world of actual and the world of conceptual are applicable to the actual state of affairs in the conventional world.
- Integrating the conventional world (*saṁvṛtti*) and the spiritual soteriological liberation (*nirvāṇa*) directly or indirectly.
- Accepting the authority of the scriptures unlike Dignāga's openness in the public domain. (See eight parts of scripture, Dunne [10, p. 240].
- The integrated trio of (i) causally efficient perceptual reality stimulating (ii) the conceptual in the actual world itself and the conceptual mental construction (*vikalpa*) derived from the actual reality; and (iii) the purposeful perceptual judgment for the universe of discourse based on the natural operation of mind.
- Explaining away the entire epistemological process of Dignāga (*trairūpya* formulae) in general for being hypothetical in nature in respect of the inductive reasoning, which is substituted with the deductive reasoning because every thought is conceptual.
- Theory of *svabhāvapratibandha* (essential connection), an invention of a new logical category, as an alternative of *trairūpya*-conditions based on the inductive approach, in which case the relation of pervasion (*vyāpti*) reveals a hypothetical nature restricted to the actual world.
- *Svabhāva* in *svabhāva-pratibandha* has two different aspects – the potentiality of causal efficiency (*arthakriyāsāmarthya*) of actual existence (*tadutpatti*) and the conceptual identity (*tādātmya*) between two essentially common individuals, tree (*vṛkṣa*) in the general sense and the oak (*śiṁśapā*) in specific sense, besides the notion of non-perception (*anupalabdhi*) to replace the ontology of absence-theory (*abhāva*) of the realists. Katsura [25, pp. 141–142] in brief explains the same as follows: "It is most likely that Dharmakīrti was the first to establish the deductive method of logic in India. Further, he introduced the new categories of *hetu*, viz. *kārya* (result), *svabhāva* (essence) and *anupalabdhi* (non-perception). The first two correspond to the two types of *svabhāvapratibandha* recognized by him, viz. *tadutpatti* (causality) and *tādātmya* (identity), while the last one must have been introduced by him in order to replace the preceding incorrect notions about the proof of non-existence (or negative inference) including Dignāga's concept of *adarśanamātra*."
- Finally, Dharmakīrti is known for maintaining confusing style of circularity, which is blamed by prominent modern scholars like Vetter [45], Steinkellner [44], Hayes [20], and Franco [11].

(3) *Dharmakīrti's Pramāṇa-epistemology*

It is very well known that Dharmakīrti faces complex problems from both sides – Buddhist and non-Buddhist epistemologists and logicians, but he offers complex solutions as well, which imply the most problematic ubiquitous mentation, unconscious error (*bhrānti*), unreal fictional universal

(*sāmānya*), conceptual thought (*vikalpa*), real particulars (*svalakṣaṇa*) to be determined by unreal and fictional conceptual thought (*adhyavasāya*), and the ubiquitous process of other's exclusion (*anyāpoha*). These fictional notions force us to reach (*prāpaka*) the real particular in the empirical world. Against these backdrops, the intriguing question arises: How can these fictional things be instrumental in acquiring the knowledge about the real world? These are some of the complex problems, which are to be dealt with by Dharmakīrti (See Tillemans [41, p. 209]).

Dharmakīrti in his *Pramāṇavārttika* (I, 1ab: *pramāṇam avisaṁvādi jñānam arthakriyāsthitiḥ*.) characterizes *pramāṇa* as that valid/true cognition, which is non-deceptive in the sense that it must not be contradictory by means of experience (*avisaṁvādi-jñāna*). This is its epistemological characteristic. Its another characteristic is that it should also be pragmatic in the sense that its desirable object should be in a position to causally reveal itself to be captured by the cognition (*arthakriyāsthiti*). In addition, it is necessary that this *pramāṇa*-knowledge should also be unique and dynamically real. The same idea is differently presented in Dharmakīrti's *Nyāyabindu* (I.1: *saṁyagjñānapūvikāpuruṣārthasiddhir iti tad vyutpadyate*.), which marks that a valid/right/true cognition is a prerequisite to the accomplishment of all human purposes whether desirable or undesirable. Dreyfus [9, p. 288] succinctly observes:

> Indian epistemology examines the nature of *pramāṇa*, its scope, basis, reliability, and the like. This is the central concern of Dharmakīrti and his followers <…> Dharmakīrti's inquiry focuses on knowledge understood as valid cognition. His questions are clearly epistemological: What is *pramāṇa* and what are its different types? Which type of valid cognition is most fundamental? Does each type bear similarly on the empirical world? Let us examine these questions in order, starting with the first, what is *pramāṇa*?

With the preceding statement of Dreyfus [9, p. 288], I come to the end of my present article, which contains three most difficult areas of Buddhism, such as *Pramāṇa*-Epistemology, Logic, and Language on the one hand and on the other three ingenious thinkers, namely, Vasubandhu, Dignāga, and Dharmakīrti – which together made my task extremely difficult and it has consumed more than six months' time and occupied more than normal space, not to talk of overcoming the acute difficulties in my understanding of numerous relevant original and secondary sources so that the adequate account of the complex discussion by means of critical examination can be appropriately fulfilled along with the historical order, development of philosophical arguments, and methodology. Nevertheless, in the present task, I confess my limitations in understanding the perplexing subject under consideration.

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The Buddhist Intent of *Parārthānumāna* and its *Hetu*-Centric Commitment

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Abstract:
The paper discusses *anumāna* and its variety in general from the point of view of inferential cognition for the sake of oneself as well as for the sake of others; i.e. *svārthānumāna* and *parārthānumāna* as given in the Buddhist tradition of logic, especially with *parārthānumāna*, its nature and role. The paper argues that the Buddhist intent of division of *anumāna* into *svārthānumāna* and *parārthānumāna* was to bring *Buddha-vacana*s under the category of *parārthānumāna* and to save them from being classified under *śabda pramāṇa*. It contends that such a division was not just an epistemological demand, but had a deeper philosophical significance in the Buddhist conceptual framework. Such a division is, therefore, intended to reject the role of *śabda* as an extra causal means or *pramāṇa*. The paper identifies the logical commitment in Buddhist tradition as *hetu*-centric commitment as it differs from the Nyāya tradition of *vyāpti*-centric one.
Keywords: *anumāna*, *svārthānumāna*, *parārthānumāna*, *hetu*, *vyāpti*, *śabdapramāṇa*, *hetvābhāsa*, *Hetucakra Damaru*, *Ekapada-paryudāsa*, *dvipada-paryudāsa*.

Prologue

In Indian epistemological tradition perception (*pratyakṣa*) is considered as the strongest reliable causal means of valid knowledge. It is so basic that no other casual means of knowledge can come into existence without the assistance of perception. Similarly, among indirect means inference (*anumāna*) has been given a status of superior causal means of knowledge. The superiority of

inference is not just because it, beyond our limited perceptions, covers the wide range of our cognitive sphere more extensively but also because it is substantially supportive to other indirect casual means of knowledge. Perhaps, that is why Buddhist logicians thought it reasonable to somehow reduce all other means of indirect knowledge to inference itself. Not only this, in the very epistemological framework of Buddhist logic all determinate/conceptual/categorical knowledge have been included within the spectrum of inference. Generally, inference is divided into two types, namely, *Svārthānumāna* (inference for the sake of oneself) and *Parārthānumāna* (inference for the sake of others). In fact, being the knowledge for the sake of oneself i.e. *Svārtha*-form is obvious to all *pramāṇa*-s but the knowledge for the sake of other self-i.e. *Parārtha*-form is only possible to *anumāna* (inference). This also extends the scope of inferential cognition to a new dimension. Although there has been a long as well as ancient tradition of classifying *anumāna* into three types, namely *Pūrvavat*, *Śeṣvat* and *Sāmānyatodṛṣṭa*, it is Ācārya Dignāga who has classified *anumāna* as *svārtha* and *Parārtha* for the first time and thereafter this classification has got a common acceptance in Indian tradition of epistemic logic. No doubt, the division of *anumāna* into *svārtha* and *Parārtha* has its own epistemological significance. But it is Ācārya Dignāga who gave a foundational division with a deeper insight. That is to say, Buddha himself had no intention that his teachings be accepted as *Śabdapramāṇa* (verbal testimony) [9, verse. 3587].[1] That is precisely the cause that the Buddhist tradition doesn't categorize *Buddha-vacana*s as *Śabdapramāṇa*. Then, it will be pertinent to ask: under which kind of *pramāṇa*s Buddha-*vacana*s and subsequent derived knowledge should be categorized? In fact, *Buddha-vacana*-s can be called as a set of *statements or propositions* producing *Parārthānumāna* because they were exhorted by Buddha not as commandments or instructions but as reasoned or rational statements. Therefore, the *Buddha-vacana*-s and the derived knowledge thereof are grasped in the form of *Parārthānumāna*. Dharmakīrti has hinted something similar at the end of the first chapter of his *Pramāṇavārttika* [3, pp. 285-287] but Prajñākaragupta, in his *Pramāṇavārttikālaṅkārabhāṣya*, has clearly stated that *Bauddha-àgama*s are not commandments or instructions, rather their form is of *Parārthānumāna* [6, ch. 1/135, p. 269].[2]

Noticeably, it is a great characteristic of *Bauddha āgama*s (texts containing *Buddha vacana*-s) that they were compiled and grasped as reasoned and argumentative statements of Buddha. They are different from other *āgama*s in that they are not commandments or instructions. This is why, despite being said by the Omniscient one, they cannot be categorized as *Śabda Pramāṇa* (verbal testimony). They are, rather, productive of *Parārthānumāna*. Hence, Dignāga's strategy of dividing *anumāna* (inference) into *svārtha* and *parārtha* should be understood as demand of Buddhist conceptual framework to keep *Buddha-vacana*-s free from the category of *Śabda Pramāṇa* (verbal testimony). That is to say that reason behind such a division was not just an epistemological demand but had a deeper philosophical demand of Buddhist conceptual framework. Here one might argue that if *Parārthānumāna* is actually the propositional articulation (for the sake of others) of *svārthānumāna* itself then, are *Budddha-vacana*-s like *svārthānumāna*, and not direct knowledge? In reply, it can be maintained that it is well known that Buddha attained enlightenment in the form of direct (*sākṣāt*) knowledge but this direct knowledge is non-categorical (*nirvikalpaka*) or indeterminate in nature. When non-categorical or indeterminate knowledge is revealed through language it naturally takes the form of categorical/propositional knowledge and comes under the domain of *anumāna*. Again, *svārthānumāna,* being prior to *parārthānumāna,* is not a rule. It is just the case that only argumentative or rational statements can lead to *parārthānumāna*.

I.

Although *svārthānumāna* and *parārthānumāna* both are *anumāna*, still Buddhist logicians differentiated their nature and called first one as epistemic and second as verbal [4, Svārthānumāna Paricceda 1, p. 87].[3] Importantly, here the adjectives – epistemic and verbal – should be understood in the sense of 'for the sake of oneself' and 'for the sake of others' respectively and not in the sense of non-categorical and categorical or unverbalizable and verbalizable. When a person

attains inferential knowledge arguing in his own mind it is called *svārthānumāna*, e.g. we come to know (inferring in our mind) that there is fire on the hill while seeing smoke on the hill. But when we wish to convince others in debate or simply want to make others know the same thing, e.g. 'fire is on the hill' or 'hill is fiery' we use syllogistic propositions/statements, it is called *parārthānumāna*. In fact, exteriorization (verbalization) or language-use is the only medium through which we can convey our knowledge to others. *Parārthānumāna* is verbal only in this sense.

Here one might ask that if exteriorization (verbalization) or language-use is the only medium through which we can provide others the same knowledge then perception should also be classified or divided into *svārtha* and *parārtha* like *anumāna*. For instance, when we see a calf running in the field, it is our *svārtha-pratyakṣa* (perception for one's own sake). But when we are telling others by pointing at calf as 'the calf is running in the field' why should it not be called *parārthapratyakṣa*? Durveka Miśra [7, p. 89][4] has discussed this question in his *Dharmottarapradīpa*. He holds that the statement 'the calf is running in the field' cannot be called productive of *parārthapratyakṣa* unlike sentences indicating *vyāpti* (invariable concomitance) between *hetu* or *liṅga* (reason/middle) and *sādhya* (probandum); i.e. *pakṣadharma* of *hetu* (presence of *hetu* in *pakṣa*, i.e. smoke on the hill) are productive of *parārthānumāna*. For, in this statement the report of auxiliary causal ingredients like senses, light etc. which are productive of perception, are not included. At most, the sentence 'the calf is running in the field' produces the desire to see or visualize in others and orient them towards it. In this way it can be maintained that Indian epistemological tradition has no trend of dividing the means of knowledge other than *anumāna* into *svārtha and parārtha*. It is a different matter that such a question has neither been raised in an elaborated manner nor has its epistemological possibilities been properly explored.

In fact, no open deliberation on the possibilities of division of perceptual knowledge into *svārtha and parārtha* along with its possible implications is not a mistake unknowingly done; rather it was a well-considered move. By disclosing this move the epistemological uniqueness of *anumāna* (inference) and through this, the logical departure in Indian epistemology too can be highlighted. Notably, for letting others attain the same knowledge which we have attained, i.e. for making others aware of the same knowledge through exteriorization (verbalization), either resultant aspect of knowledge or causal aspect of knowledge. There is no other way.

Now the nature and status of the causal means of knowledge like perception etc. is such that while transmitting it to others through exteriorization (verbalization) we can transfer only the resultant aspect of knowledge to others. Its causal aspect can neither be made available nor be transmitted to others. But here it is worth noticing that when we make it available to others the resultant aspect of knowledge attained by any means, say through its recitation/utterance, it becomes the object of verbal knowledge for others; and in this way, it is just like *śabdapramāṇa* (verbal testimony) for them. We see a calf running in the field and when we make available this particular *svārtha – pratyakṣa* to others by stating 'the calf is running in the field'; it doesn't become *parārthapratyakṣa* for the listener. Rather, it becomes, in certain circumstances, a means of producing desire in listener to see the object or of being oriented towards the object. But, where there is no circumstance in accordance with producing desire to see, the knowledge occurs through verbal reporting that 'the calf is running in the field.' Hence, if making available the causal aspects of non-inferential casual means of knowledge to others were possible, the division of such *prāmāna*-s into *svārtha* and *parārtha* would have been in proper sense.

But the case of *anumāna* (inference) is quite different. Its nature and state are not like *pratyakṣa and other non-inferential means of knowledge*. Really, we use to transmit the causal aspect of our (inferential) knowledge into other's consciousness by verbalizing it in a particular way. When *svārthānumāna* is recited or reported through syllogisms of *pratijñā* (proposition), *hetu* (reason), *udāharaṇa* (explanatory example), *upanaya* (application of example) and *nigamana* (statement of conclusion), it is causal ingredients of that knowledge which is transmitted to other's consciousness through such procedure. Perhaps, such facility is not available with any means of knowledge other than *anumāna*. This is the reason why the knowledge produced as

parārthānumāna is neither a borrowed knowledge nor is knowledge produced out of mere listening of words; rather it is an independent knowledge (*pramiti*) caused in the consciousness of a person. This is the uniqueness of *anumāna* (inference) and because of which it remains as *anumāna* despite being other-oriented (*partaḥ*), whereas means of knowledge other than *anumāna* when made other-oriented (*partaḥ*), they all, in a sense, are transformed into mere *śabdapramāṇa* (verbal testimony). In this context, it wouldn't be unjustified to make a comment on *śabdapramāṇa* (verbal testimony) that *pauruṣeya* (man-given) *śabdapramāṇa* in itself is nothing but full exteriorization of the trustworthy speech of the resultant aspect of perceptual (*sākṣāt*) knowledge.

Understanding *pauruṣeya śabda pramāṇa* (man-given verbal testimony) in this way resolves the binding of taking *śabda* (word) as an extra means of knowledge in any epistemology. This assertion of taking *śabda* (verbal testimony) as a causal means of knowledge may cause a problem for *Cārvaka*-s and *Vaiśeṣika*-s but there is no room for such difficulty in Buddhist epistemology. The reason is that on the one hand, Buddhist notion of *pratyakṣa* is *nirvikalpaka* (non-categorical or indeterminate) and therefore its exteriorization (verbalization) is not possible and on the other hand, Buddhist logicians successfully subsume all non-perceptual cognitions (cognitions other than perception) under *anumāna* (inference).

II.

When *anumāna* is verbalized we state its causal-ingredients in the form of syllogism. There may be a debate about number of premises in a syllogism and it may be increased or decreased as per the suitability of the respective schemes of epistemologies. But it is incontrovertible that each syllogism is in itself a speech-form and its members have an essential inter-relation among them. That is why they collectively become the producer of knowledge as *parārthānumāna* (inference for others). Hence it can be called knowledge deduced from a logical process, since logic as a mode of knowledge itself is fundamentally a science of speech-forms. Therefore, it can be maintained that logical departure of Indian epistemology begins with *parārthānumāna* (inference for others). However, it is maintained without implying the superiority or fundamentality of *parārthānumāna* over *svārthānumāna* since cognitive as well as certificatory force of knowledge-claims come from *svārthānumāna* itself which is later shaped in linguistic and logical form in *parārthānumāna* for the sake of others to attain the same inferential cognition. It is where logic begins. Importantly, a conception of epistemic moral responsibility is attached here with this departure of logic. That is, as the moral condition of exteriorization (verbalization) of resultant knowledge caused by direct perception (*śākṣātjñāna*) of the trustworthy person (*yathābhūtaupdeṣṭā*), likewise, the moral condition of exteriorization (verbalization) of resultant knowledge caused by *svārthānumāna (*inference for oneself), i.e. of transmitting causal aspects of this knowledge through syllogistic propositions into others, is non-blemishing of syllogistic propositions; and the pre-condition of non-blemishing of syllogistic propositions is the validity of *svārthānumāna* (inference for oneself). Perhaps, it is for this reason that we find an ideal commitment of maintaining the non-blemishing and truthfulness of syllogistic propositions in Indian logico-epistemic traditions. Hardly there is any other section of Indian epistemology wherein such an epistemological commitment of maintaining its non-blemishing and truthfulness has been shown with heroic attempt.

This epistemic moral commitment implicit in the formulation of *parārthānumāna* (inference for others) has been maintained and practiced successfully in both the traditions of logic, the Nyāya and the Buddhist. The *Naiyāyika*s took the approach of *vyāpti* (invariable concomitance) centricity and the Buddhist logicians took the approach of *hetu* (reason/middle) centricity so far as the logical formulation of *parārthānumāna* is concerned. Since the Naiyāyikas' debate on *anumāna* has been *vyāpti*-centric, texts like *Vyāptipañcaka* were written in the tradition and the idea of *bahirvyāpti* was advocated by the Nyāya logicians to a great extent. Not only this, the idea of *hetvābhāsa* (blemish [inappropriately called in English *fallacy*] of reason/inference) was discussed a lot and subsequent revisions were made in the Nyāya tradition. However, the need for discussing the idea of *pakṣābhāsa* and *dṛṣṭāntābhāsa* was not felt. The only reason again was the adoption of *vyāpti*-

centric approach to *anumāna*. Also, on account of the fact of inference being *vyāpti*-centric the object of inference has been *vhanni-sāmānya* (fire-universal) in the Nyāya tradition. Opposite to this, in the Buddhist tradition of logic, from the beginning to the end, the *hetu*-centric approach to inference was adopted and developed. This is why, for the identification of *siddhahetu* (proven reason/middle) texts like *Hetucakra Damaru* and *Hetubindu* were written and the idea of *antarvyāpti* (internal concomitance) were advocated in the Buddhist tradition of logic. Along with this, attempts with full force were made in the tradition to identify *pakṣābhāsa*, *hetvābhāsa* and *dṛṣṭāntābhāsa* [5]. Acceptance of *vhanni-viṣiṣṭa* (fire-particular) as the object of *anumāna* shows *hetu*-centricity in the Buddhist logic replacing *vyāpti*-centricity of the Nyāya. In fact, there have been these two prominent streams of debate on *anumāna* in Indian logic and epistemology. Both have their own commitments and specialities. They have tremendously enriched Indian epistemology and its systems of logic.

III.

In Buddhist logic, the main components of *hetu*-centric *anumāna* are three types of *hetu* and three conditions of *hetu*. The *hetu* which leads to the indirect inferential knowledge can either be *svabhāva-hetu or kārya-hetu or anuplabdhi-hetu*. These are three types of *hetu*. The condition of being good or valid for each of these *hetu* is that it must be in *pakṣa, also in sapakṣa and never be in vipakṣa.* These are the three forms or conditions of *hetu.* Any deviation in these three conditions of *hetu* is considered by the Buddhist logicians as *hetvābhāsa* (defects of reason). Therefore, the Buddhist logic which is entirely free from possible states of *hetvābhāsa* and the statement *anumeyethatatulyesadbhāvonāstitāsati* has been accepted by them as the right defining features of three-formed *hetu* as stated by Dignāga.[5] This definition or characteristics of *hetu* in its collective form is the most balanced definition of *hetu*. Durveka Miśra [7, p. 90][6] informed that Buddhist scholars eliminated six-fold alternatives by using the method of exclusion of one-term (*ekpadaparyudās*) and exclusion of two-term (*dvipadaparyudās*) within this definition adopted this seventh alternative as a true characteristic of three-formed hetu. In Udyotkara's *Nyāyavārttika* [10, p. 56][7] the reference of this method is found as *Hetu Vārttika*. Vācaspati Miśra [8, p. 194] has beautifully explained and analyzed with suitable examples that how in this collective characteristic of *hetu* as mentioned by Dignāga, the seventh alternative is achieved by eliminating one-one and two-two terms. According to him, this characteristic or definition collectively consists of three terms. Among three terms when one-one term is eliminated three *pakṣa*-s or conditions are formed and when two-two terms are eliminated again three *pakṣa*-s conditions are formed. In these six types of *pakṣa* there are six-fold exclusionary states of three-fold *hetu*. When these six-fold states are eliminated the seventh (alternative) characteristic of *hetu* known as *siddhānta- Lakṣaṇa* is manifested, according to Dignāga. How six-fold cases are formed within the *Lakṣaṇa* (definition); how, by eliminating them and taking three terms within characteristic collectively, the seventh variety/case of *hetu* manifests right nature of three-formed *hetu*, can be demonstrated as the following:

1. If by performing exclusion of two terms (*dvipadaparyudāsa*) only this much is said, *Anumeye Sadbhāvaḥ* then *dharma*, absent in *sapakṣa* and present in *vipakṣa*, will be called *hetu*. e.g. *śabda* (word) is eternal, by being effect.
2. If by performing exclusion of two terms (*dvipadaparyudāsa*) only this much is said, *Tattulye Sadbhāvaḥ* then dharma, present in *vipakṣa* and absent in *pakṣa*, will become *hetu*. e.g. *śabda* (word) is eternal, by being the object of eyes, like universal.
3. If by performing exclusion of two terms (*dvipadaparyudāsa*) only this much is said, *Nāstiā Asati* then dharma, absent in *pakṣa* and absent in *sapakṣa* too, will become *hetu*. e.g. *śabda* (word) is eternal, by being *asatva*.
4. If by performing exclusion of one term (*ekapadaparyudāsa*) only this much is said, *Anumeye Ata Tattulye* then *dharma* present in *vipakṣa* will also be called *hetu*. e.g. *śabda* (word) is non-eternal, by being *prameya* (knowable).

5. If by performing exclusion of one term (*ekapadaparyudāsa*) only this much is said, *Anumeye Atha Nāstitā Asati* then *dharma* absent in *sapakṣa* will become *hetu*. e.g. *śabda* (word) is eternal, by being produced (*jātimān*) and heard.
6. If by performing exclusion of one term (*ekapadaparyudāsa*) only this much is said, *Tattulye Nāstitā asati* then dharma absent in *pakṣa* will be called *hetu*. e.g. atoms are non-eternal, by being effect.
7. If by taking all three terms of definition collectively this is said, *Anumeyethtattulyesadbhāvonāstitāsati* then dharma, present in *pakṣa*, present in *sapakṣa* and absent in *vipakṣa* will be called right *hetu*. e.g. *śabda* (word) is non-eternal, by being produced, like a pitcher.

In this way, the *trairūpya* (three-formed) *hetu* is formulated in seven-fold *hetu* (*hetu-saptaka*) and then by eliminating six unwanted and fallacious cases the seventh case is obtained; and this is how, in Buddhist logic, the *siddhānta Lakṣaṇa* of three-formed *hetu* is revealed. This method of seven-fold *hetu* must have been existed and practiced in Buddhist logic as is indicated by Durveka Miśra in his *Dharmottara Pradīpa*. However, he has not given any clear outline of it. Thanks to Vācaspati Miśra who has elaborated and preserved this unique methodology of Buddhist logic in his *Nyāyavārttikatātparyatīka*.

IV.

An advanced version of *hetu*-centric commitment in Buddhist logic is found in Ācārya Dignāga's *Hetucakra Damaru* (*Hetucakra Nirṇaya*) or Wheel of reason in which another unique method has been developed to identify *sadhetu* (good or valid reason) and *hetvābhāsa*-s by formulating *trairūpyahetu* (three-formed) into the logic of nine possible arguments or varieties (of cases). It is a small work of Dignāga which has not yet been found in its original form in Sanskrit. Dharmakīrti, while classifying *pakṣa-dharma* (*hetu*), has indicated about it as a method of providing an easy understanding of *hetuprakaraṇa* [3, Parārthānumāna Paricceda-189]. Its translation in Tibetan language is preserved. Based on this translation its Sanskrit restoration by Durgacharan Chatterjee and English translation (by Satishchandra Vidyabhusan and R.S.Y. Chi with some modifications in the text are available [11, p. 298, 1, pp. 266-272, 2, pp. xi-xii]. Some other scholars, Indian and Western, have written on *Hetucakra Damaru* in English and tried to understand Dignāga's classification of *pakṣa-dharma* in the light of Aristotelian logical system, predicate logic and class calculus. In the original literature of Indian epistemology and logic, the method and structure of *hetucakra Nirṇaya* has been preserved, though not entirely but in concise form, in Vācaspati Miśra's *Nyāyavārttikatātparyatīka* [8, pp. 289-290].[8,9] It is as follows:

Hetu which is *dharma* of *pakṣa* can acquire place in three possible cases, namely its presence, absence and both absence-presence (*dvedhābhāva*) (i.e. being in a space (part) of *sapakṣa* and also not being in another space (part) of *sapakṣa*). Again, the same *hetu* which is the *dharma* of *pakṣa* can have three cases in *vipakṣa*, namely, presence, absence and absence-presence both (*dvedhābhāva*) in *vipakṣa*. Now, there can be three classes of each case of *hetu* among its three cases in *sapakṣa* and three classes of each case of *hetu* among its three cases in *vipakṣa*, thus calculatedly we get three classes of each case, of three-fold *hetu* i.e. total nine variety of cases. For example – 1) *hetu* (*pakṣa-dharma*) present in *sapakṣa* remains present in *vipakṣa*, 2) remains absent in *vipakṣa*, 3) remains present as absence-presence both (*dvedhābhāva*) in *vipakṣa*. Again, 4) *hetu* absent in *sapakṣa* (as *pakṣa-dharma*) remains present in *vipakṣa*, 5) remains absent in *vipakṣa*, 6) remains present as absence-presence both (*dvedhābhāva*) in *vipakṣa*. Similarly, 7) *hetu* (as *pakṣa-dharma*) being absent-present both (*dvedhābhāva*) in *sapakṣa* remains present in *vipakṣa*, 8) remains absent in *vipakṣa*, 9) remains present in *vipakṣa*, as absent-present both (*dvedhābhāva*). Dignāga, in his *Hetucakra Damaru*, has shown the formulations of *trairūpya* (three- formed) *hetu* in these nine varieties of cases and also demonstrated *hetu* (reason), *Sādhya* (probandum) and *dṛṣṭānta* (instance) of each case. (In Vācaspati's presentation *dṛṣṭānta* has not been mentioned). It is as follows:

1. The *pakṣa-dharma* (*hetu*) which is present in *sapakṣa* and present in *vipakṣa* too; e.g. *śabda* (word) is eternal, by being known (*prameya*), like ether (*sapakṣa*) and pitcher (*vipakṣa*). 2. The *pakṣa-dharma* (*hetu*) which is present in *sapakṣa* but absent in *vipakṣa*; e.g. *śabda* (word) is non-eternal, by being produced, like pitcher (*sapakṣa*) and ether (*vipakṣa*). 3. The *pakṣa-dharma* (*hetu*) which is present in *sapakṣa* and present in *vipakṣa* as absence-presence both (*dvedhābhāva*); e.g. *śabda* (word) is produced through effort, by being non-eternal, like pitcher (*sapakṣa*) and lightening and ether (*vipakṣa*). 4. The *pakṣa-dharma* (*hetu*) which is absent in *sapakṣa* but present in *vipakṣa*; e.g. *śabda* (word) is eternal, by being produced, like ether (*sapakṣa*) and pitcher (*vipakṣa*). 5. The *pakṣa-dharma* (*hetu*) which is absent in *sapakṣa* and absent in *vipakṣa* too; e.g. *śabda* (word) is eternal, by being heard, like ether (*sapakṣa*) and pitcher (*vipakṣa*).[10] 6. The *pakṣa-dharma* (*hetu*) which is absent in *sapakṣa* and present in *vipakṣa* as absence-presence both (*dvedhābhāva*); e.g. *śabda* (word) is eternal, by being produced through effort, like ether (*sapakṣa*) and pitcher and lightening (*vipakṣa*). 7. The *pakṣa-dharma* (*hetu*) which is present in *sapakṣa* as absence-presence both (*dvedhābhāva*) and present in *vipakṣa*; e.g. *śabda* (word) is without effort, as being non-eternal, like lightening and ether (*sapakṣa*) and pitcher (*vipakṣa*). 8.The *pakṣa-dharma* (*hetu*) which is present in *sapakṣa* as absence-presence both (*dvedhābhāva*) and absent in *vipakṣa*; e.g. *śabda* (word) is non-eternal as being produced through effort, like pitcher and lightening (*sapakṣa*) and ether (*vipakṣa*). 9.The *pakṣa-dharma* (*hetu*) which is present in *sapakṣa* as absence-presence both (*dvedhābhāva*) and present in *vipakṣa* too as absence-presence both (*dvedhābhāva*)- e.g. *śabda* (word) is eternal, by being untouchable, like ether and atoms (*sapakṣa*) and action or karma (*vipakṣa*).[11]

It is noticeable that among above-mentioned nine-fold formulations of *trairūpya* (three-formed) *hetu* only the second and the eighth formulations are the ones which satisfy the conditions of *trairūpya* (three-formed) *hetu*. Therefore, only these two are the right *hetu*s. The fourth and the sixth formulations are the examples of *viruddhahetvābhāsa*. The rest five formulations are counted as *aniścita* (uncertain) or *saṅdigdha* (doubtful) *hetvābhāsa* (blemishes of reason).

V.

From what has been analysed and elaborated above, it appears that in Buddhist logic an inherent epistemological strategy of Dignāga was operative behind the classification of *anumāna* (inference) into *svārthānumāna* (inference for oneself) and *parārthānumāna* (inference for others). This is that, how the teachings of Buddha (*Buddha-vacana*-s) can be freed from the binding of taking them as *śabdapramāṇa* (verbal testimony); and while subsuming them into *parārthānumāna* (inference for others) and how it can be maintained that the status and role of *Buddha vacana*-s is that of assertions generating *parārthānumāna*. *Parārthānumāna*, in Buddhist logic, provides the epistemological framework for fulfilling this internal conceptual demand of the tradition. Another epistemological significance of this classification is that a new dimension of exteriorization or verbalization (i.e. transmission) of personal cognition for the sake of others is revealed through it. In other words, the epistemology of exteriorization (verbalization)/transmission of knowledge freed from being *śabda pramāṇa* (verbal testimony) are offered by *parārthānumāna* (inference for others). Such an epistemology of *parārthānumāna* was developed in two parallel streams in post-Dignāga era. Its development took place, in Buddhist tradition, with *hetu*-centric commitment and in Nyāya tradition, with *vyāpti*-centric commitment. It is better not to give any value judgement about them by evaluating one in the light of the other; rather it is better to grasp them as two streams of thought in Indian logic with their inherent intents and conclusions. However, at the end, we would like to emphasize that such *hetu*-centric epistemology of *parārthānumāna* is unparallel and it is not like Aristotelian logic or predicate logic or with a logical system having class calculus and therefore unique. In other words, because of its unique nature, it does not have any necessity of its being understood in the light of formal systems of logic and their formulations.

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Notes

1. *Tāpāchhedācca nikaṣāt suvarṇmiva panditeiḥ* [9, verse. 3587].
2. *Tataḥprathamaṁvimarśaḥpunarāgmetasyārthasyadarśanaṁ, Parārthānumānarūpakenājñāmātrake* [6, ch. 1/135].
3. *Parārthānumāna Śabdātmakam, Svārthānumānam tu jñānātmakam* [4, Svārthānumāna Paricceda 1].
4. *'Nanu ca parārthānumānotpādakvākyavadasti kiñcit vākyam yatparpratyakṣopyogi'. yatha 'eṣa kalbho dhāvati' iti vākyam. Ataḥ parārthānumānvatparārtham prtyakṣam kim na vyutpādyat iti? Atroccyate—parokṣārthapratipatteryāsāmagri – liṅgasya pakṣadharmatā sādhyavyāptiśca—tadākhyānāt vākyamupcārtaḥ parārthānumānamucyate.*
Natu tatra kathañcidṅgbhāvamātreṇ, svasthyāderapi tathā prasañgāt. Idam punaḥ 'ayam kalabḥ' ityādivākyam na pratyaṣotpatteryā sāmagrīndriyālokādi tadbhidhānāttannimittam bhavattathā vyapadeśamśnute yen vyutpādyatāmpyaśnuvīta. Kim tarhi? kasyacid didṛakṣāmātrajananena. Yathā kathañcitparapratykṣotpattāva ṅgbhāmātreṇa tādrupye netrotsave vastuni sannihiteapi kathañcitparāñmukhasya pareṇayadibhimukhīkaraṇaṁ śirsastadapi vacanātmakam parārthapratyakṣam vutpādyituvrutpidyamāpadyet. Etacca kaḥ svasthātmā manasi niveśayet. Kiñc bhavatu tathāvidham vacanam parārtha pratyakṣam [7, p. 89].
5. Often this characteristic of Dignāga is referred from the second chapter of 'Pramāṇasamuccaya'. In Udyotkara's *Nyāyavārttika* too it has been called as characteristic of Dignāga's *hetu*.
6. *Trirūpaliṅgāditi cācakṣāṇenācāryeṇeikadvipadparyudāsena ṣaṭpakṣīṁ pratikṣipya saptampakṣa parigrahaṇe liṅgasya lakṣaṇamabhipretam prakāśitamiti* [7, p. 90].
7. *yadyapi hetuvārtika bruvāṇenoktam…. 'saptikāsambhave ṣaṭpratiṣedhādekadvipadaparyudāsen trilakṣaṇo heturiti'* [10, p. 56].
8. Vācaspati Miśra has mentioned the same method with which Dignāga formed nine-fold variety of cases of *trairūpyahetu*. Manorathnandi (in *Pramāṇvārttika, Parārthānumāna Paricceda*, 189) has also hinted the same, saying '*Sapakṣesannasandvedhā pakṣadharmaḥ punstridhā*' [8, pp. 289-290].
9. Vācaspati Miśra has presented the summary of *Hetucakra Damaru* as following (*Nyāya Vārttika-Tātparya-Tīka*, pp. 289-290): Atra Diñāgena –
'Sapakṣe sannasan dvedhā pakṣadharmaḥ punstridhā. Pratyekam sapakṣe ca sadasaddvividhtvataḥ.'
Iti navapakṣadharmān hetutadābhāsān darśayitvā
'Tatra yaḥ sansajātīye dvedhā cāsanstadtyaye. Sa heturviparītosmādviruddhoanyatvaniścitaḥ.' 'Iti hetutadābhāsaviveko darśitaḥ. Tasyārthaḥ. Yaḥ pakṣadharmaḥ sa sapakṣe sannasan dvedhā iti trividhaḥ, sa punarsapakṣe sadasaddvividhtvataḥ pratyekam tridhā bhavatīti, pakṣadharmaḥ sapakṣe san vipakṣe

sadasaddvividhatvatstridhā, pakṣadharmaḥ sapakṣesan vipakṣe sadasaddvividhatvatstridhā, pakṣadharmaḥ sapakṣe dvedhā sadasaddvividhatvatstridheti.'Atrodāharaṇām, 'Prameyakṛtkānityakṛtśrāvaṇyatnajāḥ. Anityayatnajāsparśā nityatvādiṣu te nav.'nityatvādiṣu sādhyeṣu prameyatvādayo navahetutadābhāsaḥ. Teṣām yathāsaṅkhyam nityatvādīni sādhyānyudāharanti 'Nityānityaprayatnotthmadhyamtrikaśāśvatāḥ, Ayatnānityanityāśca prameyatvādisādhanāḥ.'
[8, pp. 289-290].

10. In restored text/translation of Durgacharan Chattarjee and S.C. Vidyabhusan it is read as '*anitya*'(impermanent), whereas in the translation of R.S.Y. Chi and description of Vācaspati Miśra it is read as '*nitya*' (eternal).

11. In restored text of Durgacharan Chattarjee it is read as '*amūrta*' (incorporeal) and Randell and S.C. Vidyabhusan have put it as '*sparśaja*' (touchable). R.S.Y. Chi has put it as '*amūrta*' (incorporeal) and Vācaspati Miśra as '*asparśaja*' (untouchable).

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Dharmakīrti's Dual Philosophical Identity

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Abstract:
In the paper, the author addresses the question of Dharmakīrti's philosophical identity afresh. While acknowledging both the elements, external realism of Sautrāintika and idealism of Yogācāra, the author does disagree with the claim which is sometimes made, that Dharmakīrti's idealism as his ultimate position and accepts realism only at conventional level. The author shows how Dharmakīrti in *Pramāṇavārttika* oscillates between the two positions and that he must have been attracted to both the positions for different reasons. He was attracted to idealism from critical point of view, when he was critical about the limitations of Sautrāntika realism (which itself can be called critical realism). He was attracted to realism for its capacity to explain the diverse phenomena and lead human beings to their goals. The author denies the claim made by some scholars that Dharmakīrti's idealism can be called just an epistemic one. He argues that it did have a metaphysical dimension which is hard to defend. The author shows that Dharmakīrti's idealist stance has adverse implications to the realist epistemology and logic which constitute his mainstream position; the implications, which Dharmakīrti does not take up for discussion.
Keywords: Sautrāntika, realism, Yogācāra, idealism, epistemic idealism, metaphysical idealism, latent impressions, stance.

1. At the Outset

There is a problem about Dharmakīrti's philosophical identity. Scholars have diversely labelled him as Vijñānavādin (Yogācāra/Yogācārin), Sautrāntika, Yogācāra-Sautrāntika, a Mādhyamika mystic and Svatantra-vijñānavādin.[1] The two major identities attributed to him are that he was a Sautrāntika and that he was a Yogācāra. The third major identity is the combination of the two.

Dharmakīrti's position is a realist (of Sautrāntika variety) in *Nyāyabindu* and also in a large part of his commentarial work *Pramāṇavārttika*. However, in some verses of *Pramāṇavārttika* he critically examines the realist position and adopts idealism. Sometimes he confesses about his ignorance about idealist explanation of knowledge.[2]

Sometimes he appears to be equidistant from both. In Santānāntarasiddhi, Dharmakīrti claims that Sautrāntika type of argument is available to Cittamātra position also. He does not say that Sautrāntika position is wrong and Yogācāra position is correct.

After Dharmakīrti, Yogācāra seems to have dominated the development of Buddhist philosophy. So, some commentators and followers of Dharmakīrti (such as Vinītadeva, Prajñākaragupta, Śāntarakṣita, Kamalaīla, Mokṣākaragupta, Jñānaśrīmitra and Ratnakīrti) appropriated Dharmakīrti as a Yogācāra philosopher. They regarded some idealist sections of PV as expressing his final position and the large realist corpus as expressing secondary or lower truth.

Among modern scholars John Dunne and Birgit Kellner follow the dominant trend through their own arguments. On the other side there are scholars like Amar Singh who have emphasised the Sautrāntika identity of Diṅnāga and Dharmakīrti.

On this background I will try in this paper to visit the problem of the philosophical identity of Dharmakīrti afresh. I will first give a brief exposition of the two stances of Dharmakīrti. In Section 2, I will understand them in interactive light. I will check how he responded to certain odd situations from the two stances and also consider how he makes transitions from Sautrāntika mainstream to the Yogācāra island and enters the mainstream again. In Section 3, I will try to understand the exact nature of Dharmakīrti's dual philosophical identity and conclude the discussion. In the Annexure, I will express my views on the question whether his Idealism really deserves the high status which is sometimes conferred on it.

2. Two Stances: An Exposition

2.1. Realist Dharmakīrti

Dharmakīrti, in his *Nyāyabindu* appears as a realist philosopher. He rests his epistemological-logical theory on the ontology in which unique particular (*svalakṣaṇa*) as regards as ultimately real (*paramārtha-sat*). He defines unique particular as that the cognition of which appears differently (that is, as more or less vivid) according to its nearness or remoteness.[3] Only an external object can be near and remote from the knower and cause difference in the cognition due to the distance from the knower. This implies that Dharmakīrti regards external particulars as absolutely real. A unique particular according to Dharmakīrti is the object of perceptual knowledge. The perceptual knowledge grasps a unique particular without conceptualisation and without error.[4] How is it grasped by the cognition? (How does it become 'grāhya' of cognition?) The question is not dealt with in *Nyāyabindu.* However, he deals with it in *Pramāṇavārttika*. There he says that to be a grasped object of cognition (*grāhyatva*) is to be understood as being a kind of cause of cognition. Here cause-hood consists of 'contributing own form (*ākāra*) to the cognition.'[5] The external particular causes the cognition by contributing its form to the cognition.

Here there is one difficulty. Though the object which contributes its form to the cognition is real, being momentary, it does not exist at the time of the cognition. So here we have to talk of two types of objects. Object as cause and object as form (in brief: cause-object and form-object). Cause -object exists one moment before the cognition and form object is simultaneous with the cognition. Let us suppose that I am observing a blue colour patch on the wall. For a Buddhist it is not an enduring blue substance or a quality. But it is a momentary blue particular which occurs in a blue causal continuum. I observe a blue patch at the moment (n) means, the blue particular of the moment (n-1) produced a blue-form in my mind at the moment (n). At the time (n), the blue particular of the time (n-1) does not exist. But the next blue particular in the blue continuum exists, which is not an object of perception. Similarly, a blue form exists, which is an inseparable aspect of the 'blue-consciousness; at the time (n). Here the blue-particulars belonging to the continuum can be called sensibilia or unsensed sense data.[6]

Another question about perceptual cognition is its *pramāṇa*-hood. How to decide that a given cognition is true (*pramāṇa*)? We get two answers in Dharmakīrti's writings:

1. *Arthasvarūpam asya prāmāṇyam* [6, p. 84]: (Cognition having the same form as the object is the criterion of its truth). This is the criterion from cognition's side. How to decide that the object cognised is a real object? Here comes the second criterion.
2. *Pramāṇam aviasaṃvādi jñānam; arthakriyāsthitiḥ avisaṃvādaḥ* [7, verse I.3] (The true cognition is that which is non-discordant with the object. Non-discordance of the cognition is nothing but occurrence of the causal function of the object). Accordingly causal efficacy of the object is mark of its realness.

The above two criteria are not identical. Moreover, they are applicable jointly, not alternatively. For example, in the case of simple phenomenal objects such as 'blue,' the first criterion is fulfilled as there is a blue colour outside and the cognition has a blue-form. There the second criterion is automatically fulfilled as production of 'blue' form in the consciousness is itself the causal function of the object. In the case of the material objects like water and fire, production of water image or fire image in mind is not sufficient because in the case of illusion or conceptual cognition, for example in the case of mirage when one has an illusion of water, one has water image in one's consciousness, but the object is incapable of quenching thirst. Or in the case of the inferential cognition of fire, one has 'fire' as the form of one's cognition. But the conceptual fire that one cognises does not have the burning function.

There is an element of ambiguity about the nature of external objects accepted in Sautrāntika Budddhism. To say that they are all unique particulars would be a simplistic answer. Which types of objects would be included under this category? It can be agreed in the case of visual perception (*cakṣurvijñāna*) that we perceive gross (*sthūla*) objects and not objects of atomic size. Dharmakīrti, as Sautrāntika accepts that gross objects are made of atoms. But unlike Vaiśeṣikas, who accept *avayavin* (composite whole) they do not attribute distinct identity to the collection (*samudāya*) of atoms. So, what is the object which causes the cognition? According to Dharmakīrti, collected atoms are the cause. As he says, "Some of the atoms with arise due to association with other atoms are called 'collected' (*sañcita*), they are the cause of the rise of the cognition."[7]

Vaiśeṣikas say, atoms cannot be seen, but their collections (*avayavin* – those composed of six atoms) can be seen. Dharmakīrti says, atoms cannot be seen individually, they can only be seen in a collected form. In general when Vaiśeṣikas say that we see a whole (*avayavin*) which inheres in its parts, Dharmakīrti says that we just see the parts collected in a particular way and call it by the name of a whole. The change of language has a lot of ontological implications.[8] This leads to the problem of variegated-ness. Can there be a single variegated (*citra*) object? Dharmakīrti's answer is in the negative. At the level of objects there is only plurality, no unity. However, those plural particulars cause the cognition of 'unity with variegated-ness.' This appears as a discrepancy between cognition and objects. As the opponent says, "If it is not tenable to accept unity among the objects which appear as variegated, then how can there be unity and at the same time appearance of variegated-ness in that cognition?" [7, verse II.208]

Dharmakīrti's answer strengthens realism:

> This follows from the strength of reality (=the true nature of things). This is what the knowledgeable people say. (However,) as you go on thinking (critically) about the things, the things go on getting shattered.
>
> Do you mean to say that (just as there cannot be variegated-ness in a single object,) there cannot be variegated-ness in a single cognition also? If the things themselves like this, who are we to (to challenge that)?[9]

Here Dharmakīrti questions common sense realism according to which gross object (*sthūla*) is real and it causes its cognition, so that a gross thing can appear in cognition (This common-sense realism seems to be acceptable to Vaibhāṣika Buddhists or, from amongst the non-Buddhists, Vaiśeṣikas. Sautrāntika Dharmakīrti is a critical realist. According to him 'appearance of gross object' (*sthūlābhāsa*) does not exist either in reality or in a (true) cognition).[10]

2.2. Idealist Dharmakīrti

The specific structure of the direct cognition becomes the point of departure for his idealist argument according to which nothing outside consciousness can be said to exist. The 'blue' which is the content of the 'cognition of blue' and the 'cognition of blue' always exist together. There is no 'blue' content without being cognised and there is no cognition of blue without blue as its content. This is called the rule of co-cognition (*sahopalambhaniyama*) of cognition and its content. From this co-cognition Dharmakīrti argues that there is non-difference (*abheda*) between the two. This argument occurs in *Pramāṇaviniścaya*[11] and it is echoed in *Pramāṇavārttika* also.[12] The object of cognition (*svalakṣaṇa*) which was understood as sensibilia in the realist stance by Dharmakīrti is now taken to be sense-datum.

Of course, this non-difference, which Dharmakīrti calls 'abheda' between blue and cognition of blue, cannot be called absolute non-difference, but it is the relation of inseparability. This is because just as there can be 'cognition of blue', there can be 'cognition of yellow' also, which need to be distinguished from cognition of blue where we have to recognise cognition aspect to be common and content aspect to be different. That is why Dharmakīrti often talks about '*dvairūpya*' (dual character) of cognition, consciousness and content being its two distinguishable aspects. But this too is not the final position of Dharmakīrti, because he is also seen to hold that the subject-object-duality in the cognition is a false duality.[13] Hence, we come across two views as a part of Dharmakīrti's idealism: That cognition is essentially dual in nature and that cognition is essentially non-dual in nature. Dharmakīrti in his idealist stance does not seem to have resolved this inconsistency.

Dharmakīrti in his idealist stance entertains different questions from Sautrāntikas. According to Sautrāntikas though the external object (say, the blue colour-patch) is not itself the content (*ākāra*) of cognition, it is the cause (*ālambanapratyaya*) of the cognition having that content. Therefore, the cognition is called that of the blue colour patch. Yogācārin does not accept this. According to him there is discrepancy what appears and what exists outside. What exist outside are atoms. There are no gross objects there. What appears in cognition is a gross form. So eternal object is not the cause of the form grasped in perception [7, verses II.321-2]. What is the cause then? The idealist Dharmakīrti gives two different answers.

1. According to one answer, immediately preceding cognition of a similar object is the cause of the cognition of the present object.[14]

2. According to another answer, when a cognition arises, a latent impression (*vāsanā*) is awakened in a person (that is, in a consciousness-series). The difference in cognitions is due to difference in latent impressions which are awakened [7, verse II.336].[15]

At the end of the debate the idealist considers an important question coming from the realist camp. In the realist framework, a distinction is made between two kinds of '*hetu*' (cause). The cause which generates the effect (*kàraka-hetu*) and the cause (that is, the reason) which generates the knowledge of *sādhya* (*jñāpaka-hetu*).

"A sprout arises from a seed. (This is the case of generating cause). Fire is established from smoke. (This is the case of the cause as reason). This distinction the generating cause and the cause as reason rests on the acceptance of external objects.[16]

The idealist does not find any problem in it. He asks, "If even this distinction is conceptualised in relation to the appearances of their forms, as the one based on the cognitions which are regularly related in that way, what is inconsistent in it?"[17]

The realist does not find the answer satisfactory. He raises the following difficulties:

> (If smoke and fire are just appearances and not real entities, then:) There will be a smoke, which does not arise from fire. There will not be knowledge of the cause on the basis of its effect. And if at all it (= the cognition of smoke) is regarded as the cause (of the cognition of fire), how can the cognition of fire occur invariably?[18] (That is, the

> inferential knowledge of a cause from the effect will not be based on necessary relation. Hence it will occur contingently.)

The idealist answers this objection:

> Even in that case, the cognition of smoke-appearance would lead to the cognition of fire-appearance, given that the latter's latent impression is apt to be awakened. It will not give the knowledge of the (so-called real) fire.
> The mind-continuum, which has an appropriate latent impression in its core, manifests the cognition of smoke-appearance. Hence the cognition (of the causal relation) arises of the form, "Smoke arises from fire.[19]

The point is that the inferential cognition of fire from smoke according to the idealist is due to awakening of the relevant latent impression (*vāsanā*) and not due to the necessary cause-effect relation between the external reals, namely smoke and fire. And even if we grant that the knowledge of cause effect relation does play a role in the inferential cognition of fire from smoke, the so-called knowledge of cause-effect relation is due to the awakening of the appropriate latent impression.

3. Dharmakīrti's dual Identity: An Interactive Account

3.1. Giving Two Responses to the Same Odd Situation

In *Pramāṇavārttika* one finds that Dharmakīrti's background position is realist. He accepts the things which have practical or causal efficacy. In fact, the authenticity (*pramāṇa-hood*) of a cognition, rests on the reality of its object in the sense of causal efficacy (*arthakriyā-samarthatva*). In continuation with this realist framework, he presents the theory of two *pramāṇa*s, that is, two types of knowledge, direct knowledge and indirect knowledge- perception and inference. He tries to defend in this epistemology four types of perception (sense-perception, mental perception, self-manifestation and Yogic knowledge) and two types of inference (inference for oneself and inference for others) based on three kinds of *hetu*s (reasons): own-nature, effect and non-apprehension.

Though Dharmakīrti's sustained position in *Pramāṇavārttika* is realist, his realism is not naïve realism like that of Vaibhāṣikas, or that of Nyāya-Vaiśeṣikas but it is more critical. Though he accepts the existence of atoms as the real particulars, he does not accept the reality of composite wholes (*avayavin*) as real. This is consistent with his anti-substantialist position (Nairātmya-vāda). This anti-substantialism is important for Dharmakīrti from soteriological point of view also. It is through realisation of this non-substantiality only one can be free from cravings and attachments and be ultimately liberated. Secondly whereas non-Buddhist schools accept something as eternal yet having causal efficacy, Dharmakīrti asserts that whatever is real must have causal efficacy and whatever has causal efficacy must be momentary.

This gives rise to two odd situations and Dharmakīrti gives two different responses to each situation.

Oddity 1: In reality there are only distinct objects (atoms). They are many. But they cause a cognition in which a single gross form appears.

Realist response: Things are like this by nature. ("If things themselves approve of this, who are we (to question that)?")[20]

Idealist response: Appearance of an object is an illusion. Consciousness is in fact non-dual [7, verses II.212-213].

Oddity 2: Since the objects are momentary, the object which is grasped does not exist at the time of the cognition itself.

Realist response: The experts in reasoning understand that to be grasped by cognition is to be a cause of the cognition; the object contributes its form to the cognition.[21]

Idealist Response: Since the external object does exist at the time of its cognition, the cognition cannot be that of the external object. The object which appears at the time of the cognition must be intrinsic to the cognition.[22]

3.2. Understanding Dharmakīrti's Transitions from Realism to Idealism and Back

In the *Pramāṇavārttika* there are two occasions on which Dharmakīrti shifts from Sautrāntika to Yogācāra and goes back to the Sautrāntika main stream. I have called them Round trip I and Round trip II.

3.2.1. Round Trip I [Pramāṇavārttikam, II.211-219]

Sautrāntika's criticism of gross (*sthūla*) object becomes a point of transition from Sautrāntika to Yogācāra position for Dharmakīrti. A gross external object which appears to be there is unreal! So far Dharmakīrti was arguing from the side of objects. Now (from *Pramāṇavārttikam* II.212 onwards) he starts arguing from the side of cognition. Cognition is in fact part-less. But it seems to have two parts. 'Ascertainment' (*pariccheda*) is its intrinsic part. The other part (that is, the gross-appearing object) appears to be there outside. The indivisible cognition appears to be divided into parts which is an error.[23] He then argues that if one member in a dual consciousness is absent, then the duality itself is violated. Hence the essence of consciousness is non-dual [7, verse II.213]. He also describes things as indefinable (*lakṇaśūnya*) and essence-less (*niḥsvabhāva*) [7, verse II.215].

Having presented an idealistic and non-dualist position in seven verses [7, verses II.212-218] he comes back to realistic position when he says, "Hence, those who set aside the essence of things, pretend to be inattentive (to the objections against realism) like an elephant with one eye closed, and conduct deliberation on the external objects only from the peoples' point of view (*lokabuddhi*)".[24]

He then defends the position that atoms can be the objects (*grāhya*) of cognition in the sense of the cause (*hetu*) of cognition [7, verses II.223-4].

3.2.2. Round Trip II [Pramāṇavārttikam II.319-398]

The second-round trip of Dharmakīrti from Realism to Idealism and back commences when he becomes critical about the Sautrāntika's concept of *pramāṇa* as '*arthasārūpya*' ('having the same (or similar) form as the object') Finding a problem with the position, Dharmakīrti assuming the stance of a Yogācārin, asks "What (exactly) is the cognition of the object?" (Sautrāntika replies,) "It is what is called the perceptual cognition." (Yogācārin asks,) "In what way (=By what relation) is it the cognition *of* the object?" (Sautrāntika answers,) "By the relation of having the same form." (Yogācārin responds,) "This relation is variable." (That is, a perceptual cognition does not invariably have the form of the real object; for example, if it is illusory)."[25] Dharmakīrti in the stance of a Yogācārin continues a long debate [7, verses II.321-397] with a Sautrāntika to show that what appears in cognition cannot be established to be based on an external object. On the contrary it is legitimate to think that it must be rooted in the cognition itself. These are some of the major claims he makes:

1. Cognition itself becomes manifest in the form of an object.

2. Cognition and its object are not two different things. Both the subject (*grāhaka*) and object (*grāhya*) are identical with consciousness. But they appear as different due to ignorance/ error.
3. Self-manifesting cognition is the result of a true cognition. For a Sautrāntika every consciousness is self-conscious also. But a Yogācārin regards self-consciousness as the ultimate nature of every consciousness.
4. One of the arguments for negating external source of cognitions is from the intersubjective difference in cognitions. The so-called same object could be desirable (*iṣṭa*) for one and undesirable (*aniṣṭa*) for someone else. This difference in cognitions cannot be rooted in the objects themselves [7, verse II.343]. They are rooted in the latent impressions of the respective subjects.

But at a crucial point, when the Yogācārin Dharmakīrti tries to explain the inference of fire from smoke in terms of appropriate latent impressions, the Sautrāntika Dharmakīrti interrupts and says, "This is the position of the learned ones. We are, however, describing phenomena by accepting the external world as the basis. (The commonly acceptable fact remains that:) cognition has two aspects: (consciousness and content) and it is established by the rule of co-cognition."[26]

4. Observations and Appraisal

From the brief account of Dharmakīrti's presentation of the two positions in *Pramāṇavārttika*, I argue that the two positions of Dharmakīrti may be regarded as his two stances. The realist stance is more stable, sustained. This realism is critical about substantialist and soul-regarding realism of other schools such as Nyāya-Vaiśeṣika, Mīmāṃsā and Sāṅkhya. So, his realism can be called critical realism. But when he becomes critical about some aspects of the critical realism itself, he turns an idealist. But Idealism is not his stable or sustained position. Out of the 1453 verses of the whole of the *Pramāṇavārttika,* less than one hundred verses support idealism. These verses occur in the middle of the discussion of perception. We have seen above the two occasions on which Dharmakīrti makes transition from realism to idealism and returns to realism. How to understand this phenomenon? I want to discuss the following questions in this context:

1. What is the nature of Dharmakīrti's idealism? Can it be called purely epistemic rather than a metaphysical one?
2. What is the logical relation between the two positions? Can the idealist position follow from the Sautrāntika realism? What are the implications of idealism to the Sautrāntika epistemology and logic?
3. Which was the main position of Dharmakīrti-Sautrāntika realism or Yogācāra Idealism? Or both from different perspectives?

4.1. Was Dharmakīrti's Idealism Purely Epistemic?

I have argued above that Sautrāntika and Yogācāra can be regarded as the two stances of Dharmakīrti. So he cannot be identified as just a realist or an idealist. Are the two positions compatible? It has been argued that his idealist position was epistemological in nature. Accordingly, consciousness of blue has blue content (or 'form', *ākāra*) and consciousness is directly aware of the content and is not aware of anything external. John Dunne [3, p. 59] calls this epistemic idealism. Dan Arnold [2] endorses the view and adds that epistemic idealism can be regarded as the view common to Sautrāntika and Yogācāra. That is because even according to the Sautrāntika position of Dharmakīrti the direct object of the cognition is mental; the so-called external object of cognition is the cause of the cognition, not its direct object.

The question is, is Dharmkīrti's idealism strictly epistemic, without metaphysical component? I want to claim that though Dharmakīrti's idealism was epistemologically based, in its development, it tends to become metaphysical as well. For, Dharmakīrti raises the question against the realist: Why does any cognition which has a particular content, has that content and none other

at that time? What is the source of that content? The realist's answer that the the particular form of the cognition is due to the external object is not acceptable to the idealist Dharmakīrti. We have seen that Dharmakīrti in his idealist stance gives two different answers to this question. One is in terms of immediately preceding cognition which has a similar object (*samānārthaṃ vijñānaṃ samanantaram,* [7, verse II.323]) and the other is in terms of latent impression (*vāsanā*).

The first answer has an epistemological form but it is unsatisfactory. The answer is applicable if I have a series of cognitions of the series of similar objects. But in case one has cognitions of varying objects, that is, one is shifting one's attention from one type of object to another type, the immediately preceding cognition cannot be said to provide the source to the content of the next cognition.

The second answer is in tune with the typical answer of Yogācāra which refers to *ālaya-vijñāna* (store-consciousness) which is not itself conscious but consists of latent impressions or traces of past actions.[27] Hence Dharmakīrti argues that a cognition has a particular content due to latent impressions. I want to claim that since *vāsanā* is a transcendent entity, not given in the consciousness itself, the explanation of consciousness in terms of *vāsanā* does not remain purely epistemological, but tends to become metaphysical as a latent impression is always a transcendent thing. So, the two views: Sautrāntika view according to which content of a perceptual cognition is generally derived from an external object and the Yogācāra view according to which the content of a cognition is derived either from immediately preceding cognition or from latent impressions but never from external objects – are the two competing metaphysical views. We can say that both the views have a purely epistemological idealism as a common component. Both of them agree that the immediate object of any cognition is the form (*ākāra*) of the cognition itself. But they differ about the source of this form.

Another reason is sometimes supplied in favour of epistemic character of Dharmakīrti's idealism. Though Dharmakīrti in his idealist stance denies the existence of the external objects, he does not prove the non-existence of them. Here Dharmakīrti's idealism is compared with that of Vasubandhu. Vasubandhu in his *Viṃśatikā*, advances arguments against the realist view which regards the external objects as ultimately divisible into atoms. Vasubandhu tries to prove that external objects as well as atoms as their components cannot exist. This renders Vasubandhu's idealism metaphysical. Unlike Vasubandhu, Dharmakīrti does not advance any such argument against atomism. Hence it is argued that his idealism remains epistemic [2, pp. 16-17].

Against this it can be said that though Dharmakīrti in his idealist stance does not advance arguments against the existence of external objects, or atoms which are their ultimate constituents, he does make a clear assertion that "external objects simply do not exist."[28] Hence his idealism is not metaphysically neutral. However, in that case why Dharmakīrti does not give arguments against the existence of external objects remains a question.

Kellner [5, pp. 117-8] points out that though in Dharmakīrti's logical framework a special type of reason called "non-apprehension" (*anupalabdhi*), is accepted for proving absence, the scope of this reason is very limited. It does not permit universal ontological denial. So, Dharmakīrti could not use it for proving the non-existence of atoms. Kellner's point is well-taken. However, it need not be a problem with Dharmakīrti's method of argumentation. For example, when Dharmakīrti denied the existence of the entities such as God[29] (*īśvara*), composite wholes[30] (*avayavin*) and universals[31] (*sāmānya/jāti*) projected by Naiyāyikas, he does not use non-apprehension as reason for proving their non-existence, but uses arguments of *prasaṅga* type ('reductio-ad-absurdum' type). In fact, the arguments against atomism, which Vasubandhu advances in *Viṃśatikā* also are of Reductio-ad-Absurdum type. Vasubandu does not try to prove non-existence of atoms directly, but brings out inconsistencies arising from the concept of atom (*paramāṇu*) understood in a particular way.[32] This way was open to Dharmakīrti as well. But he did not go by that. This was possibly because even in his idealist stance he was not interested in condemning the external realism totally. He was ready to allow it as a logical possibility.[33]

4.2. Implications of Dharmakīrti's Idealism to the Sautrāntika Epistemology and Logic

Though idealist position appears in *Pramāṇavārttika* in the course of discussion of the Sautrāntika theory of perception, it does not appear as a natural outcome of the latter, but only by questioning some of its basic presuppositions. As a matter of fact, the idealist analysis of consciousness has adverse implications to Dharmakīrti's Sautrāntika theory of *pramāṇa*s. However, Dharmakīrti does not discuss these implications. Here are some examples:

The Status of *Svasaṃvedana*

While classifying perception, Dharmakīrti acknowledges four kinds: sense-perception, mental consciousness, self-conscious perception and Yogic knowledge. In this classification self-conscious perception (*svasaṃvedana*) is the direct awareness of mind and mental factors. All other types of perception can have external entities as their objects. But self-conscious perception cannot. Although we understand Dharmakīrti as accepting self-illuminating nature of all cognitions,[34] this only means that a cognition not only cognises its object, but also itself. This would mean that all types of perception are self-conscious perceptions *also*. In idealist concept of perception, all perceptions will be self-conscious perception *only*. Here a sharp distinction has to be made between two statements:
1. All cognitions are self-conscious also.
2. All cognitions are self-conscious only.
The first can be accepted by Sautrāntikas whereas the second can be accepted by Yogācārins only.

***Nirvikalpaka-savikalpaka* Distinction**

In Sautrāntika epistemology a clear distinction is made between non-conceptual cognition (*nirvikalpaka-jñāna*) and conceptual cognition (*savikalpaka-jñāna*). In *nirvikalpaka*, the object is 'given'; it comes from an outside source. In *savikalpaka*, the object is mentally constructed. In Yogācāra, the objects (or contents) of all cognitions are mental. The distinction between 'given' and 'constructed' gets blurred.

Distinction Between True and False, Real and Unreal

According to Sautrāntika, a true cognition is that which is non-discordant (*aviasṃvādi*) with the real object and false cognition is that which is discordant with it. Similarly, a real object is that which has a specific causal efficacy (*arthakriyāśakti*); an unreal object lacks it. Both these distinctions get blurred in Yogācāra epistemology. For example, real water is that which can be drunk, which quenches your thirst. That is its causal efficacy. The water seen in mirage is not real because it does not have the causal efficacy. According to Yogācāra there is no real water. The so-called real water is just water-appearance. The so-called unreal water is also water appearance. No distinction can be made between them. Both the cognitions are equally false as the cognitions of (external) real water. The concept of real as causally efficacious will be available here also. But it will have a very limited scope. Only consciousness will be real and it will have efficacy to produce another consciousness. Or if consciousness as well as its contents (*ākāra*) are real then there can be the inferences about the contents of consciousness as well. But there cannot be inference about anything beyond them. In fact many a time causal efficacy gets dropped as the criterion of the real in Yogācāra. Since the object in given in the cognition as its content, it is not the cause of the cognition. Still content of a cognition is called real, simply because it appears in a cognition; not because it causes a cognition.

Inference

Inference as *pramāṇa* can be accepted in Yogācāra also. But it will be riddled with many issues in its actual application. According to the theory of inference, *pakṣa* (the *dharmin*, which is the subject of inference) should be existent and acceptable to both the parties in debate. According to Yogācāra, consciousness (or the content of it) alone is real; hence that alone can be the subject of any inference. But inference also needs pervasion which is to be proved in similar and dissimilar cases (*sapakṣa* and *vipakṣa*) outside the *pakṣa*. But according to Yogācāra there is nothing outside. So, no genuine instances (*dṛṣṭānta*) are available for the idealist thesis. However, idealists such as Vasubandhu had a tendency to use instances from everyday life (such as dream, waking stage and hallucinations) and mythological beliefs (such as world of the dead and Hell) which belong to outside world for proving the idealist thesis which denies everything outside.

Types of Inference: *Svabhāvānumāna*

Coming to Dharmakīrti's classification of inferencee, a Yogācārin can appreciate *svabhāvānumāna* (inference based on own-nature) insofar as it can stand on pervasion as conceptual inclusion between the sign and the signified without observed instances. The inferences such as "This is a tree because it is a Śiṃśapā," or, "A word is momentary because it is real," will be out of picture because they are about external objects. "Consciousness is momentary because it is real" is permissible.

Types of Inference: *Kāryānumāna*

The other kind of inference, that of effect from cause will also have serious limitations in Yogācāra tradition. Out of four types of causes (*pratyaya*) accepted by realist Buddhists, *hetu* (accomplishing cause, for example, sense organ), *ālambana* (object as cause), *samanantara* (immediately preceding cause) and *adhipati* (governing cause), only two, namely *samanantara* and *adhipati* can be accepted by Yogācārins. External object as cause is specifically denied by them. Similarly, there is a difficulty in accepting *hetu* (for example, visual sense organ as the cause of visual perception) in so far as it is material in nature. *Samanantara* is accepted, as immediately preceding consciousness gives rise to the succeeding consciousness in a consciousness-series. *Adhipati* is accepted for explaining 'inter-series' relation between one mind series and another mind series.[35] Again, this causal relation is strictly accepted as between two consciousnesses, belonging to the same series or different series. The typical causal relations we observe in the world, like between seed and sprout, or fire and smoke are not acceptable in the Yogācāra framework. Let us see how a problem arises in Yogāccāra framework with respect to inference of fire from smoke.

Inference of Fire From Smoke: A Case Study

An oft-quoted example of inference is the inference of fire from smoke. In Dharmakīrti's scheme it is an inference of cause from effect. However, smoke and fire as the external objects as well as the causal relation between them are not available to Yogācāra. The inference of fire from smoke, therefore, cannot be defended in the Yogācāra framework. However, we have seen above that Dharmakīrti in his idealist stance tries to defend the inference on the basis of 'the mind series which has an appropriate latent impression as the core' (*tadyogyavāsanāgarbhaḥ cittasantānaḥ* [7, verse II. 397]). Can this be a satisfactory explanation of inference of fire from smoke? Latent impressions could be occasioning conditions of inferential knowledge, but they cannot be the validating conditions. For example, someone may infer fire from smoke due to the particular latent impressions one has formed. Another person may infer smoke from fire due to some other latent impressions. We know that inference of fire from smoke is sound, but that of smoke from fire is unsound. That is because there can be fire without smoke but there cannot be smoke without fire.

And we know this on the basis of the observation of the outside world and not on the basis of the subjective latent impressions we have formed. We cannot define sound inference as the one caused by an appropriate latent impression and unsound inference as the one caused by the inappropriate one, because which impression is appropriate and which inappropriate will be ultimately determined by the actual relation between smokes and fires. Hence the explanation of a sound inference just in terms of 'appropriate latent impressions' is quite inadequate. Dharmakīrti perhaps realises the inadequacy of the explanation which he gives in verse II.397. That is why he abruptly breaks the discussion with the (ironical) remark that 'this is the view of the learned ones' and resumes the talk based on the external world.[36]

Anupalabdhi **(Non-perception) as a** ***Hetu***

Dharmakīrti in his theory of inference acknowledges three types of *hetu*: *svabhāva*, *kārya* and *anupalabdhi*. We have seen that *svabhāva* and *kārya* as the *hetu*s can be available in Yogācāra with many limitations. There is a more serious problem about *anupalabdhi-hetu*. This type of *hetu* is used for proving absence of a thing provided that the thing under consideration is capable of being perceived (*upalabdhi-lakṣaṇa-prāpta* or *dṛśya*). The idea that a thing exists (outside consciousness), but it is not perceived because it is remote (in space or time or own nature) itself presupposes the existence of external objects. Hence *anupalabdhi* as a *hetu,* is contrary to idealism. Secondly the so-called knowledge of absence of the form, "In this colour patch there is no blue," 'blue' is very much a part of content of the cognition though it is said to be absent. Hence in idealist framework, there cannot be a genuine cognition of absence of an object, as it will go against the rule of co-cognition, which says, "Blue and cognition of blue are always together."

The general point here is that Yogācāra idealism cannot be 'based' on the Sautrāntika theory of *pramāṇa*s, but it becomes possible only by violating or incapacitating many aspects of the latter. However, Dharmakīrti is silent on this point. Though on certain occasions he regards idealism as the superior position obtained by criticising the external realism of Sautrāntikas, he does not try to develop idealist epistemology as a comprehensive alternative epistemology.

4.3. What is Dharmakīrti's Main Position – Realism or Idealism? Or Both From Different Perspectives?

Given that Dharmakīrti supports both the positions – Yogācāra idealism and Sautrāntika realism in their respective contexts, the question can be asked as to which of the two positions according to Dharmakīrti was more acceptable. It is not easy to answer the question in categorical terms. Among modern scholars Amar Singh [1] strongly argued for the position that Dharmakīrti's final position was Sautrāntika. The main grounds for his argument are *Nyāyabindu* and *Pramāṇavārttika*. About *Nyāyabindu* it is more or less obvious that it agrees with the Sautrāntika Realism in its epistemology and ontology. Amar Singh finds substantial continuity between *Nyāyabindu* and *Pramāṇavārttika*. He discusses many allegedly idealist verses from *Pramāṇavārttika* and tries to show that they are in fact favourable to Realism. However, Amar Sing's efforts are incomplete and somewhat unsystematic. He takes up some verses from *Pramāṇavārttika* (verses II.320, 338, 365, 398) and tries to show that Manorathanandin's pro-idealist commentary on them is flawed. But leaves many other verses (for instance, verses II.335, 336. 388-397) which strongly suggest that Dharmakīrti there is supporting idealism. Similarly he rejects Vinītadeva's interpretation of Santānāntarasiddhi which showed Dharmakīrti's affiliation to 'mind-only' thesis and claims that there Dharmakīrti was speaking as a Sautrāntika and was telling the Yogācāras that the argument for the existence of other minds which is available to the realists is also available to the idealists. A question here is: why should Dharmakīrti help idealists unless he himself had affinity towards idealism? Hence understanding Dharmakīrti's position exclusively as Sautrāntika realism and treating idealism simply as his rival position (*pūrvapakṣa*) doesn't seem to be fair enough.

On the other extreme end, we have scholars who regard Dharmakīrti's final position as an idealism of some sort. (Some modern scholars have called it epistemic idealism whereas I am inclined to call it a metaphysical one as I have argued already). Traditional upholders of the pro-idealist interpretation of Dharmakīrti generally appropriated him as a *Sākāra-vijñānavādin* (One who regards consciousness with its content as the ultimate reality). According to this appropriation, *Sākāravijñānavāda* was the ultimate truth (*paramārtha*) and Sautrāntika realism was only conventionally true (*Saṃvṛti-satya*). However, it is doubtful whether Dharmakīrti uses the terminology of *Saṃvṛti* and *Paramārtha* in that way. On the contrary he tries to defend the Sautrāntika concept of reality against the charge that it exists only according to convention (*Saṃvṛti*).[37] It is true that while defending Yogācāra he sometimes calls non-dual consciousness as the truth (*tattva*) and duality as error (*upaplava*). Many a time, however, he regards dual nature of cognition as true; and that is natural because his Yogācāra idealism is based on the rule of co-cognition (*sahopalambha-niyama*) which is essentially dualistic. On the other hand, in Sautrāntika stance he calls *svalakṣaṇa* as *paramārtha-sat* as it is causally efficacious. He uses the word '*saṃvṛti*' for universals (*sāmānyalakṣaṇa*) in that context.[38]

Notable among modern scholars is Birgit Kellner who claims that out of the two views, idealism and realism, idealism is superior to realism according to Dharmakīrti. He gives three main reasons for his claim. One reason is that idealism "provides the more accurate analysis of cognition, yet realism remains the default level of analysis in most areas of philosophy in which Dharmakīrti engages, notably in his theory of inference" [5, p. 107]. The second reason he advances is that idealism is superior to realism from soteriological point of view also. "The idealist theory represents a level of analysis that corresponds more closely to how beings that are further advanced on the Buddhist path to liberation are to experience reality" [5, p. 107].[39] Kellner also claims that the fact that Dharmakīrti wrote the *Santānāntarasiddhi,* to prove the existence of other mental continua, and to avert the danger of solipsism is evidence to support that Dharmakīrti was generally committed to idealism [5, pp. 106-7]. Kellner's claims give rise to some questions.

1. It can be agreed that Dharmakīrti in his idealist stance raises legitimate objections against the realist thesis of external objects. But if the idealist analysis of consciousness is accepted, it will have adverse implications (which we will consider soon) to the theory of *pramāṇa*s which he explains elaborately in *Pramāṇavārttika* and other works. Dharmakīrti does not discuss these implications. On the other hand, he abruptly breaks the presentation of the idealist approach to consciousness and comes back to realist framework.[40]

2. Kellner observes that "realism remains default level of analysis in most areas of philosophy in which Dharmakīrti engages." What he means by 'default level of analysis', is not clear. One meaning of 'default' is a preselected option adopted by a mechanism. Realism is not a default analysis in this sense. It is not imposed by any mechanism on him. It is the position willingly and thoughtfully accepted by Dharmakīrti. At best Sautrāntika realism can be called his mainstream position and Yogācāra idealism can be an island which he visits on the way and rests there for some time for the intellectual satisfaction he obtains there.

3. Though in his idealist stance Dharmakīrti regards non-dual consciousness as the truth and duality as an error (*upaplava*), apart from such occasional references Dharmakīrti does not elaborate on the idealist soteriology. On the other hand, in the first chapter of the same text [7, verses I.148-281]. Dharmakīrti elaborately discusses Buddha's soteriology as centred on four noble truths. There he understands the notions of love for oneself (*ātmasneha*) and craving (*tṛṣṇā*) as the causes of suffering and freedom from cravings and the realisation of non-substantiality (*Nairātmya*) as the causes of Liberation The analysis of suffering and liberation which Dharmakīrti gives there is quite suitable to the realist Buddhist framework and Dhramkīrti too does not make reference to idealism there.

4. Dharmakīrti's argument in *Santānāntarasiddhi* is not a convincing evidence to prove that he was committed to idealism. What Dharmakīrti tries to show in the work is that the argument for the existence of other mind continua, which is available to realists is equally available to the idealists. This does not necessarily imply that Dharmakīrti was either a committed realist as Amar

Sing thinks or a committed idealist as Kellner thinks. It can very well imply that both realism and idealism were equally important for him.

5. Conclusion

We have seen in Section 3 how Dharmakīrti addresses some odd situations from both the stances. We also saw how from the mainstream realist position he enters the island of idealism and also leaves it for the sake of the mainstream. In Section 4.1, I have tried to argue that Dharmakīrti's idealism cannot be called purely epistemic but it does have a metaphysical dimension. In Section 4.2, I tried to draw the implications of Idealism which considerably curtail and obstruct the scope of the Sautrāntika epistemology and logic. In Section 4.3, I have dealt with the two claims about Dharmakīrti's main position in his works: whether it is Yogācāra idealism or Sautrāntika realism. I have rejected both the claims. I find in Dharmakīrti's approach a kind of ambivalence between the two positions. He argues for idealism by criticising Sautrāntika realism, but does not engage much with it. He comes back to the Sautrāntika position and engages with it in a sustained manner.

Hence while understanding the dual philosophical personality of Dharmakīrti, I would like to put his two positions or the two stances not in hierarchical order, (as John Dunne and Birgit Kellner have done) but on par with each other. Dharmakīrti was attracted towards both and was clearly or vaguely aware of the limitations of both. He was attracted to idealism (of his variety) for its critical dimension. He was attracted to Sautrāntika position for its capacity to explain the diverse phenomena and lead human beings to their goals.[41]

I call Dharmakīrti's position as dual position, but I don't call it as a joint position or synthetic position. The two positions are not logically compatible with each other. Still Dharmakīrti is attracted towards both from different perspectives.

Annexure. Is Dharmakīrti's idealistic position strong enough to supersede his Sautrāntika stand?

Whether Dharmakīrti regarded Yogācāra idealism as his main position is one question. Whether the idealist position he presented really superseded Sautrāntika position is quite another. I will give my remarks about this second question now.

As I have argued, Dharmakīrti's idealism cannot be called purely epistemological, as it does not lack metaphysical component. The metaphysical component in Dharmakīrti's idealism is the rootedness of the content of cognition in the latent impressions (*vāsanā*) which are not directly given in the cognition.

Dharmakīrti's assertion of 'latent impressions' can be examined in this context. One of his arguments can be stated as follows:

Dharmakīrti points out that two persons (here 'persons' are to be understood as consciousness series) can have contrasting cognitions of the same object. One may cognise it as desirable (*iṣṭa*), the other as undesirable (*aniṣṭa*). In such a situation the two cognitions cannot be governed by the object itself ('*na nāmārthavaśā matiḥ*') [7, verses II.340-343]

What is it governed by then? Different persons have different cognitions with respect to the same or different objects. This distribution of cognitions ('*dhiyāṃ viniyamaḥ*') happens because only a particular cognition awakens the latent impression in a particular person, this distribution is not relative to external objects [7, verse II.336].

One can inquire further. Why do the latent impression and the way it is awakened differ from person to person? What is the basis for determining that the latent impression is functional in a person in a particular way? There is no convincing answer. Hence if the Sautrāntika view that 'there must be an external object, which is the real objective source of a true perceptual cognition' is dogmatic, then the Yogācāra view that the so-called true perceptual cognition has only a subjective latent impression as its source, is dogmatic as well.

This is not to suggest that latent impressions have no role to play in Sautrāntika theory of knowledge. Sautrāntikas distinguish between non-conceptual (*nirvikalpaka*) and conceptual (*savikalpaka*) cognition. The former is objectively based whereas the latter is subjectively based. Yogācārins on the other hand claim that every cognition, whether conceptual or otherwise is only subjectively based. And this raises a problem.

I am suggesting that exclusive emphasis on subjective source of cognitions can explain inter-subjective diversity of cognitions. But it cannot elegantly explain inter-subjective unity. For example, when a group of persons observes an event, they have similar non-conceptual cognitions. A Sautrāntika can explain this phenomenon simply by referring to the 'fact' that the event must actually be occurring there, which is the object of the cognitions of many persons. This path is not available to a Yogācārin. He has to give a tedious explanation that all the observers somehow have similar hallucinations, because similar latent impressions get awakened in them in similar ways. Hence 'perception of a similar object' by two persons (which is in fact a similar hallucination) becomes a matter of sheer co-incidence occurring to two mind-continua due to the mysterious match of their latent impressions. Sautrāntika does not have to take such a roundabout tour through a mysterious land. The Sautrāntika explanation has simplicity (*Lāghava*, parsimony) whereas Yogācāra explanation becomes cumbersome, inflicted by heaviness (*Gaurava*).[42]

Hence although Dharmakīrti successfully brings out the deficiencies of the Sautrāntika position, the Yogācāra position which he presents as its alternative, leads to more problems than it solves.

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Notes

1. For an account of this diversity see [1, pp. 49-51].
2. A confirmed Vijñaptimātratāvādin would say that the particular form (*ākāra*) of an object is not due to the form of an external object, but due to the past impressions of actions belonging to the same series or *ālayavijñāna*. Dharmakīrti however says,"If the cognition somehow appears without assuming the form of the object, how does it grasp an object? Really, I also do not know." (*yathākathañcit tasyārtharūpaṃ muktvāvabhāsinaḥ| arthagrahaḥ kathaṃ satyaṃ na jāne'ham apīdṛśam*‖) [6, verse II.353] This implies a kind of agnosticism about external objects and not their negation. He is suggesting that the existence of external objects cannot be proved, but he is not affirming the non-existence of the external objects.

3. *Yasya arthasya sannidhānāsannidhānābhyāṃ jñānapratibhāsābhedas tat svalakṣaṇam* [6, p. 69].
4. *Tatra pratyakṣaṃ kalpanāpoḍham abhrāntam* [6, p. 32].
5. *Hetubhāvād ṛte nānyā grāhyatā nāma kācana | tatra buddhir yadākārā tasyās tad grāhyam ucyate* || (There is no grasped-hood other than cause-hood. A cognition is said to be of that grasped-object, whose form the cognition assumes.). Also, *bhinnakālaṃ kathaṃ grāhyam it iced grāhyatāṃ viduḥ | hetutvam eva yuktijñāḥ jñānākārārpaṇakṣamam* || [7, verse II.247] (If you ask, "How can an object belonging to different time be the grasped object?" Then (our answer is that) the experts in reasoning understand grasped-ness as cause-hood which consists in offering one's own form to cognition.)
6. This is comparable with Russell's early view on Sense data as reported by Gary Hatfield in Stanford Encyclopaedia of Philosophy: "Early theorists who considered sense data to be mind-independent typically thought of them as persisting through time. Russell, in early sense-data writings (1912: Ch. 1), viewed such data as existing apart from the mind as a special kind of thing (neither mental nor physical), which was commonly designated as a *tertium quid* or "third thing", in addition to objects (such as a physical table) and the perceiver's mental states. Such intermediary third things might be epistemically given only in the act of sensing them, but they would not depend for their existence on that act. This led to the notion of unsensed sense data (e.g., mind-independent patches of color), which were sometimes called "sensibilia" to indicate that they could be sensed if someone were at the right location, but that they existed in any case (Russell 1914b: sec. 3)" [4].
7. *Arthāntarābhisambandhāj jāyante ye'ṇavo'pare | uktās te sañcitās te hi nimittaṃ jñānajanmanaḥ* || [7, verse II.195].
8. See, for instance, [7, verse II.225].
9. *Idaṃ vastubalāyātaṃ yad vadanti vipaścitaḥ | yathā yathā'rthāś cintyante viśīryante tathā tathā || kiṃ syāt sā citrataikasyāṃ na syāt tasyāṃ matav api| yadīdaṃ svayam arthānāṃ rocate tatra ke vayam* || [7, verses, II. 209-10].
10. This seems to be the content of [7, II.211].
11. *Sahopalambhaniyamād abhedo nīlataddhiyoḥ* [9, p. 39, verse k53ab].
12. *Nārtho'saṃvedanaḥ kaścid anarthaṃ vāpi vedanam | dṛṣṭaṃ saṃvedyamānaṃ tat tayor nāsti vivekitā* || [7, verse II.390]. [No object is seen without cognition and no cognition is seen without an object. Therefore, there is no separateness between the two.]
13. *Vibhaktalakṣaṇagrāhyagrāhakākāraviplavā* [7, verse II.331ab]. [That subject-form and object form are distinct in a cognition, is an error.] Also see [7, verses II.212, 354].
14. *Tatsārūpyatadutpattī yadi saṃvedyalakṣaṇam| saṃvedyaṃ syāt samānārthaṃ vijñānaṃ samanantaraṃ* || [7, verse II.323]. (If the object of a (true) perception is supposed to have two characteristics: 'having the same form as that' and 'arising from that', then then immediately preceding cognition which has a similar object would be the object of the present perception). Again in verses II.391-2 he says that the object of cognition must be simultaneous with the cognition and identical with it. One can state the rule that the perceptual cognition will not occur if all other causes are present but the immediately preceding cognition is not. There is a point in inferring (external object as) another cause if this rule is not spoken of. This suggests that the idealist wants to replace 'external object' by 'immediately preceding cognition' (that is, *ālambana-pratyaya* by *samanantara-pratyaya*).
15. The idealist Dharmakīrti holds that even the inferential cognition of fire from smoke and the cognition of the cause effect relation between smoke and fire arise due to arousal of the relevant latent impressions, not due to the real existence of smoke and fire or the real cause effect relation [7, verse II.366-7].
16. *Bījād aṅkurajanmāgner dhūmāt siddhir itīdṛśī | bāhyārthāśrayiṇī yāpi kārakajñāpakasthitiḥ* || [7, verse II.393].
17. *Sāpi tadrūpanirbhāsā tathā niyatasaṅgamāḥ | buddhīr āśritya kalpyeta yadi va kiṃ virudhyate* || [7, verse II.394].
18. *Anagnijanyo dhūmaḥ syāt tatkāryāt kāraṇe gatiḥ | na syāt kāraṇatāyāṃ vā kuta ekāntato gatiḥ* || [7, verse II.395].
19. *Tatrāpi dhūmābhāsā dhīḥ prabdhapaṭuvāsanāṃ | janayed agninirbhāsāṃ dhyam eva na pāvakaṃ|| tadyogyavāsanāgarbha evadhūmāvabhāsinīm | vyanakti cittasantāno dhiyaṃ dhūmo'gnitas tataḥ* || [7, verses II.396-7].
20. *Yadīyaṃ svayam arthānāṃ rocate tatra ke vayam?* [7, verse II.210cd].
21. *…Grāhyatāṃ viduḥ| hetutvam eva yuktijñāḥ jñānākārārpaṇakṣamaṃ* || [7, verse II. 247cd].
22. *Tasmād arthasya durvāraṃ jñānakālāvabhāsinaḥ | jñānād avyatirekitvam…* [7, verse II.391abc].
23. *Paricchedo'yam anyo'yaṃ bhāgo bahir iva sthitaḥ | jñānasyābhedino bhedapratibhāso hy upaplavaḥ* || [7, verse II. 212]. Here instead of '*bhedinau bhinnau*' I am accepting the reading '*bhedino bheda*' following the reading accepted in [8, p. 288].
24. *Tad upekṣitatattvārthaiḥ kṛtvā gajanimīlanam | kevalaṃ lokabuddhyaiva bāhyacintā pratanyate* || [7, verse II.219].
25. *Kārthasaṃvid yad evedaṃ pratyakṣaṃ prativedanaṃ | tad arthavedanaṃ kena tādrūpyād vyabhicāri tat* || [7, verse II.320].
26. *Asty eṣa viduṣāṃ vādo bāhyaṃ tvāśritya varṇyate | dvairūpyaṃ sahasaṃvittiniyamāt tac ca sidhyati* || [7, verse II.398].
27. Manorathanandin combines the two answers when he interprets the term '*antarvāsanā*' (which could be translated as 'internal latent impression' or just 'latent impression') in [7, verse II.336], as 'the latent impression which exists inside the immediately preceding condition and which is characterised by the capacity to produce a specific cognition' (*antarvāsanāyāḥ samanantara-pratyayāntara-vartinyāḥ niyata-jñāna-janana-yogyatā-lakṣaṇāyāḥ*). This means that he regards the latent impression as contained in the immediately preceding cognition. My point is that even if *vāsanā* is said to be contained in the preceding cognition, it is still a transcendent entity as it is not 'given' in the cognition.

28. *Nārtho bāhyo'sti kevalam* [7, verse II.335d].
29. Against the Nyāya argument for God Dharmakīrti argues, "If the potter is accepted as crater of a pot on the basis of its structure, then he can be regarded as the creator of an anthill also" [7, verse I.15].
30. In [7, verses II.149-151] Dharmakīrti brings out the inconsistencies involved in the concept of *avayavin*.
31. Dharmakīrti in [7, verses III.152cd-156] brings out inconsistencies which acceptance of universals as real leads to.
32. Vasubandhu's method in his refutation of atomism in [10, verses 11-15] is of Reductio-ad-Absurdum type.
33. This is suggested by his statement, *yadi bāhyo'nubhūyeta, ko doṣo naiva kaścana* [7, verses II.333ab] ("If an external object is (said to be) experienced, what is the fault there? There is no fault at all").
34. For instance, he says, "If a cognition does not cognise its own nature, how can it cognise the nature of something else?", (*athātmarūpaṃ no vetti, pararūpasya vit katham* | [7, verse II.444ab].
35. *Anyonyādhipatitvena viñapti-niyamo mithaḥ* [10, verse 18ab].
36. *Astyeṣa viduṣāṃ vādaḥ, bāhyam tv āśritya varṇyate* [7 verse II.398ab]. Here by the expression '*viduṣām*' Dharmakīrti probably refers to the idealist thinkers who are engaged in transcendental explanations by neglecting bare observational facts.
37. *Saṃvṛtyā'stu yathā tathā* [7, verse II.4d]. Dharmakīrti says this in the context of two types of objects of the two *pramāṇa*s. Dharmakīrti says there that out of the two types of objects whatever is capable of causal function (*arthakriyāsamartha*) is ultimately real (*paramārthasat*). The other type of object is called conventionally real. The two objects are self-characterised (*svalakṣaṇa*) and universally characterised (*sāmānyalakṣaṇa*) respectively. The opponent says, "But everything is incapable". Dharmakīrti replies, "The capacity of seed etc. to produce sprout etc. is seen (by us).". The opponent agues, "But the causal capacity is accepted only at conventional level (*saṃvṛttyā*)." On this question Dharmakīrti simply replies, "Let it be as it is." This suggests that causal efficacy as the criterion of the real is important according to Dharmakīrti even if it is accepted conventionally.
38. *Arthakriyāsamarthaṃ yat tad atra paramārthasat | anat saṃvṛtisat proktaṃ te svasāmānyalakṇe* || [7, verse II.3].
39. This is in accordance with John Dunne's description of Dharmakīrti's method as the sliding scale of analysis. Dunne argues that his scale of analysis is also a scale of progression toward spiritual perfection [3, p. 61]. I have argued that though Yogācāra idealism was superior for Dharmakīrti from critical point of view, Sautrāntika realism was equally important for him from practical point of view. Both the views make spiritual perfection possible.
40. See, the Transition II discussed above.
41. As Dharmakīrti in the opening sentence of the *Nyāyabindu* says that the twofold right cognition leads to attainment of human ends (*puruṣārthasiddhi*). The *Nyāyabindu* theory is generally accepted to be following external realism.
42. It is sometimes suggested that though Dharmakīrti does not try to refute the existence of atoms, his idealism will be a strong metaphysical position if it is supplemented by Vasubandhu's arguments against atomism. However, it is doubtful whether Vasubandhu's arguments against atomism are conclusive. Arguably it rests on the confusion between what is physically indivisible and what is logically/mathematically indivisible. The concept of atom becomes paradoxical if it is regarded as a concrete particle which does not occupy space. Generally, atomist metaphysicians and scientists do not conceive of an atom in that way.

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Development of Jaina Pramāṇaśāstra in the Commentaries of *Tattvārthasūtra*

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Abstract:
In Jaina philosophy, *pramāṇa* is accepted as a definitive knowledge of an object and knowledge itself. There are many treatises on Jaina *pramāṇa-śāstra* which include epistemology and logic according to Jainism. Since Siddhasena's *Nyāyāvatra* more than forty texts and commentaries are available on this subject. Five types of knowledge i.e. *matijñāna* (knowledge through sense organs and mind), *śrutajñāna* (scriptural of verbal knowledge), *avadhijñāna* (clairvoyance), *manaḥparyayajñāna* (knowing the modes of others' minds) and *kevaljñāna* (knowledge of all substances and modes) as mentioned in the canonical literature are the basis of the development of Jaina *pramāṇa-śāstra*. Contributions of Bhaṭṭa Akalaṅka (720–780), Vidyānanda (775–840), Ananatavirya (950–990), Vādiraj (1025), Abhayadevasuri (10th century), Prabhācandra (980–1065), Vādi devasśūri (1086–1169, Hemacandra (1088–1173), Dharmabushaṇa (15th century), Yaśovijaya (18th century) are very important in the development of Jaina *pramāṇa-śāstra*, the *Tattvārthasūtra* and its commentarial literature has also a significant role in developing the Jaina *pramāṇa-śāstra*. This development has three aspects-conceptual, analytical and logical. The *Tattvārthasūtra* is the first text which established the classification of knowledge as two types of *pramāṇa* – *pratyakṣa* (perception) and *parokṣa* (indirect *pramāṇa*). An intensive discussion on Jaina epistemology or *pramāṇa-śāstra* is seen in the commentarial literature of the *Tattvārthasūtra*.
Keywords: knowledge, *pramāṇa*, perception, inference, probans, probandum, determinate, indeterminate.

1. Introduction

The *Tattvārthasūtra* of Umāsvāti or Umāsvāmi is the first Sanskrit text of Jaina philosophy. It contains ten chapters in the style of aphorisms and was coined in the second century. It bears the essence of Jaina canonical literature in respect of the branches of philosophy i.e. epistemology, metaphysics and ethics.

Commentary writing is an old tradition in Jainism. There is a vast variety of commentaries on canonical literature. Mainly five types of commentaries are available: 1. *niryukti* 2. *bhāṣya* 3. *cūrṇi* 4. *tīkā* or *vṛtti* 5. *tippaṇa*. *Niryukti*s and *bhāṣya*s have been written in Prakrit verses. *cūrṇi*s

were written in mixed Prakrit and Sanskrit languages. *Tīkā* or *vṛtti* were constructed in Sanskrit. *tippaṇa* were written in Gujarati and Rajasthani and marugurjar. *Vivṛtti*, *avacūri*, *dīpikā* were also the types of commentaries in Sanskrit with minor differences from *tīkā*.[1]

> Not only on *Āgamas*, on Jaina philosophical texts also a huge commentarial literature is available. The *Tattvārthasūtra* of Umāsvāti, the *Āptamīmāṃsā* of Samantabhadra, the *Nyāyāvatāra* of Siddhasena are some instances on which a long tradition of commentaries is found. In the latter literature also commentaries like the *tattvabodhavidhāyinī* of Abhayadevasūri (11th century) the *prameyakamalamārtaṇḍa* and the *nyāyakumudacandra* of Prabhācandra (980-1065) are eminent [5, pp. 56-59].

2. Commentaries on the *Tattvārtha Sutra*

The main commentaries on the *Tattvārthasūtra* are as follows: 1. The *Tattvarthabhāṣya* by Umāsvāti himself. 2. The *Sarvārthasiddhi* by Pūjyapāda Devanandin (5th century). 3. The *Tattvārthabhāṣya* vṛtti by Haribhadra Suri (700-770) which was completed by Yaśobhadra. 4. The *Tattvārtha-Vārttika* by Bhaṭṭa Akalaṅka (720-780). 5. vṛtti by Siddhasenagaṇin (9th century). 6. The *Tattvārtha-ślokavārttika* by Vidyānanda. 7. The *Tattvārthavṛtti* by Śrutasāgarasūri (14th century). Here for discussion on development of *pramāṇa-śāstra* five commentaries (as shown above orderly 1, 2, 3, 4 and 6) are being used.

Although on *pramāṇa-śāstra* in Jaina philosophy several texts like the *Nyāyāvatāra* of Siddhasena, the *pramāṇasaṅgraha*, the *Laghīyastraya*, the *Nyāyaviniścaya*, the *Siddhiviniścaya* of Bhaṭṭa Akalaṅka, the *pramāṇa-parīkṣā* of Vidyānanda, the *Parīkṣāmukha* of Māṇikyanandin, the *pramāṇanayatattvāloka* of Vādidevasūri, the *pramāṇamīmāṃsā* of Hemacandrasuri, the *Jainatarkabhāṣā* of Yaśovijaya, the *pramāṇa-prameyakalikā* of Narendrasena are separately available, but the *Tattvārthasūtra* and its commentaries also contributed a lot.

3. Establishment of *Pramāṇa* in the *Tattvārthasūtra*

The *Tattvārthasūtra* is the first text which established knowledge as *pramāṇa* in Jaina philosophy. In canonical literature five types of knowledge are mentioned. The *Tattvārthasūtra* categorised them into *pratyakṣa* (perception) and *parokṣa* (indirect) division of *pramāṇa*. Thus Umāsvāti gave a shape to Jaina *pramāṇa-śāstra*. Five aphorisms are most significant for establishing *pramāṇa śāstra*:

1. *Pramāṇa-nayairadhigamaḥ*.1.6
2. *Matiśrutāvadhimanḥparyāyakevalāni jñānam.* 1.9
3. *Tatpramāṇe*. 1.10
4. *Ādye parokṣam.* 1.11
5. *pratyakṣamanyat.*1.12.

In the subsequent aphorisms of the first chapter description of five knowledges is very interesting. Description of *naya* is older in Jaina tradition. That is also a means of knowing. Umāsvāti clubbed the both *naya* and *pramāṇa* as the means of knowledge or cognition. Naya is a viewpoint for knowing and *pramāṇa* is a valid means of knowledge which is greater than *naya* and also a kind of knowledge. Difference between these two is that *naya* is a part of *pramāṇa* and it is limited mainly to scriptural or verbal knowledge only, whereas *pramāṇa* is a determinate cognition and it is related to all five kinds of knowledge. In this way Jains are different from other Indian branches of philosophy. The concept of *naya* is a specialty of Jaina philosophy which is not found in other philosophies.

Fivefold knowledge is mentioned as follows: 1. *matijñāna* or *ābhinibodhika jñāna* – this knowledge occurs through sense organs and mind. 2. *śrutajñāna* – scriptural or verbal knowledge 3. *Avadhijñāna* – clairvoyance or visual intuition by a soul 4. *manaḥ-paryāyajñāna* – modes of other's mind are known lucidly 5. *kevalajñāna* – substances and their modes of present, past and future are

known directly and lucidly by a perfect soul. Among these the first two knowledges are considered as *parokṣa* (indirect) *pramāṇa* and the last three are accepted as *pratyakṣa* (direct) *pramāṇa* because these are manifested directly through a soul. In this way the concept of two *pramāṇa*s was established by Umāsvāti.

4. Concept of Four *Pramāṇa*s Prior to the *Tattvārthasūtra*

Prior to the *Tattvārtha sūtra*, in Jaina canonical literature mention of four *pramāṇa*s of Nyāya philosophy is found. In the *Sthānāṅgasūtra* (sthāna 4), the *Vyākhyāprajñaptisūtra* (5.3), the *Anuyogadvārasūtra* [(*bhāvaguṇavarṇa*) four *pramāṇa*s are mentioned as- 1. *pratyakṣa* (perception) 2. *anumāna* (inference) 3. *aupamya* (comparison) and 4. *āgama* (testimony).These four *pramāṇa*s were well known at that time, hence *Caraka-samhitā* of Caraka and Buddhist text *Upāyahṛdaya* (p. 13) also describe these four *pramāṇa*s [5, pp. 5, 9].

Anuyogadvāra sūtra of Āryarakṣita gives a detailed account of these four *pramāṇa*s [1]. It propounds two types of *pratyakṣa*: 1. Sensuous (*indriya pratyakṣa*) 2. Non-sensuous (*no-indriya pratyakṣa*). In sensuous *pratyakṣa*, Āryaraksita puts knowledge manifested through five sense organs and in non-sensuous *pratyakṣa* he keeps three types of direct knowledge as *avadhijñāna, manaḥparyāyajñāna* and *kevalajñāna*. Inference is of three types: 1. *pūrvavat* 2. *śeṣavat* 3. *dṛṣṭasādharmyavat*. This division is similar to the division mentioned in the *Nyāyasūtra* and Sāṃkhya philosophy but the description and examples shown in the *Anuyogadvārasūtra* are different and related to our life of behaviour. Here a few examples of various kinds of inference are described which show the speciality of this canon.

1. *Pūrvavat* – to know a prior acquainted person or thing knowing its old mark, scar, signal, etc., for example a mother recognises his son after a few years seeing his scar on head. In the latter development of Jaina logic such example is included in *pratyabhijñāna* (recognition) *pramāṇa*. In Nyāya philosophy inference of effect from a cause is considered as *pūrvavat*.

2. *Śesavat* – it has been introduced of five types: 1. inference of cause from an effect e.g. from a sound inference of conch, from *kekā* voice inference of peacock, from raining inference of clouds, hearing neigh-sound inference of a horse, from whipping inference of kettledrum. These are the practical examples in life. 2. Inference of effect from a cause – seeing threads inference of making clothes, from the lump of clay inference of making an earthen pot. 3. Inference of substance from quality or attribute e.g. inference of flower from its perfume, inference of salt from its taste, inference of cloth from its touch. 4. Inference of a aggregate from a part, e.g. inference of buffalo from horns, inference of cock from a crest, inference of an elephant from a tusk, inference of monkey from its tail, inference of a bull from its hump etc. All these examples are based on our practical life. 5. Inference of asylum from a dependent e.g. inference of fire from smoke (generally this example is given for inference of cause from effect in Indian tradition), inference of water seeing multitude of ducks, inference of a noble son by his etiquettes etc.

3. *Dṛṣṭasādharmyavat* – In Nyāya and Sāṃkhya philosophies word *sāmānyatodṛṣṭa* is used for it. *dṛṣṭasādharmyavat* is of two types – *sāmānyadṛṣṭa* and *viśeṣadṛṣṭa*. knowing one thing to know other similar things or knowing many things to know other similar thing is *sāmānyadṛṣṭa* inference e.g. as one human is, other humans are also alike him, as other humans are, a human is also like them. In *viśeṣadṛṣṭa* one thing is known differently from many.

The *Anuyogadvārasūtra* enumerates *aupamya pramāṇa* twofold as: 1. *sādhrmyopanīta* (showing similarity) 2. *vaidharmyopanīta* (showing dissimilarity). Testimony is of two kinds: 1. *laukika* (worldly) – the *Rāmāyaṇa,*the *Mahābhārata* etc. 2. *lokottara* (statement of *tīrthaṅkara*) [1]. Description of *aupamyapramāṇa* and *āgama pramāṇa* is also intelligible for practical life, but here we have to discuss mainly this subject according to the *Tattvārthasūtra* and its commentaries.

5. Contribution of the *Tattvārthasūtra* and its Commentaries

What has been discussed about *pramāṇa* and its various aspects in the *Tattvārthasūtra* and its commentaries which shows the development of Jaina logic and epistemology is now to be focused. Jaina philosophical commentarial literature contributed in three aspects of development: 1. Conceptual development 2. Analytical development and 3. Logical development. We find all these three aspects of development in the commentaries on the *Tattvārthasūtra*. There are more than 15 commentaries on the *Tattvārthasūtra*, but here only five commentaries as mentioned before are taken into consideration.

As we know that the *Tattvārthasūtra* is the first text which developed the concept of *pramāṇa* in the Jaina framework. It established knowledge as *pramāṇa* first time in Jaina philosophy which opened the doors for the philosophers to construct the independent texts on *pramāṇa*. Siddhasena was the first to write a text named the *Nyāyāvatāra* and then Bhaṭṭa Akalaṅka wrote many texts on Jaina epistemology and logic.This tendency was continued for centuries. Commentaries are also written enriching the analytical and logical aspects. Commentators on the *Tattvārthasūtra* also contributed a lot.

6. *Pramāṇa*: A Discussion

Umāsvāti defines *pramāṇa* in his *svopajña bhāṣya* as the organ of cognition of an object- *pramīyante arthāstairiti pramāṇani* [16, 1.12]. Through which objects are cognized are *pramāṇa*s. Pūjyapāda Devanandin in the commentary *Sarvārthasiddhi* defines *pramāṇa* etymologically in three ways – *pramiṇoti, pramīyate anena, pramitimātram vā pramāṇaṃ* [9, 1.10, p. 72]. Grammatically *pramāṇa* word has '*pra*' prefix, '*ma*' root and '*lyut*' suffix. Suffix '*lyut*' is used in three meanings: doerness, an instrument and abstract state. Devanandin applied all these three meanings in the above definition. According to him that which knows rightly (*pramiṇoti*) that by which anything is known rightly *(pramīyateanena*) or right knowledge is itself *(pramitimātraṃ vā)* is *pramāṇa*. Bhaṭṭa Akalaṅka justified all these three aspects giving example of a lamp which illuminates, illuminated by which and illumination itself – all these three aspects are right [2, 1.10, p. 72]. Haribhadrasūri accepts only its instrumental meaning in his commentary: *pramīyate anena tattvamiti pramāṇaṃ karanarthābhidhānaḥ pramāṇaśabda iti* [13, 1.6, p. 69]. Instrumental meaning of *pramāṇa* is vastly acceptable in Indian philosophies. Jaina philosophers also accepted its instrumental nature only in the latter period. Siddharṣigaṇin in the *Nyāyāvatāravivṛti* gives etymological explanation of *pramāṇa* in six cases and as abstract (*bhāva*), but he advocates only instrumental case and denies all other meanings [12].

Pramāṇa illuminates the objects as well as itself. Hence Pūjyapāda Devanandin mentions two types of *pramāṇa – tatra pramāṇaṃ dvividham svārthaṃ parārtham ca* [9, 1.6, p. 14]. For the self and for others. In Buddhist logic inference is divided into two types – for the self (*svārthānumāna*) and for the other (*parārthānumāna*) [3, 2.1-2]. Devanandin propounds that except *śrutajñāna* every *pramāṇa* is for the self, but *śrutajñāna* is of two types - for the self and for the others. He also explained that for the self it's in the form of knowledge and for the others it is in the form of statement [9, 1.6, p. 14]. Bhaṭṭa Akalaṅka also propouds in the *Tattvārthavārttika* that purpose of knowledge is of twofold- knowledge for the self knower and for the others. In the form of knowledge it's for the self and for the others it's in the form of statement (*adhigamaheturdvividhaḥ svādhigamaheturjñānātmakaḥ pramāṇanayavikalpakaḥ parādhigama-heturvacanātmakaḥ*) [2, 1.6, p. 33].

7. Definition of *Pramāṇa*

Commentator Vidyānanda gives complete definition of *pramāṇa* in the *Tattvārthaśloka-vārttika – Tatsvārthavyavasāyātmajñānam mānamitīyatā. lakṣaṇena gatārthatvād vyarthamanyad viśeṣaṇam* [14, 1.10.77].

The determinate (*vyavasāyātmaka*) cognition of the self and the object is *pramāṇa*. This definition is quite sufficient any other adjective to it is futile. This definition of *pramāṇa* shows conceptual development in the commentarial literature and is a resultant of the definitions given by Siddhasena (*pramāṇaṃ svaparābhāsi jñānaṃ bādhavivarjitam*) [11, p. 1]. Samantabhadra (*svaparāvabhāsakaṃ yathāpramāṇaṃ bhuvi buddhilakṣaṇam*) [10, p. 63] and Bhaṭṭa Akalaṅka in *Laghīyastraya*, 60 (*vyavasāyātmakaṃjñānamātmārthagrāhakaṃ matam. grahaṇaṃ nirṇayastena mukhyaṃ prāmāṇyamaśnute*) in their independent texts on Jaina logic. Determinate word is very important in this reference, it excludes doubt (*saṃśaya*), illusion (*viparyaya*) and indetermination (*anadhyavasāya*) in the nature of *pramāṇa*.Vidyānanda in another treatise the *Pramāṇa-parīkṣā* defines *pramāṇa* as *samyagjñāna*. This *samyagjñāna* is also a determinate knowledge devoid of doubt, illusion and indeterminateness. Here one development is seen. In the *Tattvārthasūtra*, *samyagjñāna* (right knowledge) is a part of means of liberation from bondage which requires right view (*samyagdarśana*) prior to it, but in the *Pramāṇa-parīkṣā* it is useful for right behaviour. This *samyagjñāna* doesn't necessarily require *samyagdarśana* prior to its occurrence in the case of *pramāṇa*, but for liberation *samyagdarśana* is necessary prior to *samyagjñāna*.

8. Cognition of Cognized Object is also *Pramāṇa*

Mīmāṃsā philosophy propounds *pramāṇa* as cognition of unknown objects only. Its renowned definition is: *tatrāpūrvārthavijñānaṃ niścitaṃ bādhavarjitam. aduṣṭakāraṇārabdhaṃ pramāṇaṃ lokasammatam.*

The knowledge which cognizes hither to uncognized object, which is determinate, unobstructed, produced through non defective cause and which is acceptable in the public is *pramāṇa*. Vidyānanda negates all these inessential adjectives except the adjective determinate.

In Bhuddhist philosophy also *pramāṇa* is accepted as knowledge which cognizes uncognized object: *ajñātārthajñāpakamiti pramāṇa- sāmānyalakṣaṇam* [7]. Vidyānanda refutes this definition presenting the following argument:

> *ajñātārthaprakāśaścellakṣaṇamparmārthataḥ.*
> *gṛhītagrahaṇānna syādanumānasyānumānatā.*
> *gṛhītamagrhītaṃ vā svārthaṃ yadi vyavasyati.*
> *tanna loke na śāstreṣu vijahāti pramāṇatām* [14, 1.10.68 & 79].

If the original *lakṣaṇa* of *pramāṇa* is cognition of unknown objects, then validity of inference will not occur due to its characteristic of knowing the previously known object through recollection of invariable concomitance. Recollection of invariable concomitance is a cognition of previously cognized objects, which helps in inference of unknown objects. A *pramāṇa* doesn't leave its validity in the public and in the *śāstra*s if it cognizes the object already cognized. It should definitely cognize the self and the object, no other adjective is needed. By this statement, he also negates Bhaṭṭa Akalaṅka [17, p. 175] and Māṇikyanandin [6, 1.1] who incorporated respectively adjectives as *anadhigata* (*pramāṇaṃ avisamvādijñānama- nadhigatārthādhigamalaksaṇatvāt*) and *apūrva* (*svāpūrvārthavyavasāyātmakaṃ jñānaṃ pramāṇaṃ*) denoting previously unknown objects. Actually this was an impact of Mīmāṃsā and Bauddha philosophies on some Jaina philosophers. Bhaṭṭa Akalaṅka was not of a strong view to put this adjective (*anadhigata-grāhaka*) in the definition of *pramāṇa*, this is why in the *Tattvārtha-vārttika* he says – *yathā andhakāre avasthitānāṃ ghatādīnāmutpattyanantaraṃ prakāśakaḥ pradīpa uttarakālamapi na tam vyapadeśam jahāti evam jñānamapi* [2, 1.12, p. 56]. For instance a lamp illuminating objects like pots kept in the darkness, illuminates them in the subsequent time also. It does not leave its name as an illuminating lamp, so is the cognition. It means *pramāṇa* does not leave its validity even after knowing the object previously known. Hence Vidyānanda takes a clear cut stand and refutes his predecessor Digambara *ācārya*s. In Shvetambara tradition all philosophers accept that determinate cognition of previously cognized object is also *pramāṇa*. Hemacandrasūri presents a cogent

argument that cognition of an object to be cognized is valid at present, likewise this cognition of an object previously cognised is also valid [4, 1.1.4].

9. Sense Organs and Sense-Object Contact is not *Pramāṇa*

Naiyāyikas accept sense organs and sense-object contact as *pramāṇa,* because these are used as instrumental means in perception. Jaina philosophers don't accept sense organs and sense-object contact as *pramāṇa*. Devanandin in the *Sarvārthasiddhi* gives argument – if for differentiating *pramāṇa* from its resultant, sense-object contact is considered as *pramāṇa*, and the cognition of an object is as resultant, then a problem arises. Sense-object contact remains in both a sense organ and an object, hence its cognition should remain in both a sense organ and an object, but it is not found in the object [9, 1.10, p. 69]. In this way Devanandin presents a puzzle for Naiyāyikas and then provides a solution from Jaina point of view. He says that considering cognition as *pramāṇa,* there is an interest or negligence towards the object known and that is a resultant of *pramāṇa*. Another effect or resultant is destruction of respective ignorance [9, 1.10, p. 70]. All these are the consequences of cognitive *pramāṇa*.

Vidyānanda says in the *Tattvārtha-śloka-vārttika* – sense organs are basically inanimate, hence they are not *pramāṇa*. Knowledge is animate, it illuminates the self and the object, whereas the above two are not self illuminating. Vidyānanda argues – if eyes are known as *pramāṇa*, then pots etc are also to be treated as *pramāṇa*, but in Jaina philosophy sense organs are considered as made of *pudgala* (matter) and knowledge is considered as conscious [14, 1.6, pp. 40-41]. Vidyānanda gives a new dimension to this subject. In the Jainism sense organs are meant of two types – physical (*dravyendriya*) and conscious (*bhāvendriya*). Vidyānanda considers physical sense organs as *apramāṇa* (invalid *pramāṇa*) and the conscious senses as *pramāṇa*, because these are having knowledge in some respect [14, 1.10.10].

One another argument is given by Pūjyapāda Devanandin – if sense-object contact is a *pramāṇa* (especially perception), then how will be the cognition of micro objects, obstructed objects and distant objects? These objects don't come in the contact of sense organs. Also them omniscience will not be possible. This objection will also arise in accepting the sense organs as *pramāṇa*. One more argument is this – the sense organs like eyes can know the limited objects whereas the knowables are unlimited [9, 1.10, p. 69]. Devanandin also presents the viewpoint of Jainism according to which object-contact is not found with all sense organs, because eyes and mind are not nearly contactable [9, 1.10, p. 69]. Through them the objects are known at some distance. Bhaṭṭa Akalaṅka also supported Devanandin in the *Tattvārtha vārttika*. He says – if sense-object contact is *pramāṇa* then there will be absence of omniscience, because for an omniscient, sensuous contact is not physible [2, 1.10, p. 51]. This type of argument indicates that the concept of *yogi* perception through transcendental contact is a later development in Nyāya – Vaiśeṣika philosophy.

10. Illuminating the Self and an Object

Knowledge in Jaina philosophy is accepted as illuminating the self and an object, hence *pramāṇa* is also having the same characteristic. Other philosophers may ask a question – if through *pramāṇa* animate and inanimate objects are known, then how the *pramāṇa* will be known? If it's known through another *pramāṇa*, then infinite regress will come. Devanandin replies – a lamp illuminates the objects and itself, like that a *pramāṇa* illuminates the objects and itself. If *pramāṇa* is not self illuminating then its recollection can't take place and in the absence of memory and recollection valid behaviour will not be possible [9, 1.10, p. 70]. Akalaṅka in the *Tattvārtha-vārttika* also propounded that knowable is cognised through *pramāṇa*, but for knowledge of *pramāṇa* no other means is needed because *pramāṇa* illuminates itself also. If it's not self illuminating then it will not be a *pramāṇa*, because of two reasons. The first is – it will be known by another *pramāṇa*, and that by another one and that by another one. In this way it will lead an infinite regress. The second

argument is – in the absence of the self illumination, recollection of it will not be possible and the knower will not be able to say that he knows that object [2, 1.10, p. 49].

11. Inclusion of *Avisaṃvādakatā*

Dharmakīrti, a Buddhist philosopher propounded an empirical definition of pramāṇa – *pramāṇaṃ avisaṃvādi jñānam* [8, 1.3]. The cognition of an object without any discrepancy in its resultant is *pramāṇa*. Jaina philosophers also used the word *avisaṃvādakam,* but they accepted it in the meaning of determinate knowledge which is devoid of doubt, illusion and indeterminateness. Vidyānanda also mentions – *yathā yatrāvisaṃvādastathā tatra pramāṇata* [14, 1.10.38]. The cognition with its determinant characteristic is proved as *pramāṇa*. He also mentioned that *kevalajñāna* is more lucid and *avisaṃvādaka* than *avadhijñāna* and *manaḥparyāyajñāna* and these two are more lucid and determinant than *matijñāna* and *śrutajñāna*, hence their validity depends on the lucidity and determinateness [14, 1.10.39].

The knowledge is obscured by knowledge-obscuring (*jñānāvaraṇa*) *karma* and it is manifested after destruction *(kṣaya)* or subsidence-cum-destruction (*Kṣayopaśama*) of that *karma*. In absence of this ability no cognition or knowledge occurs. This is the specific notion of Jaina philosophy. Due to the difference in this ability knowledge of every living being varies. The knowledge *Kevalajñāna* manifests after the complete destruction of *jñānāvaraṇa* karma, hence it bears completeness of knowledge of every substance and its mode. *avadhijñāna* and *manaḥparyāyajñāna* also manifest after subsidence-cum-destruction of their obscuring *karma*s. Above these three types of knowledge arise without the use of sense organs. *matijñāna* is a sensuous knowledge and ability for its manifestation is found different due to different state of subsidence-cum-destruction of its obscuring *karma* and defective sense organs. *śrutajñāna* also arises after subsidence-cum-destruction of its obscuring *karma*, but it requires precedence of *matijñāna*. Generally it's called scriptural or verbal knowledge. It arises after listening to a sentence or word. Hence it's considered under the category of testimony or *āgama pramāṇa*. Although every *pramāṇa* is valid for behaviour and no one is greater or inferior, variation in their purity and lucidity can't be denied.

12. Refutation of Nyāya-Vaiśeṣika

Akalaṅka in the *Tattvārthavārttika* refutes the concept of Nyāya-Vaiśesika in which they accepted knower and *pramāṇa* different. He says – Knower and knowledge are not absolutely different, because then in the absence of knowledge the state of knower becomes as non-knowing. If he is believed as knower after the contact of knowledge, then without the nature of knowing he can't be called as knower. For example a blind man cannot see even after the contact of a lamp with him [2, 1.10, p. 50].

Pramāṇa is not absolutely different from its resultant and also it is not absolutely identical with that. This non-absolutist view point of Jainism is presented in the commentaries on the *Tattvārthasūtra*. If they are absolutely different then there will be no connection between them as *pramāṇa* and its resultant and if they are identical then there will be no difference between them. Accepting any thing, denying any thing or to become neutral to that are the resultant cognition which are different from *pramāṇa* whereas destruction of related ignorance is an identical resultant of *pramāṇa* [14, 1.6.42].

13. Perception (*Pratyakṣa Pramāṇa*)

Defining *pratyakṣa* (perception) Devanandin gives etymological explanation – *akṣṇotivyāpnoti jānātītyakṣa ātmā tameva prāpta- kṣayopaśamaṃ prakṣīṇāvaranaṃ vā pratiniyataṃ pratyakṣam* [9, 1.12] – *pratyakṣa* word is derived from *prati* prefix and *akṣa* word. The etymological meaning of *akṣa* is a knower and that is a soul. Direct knowledge of that soul without any help of sense organs

and mind is perception. This is the original view of the *Tattvārthasūtra* and its tradition. He also says that if only sensuous knowledge is considered as perception then the knowledge of trustworthy seers will not come in the category of perception [9, 1.12]. Haribhadrasūri also advocates this notion that direct knowledge of a soul without the help of sense organs and mind is perception. He ignores the statement of *Nandisūtra* in which *indiyapaccakkham no-indiyapaccakkham* words were used. Accepting them as secondary another sentence of *Nandisūtra* mentions *matināṇaparokkham ca suyanāṇaparokkham ca. Matijñāna* is manifested through sense organs and mind, hence it is indirect (*parokṣa*) [13, 1.11]. In the *Tattvārthavārttika* definition of perception is clear-*indriyānīndryānapekṣamatītav-yabhicāraṃ sākāragrahaṇaṃ pratyakṣam* [2, 1.12]. Perception is a definitive cognition devoid of fallacies and without the help of sense organs and mind. Here *sākāra* word excludes *avadhidarśana* (a conscious experience before clairvoyance) and *kevaladarśana* (conscious experience before *kevaljñāna*) from the category of perception, because they are non-definitive in nature.

In the latter period Jaina logicians accepted the sensuous knowledge as empirical perception. Its impact is seen in the *Tattvārtha-ślokavārttika* where Vidyānanda quotes definition of perception from his predecessor Akalaṅka:

pratyakṣa-lakṣaṇaṃ prāhuḥ spaṣṭaṃ sākāramañjasā.
dravyaparyāyasāmānyaviśeṣārthātmanivedanam [14, 1.12.4].

According to this *lakṣaṇa* (defining characteristics) lucidity is the main characteristic of perception. This lucidity includes the sensuous knowledge also in the category of perception. In this way two types of perception emerged as (i) empirical in the form of definitive sensuous knowledge and as (ii) transcendental in the form of definitive knowledge manifested directly in a soul viz. *avadhijñāna, manaḥparyāyajñāna* and *kevalajñāna*. In Jaina philosophy *darśana* is a technical term which is also a characteristic of a conscious soul and occurs before knowledge of any object, but it doesn't bear a characteristic of definitive knowledge, hence it is not meant as *pramāṇa*. This is why *nirvikalpa* or *anākāra darśana* is not understood as *pramāṇa*.

Due to the essential characteristic of definitive cognition of *pramāṇa* Jaina philosophers refute the Buddhist notion of *nirvikalpaka* perception. Vidyānanda refutes the definition of perception propounded by Dharmakīrti. Dharmakīrti says that perception is devoid of verbal construction (*kalpanā*) and also it is non-illusionary. Vidyānanda proposes four meanings of *kalpanā*: 1. Inexplicit cognition is *kalpanā*. 2. Determinate knowledge of the self and the object is *kalpanā*. 3. The verbal designation is *kalpanā*. 4. Verbal designability is *kalpanā*. Out of these four he negates the first meaning and accepts second meaning as determinate cognition of the self and the object as a necessary adjective of perception [14, 1.12.8-9]. A new development is also seen in the *Tattvārtha ślokavārttika* due to the non-absolutist view of Jainism, Vidyānanda accepts perception as *nirvikalpaka* in the sense of devoidness from verbal structure. He accepts its *savikalpakatā* in the sense of determinate cognition and *nirvikalpakatā* in the sense of devoidness from verbal designation. In his view a definitive knowledge without verbal designation may be considered as perception. Vidyānanda says in brief:

sarvathā nirvikalpakatve svārthavyavasitiḥ Kutaḥ.
sarvathā savikalpakatve tasya syācchabdakalpanā [14, 1.12.27].

Determinate knowledge is not possible in absolutely *nirvikalpakatā* and in absolutely *savikalpakatā* where a verbal construction is essential. He tried to establish *savikalpakatā* in some respect in the Buddhist perception also [14, 1.12.28-32].

14. *Parokṣa* (Indirect) *Pramāṇa*

It is notable that Devanandin, Haribhadra and Akalaṅka do not discuss five types of indirect (*parokṣa*) *pramāṇa* in their commentaries on the *Tattvārthasūtra.* Absence of this discussion in the *Tattvārthavārttika* of Akalaṅka is astonishing, because Akalaṅka is the logician who established the five types of indirect *pramāṇa* in his other treatises. It gives an indication to think whether the writer of *Tattvārthavārttika* is a different person? It is a big question which requires a separate paper.

Vidyānanda has discussed all the five types of indirect (*parokṣa*) *pramāṇa* i.e. *smṛti* (recollection), *pratyabhijñāna* (recognition), *tarka* (inductive reasoning), *anumāna* (inference) and *āgama* (testimony). He cogently establishes the validity of all these five *pramāṇa*s. In his view without accepting validity of recollection, validity of recognition doesn't exist and without accepting the validity of recognition, validity of inference can't exist and without accepting the validity of inference perception can't be established. Then in the absence of *pramāṇa* no object will be proven. Thus all systems of *pramāṇa* and objects will be abolished [14, 1.13.9-11]. Vidyānanda presented separate arguments to establish these five indirect *pramāṇa*s in the *Tattvārthaślokavārttika* efficiently which are to be consulted there.He also described inference in detail with the description of probans, probandum, invariable concomitance etc. He gives a detailed account of the kinds of probans [14, 1.13.14].

15. Conclusion

Thus, the description of *pramāṇa-śāstra* available in the commentaries on the *Tattvārthasūtra* depicts a continuation of the developing thoughts of the commentators. This is understood that the subject of the *Tattvārthasūtra* and commentaries has a vast field of Jaina philosophy, even then the wide discussion on *pramāṇa-śāstra* is found here. It gives light on the notions of other philosophies and shows arguments for their refutation also.

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Notes

1. *Nryukti* explains the selective content of *āgama* and propounds the right meaning in the context of a word. Examples and stories are also added for explanation. *bhāṣya* is greater in size and some independent content to explain. Some verses of *niryukti* are incorporated in *bhāṣya*. This is different from the Sanskrit *bhāṣya*s of Indian tradition in style and content. Sanskrit *bhāṣya* is found in prose, whereas *bhāṣya*s on *āgama* are in Prakrit. *cūrṇi* is shorter than *bhāṣya* and very brief. Commentaries as *tīka, vṛtti,vivṛtti, avacuri, dīpikā* have minor differences among them.
2. It looks like a definition of Buddhist view.

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Navigating the Excluded Middle: The Jaina Logic of Relativity

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Abstract:
The Jaina tradition is known for its distinctive approach to prima facie incompatible claims about the nature of reality. The Jaina approach to conflicting views is to seek an integration or synthesis, in which apparently contrary views are resolved into a vantage point from which each view can be seen as expressing part of a larger, more complex truth. Viewed by some contemporary Jaina thinkers as an extension of the principle of *ahiṃsā* into the realm of intellectual discourse, Jaina logic marks quite a distinctive stance toward the concept of logical consistency. While it does not directly violate the law of excluded middle, it does, one might say, navigate this principle in a highly and potentially useful way. The potential usefulness of Jaina logic includes the possibility of its use in arguing for the position known as religious pluralism or worldview pluralism. This is a view which many philosophers see as holding great promise in developing a way to think about differences across worldviews in ways that do not lead to the kind of conflict and polarization that all too often characterizes ideological differences in today's world.
Keywords: Jaina philosophy, absolutism, non-absolutism, pluralism, relativity, *anekāntavāda*, *nayavāda*, *syādvāda*.

1. The Jaina Approach to Contradiction

The Jaina tradition of India is probably most famous for the intensive practice of *ahiṃṣā*, or harmlessness – typically described by Jaina practitioners as nonviolence in thought, word, and deed –which its authoritative teachers enjoin. This observance of nonviolence is so rigorous that it can involve, for mendicant practitioners, the wearing of a *muḥpatti*, or mouth-shield, so the accidental ingestion of tiny living beings can be averted, and the use of a feather whisk to sweep the ground on which one may about to walk, or any surface on which one may be about to sit, in order to avoid accidentally treading or sitting upon any living entity.

In the field of philosophy, however, the Jaina tradition is known for its distinctive approach to *prima facie* incompatible claims about the nature of reality. In some ways analogous and in some

ways directly contrary to the famous negative dialectic practiced by the Buddhist philosopher Nāgārjuna, the Jaina approach to conflicting views is to seek an integration or synthesis, in which apparently contrary views are resolved into a vantage point from which each view can be seen as expressing part of a larger, more complex truth. Viewed by some contemporary Jaina thinkers as an extension of the principle of ahiṃsā into the realm of intellectual discourse, Jaina logic marks quite a distinctive stance toward the concept of logical consistency[1] [3], [14, pp. 154-165]. While it does not directly violate, as shall be shown here, the law of excluded middle (according to which something must be either *a* or *not-a*, and that there is no logical position between these two possibilities) it does, one might say, navigate this principle in a highly and potentially useful way.

The potential usefulness of Jaina logic includes the possibility of its use in arguing for the position known variously as *religious pluralism* or *worldview pluralism* [18], [19]. Developing initially out of conversations amongst primarily Christian theologians and philosophers of religion, religious pluralism is the view that many religions teach important truths about the nature of reality and can lead their practitioners to salvation (however this might be conceived). Worldview pluralism is an attempt to extend this concept further, to encompass not only religious worldviews, but worldviews of all kinds. Typically, religious or worldview pluralism emerges from out of a desire to overcome the many conflicts, often violent, which are fuelled by or rooted in differences among worldviews. Pluralism is seen as an antidote to its opposite, *exclusivism*, which is the claim that one worldview alone is true. In its religious iterations, exclusivism is the view that there is only one true religion and that it alone provides the means by which human beings can be saved (again, whatever 'saved' might mean in the religious context in question).

Pluralism is seen by its proponents as more adequate to the complexity of the reality which human beings inhabit. Religious pluralist John Hick, for example, famously argues that exclusivist views of religion are arbitrary, failing to take into account the fact that religious adherence is not typically a matter of rational reflection, but is largely an accident of birth:

> …[A] "hermeneutic of suspicion" is provoked by the evident fact that in perhaps 99 percent of cases the religion to which one adheres (or against which one reacts) is selected by the accident of birth. Someone born to devout Muslim parents in Iran or Indonesia is very likely to be a Muslim; someone born to devout Buddhist parents in Thailand or Sri Lanka is very likely to be a Buddhist; someone born to devout Christian parents in Italy or Mexico is very likely to be a Catholic Christian; and so on. Thus there is a certain non-rational arbitrariness in the claim that the particular tradition within which one happens to have been born is the one and only true religion. And if the conviction is added that salvation and eternal life depend upon accepting the truths of one's own religion, it may well seem unfair that this saving truth is known only to one group, into which only a minority of the human race have had the good fortune to be born [11, p. 610].

In attempting to address, however, the non-rationality of exclusivism, pluralists typically end up having to solve a different kind of logical conundrum. If affirming the unique truth of one's worldview is arbitrary, with one's worldview being shaped, as it is, by all kinds of prejudices and other factors that are a result of one's location in a particular tradition and a particular society at a particular point in history, and if the alternative being proposed to this arbitrary stance is that there are, in fact, many true worldviews, and many valid and effective paths to humanity's ultimate end, whatever it may be, then one is left with the question of how it is that many worldviews, many of which make mutually contradictory claims, can all be true, and the practices corresponding with them effective.

A variety of approaches to this problem have been attempted by pluralists. Hick argues for a 'Pluralistic Hypothesis,' according to which the diverse worldviews that are found in the religions of the world, "represent different phenomenal awarenesses of the same noumenal reality and evoke parallel salvific transformations of human life" [10, p. 15]. Philosopher Aldous Huxley, on the other

hand, seeks to discern a common core of ideas and practices shared across traditions, which he calls the 'perennial philosophy.' He defines this philosophy as

> the metaphysic that recognizes a divine Reality substantial to the world of things and lives and minds; the psychology that finds in the soul something similar to, or even identical with, divine Reality; the ethic that places man's final end in the knowledge of the immanent and transcendent Ground of all being [12, p. vii].

Other pluralists argue that approaches such as Hick's and Huxley's fail to do justice to the genuine diversity that exists across worldviews, especially amongst the world's religions, and have sought to develop forms of pluralism that would allow for a variety of salvific goals, as well as a complex vision of reality of which diverse worldviews could be said to articulate specific parts or elements [9], [7].

It is in relation to this latter approach to worldview pluralism that Jaina logic would appear to be most promising. Like the pluralists who object to the idea that all worldviews and practices must be aimed at the same ultimate end in order to be valid or effective, and that the areas where many worldviews can be said to be true must necessarily be those in which they are in agreement, or in which they say the same things, traditional Jaina philosophers take a non-reductive view of reality, and contrast their position with views which seek to relegate all of reality to just one single principle. Jaina logic also entails, as we shall see, that diverse and even apparently contradictory claims can be shown to be true. This eliminates the necessity of focusing solely upon those areas of diverse worldviews that are in agreement with one another.

2. Jaina Logic in Context

The setting in which the Jaina approach to contradiction emerges is one in which there is no sharp gulf presumed between the realm of thought and the realm of practice. Like other systems of philosophy that emerge in India, Jaina thought emerges within a context of, and ultimately in the service of, practice. Like ancient Greece, where *philosophia*, in its origins, was not an abstract set of claims, but rather reflection occurring in the context of a way of life often involving some kind of spiritual practice, as famously affirmed by Pierre Hadot, India was a cultural environment where philosophical reflection accompanied, supported, and was often occasioned by practice aimed at a goal of transcendence [8]. Hadot defines "spiritual exercises" as activities that are "intended to effect a modification and a transformation in the subjects who practice them" [8, p. 6]. This definition certainly applies to the various ethical, ritual, and contemplative practices that are understood to accompany most of the systems of Indian philosophy. Indeed, it can sometimes be very difficult to grasp what Indian philosophers are saying if one is not attentive to the context of practice in which they are operating, particularly when they refer to meditative states, ritual injunctions, and so on. This is as true of Jaina philosophers as it is of thinkers in other Indic traditions, whose reflections are carried out in the service of practices such as those associated with the ideal of ahiṃsā.

Indeed, Jainism scholar Piotr Balcerowicz traces the origins of the Jaina approach to logic to the practices of Jaina ascetics seeking to take care not to destroy small life forms:

> …[W]hat apparently prompted the [Jain] enquiry into the multi-faceted nature of the world and the methods of its reliable reproduction in the human mind and language were not theoretical philosophical concerns but rather the…interests or moral concerns of the ascetic: what objects can be hurt by his actions and what objects are generally immune from injury. The earliest applications of analytical tools [later commonly used by Jaina thinkers], such as standpoints (*nikṣepa*, *nyāsa*), viewpoints (*naya*) or…modal description (*sapta-bhaṅgī*, *syād-vāda*), would always attempt to define what objects are living and what are lifeless, which is the space inhabitable by the living beings where

> they can be hurt, and which is not, etc. For a community of ascetics admitting that even some minerals, drops of water, [and] particles of fire and air can be animate and can suffer at their hands was indeed a serious worry. For someone who believed that souls (*jīva*) could be present in numerous physical forms, it was vital to determine which forms of particles could contain a soul which could potentially experience pain [1, p. 326].

Jaina philosophy thus clearly emerges in the context of providing support for a way of life aimed at a spiritual goal.

While it would not be correct simply to conflate Jaina philosophy, or any system of Indian philosophy with religion, given that the practice of a religion is largely a matter of acculturation, whereas the practice of philosophy requires rigorous specialized training and is largely carried out only by those who have this particular expertise, understanding this system of philosophy requires us to be attentive to practice in the service of which it is pursued. Otherwise, aspects of this system of thought will no doubt appear confusing.

In terms of its own self-understanding, Jaina teaching is co-extensive with the nature of reality itself: with the true nature of things (*tattvārtha*) as proclaimed by a beginningless and endless series of omniscient teachers, or 'Ford makers' (*tīrthaṅkara*s) who appear periodically among human beings in order to establish a 'ford' or 'crossing' over the ocean of birth, death, and rebirth (*saṃsāra*) to the 'further shore' of liberation (*mokṣa*) from this beginningless and potentially endless cycle. Twenty-four Ford makers appear over the course of a single *kalpa*, or cosmic epoch. The most recent of these figures, and the twenty-fourth Ford maker of the current epoch – Vardhamāna Jñātṛputra, or Mahāvīra, the 'Great Hero,' as he is more widely known, lived from approximately 599 to 527 BCE.

According to Jaina tradition, Mahāvīra, like his junior contemporary, the Buddha, was born to wealth and privilege but renounced his position in order to find a path to freedom from the cycle of death and rebirth. After twelve years of rigorous ascetic practice and meditation, Mahāvīra is said to have attained the goal of the Jaina path of purification. Having conquered the passions (*kaṣāya*s) of his lower self, he became a *Jina*, a 'victor' or 'conqueror' (hence the name *Jaina* or Jain, for a follower of Mahāvīra). At this point, at the age of forty-two, it is believed by Jainas that he attained *kevalajñāna*: absolute knowledge, or complete omniscience. It is on the authority of this absolute knowledge that the Jaina tradition proclaims its doctrines and fundamental worldview, the teachings of Mahāvīra as preserved in the Jaina scriptures, or *Āgamas*. Therefore, despite its later emphasis on the validation of its teachings through a process of logical argumentation, the Jaina tradition "in actuality shows many of the characteristics of a revealed religion of the Judaeo-Christian-Moslem type" [5, p. 77].

A common problem faced by both the Buddha and Mahāvīra, according to the texts of their respective religious communities, was the positing of *avyākata*, or unanswerable, questions by their followers – metaphysical and cosmological questions which were major sources of controversy among the various schools of thought existing at the time. The Buddha, as portrayed in the Pāli literature, often refused to answer these questions, viewing them as not conducive to edification. But when he did choose to answer them, the method by which he dealt with such questions came to be called the *vibhajya*, or analytical, method. This method involves relativizing the terms in which the questions are phrased. According to Bimal Krishna Matilal, Jaina logic developed from a similar strategy which was pursued, according to the earliest extant Jaina texts, by Mahavīra [16, pp. 19-29].

As translated by Matilal, the Buddhist *Majjhimanikāya* (*Cūlamālunkya Sutta*) lists the ten *avyākata* questions as follows:

1. Is the *loka* (world, man) eternal?
2. Is the *loka* not eternal?
3. Is it (the *loka*) finite (with an end)?
4. Is it not finite?
5. Is that which is the body the soul? (Is the soul identical with the body?)
6. Is the soul different from the body?
7. Does the *Tathāgata* [the Buddha, or any liberated being] exist after death?

8. Does he not exist after death?
9. Does he both exist and not exist after death?
10. Does he neither exist nor not exist after death? [16, p. 12]

As he is depicted in the Buddhist texts, the Buddha viewed passionate attachment to particular philosophical views on questions such as these as being no less of a hindrance to spiritual progress than other kinds of passionate attachment, such as greed or lust. From a Buddhist perspective, in other words, attachment to such views (*dṛṣṭis*) is, in a way, more dangerous than other kinds of attachment. This is because those who are attached to a particular view may be under the illusion that this view will lead them to liberation. This intuition of the dangers of attachment to views gradually developed into the negating dialectical method of Nāgārjuna's Madhyamaka school of Buddhism. Nāgārjuna does not posit a view of his own, but rather shows the problems inherent in the views of others. "This is the sole concern of the Madhyamika, to analyse the positions of the opponent, not to put forward counter-positions which might entail something of their own capable of resisting analysis" [23, p. 146].

The Buddha's approach to *avyākata* questions can be seen as an attempt to avoid philosophical extremes, to walk a 'middle path' between the various views current in his time by refusing to embrace any of them. The first four questions, about the world's having or not having a beginning or an end, he simply refused to answer. The fifth and sixth questions, regarding the identity or non-identity of the soul and the body, he addressed with his *anātman* doctrine, which denies an independently existing soul, but is not a materialism or a physicalism either. The remaining four questions he answered in the negative, giving rise to the *catuṣkoṭivinirmuktatvam*, or Fourfold Negation, of Buddhism. Truth, according to Buddhism is finally not something that can be encompassed in any philosophical claim.

Matilal suggests that the Jaina doctrines of relativity developed from an analogous strategy on the part of Mahāvīra, as portrayed in the Jaina *Āgama*s, for dealing with the *avyākata* questions. Unlike the Buddha, however, Mahāvīra replies to these questions in the affirmative. He answers the *avyākata* questions with a qualified "Yes" rather than a "No." This approach is seen by Jainas to demonstrate Mahāvīra's omniscience. Matilal characterizes this approach as an "'inclusive' middle," in contrast with the Buddhists' "'exclusive' middle," path. The Buddha avoids exclusivist, dogmatic attachment to particular views by rejecting all of them. Mahāvīra avoids such attachment by incorporating all views equally into his own. The eventual development of the Jaina doctrines of *anekāntavāda* (the doctrine of the complexity of reality), *nayavāda* (the doctrine of perspectives), and *syādvāda* (the doctrine of conditional predication) roughly around the time of the rise of Madhyamaka Buddhism, can be seen as a Jaina parallel to the Buddhist Madhyamaka dialectic. Mahāvīra's positive use of *vibhajyavāda*, the analysis of the *avyākata* questions into their component parts, is illustrated in the *Bhagavatī Sūtra*, a text of the Jaina *Āgamas*:

> [T]he Venerable Mahāvīra told the Bhikkhu Jamāli thus: …[T]he world is, Jamāli, eternal. It did not cease to exist at any time. It was, it is and it will be. It is constant, permanent, eternal, imperishable, indestructible, always existent.
> The world is, Jamāli, non-eternal. For it becomes progressive (in time-cycle) after being regressive. And it becomes regressive after becoming progressive.
> The soul is, Jamāli, eternal. For it did not cease to exist at any time. The soul is, Jamāli, non-eternal. For it becomes animal after being a hellish creature, becomes a man after becoming an animal and it becomes a god after being a man (*Bhagavatī Sūtra* 9:386) [16, p. 19].

According to the Jaina tradition, because of his omniscience, a *kevalin*, such as Mahāvīra, can see the complexity of reality from all of its various perspectives and thus answer deep metaphysical questions from all of these various relatively valid points of view. Thus, from the perspective of permanence – of the fact that "it did not cease to exist at any time…it was, it is and it will be" – the world is, according to Mahāvīra, eternal. From the perspective of change, on the other hand, the world is affirmed to be "non-eternal."[2]

Similarly, from the perspective of its innate qualities, the soul, or *jīva*, is eternal. "It did not cease to exist any time." But from the perspective of its karmically determined experiences within the realm of *saṃsāra*, its rebirths in numerous different forms, it is non-eternal. The point of view of the omniscient *kevalin* encompasses all these varied perspectives. As a result, Mahāvīra can address these and many other *avyākata* or unanswerable questions in all of their various dimensions.

The systematization of the approach to the nature of reality suggested by Mahāvīra's teaching as presented in the Jaina *Āgamas*, texts dating, for the most part, to roughly a couple of centuries before the Common Era, is left to Umāsvāti, a Jaina thinker who lived around the second or third century of the Common Era and who authored the *Tattvārtha Sūtra*. This text summarizes the teachings of the *Āgamas* and itself possesses "quasi-scriptural status" [5, p. 75].

Most relevant to the development of Jaina logic are the *Tattvārtha Sūtra*'s systematizations of the notions of *satsāmānya*, *nikṣepa*, and *naya*. *Satsāmānya* refers to the general characteristics shared by everything that exists: the basic nature of a real thing. These are, according to Umāsvāti's famous formula: "Existence is that which is linked to emergence, perishing, and duration."[3] The importance of this formula for the Jaina tradition has to do with the character of the soul, or *jīva*, and the process of its liberation. Unlike Advaita Vedānta, which affirms the ultimate permanence of Brahman as the underlying ground of all reality, and Buddhism, which affirms radical impermanence and the *lack* of any underlying ground as the defining characteristic of existence, Jainism affirms the coexistence of permanence and impermanence, identity and difference, in the nature of the *jīva*; for the *jīva* is held to be, in one sense, permanent – eternally possessing the inherent characteristics of infinite perception, bliss, energy, and consciousness – but in another sense, impermanent – inasmuch as its status vis-a-vis its karmic accretions is constantly changing and different from moment to moment. In contrast with both Advaitic and Buddhist tendencies toward idealism, the Jaina tradition thus affirms a metaphysical realism which accepts the phenomena of the emergence, perishing, and (finite) duration of all entities as fundamental to its soteriology.

The pluralistic character of reality which Jainism affirms – its claim both that there are a variety of substances (*dravyas*) constituting the world and that these entities have a variety of aspects (aspects having to do with their emergence, perishing, and endurance over time) – gives rise to the variety of perspectives from which a philosophical issue can be addressed: the varied relative perspectives from which Mahāvīra is depicted as addressing metaphysical questions in texts like the *Bhagavatī Sūtra* [13, p. 81].[4] Although it is not yet called this in the *Tattvārtha Sūtra*, this conception of reality as having many facets or aspects is, in its essence, the doctrine of *anekāntavāda*. The perspectivalism which it entails as its epistemological correlate is later expressed in the doctrine of *nayavāda*. This perspectivalism is articulated in the *Āgama* literature and systematized by Umāsvāti in the two interrelated concepts of *nikṣepa* and *naya*.

A *nikṣepa*, or 'gateway of investigation,' is a topic in terms of which a particular entity can be analyzed. Umāsvāti lists the *nikṣepa*s as *nāma* (name), *sthāpanā* (symbol), *dravya* (potentiality), *bhāvata* (actuality), *nirdeśa* (definition), *svāmitva* (possession), *sādhana* (cause), *adhikaraṇa* (location), *sthiti* (duration), *vidhānata* (variety), *sat* (existence), *saṃkhyā* (numerical determination), *kṣetra* (field occupied), *sparśana* (field touched), *kāla* (time, continuity), *antara* (time-lapse), *bhāva* (states), and *alpabahutva* (relative numerical strength). *Naya*s are philosophical perspectives from which a particular topic can be viewed and which determine the conclusions that can be reached about it. Umāsvāti lists them as seven – *naigamanaya* (common person's view), *saṃgrahanaya* (generic view), *vyavahāranaya* (practical view), *ṛjusūtranaya* (linear view), *śabdanaya* (literal view), *samabhirūḍhanaya* (etymological view), and *evaṃbhūtanaya* (actuality view). Umāsvāti's commentators see these seven *naya*s as partial views which collectively make up a valid cognition (*pramāṇa*) [21, pp. 8, 23].

Siddhasena Dīvākara, a Jaina thinker of roughly the fifth century of the Common Era, takes the next major step in the development of Jaina logic. Siddhasena's contribution can be found in his text, the *Sanmatitarka*, or 'The Logic of the True Doctrine,' in which he divides Umāsvāti's seven *naya*s into two major categories: those which affirm the substantiality of existence (*dravyāstikanaya*s) and those which affirm the impermanent, changing aspects of existence (*paryāyāstikanaya*s). In this text,

Siddhasena sets the tone for subsequent Jaina thinkers by affirming that substantiality and modality, permanence and impermanence, identity and difference, are all necessary elements in any adequate account of reality. As one may recall, this understanding has its origins in Jaina beliefs about the soul as having a permanent, intrinsic character while simultaneously undergoing a series of constantly changing, karmically determined states. Beginning with Siddhasena, however, this understanding of reality as complex, as characterized by a variety of seemingly contrary aspects, was to become the chief criterion in terms of which all philosophical claims would be assessed: the essence, as it were, of Jaina logic.

Two further innovations in the interpretation of *nayavāda* which Siddhasena introduces in this text are, first of all, to affirm, while yet retaining the traditional list of seven *naya*s, that the number of *naya*s, or perspectives on reality, is potentially limitless. In this regard, his distinction between the *dravyāstikanaya* and the *paryāyāstikanaya* becomes definitive, in a sense, of extreme polarities, between which a vast range of views can exist on a spectrum and be ranked in terms of their adherence to one or another of these extremes, with the Jaina position being established firmly in the middle.

Secondly, Siddhasena goes on to identify the *naya*s with the positions of various non-Jaina schools of thought. He thus sets the stage for what would become the standard Jaina criticism of non-Jaina views as advocating one or another extreme position to the exclusion of the rest. He also defines the criterion by which the validity of the use of a *naya* is to be assessed as the extent to which that usage is in conformity with traditional Jaina doctrine. All of these ideas, as set forth in the following verses from the *Sanmatitarka*, were to become standard for subsequent Jaina philosophers:

> A well-presented view of the form of [a] *naya* only lends support to the Āgamic doctrines while the same, if ill presented, destroys both (i.e. itself as well as its rival).
> There are as many views of the form of *nayas* as there are ways of speaking, while there are as many rival (non-Jaina) tenets as there are views of the form of *nayas*.
> Kāpila's philosophy [Sāṃkhya] is a statement of the *dravyāstika* viewpoint while Buddha's that of the *paryāyāstika*.
> As for Kaṇāda [the founder of the Vaiśeṣika school of philosophy, which upholds the existence of both substances (*dravya*s) and qualities (*guṇa*s), but as independently existing entities in a relation of "inherence" (*samavāya*)], his doctrine, even if supported by both viewpoints is false inasmuch as each here gives primacy to itself and is independent of the other (Siddhasena Dīvākara, *Sanmatitarka* 3:46-49) [4, pp. 110-111].

Finally, in this text, Siddhasena sets forth *syādvāda* and its method of sevenfold predication (*saptabhaṅgīnaya*). We shall return to this doctrine and discuss it in greater detail later.

Siddhasena's affirmation of the necessary complementarity of contraries in the description of an entity in his *Sanmatitarka*, and the basic agenda for Jaina philosophy which it outlines, is taken up and further elaborated by his contemporary (or near contemporary), Samantabhadra, another fifth-century Jaina thinker, in his *Āptamīmāṃsā*, or 'An Examination of the Authoritative Teacher.' As Krishna Kumar Dixit writes:

> Samantabhadra had a clear consciousness of what constitutes the central contention of *Anekāntavāda* [or *syādvāda*], viz. that a thing must be characterised by two mutually contradictory features at one and the same time. He also realised that the doctrine was applicable rather universally; that is to say, he felt that taking any thing and any feature at random it could be shown that this thing is characterised by this feature as also by the concerned contradictory feature [4, p. 136].

This is, essentially, is what Samantabhadra does in the *Āptamīmāṃsā*. He applies a conception of reality as necessarily involving contrary attributes to the resolution, through synthesis, of a variety of philosophical topics – being and non-being, unity and plurality, permanence and impermanence, identity and difference, idealism and materialism, and so on. He thereby sets the stage for centuries of

philosophical analysis of the prima facie incompatible claims of diverse schools of thought by his successors in the Jaina tradition.

In the centuries to come, many other Jaina thinkers would continue to develop these ideas much further; but the essential contours of Jaina logic were set in place by Siddhasena and Samantabhadra.

3. Anekāntavāda, Nayavāda, and Syādvāda: The Jaina Doctrines of Relativity

Let us turn now from intellectual history and context to an analysis of Jaina logic itself. The terms *anekāntavāda*, *nayavāda*, and *syādvāda*, though frequently used interchangeably in both primary and secondary texts, can be seen to denote three distinct doctrines which collectively constitute the systematic philosophical position which I call the 'Jaina philosophy of relativity.'

Anekāntavāda, first of all, may be translated literally as 'non-one-sided-doctrine,' 'many-sided doctrine,' or 'doctrine of many-sidedness.' Satkari Mookerjee's translation, 'philosophy of non-absolutism,' is useful up to a point, but ultimately deceptive, inasmuch as it might be taken to imply that there is *no* absolute viewpoint within Jaina philosophy [17]. According to Jaina thought, though, as we have seen, such a viewpoint does exist: namely, the viewpoint that encompasses all others, the viewpoint of those fully enlightened and liberated omniscient beings (*kevalins*) such as Mahāvīra whose souls (*jīvas*) have been liberated from all inessential defiling matter (*karma*) and so shine forth in their true, essential nature of perfect knowledge (*jñāna*), energy (*vīrya*), bliss (*sukha*) and perception (*darśanas*) – and hence the inappropriateness of either 'relativism' or 'non-absolutism' to translate *anekāntavāda*. 'Non-absolutism' is, however, a perfectly fine translation of *anekāntavāda* if it is taken to apply only to the epistemic situation of non-omniscient beings.

Anekāntavāda is an ontological doctrine. Its fundamental claim, as it eventually came to be understood by the tradition, is that all existent entities have infinite attributes.

This claim stems from the ontological realism which characterizes the Jaina position – that is, according to Jainism, reality is essentially as we perceive it. The apparent contradictions – the Kantian antinomies – that our perceptions involve, such as continuity and change, emergence and perishing, permanence and flux, identity and difference, actually do reflect the interdependent, relationally constituted nature of things. Reality is a synthesis of opposites. As we have seen, this character of reality is reflected in the definition of existence presented in the *Tattvārtha Sūtra*.

Consequently, it is not inconsistent with the nature of reality to affirm contrary attributes of any given entity. The number of possible predications which can validly be made of an entity is heightened to infinity by the fact that, unlike other Indian (and Western) notions of a substance as having no real relations with any other entity, Jainism affirms a definition of an entity which includes within itself the entity's relations, both of being and of non-being, with every other entity constituting the cosmos. A pot, therefore, is related to all other pots, in part, by having all of the qualities which go into making a pot a pot (that is, a member of the category 'pot'); but it is also related to pens, in part, (albeit negatively) by its not possessing pen qualities [17, pp. 23-48]. It can therefore be asserted that, from a certain perspective (that of being a pot), the pot exists; whereas, from another perspective (that of being a pen – that is, of having pen-qualities) the pot does not exist – that is, it contains within its definition non-being with respect to pen-qualities. It does not exist *qua* pen. The Jaina definition of an entity thus includes, in the form of its internal relations with them, both positive and negative, every other entity in the cosmos.

Epistemologically, *anekāntavāda*, with its affirmation that every entity possesses infinite attributes, entails *nayavāda*. This term is best translated as the 'doctrine of perspectives.' The gist of this doctrine has already been presented above. All entities possess infinite attributes. Some of these attributes, such as emergence and perishing, are prima facie incompatible. One may therefore make infinitely many, and sometimes prima facie mutually incompatible, claims about the character of an entity – such as, "It is in the nature of an entity to endure over time," or "It is the nature of an entity to perish." The truth of one's affirmations about any entity depend upon the perspective from which those affirmations are made. Truth – and, consequently, knowledge – is a

function of one's perspective (*naya*). This, at least, is the case for non-omniscient beings, who only, by definition, grasp but a portion of reality within the field of our limited awareness. We are like the blind people in the famous Indian parable of the blind men and the elephant. We perceive reality only to the extent that we can grasp it, not in its totality.

The doctrine of *naya*s enables the Jains to avoid the charge of self-contradiction in their attribution of prima facie incompatible characteristics to a given entity. No violation of the law of non-contradiction is entailed; for it is not the case that the Jains make incompatible predications of an entity in the same sense, but in different senses, from different *naya*s. In other words, the Jainas do not claim, for example, that an entity both exists and does not exist in the same sense. But in different senses, from different perspectives, the entity *can* be said both to exist and not to exist (*qua* pot, for example, but not *qua* pen).

This doctrine is illustrated famously by the example of the golden crown. A golden crown comes into the possession of a king. His son, the prince, wants to keep the crown, but the queen wants it melted down and made into a necklace. The king acquiesces to the wishes of his wife and the crown is melted down. The queen is delighted to have a new necklace. The prince is disappointed that the coveted crown has been destroyed. The king, however, is indifferent, for the amount of gold in question has remained the same. These three are viewing the entity in question from the perspectives, respectively, of emergence, perishing, and duration. The former state (*paryāya*) of the substance (*dravya*) of the gold has passed away – the crown. A new state has taken its place – the necklace. But the substance, the gold, constituted by its essential qualities (*guṇas*), persists. In one sense, a new entity has come into being. In another, an entity has been destroyed. And in yet another, no change has occurred. This illustrates the complex character of reality.

As indicated earlier, the perspectives of emergence, perishing, and duration are not the only *naya*s affirmed in Jaina philosophy. According to later interpretations, the number of *naya*s is potentially infinite. "Reality is many-faced (*anantadharmakātmakaṃ vastu*) and intelligence is selective. There are, therefore, as many ways of knowing (*naya*s) as there are faces to reality" [2]. As we have seen, though, a standardized list of seven *naya*s is articulated in a number of Jaina philosophical texts, like the *Tattvārtha Sūtra*. These texts come to be identified by Jaina thinkers with the perspectives of various non-Jaina systems of Indian philosophy.

Again, Jaina thought is not a complete relativism. It is not the case that 'anything goes' in Jaina logic. There is a Jaina theory of error. According to this theory, the worst philosophical error that one can commit – and which, finally, is the root of all error – is *ekāntatā*, that is one-sidedness, or exclusivism, in making one's philosophical assertions.

A common illustration in Jaina texts of the limitations of *ekāntatā* is the dispute – quite heated in Indian philosophical discourse – between *nityatvavāda* and *anityatvavāda*. *Nityatvavāda*, or eternalism, the view according to which there is such a thing as a permanently enduring substance is correct if affirmed from the perspective of the enduring nature of a thing, but incorrect inasmuch as it rules out its antithesis. Similarly, the contrary view, *anityatvavāda*, or the affirmation of impermanence as the essential nature of things is correct if it is affirmed of the constantly changing modal nature of things, but incorrect inasmuch as it rules out the permanently enduring aspect of a substance. The truth, of course, is *nityānityatvavāda*. Reality is, in different senses, both eternal and non-eternal, according to the synthesizing Jaina perspective.

The Jaina conceptualization of alternative schools of thought, then, is of these schools as representing partially correct, but incomplete, *ekānta naya*s. Like Alfred North Whitehead, the Jaina tradition can be interpreted as affirming that, "The chief danger to philosophy is narrowness in the selection of evidence" [22, p. 337]. This is the realist thesis that any metaphysical system which bases itself on only one dimension of experience errs inasmuch as it rules out the validity of all other possible perspectives. According to the Jaina version of realism, *ekāntatā* leads to *māyāvāda* – the thesis that the bulk of human experience, such as the element of change, or of continuity, is the result of illusion (*māyā*). This view is rejected by the Jains as destructive of human religious and moral aspirations and activities [20, p. 178]. Unlike traditions like Buddhism

and Advaita Vedānta, which teach that seeing phenomenal reality as ultimately unreal is salutary and conducive to detachment (*vairagya*), Jaina thinkers see such perceptions as undermining the urgency of spiritual practice.

One can thus see that the concerns of the Jaina intellectual tradition are not confined to the realm of philosophy, in the straightforward sense of inquiry into the nature of reality, but extend to the realm of 'meta-philosophy' as well – that is, reflection on and discussion of what constitutes the proper nature of philosophical discourse itself [6]. This brings us, finally, to a discussion of *syādvāda*, translatable literally as the 'maybe doctrine,' but more accurately as the 'doctrine of conditional or qualified assertion.' This is the doctrine of the proper formulation and analysis of philosophical propositions in light of the philosophy of relativity.

In the discussion of *nayavāda*, it was stated that, according to the dominant Jaina theory of error, one commits falsehood only by stating propositions exclusivistically or one-sidedly, as reflecting the only possible truth of the matter at hand, and as exclusive of any possible antithesis. Consequently, according to later Jaina thought, one states a true proposition only when one speaks in a non-exclusive manner. The mark of this non-exclusive, non-absolutist form of speech is the qualification of one's philosophical statements with the Sanskrit modifier 'syāt,' hence the name 'syādvāda,' or '*syāt*-doctrine,' for the Jaina doctrine of the proper formulation and expression of philosophical claims [16, pp. 52-53].

What does the word 'syāt' mean? In ordinary Sanskrit usage, 'syāt' is the third-person singular optative form of the verbal root as, meaning 'exist.' 'Syāt' thus normally means 'it could be,' 'it should be,' 'maybe,' or 'it is possible that…' But in the context of its usage as a technical term in Jaina philosophy, it is stipulated that *syāt* is *not* the third-person singular optative form of 'exist,' but an indeclinable particle (*nipāta*). In its normal usage, *syāt* conveys indefiniteness. But this is not adequate to what Jaina thinkers intend when using this term to qualify philosophical claims. Quite an opposite meaning is, in fact, intended; for the point of *syādvāda* is ultimately to *dis*ambiguate language, to coordinate the exclusive, one-sided claims made by competing schools of thought with partially valid perspectives, or *naya*s, understood as such in terms of Jaina thought. As Samantabhadra explains:

> In the sentences of the position of relativity there is a movement towards specificity (*viśeṣanam*). [This occurs] due to the connection of the meaning of the particle (*nipāta*) '*syāt*' with Your [Mahāvīra's] absolute perspective.
> Due to its renunciation of absolutism, *syādvāda* [could be taken to mean] 'somehow' or 'sometimes' [in other words, to convey a sense of indefiniteness]. But in the method of sevenfold predication [to be explained shortly] it means 'in some specific sense.'[5]

In Jaina technical usage, then, *syāt* conveys the meaning 'in some specific sense, or from some specific perspective, it is certainly the case that….' According to Ācārya Mahāprajñā, a Jaina thinker of the modern period, in order for a statement to be valid according to *syādvāda*, to convey a true understanding, it must include not only the modifier '*syāt*' – which, as we have seen, in ordinary usage conveys a sense of indefiniteness – but the modifier '*eva*' as well. In a sense the opposite of 'syāt' in ordinary Sanskrit usage, *eva* is typically used to give emphasis, to indicate that something is *certainly* the case, or that what is being said is of special importance. It tends to have the same function as the old English word 'verily,' and is frequently translated as such in early English renditions of Sanskrit texts. The pairing of *syāt* with *eva* is intended to convey the synthesis of the relative and the absolute that it is the purpose of *syādvāda* to effect – the idea that the truth of a claim is relative to the perspective from which it is made, but that, given this specification, definite truth-claims are possible. In the words of Ācārya Mahāprajñā:

> In the absence of relativism [i.e. relativity] indicated by the phrase 'in some respect' (*syāt*) the use of the expression 'certainly' (*eva*) would confer an absolutistic import on the propositions. But by the use of the word 'syāt' (in some respect) indicative of

> relativism [i.e. relativity], the expression 'certainly' (*eva*) loses the absolutistic import and confers definiteness on the intended attributes predicated in the propositions [15, pp. 18-19].

According to Siddhasena, there are seven possible applications of '*syāt*' which exhaust the possible truth values of a proposition. These seven applications of *syāt* do not correspond to the traditional seven *naya*s, but their purpose is the same: to situate various views as parts of the whole constituted by the synthetic perspective of Jaina philosophy.

According to Samantabhadra, the seven possible truth-values of a given proposition *p* are:

1. In a sense/from one point of view (*syāt*) *p* is certainly (*eva*) true.
2. In another sense/from another point of view (*syāt*) *p* is certainly (*eva*) not true.
3. In another sense/from another point of view (*syāt*) *p* is certainly (*eva*) both true and not true.
4. In another sense/from another point of view (*syāt*) *p* is certainly (*eva*) inexpressible.
5. In another sense/from another point of view (*syāt*) *p* is certainly (*eva*) both true and inexpressible.
6. In another sense/from another point of view (*syāt*) *p* is certainly (*eva*) both not true and inexpressible.
7. In another sense/from another point of view (*syāt*) *p* is certainly (*eva*) true, not true and inexpressible.

In order to illustrate the function of *syādvāda* in the analysis of a proposition, let us return to our friend, the pot, and analyze the unqualified proposition "The pot exists":

1. In a sense (that of possessing the defining characteristics of a pot), the pot certainly does exist.
2. In another sense (that of possessing some characteristics incompatible with those of a pot, such as the characteristics unique to a pen), the pot certainly does not exist (that is, it does not possess those non-pot characteristics).
3. In another sense (the two aforementioned senses taken in successive conjunction with one another), the pot certainly both does and does not exist. (It exists with respect to some characteristics and not others).
4. In another sense (the first two senses taken in simultaneous conjunction with one another), the character of the pot certainly is inexpressible. (This is the sense in which the concrete character of the pot cannot be captured in words but, in Wittgenstein's terminology, can only be "shown." This is the point at which the limits of our concepts and our language are surpassed.)
5. In another sense (the first sense combined with the fourth), the pot certainly both exists and is inexpressible.
6. In another sense, (the second sense combined with the fourth) the pot certainly does not exist and is inexpressible.
7. In another sense (the third sense combined with the fourth) the pot certainly both does and does not exist and is inexpressible.

This sevenfold application of *syāt* is seen as universally applicable and exhaustive of the possible truth-values that a given proposition can convey. *Syādvāda* is, in fact, applied by Jaina logicians to a wide variety of topics. It represents Jaina dialectical logic at its most sophisticated and yet is elegantly simple. As Matilal summarizes it, "Add a *syāt* particle to the proposition and you have captured the truth" [16, p. 3].

The seven applications of *syāt* are not, according to the tradition, arbitrary. They really do reflect the possible number of truth-claims which can logically be made with respect to a given proposition; for further combinations of the first four applications (e.g. "In a certain sense, *x* is true, true, not true, and inexpressible") are redundant, while it is argued that applications five, six, and seven amount to distinctive truth-claims, and not mere repetitions of the first four distinct possibilities [17, pp. 117-120].

The only limitation on the universality of the application of *syādvāda* is that placed by the insistence of the tradition that the seven possible truth-values of a given proposition – the senses in which a given proposition can be said to be true – as well as the perspectives (*naya*s) from which these truth-values can be affirmed, must be consistent with the Jaina worldview. The introduction of this normative standard into the Jaina philosophy of relativity is what prevents it, again, from being a form of relativism in the extreme sense. It is not the case that *any* proposition can be true in *any* sense, but only in senses specifiable from within a correct understanding of reality: and for a Jaina at least, that will be a Jaina understanding of reality.

4. Conclusion

Although the situation of the Jaina philosophy of relativity within the context of the Jaina worldview has the salutary effect of preventing this philosophy from lapsing into an incoherent relativism, it also raises the question of the applicability of this philosophy, as discussed at the start of this essay, to a model of worldview pluralism. Is this truly a model suited for pluralism, or is it a parochial Jaina way of approaching philosophical difference? Is its relevance confined only to the Jaina tradition, or is this system of logic, in a sense, "exportable"? That is, could it also be deployed from within a more neutral worldview that is seeking to coordinate amongst the many worldviews available within humanity's many religions and philosophies? Could this potentially raise the kinds of issues of cultural appropriation that the is involved in, for example, the modern discourse of yoga? Or could it be hailed as a gift from the Jaina tradition to a human species which is still struggling with the coexistence of diverse belief systems? This question is beyond the scope of this essay; but it is the hope of this author that Jaina logic can, indeed, be utilized in a way which can give hope to a world wracked by conflict and worsening polarization.

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Notes

1. Jainism scholar John Cort has demonstrated that, historically, Jaina logic does *not* function as a form of intellectual *ahiṃsā*, but as a device for showing the superiority of a Jain worldview over other, merely partially true alternatives. The prospect that this system of logic can, however, in principle be utilized to advance a more accommodating way of approaching diverse worldviews is not thereby excluded.
2. The "progressive" and "regressive" time-cycles–called the *utsarpiṇī* and *avasarpiṇī*, respectively–are periods of increasing good and bad qualities, each of which characterizes half of a *kalpa*, or cosmic epoch according to traditional Jain cosmology.
3. *Tattvārtha Sūtra* 5:29, translation mine.
4. The dravyas making up existence, according to Jain teaching, are *dharma* (the principle of motion), *adharma* (the principle of inertia), *ākāśa* (space), *pudgala* (matter), *kāla* (time), and *jīva* (life, or soul). To these six, a seventh, *abhāva*, or absence, is added by some thinkers, though others argue that absence is not really an entity and that its addition to the list of dravyas is superfluous. In keeping with later Jain philosophy, though, absence refers to the non-presence in a particular location and at a particular time of a specific quality, characteristic, or entity.
5. *Āptamīmāṃsā* 103-104, translation mine.

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A Set of Meta-Systemetic Assumptions for Dovetailing Jaina Logic Into Jaina Metaphysics

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Abstract:
This paper presents an integralist approach to Jaina logic. This is built around an analysis of the pivotal notion of *antarvyāpti* in Jaina logic. It is shown in this connection why *antarvyāpti* needs to be considered the 'Core Perspective/Problem' of Jaina logic. Next, it is shown how all the salient features of Jaina logic (as viewed from its language-oriented perspective and the epistemic perspective respectively) stand intimately related to the so-called core perspective. In the remaining sections of the paper topics like relationship of the core perspective i) to various non-standard systems of logic [DL, FL, NMR etc.,], ii) to the four pillars and to the eight MPC's of Jaina philosophy, iii) to some bluntly unimaginative ways of looking at Jaina logic [e.g., Ducko-Rabbitism], iv) to the scheme of classification of propositions in Jaina logic, v) to the resulting conceptual economies related to methodology, and especially to a unified theory of Hetvābhāsa and, finally, vi) to a re-assessment of Frege-Husserl discord in the light of the significance of Jñānātmakatā vs Vākyātmakatā in Jaina logic, etc., have been discussed.
Keywords: *antarvyāpti*, *anumāpakas*, *anyathā-anupapanna*, *avinābhāva*, *bahirvyāpti*, *bhūyodarśana*, DKM, Ducko-Rabbitism, epistemic view of logic, fallacious validity, Hetvābhāsa, *jñānātmaka*, ontic view of logic, *śabdātmaka*, semantic-conceptual linkage, syllogism-ism, synonymy, synthetic *a-priori*, *vākyātmaka*.

1. Introduction

Most other papers on Jaina logic are written with a kind of academic attitude which I prefer to call, 'a *segmented conceptual depth-analysis* orientation.' In contrast, the author of this paper takes a *holistic* approach and makes an honest endeavor to lay down some sort of a blue-print for achieving a neat scheme of conceptual unification of the entire corpus of Jaina philosophy, with a view to situating Jana logic in its *total conceptual network*. I would like to characterize the orientation of this paper as 'holistic-cum-comparative.' It is *holistic* in the sense that unlike most other papers of this genre – it tries to *situate* Jaina logic in the wider context of Jaina system of philosophy as a whole, which includes i) the metaphysical underpinnings [which I propose to call the 'meta-

systemic presuppositions' [MSP's] or, the 'metaphysical pre-commitments' [MPC's] of Jaina philosophy/metaphysics'] and, (ii) the so-called 'pillars' of Jainism. One such systemic pre-commitments of the Jaina's happens to be their commitment to a sort of world-view which I call 'universal pan-relational contextualism' [UPRC]. Such a commitment is clearly enshrined in their canonical text *Ācārānga Sūtra* [8, p. 222, Section 1.8]. In simple language, it entails commitment to a *pan-relational* world-view in which everything that is real, i.e., a *vastu*, whether animate or inanimate (*Vastu cetanācetanam sarvam dravyam*) does exist only as a *node* of a *cosmic relational network*. Nothing is exempted. [Physicists like John Gribbin, D'Espagnat, lines from thinkers like John Muir: 'When one tugs at a single thing in Nature, He finds hitched to the rest of the World,' Tennyson's ('Flower in the Crannied Wall') all express the same belief in *cosmic interrelatedness*, as is expressed in the *Acārāṅga Sūtra* [29, p. 97], [8, p. 222]. The Jainas have elevated this belief in *cosmic interrelatedness* to the status of a *non-negotiable* metaphysical truth. The entire system of Jaina Metaphysics/Philosophy [including Ontology, Logic, Epistemology, 'Philosophy of Language', Ethics (as Theory of Morality), Religion, etc., can be, and needs to be, viewed as a concerted effort to work out a well-coordinated system of philosophy. In other words, my claim here is that any proper appreciation of the characterizing features of Jaina logic is not possible unless one considers them as *organic units/components*/organs of a *living* whole (viz., of the entire metaphysical system that underlies Jaina logic) instead of regarding those specific features/peculiarities of Jaina logic as *separable fragmentary parts* of a mechanical structure. Moreover, besides being *holistic*, this paper is also *comparative* in its orientation in the sense that i) it [i.e., this paper] not only highlights the points on which Jaina logic *deviates* from the traditionally agreed framework of Indian logic (as shared by the *other* schools of Indian logic), but ii) it also makes an in-depth analysis of the logical-philosophical implications of those points of deviation *vis-à-vis* their corresponding ideas in Western logic.

It should not be difficult for a careful student of Jaina philosophy to see how Jaina 'Ontology,' [when it is viewed from a combined perspective of UPRC + IMFR + FMCA] naturally leads one to accept AKV. Similarly, when Jaina 'Philosophy of Language' as well as Jaina Logic are viewed from that same combined perspective it leads to i) Meaning Holism [MH], ii) the denial of sharp and discrete semantic boundaries between *any two* concepts, which in its turn, prepares the ground for entertaining *fuzzy* interpretation of *all* predicates occurring in each one of the *seven bhaṅgas* of *Saptabhangī* a highly plausible option. The result being context-relative conditionalization of all truth-claims i.e., *Syādvāda* [SV]. Clearly, the notion of 'conditionality' is intimately linked with the notion of 'context-dependency,' and as such, it reflects the spirit of 'pan-contextualism' in Jaina philosophy. [Of course, we should keep in mind that the Jainas consider '*existence*' itself as a predicate.] Again, iii) when 'Epistemology' is viewed from the combined perspective of MH + Fuzziness [i.e., denial of sharp and discrete semantic boundaries] + FMCA [i.e., 'Finitude of Man's Cognitive Ability', [29, p 53,] we get, what is called, *Nayavāda* [NV]. Finally, iv) once it is accepted that the real objective of the Indian logicians in general was to work out a *unifying-cum-systematizing framework* for **our world-view as whole**, it follows that the real interest of the Indian logicians was primarily *epistemological* [and thus, inescapably ***information-theoretic***] in nature. An inability to appreciate this point causes problems for those modern interpreters (of recent past) of Indian logics who try to fit Indian logic in the framework Aristotelian syllogistic model. Naturally, when it fails to fit (as it must) they come up with some very queer sorts of theoretical hodgepodges [e.g., what D.M Dutta & S.C. Chatterjee do in their book, Introduction to Indian Philosophy]. Consequently, they not only fail to appreciate the deeper significance of Indian logics, they often try to obfuscate the situation. If something 'x', has the characters both of a *duck* (i.e., being epistemology-centric, unlike a syllogistic inference) and also of a *rabbit* (i.e., possesses quite a well-defined structure somewhat similar to syllogistic format) then just call it a *'ducko-rabbit,* instead of admitting that you failed to recognize 'x' for what it is viz., a hitherto unknown and altogether a new species. Such a 'ducko-rabbit' approach, instead of solving the real problem, invents an easy way to (*dis*)solve it by a sort of sleight of hand merely by playing upon words. They try to sell (to most of the gullible readers) the idea that the 'pancāvayavī

nyāya' is nothing else than a more elaborate and better version of syllogistic format. Nothing could be further from truth that results from a blind-sight or, may be, a refusal to see the real issue. I wonder why, by an extension of the 'ducko-rabbit' argument and using parity of reasoning, nobody ever seriously considered branding Mill's so-called 'Inductive' Methods as 'deducto-observational' in nature? Such advocates of 'ducko-rabbit-ism' fail to recognize that by Mill's own admission, each one of his 'Inductive' Methods is implicitly deductive in nature. As a matter of fact, each one of Mill's so-called 'Inductive' Methods, conforms to a *dedudtive* pattern which happens to be based on some implicit axioms [13].

Granted that i) 'all *empirical* concepts are essentially fuzzy' [as the feasibility of a fuzzy interpretation of the *bhangas* of SV indicates], ii) that 'there is no (and cannot be) any sharp and definite semantic boundaries' between any two concepts, that iii) 'indefinitely extended pan-contextualism' [UPRC] holds and, that iv) 'finitude of man's cognitive ability' [FMCA], etc., are facts that we cannot turn our backs to, it follows that taking recourse to Default Logic [DL]/Non-Monotonic Reasoning [NMR] remains the only option open for staying in the business of doing logic. This is exactly what the Jaina logicians ended up doing, of course, without being aware of the formal technicalities involved in Default Logic or in NMR. As already pointed out, if there is no sharp semantic boundary-line between semantic units and further, every meaning-context must spread out indefinitely then being endowed with a finite cognitive ability (as we happen to be), we must honestly admit that there is *no way to be sure* how far a context extends or where it ends. Behind every assertion, there is always an *endless* number of presuppositions. So, instead of vainly looking for a fully *exhaustive* list of presuppositions before venturing into logic at all, we ought to be satisfied with a *tentatively exhaustive* list of presuppositions underlying any truth-claim, [as is done in DL/NMR] we need to keep on playing the game of logic *undaunted* in the face of such incomplete (and, also incompletable) information. The kind of logic that has been developed to handle this kind of gappy information-situations is called *default logic* [**DL**]. It should be clear by now why UPRC, FMCA, AKV, SV and NV all these must go, as they do, hand in hand in Jaina logic.

Clearly, it is not for nothing that I decided to take this somewhat *deviant* approach, looking for an integrated holistic view to Jaina logic. There are some other reasons behind it too: i) *first*, by focussing too much on each one of the constituent components of Jaina logic [theory of *anumāna* (inference)] one may fail to see the significance of the entire *conceptual ecosystem* in which alone the structure of Jana logic can grow and survive. My motive here is somewhat analogous to that of a forest ecologist (*not* that of a plant anatomist or that of a plant histologist). Losing sight of the forest for the individual trees cannot be an option to an ecologist. A forest is not just a collection of individual trees in close proximity to each other, any more than the graceful pattern of a dance-rhythm in a dance-performance is simply a 'series of arrested falls.' ii) *Secondly*, not only does an integralist approach to Jaina logic enables one to clearly see the *forest* (instead of seeing only the individual trees), it [i.e., an integralist approach] can also more effectively blunt the edges of unfair criticisms (by scholars of Dayakrishna's type) against the Jaina doctrines of SV, AKV etc. [For an example of such criticism, see [29, pp. 70-74]. iii) *Thirdly*, it also opens up the scope and possibility of free *trans-bound comparison* of Jaina logic with similar ideas in other systems of thought – both Indian and Western. iv) *Fourthly*, our integralist approach to Jaina logic also shows the possibility of smoothly dovetailing Jaina logic with Jaina Metaphysics, resulting in an integrated conceptual whole.

2. Highlighting the Strands that Weave Into the Unique Tapestry of Jaina Logic

It is generally claimed that the edifice of Jaina philosophy can be viewed as standing on three (or, four) so called 'pillars of Jainism' viz., AKV (*anekāntavāda*), SV (*syādvāda*), and NV (*nayavāda*). Some, like the present author, think that it is necessary to add a *fourth* one, viz., VV (*vibhajyavāda*) to the list of the above *three* which are the traditionally recognized pillars. I think that like any other load-bearing support-structure, the four pillars also need to stand on some rock-solid foundation

stones. I *hypothesized* the presence of a few such foundation stones and proposed to consider them 'rock-bottom foundation.' As we cannot go any deeper than that foundational level, our conceptual 'spade is turned back' from there, so to say. These foundation stones I propose to call 'the meta-systemic presuppositions' [MSP's] or, metaphysical pre-commitments [MPC's] of the entire system of Jaina philosophy. In my earlier writings I listed *eight* such MPC's [29, p. 84 ff]. The *four* pillars together with the *eight* MPC's/MSP's we may call 'the basic strands of Jaina philosophy.' In the rest of this section the basic strands are listed and discussed very briefly, followed by a discussion of the mutual conceptual inter-connectedness among the individual strands.

I think, before proceeding any further into developing my anti-segmental/integralist approach to Jaina logic, I need to be clear about the two main planks underlying the metaphysical basis on which my arguments for the holist-cum-integralist view about Jaina logic depends. These *two* planks are i) the so-called *pillars* of Jainism and ii) the set of *foundation stones*/the *rock-bottom* (i.e., the MPC's) on which those pillars ultimately need to stand.

It is almost a commonplace knowledge that there are (at least) *three* basic tenets or fundamental principles or 'pillars,' so to say, of Jainism viz., a) *Anekāntavāda* [AKV], b) *Syādvāda* [**SV**], and c) *Nayavāda* [**NV**]. Of these three, the first two are comparatively better-known and are talked about more often than *Nayavāda*. However, I maintain that there is another basic tenet, a *fourth* pillar, so to say, viz., *Vibhajyavāda* [**VV**] which is even less frequently discussed than the other three, although it is logically no less important than those three for that reason [*Vibhajyavāda* is discussed in detail in [29, pp. 261-288, 129].

After these initial remarks, I am going to consider the *four* pillars one by one, with a view to highlighting **a**) the respective *primary* orientation/import of each one of them and **b**) to bring (*en passant*, and in brief) to relief the *logical-cum-conceptual links/inter-relationships* that bind them together. See [29, pp. 194-204, 261-266].

With regard to **AKV,** I maintain that since it says/specifies what 'reality' is like, (*dharma*-wise/feature-wise) its *primary* orientation should be counted as ontological. In other words, *Anekāntavāda* is *basically ontological* in import.

Regarding *Syādvāda* (**SV**), I hold that since it says what sort of logically and linguistically constrained *form*, a knowledge-claim [when it is *propositionally* expressed] about the nature of something real (i.e., a *vastu*) *must conform* to, the *primary* orientation of **SV** needs to be considered *logical-cum-linguistic* in nature. In short, *Syādvāda* is basically logical-cum-linguistic in import.

In the same way, so far as *Nayavāda* [**NV**] is concerned, it is about possible *epistemic* perspectives/viewpoints that a knower may adopt in regard to its object of knowledge (*jñeya-vastu*). Whence it follows that *Nayavāda* is *basically epistemological* in import. In short, the primary orientation of **NV** is epistemological.

The qualifying words 'basically'/'primarily' are used on purpose, in order to indicate that none of the respective philosophical orientation/import imputed to any of the pillars can be said to be its *only* and *exclusive* feature. In other words, the orientation of none of the pillars is *exclusively* ontological or, *exclusively* logical or, *exclusively* epistemological in nature. It must be clear that the reason for using such qualifying words like 'basically'/'primarily' etc., is this: Since in Jaina philosophy (as in any other system/school of Indian philosophy), ontology, logic and epistemology are so *inextricably intertwined* with each other that not any one of these can be understood in isolation, singly by itself without any reference to the others. Exclusivity of one feature at the cost of the rest must be blocked. Ascription of this type of exclusivity to any one of the pillars, as we shall see, runs counter to the very spirit of 'exclude none' attitude which is so deeply entrenched in Jaina philosophy [32].

We may pause here for a while to say a few words about the *fourth* pillar, viz., *Vibhajyavāda* [**VV**] itself. Unlike the three other pillars, the primary orientation of the fourth pillar viz., of *Vibhajyavāda* is *analytical-cum-conceptual* clarification of philosophical/metaphysical claims/questions. Thus, in a way, the primary orientation of *Vibhajyavāda* is 'exclusivist,' in so far as the aim of *Vibhajyavāda* is to *sift out* or, to *exclude* (as *un*-entertainable), such purported philosophical/metaphysical queries which turn out to be *ill-formed*, by the *Vibhajyavāda* criterion.

Such *ill-formed* and *un*-entertainable questions are consigned to the special category viz., *sthāpanīya* [i.e., 'to put *on-hold*'] type questions [29, p. 256 ff]. If we keep this background in mind, we cannot deny that all these pillars have to be intrinsically interlinked in so far as each one of these only happens to be high-lighting the different aspects of one given thing [*vastu*] or another. In addition to this, there is other philosophically more significant ways also in which the pillars happen to be interlinked. We will discuss it later.

As I claimed earlier, these pillars need some foundation stone at the ultimate rock-bottom level. Such foundation stones I proposed to call 'metaphysical pre-commitments' or, MPC's of Jaina philosophy. [In some of my other writings I used 'meta-systemic presuppositions' (MSP's) instead of calling them MPC's of Jaina philosophy.] In this connection I also want to show how, by using the MPC's as launching pads for our project, it is possible to tie-up and systematize diverse areas of Jaina philosophy such as metaphysics, logic, philosophy of language, etc., in a logically coherent way. This should, in its turn, explain how ***all*** the typical characteristic/salient features of Jaina logic (viz., those that make it stand apart from the others) can be viewed as *quasi-corollaries* following from, what I consider to be *the* core feature of Jaina logic viz., the nature and the role of *antarvyāpti* in it. [By 'quasi-corollaries,' I do *not* mean *logical corollaries* in its full technical sense. Here, I use 'quasi-corollaries' only to mean such important ideas which possess (i) a strong *intuitive* plausibility, but *cannot* be derived as *deductive* consequences from our hypothesized set of MPC-**s**], and yet, (ii) they [i.e., such important ideas] happen to be *conceptually relevant* for a nice kind of systematization of Jaina logic.

Here is the list of our *eight* **MPC**'s: 1. **R**ealism – 'Ontology' is fully independent of 'epistemology'. Or, to put it in a different way, 'Mind'/'Consciousness' has nothing to do with the 'existence' of any *vastu*. 2. Infinitely many-faceted nature of reality [**IMFR**] 3. Universal Pan-relational Contextualism [**UPRC**]. 4. Ultra-literal Interpretation of the notion of 'pratyakṣa' [**ULIP**]. 5. Self (*ātmā*) as the Locus and Repository of all *jñāna* (cognitions) [**SLRJ**]. One interesting *corollary* of **SLRJ** is what may be called **UVJ** or, the '*un*-concealment view of '*jñāna*'.[29, p 43-50 ff.] [I prefer to use 'cognition' as a translation of 'jñāna,' instead of the more natural-sounding term 'knowledge,' in order to avoid any possible conceptual confusion with similar ideas in 'contemporary theories of knowledge,' as it is understood in the West.] 6. Finitude of an Ordinary Man's Cognitive Ability [**FMCA**]. This, together with **IMFR,** entails that humans are intrinsically incapable of grasping the *true* nature (i.e., the *whole* nature) of any given *vastu*. 7. Linear Hierarchical Gradualism [**LHG**]. 8. Adequacy of Bivalence-based Logic [**ABBL** or, simply, **BBL**].

I think, the nature of each of the **MPC**'s in the above list should be clear from the brief characterization given following the name of each such **MPC**. We must note here, *en passant*, that **R**ealism, **IMFR**, and **UPRC**, are three basic *non-negotiable* commitments of Jaina metaphysics as a whole. It is easy to see that *given* **R**ealism, **IMFR** and **UPRC**, **AKV** follows as a corollary, with Jaina ontology of *Anekāntik* pan-relational realism [**APRR**] coming in toe.

At this point we must *not* overlook two things,

i) that according to the Jaina view the *range of applicability* of AKV is universal and exception-less. It extends over everything in the world – both material and immaterial. Being infinite-faceted is proposed by the Jainas even as a criterion for telling something 'real,' apart from what is '*un*-real.'

[Cp. *anantadharmātmakaṃ vastu …. Vastu cetanācetanam sarvam dravyam …. yadanantadharmātmakam na bhavati, tat prameyamapi na bhavati yathā vyomakusumam iti…* [29, p. 53], [8, p. 212], and

ii) the logical-cum-conceptual relationship between AKV and APRR are mutually *complementary* to each other. In a way, the two are as inseparable as are the two sides of the same coin.

The objective of this paper, as already pointed, is to present an integrated holistic picture of some outstandingly unique features of Jaina logic by way of weaving out a recognizable pattern from the basic strands [viz., the *four* pillars and the MPC's] that give shape to Jaina metaphysical system in its entirety. Obviously, this objective is easier promised than fulfilled. However, in order

to make our job tractable and to keep it within a reasonable length, I plan to view and organize/discuss such unique features of Jaina logic' from *three* different perspectives viz., a) Jaina Logic as viewed from the Perspective of its 'Core-problem,' viz., that of *antarvyāpti*. [Henceforth, for the sake of brevity, I will refer to it as the 'Core Perspective' or the 'Core-problem']. b) Jaina Logic as viewed from a Language-oriented Perspective, and finally, c) Jaina Logic as viewed from the Epistemic Perspective. These topics viz., a), b), and c) above, will be discussed in Sections §3, §4 and §5 respectively. It needs to be pointed out here that each one of these perspectives generates various interesting logical-cum-philosophical *spin-offs*, some of which will be shown to be directly relevant to the topic under discussion here. As and when it is considered helpful for easer cross-referencing, the spin-offs from any of the above perspectives will be labelled by using Greek letters [e.g., α, β, γ, etc.]

At the beginning of §2 above, I claimed that ***all*** the typical characteristic/salient features of Jaina logic (viz., those that make it stand apart from the others) can be viewed as *quasi-corollaries* following from *the* core feature of Jaina logic viz., the nature and the role of *antarvyāpti* in it. It is one reason why I chose *antarvyāpti* as the 'Core Perspective' for viewing and understanding the distinguishing features of Jaina logic. Moreover, the notion of 'antarvyāpti,' as it is understood/interpreted by other Indian logicians, helps us to relate Jaina logic to other schools of Indian logic. This is another reason why 'antarvyāpti' may be regarded as the 'Core Perspective' for understanding the very nature of Jaina logic itself.

3. Jaina Logic as Viewed From the Perspective of its Core-Problem

As I just pointed out, the problem of determining the essential/logical nature of *vyāpti jñāna*, as also the problem of *zeroing-in* on some legitimate methods of acquisition of/ascertainment of the relevant *vyāpti jñāna* (that supposedly links a 'hetu' with its 'sādhya') in a *fail-proof* way, need to be regarded *the* core problem of Jaina logic. *This* core problem is the pivot around which the so-called 'core perspective' revolves. Before discussing how the Jaina view on *vyāpti* differs from those of the other schools of Indian logic, it needs to be pointed out that despite its crucial differences from the other schools of Indian logic, Jaina logic remains unmistakably Indian in virtue of the fact that according to the Jaina logicians i) *anumāna* is a mode of cognition/*jñāna* (NOT simply a system of formal calculus) and ii) NO watertight split between the so-called 'inductive' and 'deductive' logics is either envisaged to exist or is considered to be reasonable. The core perspective clearly consists of two components viz., a) problem of giving an exact definition/characterization of a *vyāpti* relation, and b) problem of finding a supposedly fool-proof, legitimate method of ascertaining a relevant *vyāpti jñāna* by relying on some specific group of evidence/data. Regarding problem (b) above, there are two views viz., *bahirvyāptivāda*, and *antarvyāptivāda*. Most traditionalist Indian logicians are *bahirvyāptivādīns*, while the Jainas are not. Regarding the method of ascertainment of the relevant *vyāpti jñāna* both the Naiyāyikas and the Bauddhas agree that ascertainment of *vyāpti jñāna* is amenable to empirical/perceptual evidence, provided that the set of such empirical evidence satisfy the following *five* characteristic features (*anumāpaka dharmas*) of *vyāpti* relations viz., *Pakṣavṛttitva*, *Sva-pakṣavṛttitva*, *Vipakṣa-avrttitva*, *Abādhitatva*, and *Asatpratipakṣitva*. The Naiyāyikas neatly tag and correlate one-to-one the five types of *hetvābhāsas* with failure to comply with one specific *anumāpaka dharma* or another. The Bauddhas on the other hand hold that *only three* of the *anumāpaka dharmsa* need to be satisfied in order to ensure the legitimacy of the *vyāpti jñāna* acquired through *bahirvyāpti*. So, the Bauddhas recognize only *three* corresponding types of *hetvābhāṣas*. However, the details of the Bauddha view differ from that of the Jainas only in its specifics, since both the Naiyāyikas and the Bauddhas are *bahirvyāptivādīns* and follow exactly the same logical pattern of argument in order to support their respective positions.

Keeping this background in mind we may now take a deeper look at the concept of *antarvyāpti* in Jaina logic. The standard view held by most Indian logicians regarding *vyāpti* is that i) *vyāpti* is a relation of *invariable* concomitance/pervasion between a *hetu* and its *sādhya*, secondly,

ii) ascertainment of such *vyāpti* relation (*vyāpti sambandha nirṇaya*) is amenable to a simplistic 'naïve inductivist method,' technically called *bahirvyāpti*. It is based on 'the observation of a good number' (*bhūyodarśana*) of 'exception-less corroborative instances' ('vyābhicāra adarśane sati, niyata sahacāra darśanaṁ').

The Carvākas (and the Grammarians like Bhartṛhari) questioned the validity of inference as a source of knowledge ... based on their denial of the possibility of necessary concomitance. The Cārvāka's refusal to accept *anumāna* as an acceptable/accredited means of knowing, hinges on their argument that it is *in principle impossible* to ascertain any invariable relationship [*vyāpti-sambandha*] between a 'linga' [a logical *indicator,* say, smoke] and a 'lingī' [i.e., what is logically *indicated* by it *viz*., fire]. So, the entire controversy between the 'pro-anumāna' schools and the 'no-anumāna' group boils down to this: how is it possible, *if at all*, to ascertain an invariable universal relationship or *vyāpti-sambandha* between a *hetu* and a *sādhya*. It is undeniable that no matter how many instances [without even a single exception] one may have observed, that cannot cover all the *possible* cases of past, present and future, and hence, no exception-less *bhūyodarśana* can logically warrant any universal empirical generalization.]

Consequently, ... the Jaina logicians decided to break away from the standardly proposed instance-based model of empirical generalization [i.e., *bahirvyāpti*], and advocated for the theory of internal concomitance (*antarvyāpti*) instead [14, pp. 109-11]. Hemachandra in his *Pramāṇamīṁāmsā* [PM], categorically states ... a genuine *vyāptigraha,* which is not amenable to any standard way of knowing, can be ascertained *only* by *ūha* i.e., *tarka* [*tarkāt tanniścaya*]. Mishra also draws attention to the fact that the 'number of constituents of a syllogism, according to Jaina logicians, is context-relative and depends on the level of intelligence of the people concerned' [14, pp. 109-110].

The Jainas emphasized that *bahirvyāpti*, being a sort of 'externalist naïve inductivism,' is *in principle*, incapable of yielding knowledge of universal concomitance between a *hetu* and a *sādhya*. So, they proposed to recast the method of ascertaining the relation of pervasion (*vyāpti sambandha nirnaya*) by switching away from *bahirvyāpti* to a sort of 'conceptuo-linguistic-cum-analytical' approach. Such a method of ascertaining an *inseparable, universal* link between a *hetu* and its *sādhya* (by solely relying on a conceptuo-linguistic analysis of the key-ideas involved) is technically known as *antarvyāpti*. Since *antarvyāpti*, unlike *bahirvyāpti*, dispenses with any need of relying on *external* empirical evidence we may call it, 'internalist *non-inductivism*.' The following well-known sloka is often quoted to express in a nutshell the spirit that motivates the Jaina logicians to reject *bahirvyāpti* as totally useless as a means of ascertaining a genuine *vyāpti* relation between a *hetu* and and its *sādhya*:

> *anyathānupapannatvam yatra tatra trayeṇakim/*
> *nānyathānupapannatvam yatra tatra trayeṇa kim.//*
> (Borrowed from Phaṇībhūṣaṇa [17, p. 121].

A few more words of clarification on the essential logical points packed in the notion of *antarvyāpti* is called for here. A Jaina logician Vādidevasūri says: ***If*** a given minor (*pakṣa*) is such that ***within*** it the concomitance between the *hetu* (probans) and the *sādhya* (probandum) holds/are co-located, ***then*** it is a case of *antarvyāpti*. Elsewhere, it is *bahirvyāpti* [35]. We also find the following very similar characterization of *antarvyāpti* in – Ratnaprabhācārya's work, Ratnākarāvatārika: "pakṣīkṛta eva viṣaye sādhanasya sādhyena vyāptiḥ antarvyāptiḥ anyatra tu bahirvyāptiḥ" [21, Part 2, Sutra 38]. However, the notion of 'concomitance holding within/inside a *pakṣa*' needs a lot of unpacking before it can make any clear sense. Unfortunately, traditional commentators, as we shall see, do not throw much light on it. So, we discuss it more analytically in the following sections.

Phaṇībhūṣaṇa too, follows Vādidevasūri, and says this: in the case of *antarvyāpti* concomitance of a probans and its probandum holds ***internally***. He explains it thus: 'when it is a case where the *pakṣa* [i.e., the hill] to which the *sādhya* [i.e., the fire] is to be imputed by using *anumāna,* is such that the concomitance of the *sādhana* [i.e., the *hetu*] (viz., the smoke seen on *that*

hill)] and its *sādhya* [i.e., fire on *that* hill] holds ***internally*/*within*** the *pakṣa* itself, that counts as an instance of *antarvyāpti* [17, p. 339]. According to S.C. Vidyābhūṣaṇa, 'Extrinsic inseparable connection (*bahirvyāpti*) occurs when an example from outside is introduced as the common abode of the middle term (*hetu*) and the major term (*sādhya*) to *assure* the inseparable connection between them. ... However, [in cases of *antarvyāpti*] the reference to the kitchen is *no essential part* of the inference' [36, pp. 177-78]. What is meant by saying, 'the reference to the kitchen is *no essential part* of the inference' is left unclear. I did not get any clue from the texts, but I do have a hunch about how to make a good sense out of it. I use an analogy to drive my point home. Imagine a classroom in which there is a blackboard with a triangle drawn on it. A student is asked to go to the blackboard and to demonstrate that the sum of the *three* angles of the triangle is 180^0. The boy goes to the board, picks up the protractor, measures the angles one by one, adds up the *three* angles so measured and, gets the result 180^0. This is one way of showing that the sum of the three angles of the triangle is 180^0. Similarly, to add 7+5, a junior schoolboy may depend on counting fingers. But obviously, neither using a protractor nor finger-counting is *any essential part* of a 'geometric proof' or of an 'arithmetic operation.' Why is it so? Because, as in the case of the geometric proof, the ideas viz., 'sum of the internal angles of a triangle' (='*hetu*,' so to say) and 'being equal to 180^0' (=*sādhya*) the concomitance relation 'holds *internally*' i.e., is logically contained in the very concept of a triangle itself. This also helps us to understand why reference to other triangles 'is *no essential part* of the concerned inference.' Naturally, when *antarvyāpti* is used for *vyāptinirāaya*, '*bhūyodarśana*' is no longer indispensable and even '*sakṛt darśana*' would do. For obvious reason, I propose to use 'intrinsic semantic-conceptual linkage/concomitance' [or, simply, 'semantic-conceptual linkage'] as an English equivalent of *antarvyāpti*. When viewed from this angle, the notion of *antārvyāpti* looks very similar in spirit to Kant's notion of an '*analytic* judgment', where 'the subject-term *contains* the predicate-term *within* it' [das Prädikat **B** gehört zum Subjekt **A** als etwas. (German originals taken from Ratke, Heinrich (1928): *Systematisches Handlexicon zu Kants Kritik*). All we need for such a re-construal is to *substitute*, 'in an analytic judgment the subject-term *contains* the predicate-term *within* it,' *in place of* 'in *antarvyāpti* the concomitance of *hetu* and *sādhya* holds ***within*** the *pakṣa*.' [By this, I do *not* suggest, however, that the *vyāpti* relation between a *hetu* and a *sādhya* as ascertained by using *antarvyāpti* is an analytic one in the full-fledged Kantian sense. It is to be construed as indicative of an invariable relationship [= *universality* and *necessity*] between a *hetu* and its *sādhya* in a way in which the subject and the predicate in a synthetic a-priori judgement are related]. One interesting question arises here. In order to philosophically explain why it is possible at all to blend the requirements of 'infallible necessity' with that of 'factuality' in a synthetic a-priori judgement Kant had to hypothesize a 'Copernican revolution' in philosophy. [Cp. 'Understanding maketh nature']. He claimed (contrary to the popular belief) that 'an object must conform to knowledge, rather than the other way around.' This was Kant's proposed way for putting 'a-priority' and 'factuality' together. Similarly, in order to reconcile their 'strong realism' with that of 'infallibility', the Jainas needed to take recourse to one of their *eight* metaphysical pre-Commitments (viz., SLRJ, which includes UVJ) and ended up embracing, what I prefer to call, 'a-priorist realism'/'realist apriorism' [29, pp. 47, 109-111].

I think that our foregoing discussion does suggest i) a clue to, what I consider, the most plausible approach to make sense of '*antarvyāpti*', [where 'concomitance of *hetu* and *sādhya* supposedly holds ***within*** the *pakṣa*'], and moreover, and ii) makes it easy to see that ***if*** my hunch is correct, the *vyāpti-jnāna* yielded by *antarvyāpti* does have a close *thematic affinity* to Kant's notion of a synthetic a-priori judgement. [I use 'judgement' here (*not* 'proposition') on purpose, in order to emphasize that it [i.e., such a *vyāpti-jnāna*] is essentially cognitional (*jnānātmakam*) in nature – *not* simply a grammatically well-formed sentence-shell or proposition (*vākyātmaka*). In contrast, a *bahirvyāpti-nirūpita* knowledge of concomitance is predominantly *vākyātmaka*, because it is nothing else than a frequency-theory-based statistical index of positive correlation between a *hetu* and a *sādhya* [11]. We shall soon see that the notions of *vākyātmakatā* vis-a-vis *jnānātmakatā* play crucial roles in Indian logic.

If we look carefully at the different characterizations of *antarvyāpti* as proposed by different Indian logicians, we cannot fail to discover a *unifying* thread that runs through *all* the different versions of it. This will also bring the essence of *antarvyāpti* to a clearer focus. Following is a list of *four* such alternative characterizations of *antarvyāpti*: i) it is the kind of *vyāpti* where the concomitance of *hetu* and *sādhya* holds ***within*** the *pakṣa*', ii) it is the kind of *vyāpti* where the *necessary* concomitance is either to be (a) in the subject of inference (*sādhyadharmiṇ*) or else, (b) it is to be in the corroborative instances (*dṛṣṭāntadharmiṇ*). In the former case, it is called 'antarvyāpt,' in the latter case it is called 'bahirvyāpti,' iii) Pt. S. C. Nyāyācārya [15, pp. 39-40] maintains that by 'antarvyāpti' the Jainas simply meant the type of *vyāpti* used in inferences that yield pan-inclusive universal conclusions called, 'kevalānvayi anumāna.' [According to Jayanta Bhaṭṭa, however, there is no *kevalānvayi hetu* [17, pp.304, 316], iv) According to the Bauddhas, ***all*** *hetutā* (i.e., *vyāpti*) relations are reducible to either *tādātmya* (identity) or, *tadutpatti*, (i.e., causal/dependent origination'). Let us unpack this view. It is clear that the Bauddhas agree that 'hetutā' signifies an infallibly universal relation between a *hetu* and a *sādhya*. In case it is *tādātmya* it turns out to be an instance of *antarvyāpti* by definition. In case the *hetutā* relation concerned is that of *tadutpatti* [causal fructification], it would be based on observation of a good number of exception-less corroborative instances. In that case, it is nothing but *bahirvyāpti*. Most of the scholars who criticize the Buddhist view on this point, simply *interpret tadutpatti* to imply that according to the Buddhists, *bahirvyāpti* is just another *legitimate* way of ascertaining *vyāpti*. Most people consider such an interpretation natural, unproblematic and easy to smoothly fit in with the overall framework of Buddhist position. However, I do not think it either natural or unproblematic to consider the Buddhists *bahirvyāptivādins*, because there are many textual evidences which clearly indicate that the Buddhists supported *antarvyāpti* and explicitly rejected *bahirvyāptivāda*. Moreover, the very fact that the doctrine of *pratītyasamutpādavāda* itself is considered a non-negotiable metaphysical truth by the Buddhists, does entail that it must be '*non*-counter-instance-able,' in principle. If so, an *a-priorist* interpretation of *tadutpatti* is quite feasible and would be more plausible. Anyway, neither *tādātmyatva* nor *tadutpattimatva* militate against the view that being a 'semantic-conceptual linkage' constitutes the very essence of the notion of *antarvyāpti*.

Both the Bauddha and the Jaina logicians were advocates of '*antarvyāpti*.' Incidentally, in Buddhism one comes across another technical term viz., '*svabhāva hetu*,' which seems to play the same methodological role as *antarvyāpti* plays in Jaina philosophy. It is interesting, however, that the respective examples used (by the Jainas) for *antarvyāpti* and the ones used (by the Bauddhas) for what they call, '*svabhāva hetu*,' are uncannily similar. Actually, both parties use 'It's a tree, *because* it is an Oak' (or, some similar variants of it) as illustrative examples for their respective cases. This naturally prompts one to ask whether or not the two terms [viz., *antarvyāpti* and '*svabhāva hetu*'] mean the same thing, except for being couched in different terminologies.

Be that as it may. But what is the *unifying* thread that is supposed to run through *all* the different versions/interpretations of *antarvyāpti*? Let us proceed in a step-by-step manner to arrive at the required answer.

Step 1. The entire controversy regarding the legitimacy of 'anumāna' as a *pramāna* boils down to this: How is it possible, *if at all*, to ascertain an inviolable/necessary and universal/exception-less relationship [i.e., a *vyāpti-sambandha*] between a *hetu* and a *sādhya*? [All would agree on this point.]

Step 2. Any claim to this effect [about universal and necessary connection between an 'S' and a 'P'] has to be a synthetic a-priori judgment which, according to Kant, cannot be given in or through experience.

Step 3a. Vādidevasūri's idea of 'concomitance of *hetu* and *sādhya* holding ***within*** the *pakṣa*' can be reasonably viewed as having a close thematic affinity to Kant's notion of synthetic a-priori judgments which are '*non*-counter-instance-able,' in principle.

Step 3b. Similarly, ***if*** all cases of 'antarvyāpti' simply signify a 'kevalānvayi hetu' (which does yield only *pan-inclusive* universal conclusions) ***then*** the concomitance of *hetu* and *sādhya* that

'*antarvyāpti*' shows has to be '*non*-counter-instance-able,' in principle, too [15 i.e., JDD, pp. 39-40].

Step 3c. Again, ***if*** 'antarvyāpti' means where the – *necessary* concomitance holds inside the subject of inference (*sādhyadharmiṇ*) ***then*** it ['antarvyāpti'] need *not* depend on observation of external instances. So, it would also be '*non*-counter-instance-able.'

Step 3d. Finally, with regard to the Buddhist view on this issue [of 'antarvyāpti'] I have made my position clear a few paragraphs earlier.

Steps 1, 2 and 3a-3d above clearly show that the *unifying* thread that is supposed to run through *all* the different versions/interpretations of *antarvyāpti* is the notion of 'semantic-conceptual linkage,' which carries with it the ideas of '*non*-counter-instance-ability' and of 'infallibility' as two logically inseparable associates of it. As I see it, the *unifying* thread that laces together the various formulations of 'Antarvyāpti' captures the very heart-throb of Indian logic viz., the root problem/'das ***Ur***-problem' of *vyāpti-nirṇaya*. It also defines the watershed between the 'pro-*anumāna*' and the 'no-*anumāna*' groups.

An etymological exploration of the most well-known inferential structure in Western logic shows that it is a rigidly structured *triplet* called, 'Syllogism;' whereas in Indian logic, it is a *non*-rigidly structured pattern called 'anumāna' which may consist of *two*/*three*/*five* or up to *ten* organs/limbs (*avayavas*). The Greek word for 'syllogism' is 'συλλογισμός' which is linked to 'logos' ('λογός') i.e., language/sentence. Naturally, it predominantly highlights the *vākyātmakatā* aspect of an inference. This, in its turn, *delinks* the cognitive [i.e., *jnānātmaka*] aspect of a syllogism and prepares ground for a *meaning-insensitive* formulation of syllogistic inferences. It is no wonder therefore, that the Western concept of 'logic' [which is derived from 'logos'('λογός'] until recently, considered complete ***formalizability*** as the acme of perfection (Cp. Hilbert's Program)].

Actually, at times, the carrot of a prospect of achieving a purely mechanical/algorithmic means of sanitizing any argument into an ER-free i.e., an errors of reasoning-free one by way of syllogizing it looked intellectually so alluring/tempting that even Aristotle himself succumbed to it and toyed with the idea of working out a scheme of 'Inductive Syllogism.' For brevity, let us call it the 'συλλογισμικ tendency.' It should be clear by now that this tendency would be primarily 'logos-centric' [*vākyātmaka*] and would thus tend to ignore the cruciality of the *jnānātmakatā* in the logic of inference (Western). In sharp contrast to it, in the systems of Indian logic (or, Indian Theories of inference) [which are always and inalienably cognition-centric (*jnānātmaka*)] no split/fissure occurs (or, a sharp line of demarcation exists) between '*formal* truth' and '*material* truth,' between '*deductive* logic' and '*inductive* logic.' There is simply no scope for passing off a meaning-cum-relevance-*insensitive* technic of symbol-manipulation as a pristinely *rigorous* system of logic. I have a hunch that a number of such later-day intellectual high-hopes [e.g., Hilbert's program, various attempts to axiomatize Physics (e.g., by people like Frederick Suppe), Woodger's book, *Axiomatic Biology*, 'Encyclopedia of Unified Sciences' program of the Logical Positivists etc., can be considered motivated by what we call, 'συλλογισμικ tendency' [or, 'syllogism-ism,' to put it differently].

A few words on 'syllogism-ism' need to be said here. As already pointed out, the Western concept of 'logic', being a progeny of 'logos' ('λογός') contains in its DNA a 'syllogismic' ('συλλογισμικ') tendency. It was natural, therefore, to expect that Western logic would be lured by the methodological 'carrot' of total formalizability in complete disregard to the requirements of 'meaning-cum-relevance sensitivity.' History of 'logic' clearly shows that things happened as expected. Until recently, complete *formalizability* was considered the acme of theoretical perfection in logic [Until Kurt Gödel showed it to be a chimera.] Intrusion of epistemic considerations in logic was considered a theoretical blemish/imperfection which a logician must try to get rid of. In earlier paragraphs I mentioned the cases of Hilbert's and Woodger's, attempts at axiomatizing Physics [often referred to as the Sixth Problem of Hilbert] etc., as examples. [Some corrective reaction to making logic free of all elements of subjectivity is taking place in contemporary Western logic. A trend of converging the 'ontic' and the 'epistemic' approaches to logic is discernable] [28, pp. 36-42 , §11, §12].

In the light of this recent trend, I think it would not be unreasonable to consider Frege's charge of 'pychologism' against Husserl's **Philosophie der Arithmetik** (1891) [in which Husserl tries to combine mathematics, psychology and philosophy] to be based on a deep misapprehension of Husserl's philosophical objective. As R. Tieszen [25] put it, 'Husserl, as a philosopher, cautioned against the 'blind' or uncritical development of formal work. ... in its general outline, Husserl's post-psychologistic, transcendental view of arithmetic is still a live option in the philosophy of mathematics, unlike Frege's logicism. It is also superior to Frege's late views on arithmetic in several important respects.' According to J. N. Mohanty, [26] the review (by Frege) falsely accuses Husserl of subjectivizing everything, so that no objectivity is possible, ... Husserl's conception of logic and mathematics differs from that of Frege, who held that arithmetic could be derived from logic. For Husserl this is not the case....

Moreover, I do honestly believe that Frege went wrong because he failed to appreciate the deeper/inner epistemic significance of Husserl's ideas & Husserl, who *allegedly* changed his view after Frege's criticism, did so more because he succumbed to the pressure of Frege's stature as a mathematician rather than to force of Frege's criticisms [Cp. Chandrasekhar-Eddington row in the area of Astrophysics in 1935, regarding the calculated value of 'Chandrasekhar Mass.' Although Niels Bohr, Wolfgang Pauli and other physicists agreed with Chandrasekhar's analysis at the time, yet owing to Eddington's status, they were unwilling to publicly support Chandrasekhar].

4. Jaina Logic as Viewed from a Language-Oriented Perspective

A few points need to be noted here before we can enter into any meaningful discussion about how Jaina logic, as viewed from its 'core perspective,' logically relates to the view from a language-oriented perspective. It is a 'no-brainer' to figure out that our rendition of the notion of 'antarvyāpti' on the analogy of synthetic a-priori judgments, ***if*** correct, does show *three* things viz., i) that it [= *antarvyāpti*] can offer a highly plausible explanation for combining two desiderata viz., a) *niyata sahacāritva* (universal and exception-less-ness of co-presence, *in principle*) and b) *avyābhicāritva* (i.e., an infallible and necessary connection) between a *hetu* and its *sādhya* (in other words, a genuine concomitance relation between a '*probans*' and its '*probandum*') and thirdly, c) it also shows that on our interpretation *antarvyāpti* [being of the nature of a judgement] happens to relate *two* concepts [viz., *hetutā* and *sādhyatva*] and thus, has to be amenable to being expressed in a propositional form. Whence it follows that so far as the formulation of *antarvyāpti* in a propositional form is concerned, it must form an integral part of the semantic network of some language, say L and, as such, it must also be subject to the constraints of SV (*Syādvāda*) i.e., the Doctrine of Essential Conditionality of all Propositional Claims, besides being subject to other constraints like MH and of *non*-negotiable/unavoidable *contextuality* of all propositions/sentences [due to a metaphysical pre-commitment of the Jainas to, what we called, UPRC]. When this entire scenario is viewed in the background of the pan-inclusivist [32] attitude or, conceptual Catholicity of the Jainas, it is only too natural to expect that they would tend to break out of the rigid stereotypical logical positivist attitude of conflating 'meaningfulness' of a sentence with it having a truth-value (either T or F). Any such scheme of classification of sentences/propositions I call 'a truth-functional scheme of classification of propositions.' Logical positivists were strong advocates of such a view. In contrast, I prefer to call the expanded scheme of classification of propositions as laid down by the Jainas, 'a *non*-truth-functional scheme of classification of propositions.' We are now in a position to explore the details and related implications of the so-called 'Core Problem' of Jaina logic when it is viewed from a language-oriented perspective or from an epistemology-oriented perspective (in §5, below). As a step towards understanding the rationale behind the elaborate, but *non*-truth-functional, scheme of classification of propositions. [In the present context, 'proposition' should be taken to mean 'any well-formed sentence that can be used as part of a language L as it is used for communication by an established linguistic community']. Keeping this point in mind, the first thing that we need to recognize in order get into the heart of the *non*-truth-functional theory of language of the Jainas is this: They started by dividing all human languages

into two major groups: a) a set of logically entertainable *meaningful* sentences each one of which admits of a definite truth-value T/F, [we may call it the '*alethic* group', for short]; and b) a set of logically entertainable meaningful sentences which *do not* admit of any such definite truth-value assignment, [*non-alethic* group, for short].

From what has been said just now, it should be clear that Jaina logic was clearly shaped, to a large extent, by their ontology, especially *anekāntavāda*, and also by *syādvāda* [i.e., doctrine of *unavoidable conditionality* of all propositionally expressed truth-claims]. These two, coupled with Jaina theory of language, made their joint contribution by developing an elaborate, non-standard scheme of classification of propositional expressions. Keeping such logical ramifications in view, the Jainas classified all propositional expressions (i.e., any grammatically correct, meaningful sentence to which a truth-value can be assigned) by going beyond the artificial True/False dichotomy of the logical positivists. Naturally, the resulting Jaina scheme of classification has some highly interesting features. As a consequence of breaking the barrier of True/False dichotomy 'as the sine qua non' of meaningfulness, the Jaina logicians were able to include not only the *purely* truth-functional expressions but also the non-truth-functional ones in their scheme and classified all purported truth-claims into **α**) *satyāpanīya* (*paryāpta*) *bhāṣā* [i.e., potentially truth-value assignable expressions of a language [*Prajaha Sūtra*. Bhāṣāpada, 15-19], and **β**) *a-satyāpanīya* (*a-paryāpta*) *bhāṣā*, [i.e., *non-alethic* ones to which *no* truth-value (**T** or **F**) can be assigned [Ibid]. It is interesting to note that the Jainas used 'paryāpta' [=adequate/good enough] and 'a-paryāpta' [=inadequate/*not* good enough] as synonyms for *satyāpanīya* and *a-satyāpanīya bhāṣā* respectively [3, Chapter 5], [9].

The potentially truth-value assignable expressions again, are of *three* types viz., **T** (*true*), **F** (*false*), and *imprecise* ones [i.e., expressions to which only a *non-sharp* truth-value can be assigned (e.g. 'current population of India is 134 million')] This shows that the Jaina-s are never happy with an 'all-or-none' type scheme of bifurcation of truth-values [T/F] for the purpose classification of anything.

The *non-alethic* expressions, on the other hand, are sentences/expressions (e.g., 'May God bless you,' 'Listen to your parents,' 'Wish you the best of luck,' etc.,) which are *not* classifiable under any one of the three classes of *potentially alethic* [i.e., truth-value assignable] expressions listed above. In some Jaina texts 'non-alethic' expressions of a language are classified into two sub-groups viz., *quasi* truth-functional expressions (*satyāmṛṣa bhāṣā*) and pure non-truth-functional (*a-satyāmṛṣa bhāṣā*) [3]. Nonetheless, according to the Jaina-s, such *non-alethic* expressions are *logically as significant* as are the potentially *alethic* ones. Accordingly, the *non-alethic* expressions are graded and classified by the Jaina-s into various sub-classes of non-truth functional, yet *informationally non-empty*, expressions. This idea of a non-truth functional and yet information-wise non-empty sentential expression/proposition stands in sharp contrast to the logical positivists' view, according to which a sentence which is neither **T** nor **F**, *must not* be counted as having *any* information-content whatsoever [For further details of the Jaina scheme of classification of statements [3], [9].

A list of a few types of non-alethic sentences, along with their corresponding Jaina jargons as found in various Jaina books, is given below:

i) Āmantranīya: Requestative. Please come to the Birthday Party.
ii) Yācanīya: Expressive of a Prayer: May God help him.
iii) Pṛcchanīya: Interrogative. Which way is the Airport?
iv) Prajnāpanīya: Information-catering: The meeting is scheduled at 10 AM, next Sunday.
v) Loaded Question Expressing: Would you like to live in Slavery?
vi) Pratyākhyānīya: Refusal-indicating. Sorry, I have no money to lend.

Each one of these examples fails to be either T or, F but still each conveys some 'information' and none is 'Nonsensical.'

As a consequence, Jaina logic was prone to accommodate the idea of logics of many sorts e.g., Fuzzy Logic [FL], Default Logic [DL]/Non-Monotonic Reasoning [NMR] etc. Since, the System of Jaina logic consists of logics of different sorts as its various segments, I consider it more

advisable to *characterize* Jaina logic as a whole, as a cluster or conglomeration of logics of various sorts' [CLVS, for short].' What I mean by CLVS *must not be confused* with the claim made by some experts like Professor S. L. Pandey [16], who maintains that Jaina logic needs to be branded as a system of many-valued logic [MVL] of *seven*-values. I found some serious weaknesses in Pandey's arguments. So, I could not agree to his view and suggested that it would be somewhat misleading to brand Jaina logic as a simple and *unproblematic* case of many-valued logic [MVL] of *seven*-values [29, pp. 66-70, 297-302].

Steps in the logical link that exists between Jaina theory of language on one hand, and FL, DL, NMR and other kinds of non-standard logics on the other, is indicated below in a step by step fashion:

Step 1. There can be no *anumāna* unless there is a legitimate *vyāpti*-relation, to support it.
Step 2. No *vyāpti*-relation is legitimate unless *all* its accidental vitiating factors [*upādhis*] are eliminated.
Step 3. It is impossible to eliminate *all upādhis*, because there is an endless number of them.
Step 4. Hence, in order to ascertain that a *vyāpti*-relation is a legitimate one, an inferer [*anumātā*] would need to fall back upon some kind of default logic [DL] or non-monotonic reasoning [NMR].
Step 5. Steps (1)-(4) above clearly show the relevance of default logic [DL] and of non-monotonic reasoning [NMR] in the theorization of Jaina logic.

Finally, a look at the details of the Jaina scheme of classification of 'propositions' also reveals that the Jaina logicians are *not* averse to incorporating 'fuzzy' and/or 'quasi-truth functional' propositions in their system of logic, say S.

The forgoing discussion clearly suggests that 'ideally speaking,' an adequate systematization of Jaina logic (theory of *anumāna*) would require softening and suitably adjusting the currently dominant exclusively formalist-deductivist tautology-centric notion of 'validity,' in favor of a more 'intuitively natural' notion of '*soundness*' of 'logical infer-ability' [*anumeyatā*]. The features of such an *ideal* system of 'logical *inferability*,' say **S,** needs to be able to incorporate in its framework, are mainly of *three* types viz., α) incorporating context-cum-relevance sensitivity β) incorporating the machinery for handling 'fuzziness' into the system **S** [These *two* requirements should constitute the so-called, 'epistemic moorings' of **S**. [Clearly, 'fuzziness,' when it is taken seriously, would be antagonistic to the spirit of 'absolutizing' such dichotomies as, 'deductive-inductive,' 'valid-invalid,' 'consistent-inconsistent,' etc.]. Finally, γ) **S** would also need to be flexible enough to accommodate a way of *de-linking* the ideas of 'logical rigor' and 'deductive validity.' ***If*** such a logical system **S** were ever fully realizable, that would naturally amount to being flexible enough to accommodate elements of 'fuzzy logic' and of 'default-cum-non-monotonic modes of reasoning' as parts of its inferential machinery. However, such flexibility of an **S** would come only at a cost. At the '*metalogical* level,' the resulting system can be only '*non*-semi-decidable' [24, pp. 224-229].

5. Jaina Logic as Viewed from an Epistemic Perspective

In this section we will discuss some epistemic spin-offs of different sorts which are related to what I called the 'Core Perspective' viz., tackling the problem of ascertaining the legitimacy of a purported *vyāptijnāna*. Jaina logicians rejected *bhūyodarśana and dṛṣṭānta-based* enumerative induction as totally incapable of solving the problem. In other words, it amounts to rejection of *bahirvyāpti* as a methodological tool for ascertaining genuine *vyāpti*. As we have already seen, this led the Jaina logicians to propose *antarvyāpti* as the only proper method for arriving at a legitimate *vyāptijnāna*. Clearly, getting rid of *bhūyodarśana*, *dṛṣṭānta*, etc., also enabled the Jaina logicians to minimize the so-called 'factuality bias,' which was so deeply ingrained in the other systems of Indian logic. This methodological move also resulted in conceptual economy (*lāghava*). Some of those are (a) *general* while (b) some have more *specific* epistemic implications e.g., relating to the Jaina theory of 'Hetvābhāsa.'

a) Some general advantages relating to conceptual economy (*lāghava*) are the following: i) getting rid of the need of *dṛṣṭānta* and of *bhūyodarśana*, resulting in ii) getting rid of the need of *ad hoc* postulation of *five/three anumāpakas* (to guard against the possibility of any purported *vyāptijnāna* going astray), etc. Hemacandra and Yaśovijaya are quite emphatic on the point that an exemplar (= *udāharaṅa*) is *not* really necessary for arriving at an inferential conclusion. This naturally fits in well with the Jaina assumption that the actual process of inference-making resembles what we may call a 'deterministic knowledge machine' – DKM for short. ***If*** inference is considered the product of a deterministic input-output sequence generating machine ***then***, depending on how rich the data-base of a DKM is or, how it can gradually improve, etc., the amount of information that needs to be fed into such a machine may be proportionately minimized [22, pp. 374-382], [28, pp. 28-32].

[So far as the Indian theories of inference are concerned, I consider the DKM view of inferential machinery somewhat analogous to Pavlovian 'conditioned reflex,' except that instead of being a purely mechanical *reflex-response* (of a Pavlovian dog) it happens to be a reflexive *cognitive awareness* (a state of *jnāna*) according to the Indian logicians] [35, pp. 3-8, 24-26].

b) Besides this, some other spin-offs related to the 'core problem' which has important berings on the Jaina theory of *anumāna* in general and on Jaina theory of 'Hetvābhāsa' in particular, are the following:

Firstly, as already indicated, in order to eliminate the need of fact-dependency of *anumāna*, Jaina logicians argued in favor of redundancy of *dṛṣṭānta*, and thereby was a step closer to overcoming the *factuality bias* in their theory of *anumāna*. It may also be noted here that *this* very move did prepare the logical basis forthem to re-define and develop a *unified, jñānātmaka* (cogno-centric) theory of *hetutā* (invariable concomitance) which, in its turn, paved the ground for formulating a theory of single-criterion, single-type notion of *hetvābhāsa*.

Secondly, once we grant that our construal of *antarvyāpti* on the analogy of Kant's notion of synthetic a-priori judgement is a plausible hypothesis and view it along with such other things as commitments of the Jainas to i) *non-negotiability* of pan-contextualism, ii) to *syādvāda* [i.e., the Doctrine of Essential Conditionality of all Propositional truth-claims] and iii) also to the denial of existence of any sharp boundary-line between semantic units then logic dictates that there can only be *conditional* assertions (as in SV) and *tarka* must not only be admitted [*contra* the Naiyāyikas and others of their ilk] *just as* one of the, but rather as *the main* legitimately admissible source of *vyāptijñāna*. Actually, this happens to be the basis of today's celebrated HD-method of theory construction universally followed in modern Science. No sophisticated scientific theory of today [e.g., the Relativity Theory, String Theory, etc.] can be properly understood except as a conjecturally entertained *posit* – technically called a 'tarka' – a sort of reasoning based on counterfactual condtionals. Whence it follows that on ultimate analysis, an invariable concomitance can be *definitely ascertained* only by taking recourse to *tarka* or hypothetical reasoning [*tarkāt tanniścaya*]. In order to methodologically legitimize this claim, the Jainas needed to admit *tarka* as a full-fledged *pramāṇa*. They did this by going against the Naiyāyikas and some other mainstream traditionalists.

It is interesting to note that after the Jaina logician Akalankadeva, other thinkers/Indian logicians belonging to other schools (e.g., Naiyāyikas like Vācaspati Miśra, Udayaṇa, Vardhamāna, etc.,) recognized the importance of, and put more and more importance on *tarka* as an indispensable means of *vyāptigraha.* However, as it seems to me, they continued to follow a *double standard* and, as a result, most Naiyāyika-s still showed reluctance to admit *tarka* as a full-fledged form of *pramāṇa* [=method of epistemic justification]. However, thinkers of the Jaina school such as, Yaśovijaya, Akalankadeva, etc., continued to argue at length in order to establish the status of *tark*a as a full-fledged and independent *pramāṇa*.

At least from our vantage point of view, I prefer to consider this bold and breaking-away-from-the-tradition approach of the Jaina logicians as a primitive inkling of the modern spirit of hypothetico-deductivism [Popper-Lakatos type], by way of rejecting a simplistic Mill-type 'Inductivism' of the Naiyāyikas.

Besides this, non-negotiability of pan-contextualism would *entail* that even the Law of Non-contradiction [LNC] needs to be contextualized. And if so, then the tautology-centric formalist notion of validity would fail to be a universally *applicable* criterion of validity, and this would entail that the *allegedly* clear line of demarcation between 'fallacious' and 'non-fallacious' arguments gets smudged. These implications of accepting *tarka* [arguments based on counterfactual conditionals (CFC)] as a legitimate *pramāṇa,* plus a commitment to non-negotiability of pan-contextualism, are too obvious to miss.

Thirdly, among the Indian schools of logic, the Jaina school holds a unique position due to their commitment to pan-contextualism as the *sine qua non* both of their logic as well as of their metaphysics. For example, this commitment [to non-negotiability of pan-contextualism] logically leads them to accept the doctrine of MH [Meaning Holism] [29, pp. 93-97, 105-129], which commits them to the view that even the technical words of logic and even the laws of logic are no exceptions. So, they end up challenging the status of LNC [Law of Non-Contradiction] as an absolute/non-negotiable principle. Naturally, they propose to, and does, contextualize LNC [29, pp. 110-119]. One must *not* conflate the notion of contextualization of LNC (by the Jainas) with that of its denial or rejection by them as some scholars like K. P. Sinha tend to do [33, pp. 9, 110-120].

Fourthly, due to their undiluted commitment to MH the Jaina thinkers had to question the notion of context-free synonymy. Elsewhere, I showed [29, pp. 247-249] how the idea of context-relative gradations of synonymy happens to be a highly plausible interpretation, especially in the context of their Nayavāda. Granted the plausibility of this interpretation, the idea of context-relative gradations of synonymy seems so kindred in spirit to Putnam's view on 'synonymy' [19, pp. 119], [29, pp. 105-107]. Quine also pointed out some problems that arise in the context of defining the notion of synonymy [20]. I also discussed the question of synonymy in my RBU lectures [26].

c) Some *Lāghava* aspects of Jaina theory of 'Hetvābhāsa':

i) The Logicians of the Nyāya school, as we have seen, held that a legitimate probans must be characterized by a set of *five* characteristic features [*anumāpakas*].

ii) The standard view of the Naiyāyikas is that there are *five* types of *hetvābhāsa*, each type corresponding to violation of a specific legitimizing feature. Since, the Buddhists admit of *only three* such legitimizing features, they admit of only three kinds of *hetvābhāsa*, viz., *savyābhicāra*, *asiddha*, and *viruddha* [(Dingnāga, Dharmakīrti, *Nyāyabindu*)]. The Jainas, on the other hand, hold that neither *five* nor *three* of the characteristic/ legitimizing features can guarantee the legitimacy of a *vyāptijnāna*. According the Jainas all *hetvābhāsas* are due to a failure to satisfy the requirement of *avinābhāvatva* which signifies an *inseparable semantic-conceptual* relationship between a *hetu* and a *sādhya*. It simply means that 'it is *impossible* that the *hetu* exists but the *sādhya* does not, [in symbols, ~ M (*hetu* & ~ *sādhya*)]. This is what, as we saw, *antarvāapti* is supposed to ensure. The Jainas, however, proposed to use a more inclusive term 'anumānābhāsa' [instead of 'hetvābhāsa'] to mean 'defects of inference in general.' In the light of the very brief sketch given above, we may now take a deeper look at *hetvābhāsas* in the context of Indian logic and especially, of Jaina logic.

Throughout this paper I kept harping on the point that the Jaina approach to *anumāna* is essentially cognition-centric [*jnānātmaka*]. Hence, it [Indian logics in general and especially Jaina logic] cannot but be *context*-sensitive, *relevance*-sensitive, as well as *meaning*-sensitive, even in contexts of serious logical controversies. Clearly, it is far beyond the capability of any purely formal system of logic to live up to. Here is an example to justify this claim. If we try to treat 'hetvābhāsa'/'anumānābhāsa' on par with 'fallacies' in Aristotelian logic [AL], disaster is just waiting to happen. The following queer instances selected from Western Logic, of what I call 'fallacious validity', in the absence of any better expression, clearly show that: 'Hetvābhāsa'/'anumānābhāsa' must *not* be considered on par with the 'purely formal notion of fallacies' as found in Western logic. Let us consider a few of the reasons for it:

α) Western logicians who claim to have made a 'neat classification of fallacies' into 'deductive' ones and 'inductive' ones, are quite mixed-up in this respect. Even the supposedly 'pure deductive' fallacy viz., that of ambiguous middle, turns out *not* to be a *purely* deductive one at all. Rather, it is of a mixed sort – it is actually a 'semantic-cum-logical' fallacy. This becomes obvious, if we

remember that a computer logic-program that relies on a purely abstract schema, based exclusively on rules of 'formal syntax,' would fail to be sensitive to the two different *contextual* senses of 'dates' in two of its occurrences [e.g., in '*dates* are edible' and in '12th &13th of May are *dates*']. Naturally, such a context-*insensitive* logic-program would put '12th &13th of May are *edible*' in the category of proper deductive consequence of a *valid* inference.

Similarly, β) despite the fact that the Western logicians maintain a very sharp line of demarcation between 'inductive' and 'deductive' logics, they unlike their Indian counterparts, are hardly concerned with the problem of formulating a general definition of 'fallacies,' which would apply both to 'Inductive' as well as to 'Deductive' fallacies with equal plausibility.

γ) Moreover, the theoretical position of Aristotelian logic [AL] (i.e., traditional logic), is *not internally consistent* at all, even when one takes into consideration *only* the purely formal deductive fallacies. Let us take just one such example: In traditional logic, 'Most P' = 'Some P'. So, 'Most S are P' = 'Some S are P', it is an '**I'** proposition in which both the subject and the predicate terms are *undistributed*. Yet, from 'Most teachers are graduates' and 'Most graduates are reliable' we can *validly* infer that, 'Some teachers are reliable'. Although, as a matter of fact, a) the argument is a syllogism, b) it does *violate* the syllogistic requirement of validity that the middle term must be distributed at least once in the premises, and yet, c) it is also *valid* in the sense that *if* its premises are true, so *must* be its conclusion. Although, this very same argument has to be counted as *definitely invalid*, as per the rules of Aristotelian logic. Such queer cases may be called, '*fallaciously valid*' arguments. Nothing can better highlight the difficulties of working out a totally unproblematic scheme of neat compartmentalization of logic into 'deductive-inductive,' of fallacies into 'formal-informal,' of arguments into 'valid-invalid' etc. In our college days, we grew up being constantly exposed to the claim that 'Indian logic' *blurs/lacks* clear lines of 'area-compartmentalization' *vis-à-vis* the 'surgically clean dissection' of areas in Western Logic.

The lesson to learn from the above discussion is very clear. In a system of logic which is inalienably epistemo-ontic/cognition-centric (like Indian logics in general and Jaina logic in particular happen to be) cannot entertain/accommodate any 'purely formal' notion of logical fallacy (or, for that reason, even that of a 'purely formal' notion of validity, (like, '**p**/therefore, **p**') within its framework].

After having shown the difficulties in trying to force-fit logical concepts from the West into the conceptual framework of Indian logic, we may now very briefly highlight some benefits pertaining to conceptual economy (*lāghava*) that the Jaina theory of *hetvābhāsa* has, over its alternative versions proposed by the other schools of Indian logic. By discarding *bahirvyāpti* in favor of *antarvyāpti* the Jaina view got rid of dependence on *bhūyodarśana* and *udāharaṇa*, eliminating thereby any chance of any purported *vyāptijñāna* going astray due to the presence of some accidental impediments (*upādhi*). So, no *anumāpaka dharma* had any place in the Jaina theory. *Secondly*, by re-defining the key-concept 'hetutā' by a single, overriding criterion of *avinābhāvitva/ananyathāsiddhatva* the Jainas were able to formulate a single-criterion unified concept of *hetvābhāsa* without any need to proliferate *hetvābhāsas* into different types. However, it needs to be mentioned here that most of the Jaina writers tend to use the expressions '*avinābhāvitva*' and '*ananyathāsiddhatva*' interchangeably but some of them seem to be in two minds in that respect. Reason for this is, I surmise, that the two expressions are *not* to be considered exact synonyms of each other. I argued elsewhere [43] =28, p 20-21, §4 that the real import of '*avinābhāvitva*' is mainly logical/conceptual/analytical whereas that of '*ananyathāsiddhatva*' is basically methodological. If so, '*avinābhāvitva*' would entail '*ananyathāsiddhatva*,' but *not* conversely. It can be shown by citing any number of instances that the Indian logicians lacked any keen awareness of the distinction between the 'methodological' and the 'conceptual-logical' aspects of a *hetu* that a *vyāpti*-relation may indicate. Consequently, they were prone to *mix up* the 'methodological' and the 'conceptual-logical' aspects of *vyāpti*, without realizing its implications. Yet, because of their instinctive and keen analytical acumen, they had a hunch that something was amiss somewhere. Consequently, the Jaina logicians [and all other logicians belonging to some other school of Indian logic] failed to appreciate the problem and were quite confused about how to

prioritize the status of '*avinābhāva*' *vis-à-vis* '*anyathānupapannatva*.' I have already discussed the issue in detail elsewhere [28, pp. 21-25, §5]. I hope, that here and in my other writings I have been able to remove a potential source of confusion in Jaina logic besides explaining why some Jaina thinkers were in two minds about this very issue.

6. How to Catch a Tricky 'Ducko-Rabbit'?

In the earlier sections of this paper our objective was mainly to identify and highlight some salient features of Jaina logic which make it stand apart from the other systems of Indian logic. We picked up the following *five* distinctive characteristic features of Jaina logic, (*not* in the order they are listed here): i) Upgrading the status of Tarka to the level of a full-fledged 'Prāmāṇa' [i.e., an accredited means of acquiring proper knowledge (viz., 'Pramā')], ii) Challenging the status of LNC (Law of Non-contradiction) as an absolute/unconditional principle/truth, iii) Challenging a widely shared, deeply ingrained feature of Indian logic which I prefer to call 'factuality bias.' [For example, the following implicit assumption viz., 'No *dṛṣṭānta*, no *vyāpti-jñāna*, no *vyāpti-jñāna*, no *anumāna*/Therefore, 'No *dṛṣṭānta*, no *anumāna*,' has its root in the 'factuality bias']. iv) Ensuring conceptual economy (*lāghava*) through unification and simplification of some key-concepts, of logic, and finally, v) Jaina logicians' proposal for a more elaborate and unconventional scheme of classification of well-formed, information-conveying linguistic expressions [Actually, my claim that 'an *anumāna* is mainly geared at extracting some information on the basis of the inferential data' may seem quite unacceptable to some contemporary 'deductivist' logicians. For example, according John Corcoran [28, pp. 9-24]. Łukasiewicz explicitly rejects the view that deduction is a process of information extraction. It is also interesting to note here that Karl Popper himself was reluctant to consider 'Inductive' logic as a 'logic' in the strict sense of the term. In this paper I tried to challenge such an idea in two ways: *first*, by emphasizing the crucial importance of distinguishing between the '*logos*-centric' (*vākyātmakatā*) and the 'cognition-centric' (*jñānātmakatā*) aspects of logic, and *secondly*, by exposing the risk of conceptual confusion that may ensue from using 'deduction' and 'anumāna' interchangeably].

In this section, in contrast to the previous ones, we concentrate on such features as Jaina logic shares with other schools of Indian logic which, in its turn, clarifies what constitutes the 'Indian-ness' of different systems of Indian logic. Two features viz., a) unlike Western logic, Indian logics refuse to succumb to the pressure/lure of 'syllogism-ism' (συλλογισμικ') without letting the aspect of 'logo-centricity' (*vākyātmakatā*) aspect of an *anumāna* split away from its cognition-centricity/epistemo-centricity (*jñānātmakatā*) aspect. For brevity, we shall use the expression 'no-split' stand, to refer to this shared feature of Indian logic, and b) the second of the two constituent features of 'Indian-ness' is prioritization of *jñānātmakatā* aspect of an *anumāna*, over its *vākyātmakatā* aspect. We may recall that 'ducko-rabbitism' is taken recourse to by a savant/scholar when two conditions are fulfilled: i) when he is confronted with a queer biological species possessing two such features which are of 'never-seen-together-before' type, and yet ii) he can neither identify it with any of the known species, nor is he confident enough to claim that he has discovered a new species. Under such a condition he feels a natural propensity to give it a new composite name (like 'ducko-rabbit') to the recently discovered specimen in order to mask his own incompetence. The incident was not at all dissimilar to doing a sort of, what I called, 'ducko-rabbitism.' I like to cite here two real life examples of scholarly 'ducko-rabbitism': the *first* one (already mentioned) is found in (Professors D. M. Dutta & S. C. Chatterje's book) 'Introduction to Indian Philosophy' which characterized *Pancāvayavī Nyāya* of the Nyāya School simply i) as a more elaborate version of Aristotelian syllogism and ii) as a kind of logic which is deductive-cum-inductive in nature. The second example is from S.L. Pandey's characterization of Jaina logic. Pandey indulges in a more arrogant type of 'ducko-rabbitism.' According to him, '…. Jaina logic is thus …. *both* a ***non-truth-functional*** many-valued logic of *probabilities* and a ***truth-functional*** three-valued logic.' .... [16, p. 159], [10] '*prāmāṇya* or logical value of every *naya* is a *probability*-value or a midway position between truth and falsehood. ... hence *Nayavāda* leads to ***non-truth-***

functional many-valued logic of probability. … Jaina-s have conceived this logic as truth-functional ***also***, …. Jaina logic is thus …. *both* a ***non-truth-functional*** many-valued logic of *probabilities* and a ***truth-functional*** three-valued logic' [16, p. 159].

Pandey [10, pp. 155-160] continues further, '.... there are certain other relevant considerations which indicate that *Syādvāda* refers to a many-valued logic. Pandey also claims that *Syādvāda* challenges the *law of non-contradiction*.' Matilal and Sinha, concur with Pandey on this point. [12, pp. 44-53], [33, p. 9]. Pandey thinks that the Jainas would assign some truth-value even to contradictory statements.' In this context Pandey also claims that 'such logic *would have to be a Three-valued Logic* [16, pp. 157-158]. This point and the reasons for the untenability of S. L. Pandey's view is critically discussed in detail in my forthcoming book [29, pp. 297-302].

One may ask here, if 'cherry-tomatoes,' 'baby-carrots,' etc., are OK, why do instances of academic 'ducko-rabbitism,' like 'deductivo-inductive,' or being 'non-truth-functional-cum-truth-functional' etc., sound so odd and looks so ridiculous? The reason is not at all far to seek. I think, it's due to acting in a way similar to that of a dog that's 'barking up the wrong tree' in order simply to impress its master about its own alertness and efficiency. When one reads between the lines of Dutta-Chatterjee's or S. L. Pandey's claims, it becomes obvious that both parties are bent on scoring a Quixotic victory, actually by trying to tackle some *non*-issues. A *pancāvayavī nyāya* is better than a syllogism *not because* the former is a 'quintuplet,' while the latter is only a 'triplet,' but because a syllogism is purely formal, relevance-insensitive and totally logo-centric (*vākyātmaka*) mode of reasoning, whereas a *pancāvayavī nyāya* is relevance-sensitive and basically cognition-centric (*jñānātmaka*) mode of reasoning. The air of 'inductive-ness' surrounds *pancāvayavī nyāya* because, *ex hypothesi*, a *pancāvayavī nyāya* needs to have some information-content (*ajñāta-jñāpakatā*). Actually, a look at the *two* components/*avayavas* (*viz., hetu* and *udāharaṇa*) of any *pancāvayavī nyāya* should clearly explain the reasons why there always has to be an air 'inductive-ness' surrounding the concept of *anumāna* in Indian logic. Of course, a *pancāvayavī nyāya* does put to use the result of some previous induction. However, making such an induction itself is no part of a given *pancāvayavī anumāna*. This is a subtle but very important point – to forget it is to walk into the trap of theoretical confusions. I suspect, S. L. Pandey is affected by some such confusion. Presumably, that's why S. L. Pandey, in his eagerness to show that Jaina logic is so much more comprehensive and forward-looking, (*vis-à-vis*, Aristotelian logic and other more recently developed areas of Western logic) proposes to put in so many disparate items in a single portmanteau (viz., Jaina logic) that it tends to burst at its seams. ***If*** instead of proceeding in such an *ad hoc* disorganized way, Pandey had appreciated the implications of inalienable *jñānātmakatā* of Indian logic, he would see how most of the logical features that he ascribes to Jaina logic would find their respective spots on a more comprehensive canvas of *logic in general* (or, of a *universal logic*). However, a proper systematization of the jarring elements in the masterplan of a *universal logic* (if it is ever actualized) would be subject to at least *two* constraints:

i) First and most importantly, it must be able to strike a balance between the 'ontic aspect' and the 'epistemic aspect' of logic. Clearly, till now, it is just a pious hope, only a *desidiretum*, so to say. [The 'ontic aspect' and the 'epistemic aspect' correspond, though only very roughly, to our notions of 'logo-centricity'/'vākyātmakatā' and 'cognition-centricity'/'jñānātmakatā' respectively]. Why it is so important not to downplay the centrality of *jñānātmakatā* in Indian logic, especially when comparing it with Western brands of logic becomes obvious if we remember that even the technical vocabulary of Indian theories of *anumāna*, wears the tag of *jñānātmakatā* on its sleeves. For example, 'pakṣa' of an *anumāna* is defined as 'sandigdha sādhyavān pakṣaḥ' and 'sādhya' is defined as that feature [*dharma*] 'which is yet to be ascertained.' Let us talk about a few other similar points. For example, in the case of a syllogism, its constituents [premises, terms etc.,] are identified/defined *not* by their respective *logical functions* but by tagging a specific location-address [e.g., Premise number 'so and so', or by tagging a status-indicator to each premise [e.g., *Major*/principal premise, *Minor*/subsidiary premise etc.,] Similarly, 'terms' occurring in a syllogistic inference are so called neither because of their meaning-contents nor because of their logical roles in the inference. Terms are so called simply to indicate their *terminal*

positions/locations in a sentence, technically called a 'premise'/a 'conclusion,' etc. Naturally, this kind of approach to logic cannot block even a meaningless expression from becoming a term (in the full-fledged technical sense) of an inference. Unfortunately, in the context of an *anumāna* however, expressions like 'sky-lotuses' or, 'hare's horns' or, 'a bandhyāputra,' etc., are hardly ever accorded a respectable logical status. No wonder therefore, that Western logic finally ends up embracing a 'garbage in, garbage out' type notion of inferential ***validity***. In the same vein, a major term is identified by its location-address i.e., simply as the predicate of the conclusion (i.e., the second terminus of the conclusion-expressing sentence). Unlike the definition of its Indian counterpart *viz*., 'sādhya' (i.e., something which is yet to be established) the identifying criterion for a major term is simply its specific location-address. All these highlight the fundamental difference between Western logos-centric (*vākyātmaka*) approach to logic *vis-à-vis* the Indian cognition-centric (*jñānātmaka*) approach to logic. Keeping this background in mind would also make it easier to appreciate the point that I was trying make [in §3 above] regarding the Frege-Husserl controversy. All these things go to show that there is always an *un-eliminable* epistemic mooring underlying Indian theories of *anumāna*. It is for this reason that Frits Staal (1973) very clearly recommends ample caution to guard against possible confusions engendered by indiscrete translation of logical terminology of Western logic and its glib use in the context of discussing Indian logic. He draws attention to the fact that the customary assumption that the Indian concepts of 'hetu', 'sādhya,' and 'pakṣa' correspond to the Aristotelian middle, major and minor terms respectively, is incorrect [34, pp. 156-165].

As regards the *desidiretum* mentioned above, it needs to be pointed out that if we take a careful look at the growth-patterns of recent thoughts *about* both Western and Indian logic, an interesting pattern begins to emerge. On one hand, in the post-PM ['Principia Mathematica'] period of growth of logic, Western logic has been moving away from its initial predominantly 'ontic,' 'strictly *rigid formalism*' to more 'flexibly inclusive' diversified systems of logic which include, 'Fuzzy Logic' [FL], 'Relevance Logic' [RL], 'Default Logic' [DL], 'Para-consistent Logic' [PCL], 'Epistemic Logic' [EL], etc. On the other hand, during the last fifty years or so, the approach of reputed scholars of Indian logic is moving away from the original nebulously formulated, *non*-deductivist, information-theoretic, and predominantly 'epistemic' view of logic, to a more well-regimented but at the most a semi-formal analog of 'ontic' view of logic [28, pp. 41-42].

ii) Secondly, any masterplan of a *logic in general* (or better still, of a *universal logic*) must also be ready to pay a high price in terms of a complicated meta-theory of the resulting system which would include, among others, Default Logic [DL], Non-monotonic Reasoning [NMR] etc. For example, it is known that the general question of entailment in Non-monotonic Reasoning is *not* even semi-decidable i.e., it is '*non*-semi-decidable' [24, pp. 226-234]. This, and some similar other point have been touched upon by the present author [28, pp. 220-229]. For some other 'metatheoretic' results see [5].

7. Concluding Remarks

I honestly believe that a proper and balanced blending of *jñānātmakatā* aspect of logic with its *vākyātmakatā* aspect is needed for balancing out their respective one-sidedness. As I see it, taking the first step in the direction of tackling this formidable task requires working out a plausible account of an information-theoretic [*not* a tautology-centric] notion of implication. If successful, this itself would take care of both 'context-sensitivity' and 'relevance.' Our desidiretum may be just a dream-stuff and even if my sojourn along the path of 'holistic-integralist approach' to Jaina logic turns out to be only a case of sleep-walking, I wouldn't mind it in the least. For me, the bottom line is this: If we are not daring enough to dream, we forfeit our right to complain about our dreams having been shattered.

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Indian Philosophy and Some Perspectives of Non-Violence

Abstract: The interview given by Dilipkumar Mohanta (b.1959), a Professor of Philosophy in the University of Calcutta (India). He is presently the Joint Secretary of Indian Philosophical Congress (Estd. 1925). He is a former Vice-Chancellor of the University of Kalyani, and also the founder Vice-Chancellor of the Sanskrit College and University. He is a former member of Indian Council of Philosophical Research. Professor Mohanta is the recipient of number of awards for his academic contribution; such as US Government State Scholar Award (2008) at the University of California (Santa Barbara), Fulbright-Nehru Visiting Lecturer (2011) at the University of Florida, William Paton Fellowship at the University of Birmingham (2015), IUC Associate at IIAS (Shimla, 2001-2003), Professor B. M. Barua Samman (award) in 2016, Jan Jacobsen prize (2016), Manjusree Samman (2022), Kamaladevi Smriti Samman (2022). He is the author of 15 books and 60 papers (in English & Bengali) published in journals in India and abroad. *Cognitive Scepticism and Indian Philosophy*, *Studies in Vaidalyasutra of Nagarjuna*, *Studies in Jayarasibhatta's Critique of Knowing from Words*, *Advaita-Siddhanta-Sara-samgraha* (Sanskrit text with Introduction in English), *Collected Works of Brajendra Nath Seal* (ed.) are some of his important books in English. Mohanta also authored some books on Buddhist Philosophy, Advaita Vedanta Philosophy, Philosophy of Religion and Political Philosophy in Bengali.

Keywords: non-alignment, *pañcasīla*, empathy, fallibility of human being, growing feature of knowledge, *darśana*, therapy of the soul, war in Ukraine.

Andrew Schumann: India is a rapidly developing democratic society and a fast growing economy. Indian philosophy is one of the most ancient forms of philosophical reflection. What role does India's own philosophical tradition play in India's development?

Dilipkumar Mohanta: I think, the essential features of India's Philosophy, like argumentativeness and openness along with its moral and spiritual ideal called *Vasudhaiva kutumbakam* (वसुधैव कुटुम्बकम्) have been promoting towards a favorable condition for India's sustainable development. By *Vasudhaiva kutumbakam*, I mean, all the inhabitants of the increasingly interdependent world that includes great cultural, ethnic, racial, local, national, and religious diversity. These are necessarily the relatives of one another. In short, the inhabitants of the world are inter-related and inter-dependent. It is imperative that the ways to come together as a human family honouring and respecting the commonly adjustable diversities have to be worked out relentlessly to ensure global peace and harmony. If we look at both prosperity and peace, we find them inter-linked from the perspective of India's material-spiritual heritage which is holistic in nature. It includes both *abhyudaya* (the worldly well-being) and *niśreyasa* (the spirit of non-attachment). Material ideal of prosperity has a spiritual and holistic efficiency in India and the efficiency is the means by which the goal of prosperity is realized. Therefore, philosophical attitude is seen as a component of India's 'soft power.'

Andrew Schumann: By the beginning of the 21st century, the world has reached a state of calm, peace and non-violence. However, the war in Ukraine began to threaten with a new world war and

dramatically changed the attitude towards violence. Violence has again become a way to resolve political conflicts. Have the ideas of non-violence in politics, perfectly applied by M. K. Gandhi, lost their relevance? How can we stop this war?

Dilipkumar Mohanta: Sorry, I cannot agree to your statement expressed in the 1st line. How can we ignore 9/11 which led to series of violent events throughout the world including 26/11 in India and numerous other events in different countries? Cross-border-terrorism, aggression in Asia cannot be over-looked. *Non-alignment* and *pañcasīla*, the twin key concepts of India's foreign policy are rooted in Classical Philosophy of India. It speaks of the mandate of a policy of equanimity in one's international stand for maintaining relations. Violence is not the proper way to resolve political conflicts. It is to be resolved through dialogue with *understanding* and *empathy*. War is opposed to all three virtues of human being, e.g. spirituality, freedom and culture. The model based only on 'right' and 'competition' is *inadequate* for the promotion of peace and prosperity. A kind of reconciliation is necessary. This reconciliation implies ending of quarrels, conflicts, hostilities through settlements by dialogue/polylogue, and agreements based on material, moral and spiritual values. The effort to build one world requires a closer understanding among the people of the world and their cultures. One-dimensional and unilateral identity cannot lead to peace, which involves social, ethical, religious and political elements. In this pluralistic world the application of this holistic, interdependent outlook may be an alternative paradigm for peace and prosperity. 'People to people' cultural diplomacy, I think, may work as an additional and alternative way to the monopoly of political diplomacy for international understanding. In view of this, the philosophical ideals of both Buddha and Gandhi are quite relevant today if we can put it on proper context and do not accept *non-violence* in the categorical and simplistic sense.

Andrew Schumann: What do Indian philosophers think about the war in Ukraine, according to your opinion? Perhaps are there some thinkers with anti-American attitudes who can support the Russian aggression in Ukraine?

Dilipkumar Mohanta: As I already hinted, I think, the principles of *non-alignment* and *pañcasīla* are the philosophical ideals that are important for international relations today. The principles of peaceful co-existence, interdependence and elimination of domination to be taken together to promote universal brotherhood. So neither Russian nor American attitude is perfectly consistent with the philosophical Ideal of *Vasudhaiva Kutumbakam* of India's culture. As 'there is nothing nobler than humanity' and 'war destroys humanity,' we cannot, in general, support war, unless it is inevitable as the last option. Every nation, every person should enjoy the right of self-defense. The simplistic understanding of *non-violence*, as categorical one, is not practicable.

Andrew Schumann: What are the most fundamental characteristics of Indian Philosophy when viewed as a whole?

Dilipkumar Mohanta: It is a quite relevant question. But it is difficult to put the answer in a sentence. However, I think, argumentativeness, openness and holistic spirituality conjointly characterize India's philosophical approach to life and the world. The views of cognitive skeptics like Nāgārjuna, Jayarāśi Bhaṭṭa and Śrīharṣa are very important even today, because they uphold a position of *non-finalizing* and this admits the *fallibility of human being* and welcomes the *growing feature of knowledge*. I think, Indian Philosophy addresses the problems of our life-world and philosophy (in the sense of *Darśana*) means 'philosophical problems' in spite of geographical, historical and cultural differences at the genesis of the approaches or addresses. A deserving candidate for this may be seen in combination of reason, morality and spirituality in modern Indian philosophical approach clubbed under the word *Darśana*. It is called *Darśana*, that is, seeing the things in their right perspective and as they really stand. In India philosophizing is expected to act

as a *therapy of the soul* and so it should not remain confined within the boundary of "purely cerebral activity."

Andrew Schumann: What trends in Indian Philosophy can be the most promising?

Dilipkumar Mohanta: I think, in theoretical side, pragmatic idealism of the maxim 'let noble thoughts come to us from different directions' and in applied side, 'live and let live' is the goal. What I feel about the task of philosophy is that it is not ended with a commentary of life, but to 'lead the life in the right direction.' Indian Philosophy does not negate the life and the world, but discovers a new meaning of both. We are to be ready, to use a recent Indian philosopher D. P. Chattopadhyaya's words, "to learn from others' mistakes, to peruse others' ways of understanding and misunderstanding and finally to see how much" we "owe to others." In this sense social and impersonal conditions are important considerations for philosophical thinking. As I have already said, two features seem to be important in Indian philosophical enterprise today, namely 'the fallibility of human being', and 'the growing character of knowledge.' Revival of old Indian thoughts through modern acceptable idioms of comparative philosophy is a dominant trend in recent Indian Philosophy. I think, a kind of hermeneutical exercise is being seen among Indian philosophers. In other words, one of the current trends among philosophers in India consists of an endeavour to contextualise what they inherit and in doing so they consciously deviate from their inheritance and recreate it. I think, they consider that 'deviations and counter-positions' are as essential as the inheritance. They inherit the past and also claim freedom from it. This seems to be one of the most promising features of contemporary thinkers in Indian Philosophy. There are other trends also.
Thank you.