

THE CONCEPT OF TARKA AND ITS ROLE IN PHILOSOPHICAL ANALYSIS

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PREFACE

The thesis has been prepared for the fulfilment of the Ph.D. degree of the University of North Bengal. The principal objectives of this thesis are as follows:

The present work entitled : 'The Concept of *Tarka*' and Its Role in Philosophical Analysis' is an attempt to provide an account of what is meant by *Tarka* both by the older and Navya Naiyāyikas. It also shows how this *Tarka* has been brought to a developed and superior position by the Navya Naiyāyikas in the course of time. Besides, to make the idea of *Tarka* as understood and discussed by Nyaya school more clear *Tarka* has observed by other schools , such as Jaina , Sāmkhya, Mimamsā, Bauddhya and Vedānta has also been put forward

Here an attempt has been made to present the utility of *Tarka* in our practical life. A conscious reader of this dissertation can easily understand how the method of *Tarka* is adopted by us every now and then in our day to day life to substantiate our own position by negating that of the opponents.

It is well known to us that inference as a *pramāna* has been denied by the carvakas. They maintain that the inference as a source of valid cognition is impossible because *Vyapti-jñāna*, the nerve centre of inference, is not possible to ascertain. This work is a sincere attempt to show how beautifully and logically the Older Naiyāyikas in general and the Navya Naiyāyikas in particular have presented that through the application of *Tarka* along with some other means *vyāpti*, the nerve centre of inference, is ascertained and thereby inference as a source of valid cognition is possible.

The Older Naiyāyikas hold that *Tarka* is of two kinds- *Viṣayaparisadhaka* and *Vyābhicārasaṁkānivartaka*. The Navya Naiyāyikas reject the former one and accept the latter one only. An effort has been made to establish the fact that *Viṣayaparisadhaka Tarka* cannot be denied.

A burning controversy is seen among the Indian philosophers about whether *Tarka* is a separate and independent *pramāna* or just a helping condition i.e. promoter to a *pramāna*. The Naiyāyikas with some other thinkers observe that *Tarka* is a promoter to a *pramāna*, whereas the Jainas, the Mādhvas and some other thinkers maintain that *Tarka* is a separate and independent *pramana*. Extensive care has been taken to substantiate the view of the Naiyāyikas by rejecting that of the Jainas and the Mādhvas in the concluding chapter which is exclusively the result of the personal reflection.

For the sake of better presentation and understanding the Sanskrit terms have been put in Italics. Besides, the references have been given after the concluding chapter of the work.

I am highly grateful to my respected teacher Dr. Raghunath Ghosh, the supervisor of this work, who has given me valuable suggestions time to time and with whom I had to read many important treatises, higher dissertations on Navya as well as Older Nyaya and also some other relevant treatises of Indian philosophy in course of preparing this thesis. I express my respect and gratitude to all other teachers of the Dept. of philosophy of North Bengal University by whom I have been enlightened in the course of making this work. I get pleasure to express the same to my teachers cum colleagues of the Dept. of philosophy of Raiganj College

(University college) who enrich me by their sincere participation in discussion with me on some of the problems of my work.

I am indebted to my parents and my wife Mrs. Nirmala Roy who inspired me and extended their hands of co-operation to me in various ways in preparing this work .

I cannot but appreciate the library staff of both of the North Bengal University and of Raiganj College who help me by providing the necessary books for my study.

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Chapter - 1

DEFINITION AND CLASSIFICATION OF KNOWLEDGE

ACCORDING TO NYAYA SCHOOL:

Knowledge plays a vital role in the development of each and every aspect of human life. How far one will progress in one's economic and political aspect of life is mainly based upon how much knowledge and experience one will gather in these fields. The same can truly be said in the case of our social and spiritual life. Knowledge is the key-factor for social recognition and establishment. All the great men like Rabindranath Tagore, Shakespere, Socrates, Plato, Aristotle and so on are still alive in the mind of the whole society because of their intellectual contribution to society. Spiritual upliftment is entirely depended upon knowledge. Perhaps keeping this in view, Socrates tells us that virtue is knowledge. All the men spiritually developed like Ramkrishna Paramhansa Deva, Swami Vivekananda, Sri Chaitanyadeva, Goutam Buddha, Jesus Christ, Hajrat Mohammed, etc advocate that ignorance is the sole cause of our bondage and sufferings, and it is knowledge through which liberation, the ultimate goal of our life be attained. Thus it is seen that our whole life, material as well as spiritual, is based upon knowledge. Keeping this importance of knowledge in view philosophy renders a lot of efforts to deal with it. Particularly the *Nyāya* School has given so much importance upon the concept of knowledge that it is regarded as *Tarkavidyā* or Indian logic.

In dealing with the concept of knowledge the question which arises in our mind at first is - What is knowledge? But unfortunately, a diversity of opinion is found among the philosophers regarding the definition of knowledge. Consequently, any singular universally accepted definition of knowledge can not be derived. Even the Indian scholars of different schools do not go hand in hand in defining the same. Here, in this paper, we are concerned only with the definition of knowledge as stated by *Nyāya* thinkers.

Annambhatta in his *Tarkasamgraha* says, "Cognition (*buddhi*) is consciousness (*Jñāna*) and is that quality (*guna*) which is the ground (*hetu*) of all usage (*vyāvahāra*). This is of two kinds memory and *anubhava*".¹

It is important to note that though the word '*buddhi*' as used by *Nyāya* school means the same as knowledge or *jñāna* it does not do so in other schools. Say for example, '*buddhi*' in *Sāṃkhya* school refers to the first evolute of primordial matter. The general meaning of the same also does not tally with that of the *Naiyāyikas*. By the term '*buddhi*' we, the common people generally mean the capacity of understanding we possess.

The *Naiyāyikas* take self or *ātmān* as a substance and cognition as a quality of it. It is worthy to note that as far as the observation of the *Naiyāyikas* is concerned knowledge is a quality of the soul, but not essence of it as maintained by the *Vedāntins*.

Cognition is an accidental quality and not an essential nature of the soul. In order to make us conscious about this truth the Naiyāyikas use 'cognition' and '*buddhi*' in one and the same sense. The implication of the use of the two terms in identical sense lies in the fact that '*buddhi*' is an accidental quality of the soul, likewise cognition is also accidental quality of the same.

All the words and phrases used in the definition of cognition noted above are highly essential. If the term 'quality' were dropped from the definition then the definition would have suffered from the fallacy of over coverage (*ativyāpti*) since it would include or cover time, space etc. within the purview of knowledge, which actually is not the case. Again, if the phrase 'ground of all usage' were not added to the definition then the definition would have been vitiated by the fallacy of over coverage. If the said phrase were dropped from the definition then any sort of quality like colour, taste, smell, etc. would have been cognition. But actually this is not the case. Colour, taste, smell, etc. are quality no doubt, but they are not the cause of all usage. So, the insertion of the phrase 'ground of all usage' to the definition is quite justified.

But it is important to note that the Nyāya thinkers are in confusion regarding the actual meaning of the phrase 'ground of all usage'. But it is important to note that the Nyāya thinkers are in confusion regarding the actual meaning of the phrase 'ground of all usages'. The meaning phrase, as noted in *Siddhānta Candrodaya* and *Padakṛtya*, is eating, walking, speaking, in a word all sorts of

activity. But if the meaning of the phrase in question is understood in this sense then even the non-voluntary actions be counted as an effect produced by cognition or consciousness. But the fact is otherwise, as we perform non-voluntary actions fully unconsciously. Thus the definition be the subject of the fallacy of over coverage. Keeping this problem in view, '*Nyāya-Bodhini*' and '*Nīlakānṭhī*' records the meaning of the phrase as the ground of all linguistic usage. If the meaning of the phrase is understood in this sense then, the so called non-voluntary actions with some voluntary actions like eating, walking, etc which are not the cause of linguistic usage, will be excluded from the definition of knowledge and thereby the definition will be free from the fallacy of over-coverage.

But the meaning of the phrase under consideration as noted down in '*Nyāya Bodhini*' and '*Nīlakānṭhī*' is also not purely free from all sorts of limitations and defects. If the meaning is understood in this sense then the definition of knowledge suffers from the fallacy of under coverage. Indeterminate knowledge is a knowledge proper, no doubt, but it is not the ground of linguistic usage. So, this knowledge can not be regarded as a case of knowledge as far as the meaning of the phrase 'ground of all usage' put down in '*Nyāya Bodhini*' and '*Nīlakānṭhī*' is concerned.

Keeping the problem mentioned above in mind Annambhatta in his *Tarkasaṁgraha Dīpikā* counts knowledgehood (*Jñānatva*) as a defining mark of knowledge. To clear this idea it should be elucidated. Some philosophers are of the opinion that knowledge is self-

luminous. But Nyāya-Vaiśeṣika, on the other hand, observes that knowledge is not self-luminous. A cognitive state comes to be known in a subsequent state of cognition called '*anuvyāvasāya*' which is a kind of internal perception. When I have a state of cognition, say, perceiving a table, I do not at that precise instant know that I have such a cognition. I come to know only at a subsequent instant that I have a perception of the table. This latter perception is known as the subsequent perception or

'*anuvyāvasāya*' of the original perception which is known as '*Vyāvasāya*'. This internal perception reveals the state of the original cognition as a state of consciousness. The original states of consciousness have an indefinite number of multiplicity and the same can truly be said in the case of the corresponding states of internal perception of these original states. Now each and every original cognitive state is a state of consciousness. So, they possess something in common. This something is nothing but universal 'consciousness'. In Sanskrit terminology the original state of cognition is called a state of *Jñāna* and the common feature present in each and every state of cognition is said as '*Jñānatva*'. This *jñānatva* or knowledgehood is present in each and every case of knowledge either *nirvikalpaka* or *savikalpaka*. So, it is seen that the definition of knowledge given in '*Tarka samgraha Dīpikā*' is free from all sorts of defects.

Now let us deal with the classification of knowledge suggested by *Nyāya*. Knowledge, to them, is of two kinds: memory and *anubhava*.

Memory or recollection is defined in *TS* as the consciousness which results only from *Saṁskāra*.³ But it is worthy to note that the term *Saṁskāra* here has been used in a technical way. Generally *Saṁskāra* means a trace or impression. But here *Saṁskāra* has been used by the *Naiyāyikas* and *Vaiśeṣikas* as a term having wider significance including speed and elasticity as well as physical trace, which is specially called *bhāvanā*. This is why *TSD* explains it as *bhāvanā*.

The definition of memory given comprises three phrases, and the special significance of them has been explained by *TSD* in the following way: (a) consciousness (b) which results from *Saṁskāra* and (c) only or alone.⁴ (a) If the term 'consciousness' were dropped from the definition then it would have suffered from the fallacy of over-coverage, since it would cover or include the destruction of trace within the purview of memory which actually is not the case. The 'destruction of trace' also is the outcome of 'trace'. But yet it is not memory at all. So in order to avoid this difficulty the term 'consciousness' has been inserted to the definition. Though the effect, destruction of trace, necessarily presupposes trace as a cause, obviously this is not the state of consciousness. But memory, of course, is a state of consciousness.

- (b) The insertion of the phrase – ‘which results from trace’ to the definition saves the definition from being vitiated by the same fallacy mentioned above i.e. the fallacy of overcoverage. If the said clause were omitted from the definition it would have stood as ‘memory is consciousness’ and thus it would cover the perceptual knowledge, for those are also the state of consciousness. But the perceptual knowledge inspite of necessarily being a state of consciousness like memory. Clearly it is not the ‘result of any trace like the latter one’. So the insertion of the second clause to the definition prevents it from the fallacy of overcoverage.
- (c) The word ‘only’ or ‘alone’ has been inserted to the definition of knowledge because it also bears a great significance in it. If this term were dropped from the aforesaid definition, it would have read as “memory is the cognition which results from a trace and thereby it also invites the blemish of over coverage like the former owes in a different way. For a recognitive cognition (*pratyābhijñā*) is also a cognition resulting from a trace, though obviously it is not memory but perception. The insertion of the term ‘alone’ to the definition prevents it (definition) from being the subject of the difficulty already mentioned, because recognitive perception is due to some trace no doubt but it is not due to trace alone. It also requires some other conditions called sense-object contact which is not applicable to the case of memory-cognition.

In defining *anubhava* it is said that *anubhava* is that kind of knowledge which is different from memory or *smṛti*. It is important to note that here may translate *anubhava* as direct or immediate

cognition. But it will be mistaken for even the mediate knowledge like inference, testimony etc. belong to *anubhava*, as used by *Nyāya-Vaiśeṣika*.

Veridical and non-Verdical anubhava :

Anubhava, Nyāya- Vaiśeṣike maintains, is of two kinds : Veridical (*Yathārtha*) and non-veridical (*ayathārtha*).⁵ A cognition which has, for its subject (determinans or *prakāra*), something 'p' (*taṭ*) when its predicate (determinandum , or *viśeṣya*) has that something (*tadvat*), for example the knowledge, "This is snake" in the case of snake is called veridical *anubhava* or *pramā*.

The definition of veridical cognition or *pramā* can hardly be understood and explained unless and until we understand and analyse what we mean by *prakara* and *viśeṣya*.

Knowledge, is of something which is known as the object or the cognitum (*viṣaya*) of the knowledge concerned. Usually this object is a complex entity composing of '*viśeṣya*', '*prakāra*', and '*saṁsarga*'. *Viśeṣya* in the object is one which is characterised by something, and *prakāra* on the other hand is that which characterises the *viśeṣya*. Let us explain the idea by citing a concrete example. Suppose I perceive a snake. In this perception, the object concerned is a complex entity which may be described as '*something*' which is characterised is called the *viśeṣya* and 'snakeness' which characterises the something i.e. snake is said to be the *prakāra* or *viśeṣaṇa* of the perception in

question. The same can truly be said about other kinds of cognitive states like knowledge by testimony, inference, and so on.

Now let us turn to the analysis of the terms, inserted in the definition of veridical cognition or *pramā* and thereby the justification of the definition as a whole. The definition given in *TS* and *TSD* stands – ‘*tadvati tatprakārākānubhavaḥ*’. The Sanskrit word ‘*tat*’ is usually a demonstrative pronoun which means ‘that’. But here this term has been used not in a traditional sense but in technical sense meaning anything which figures at the ‘characteriser’ (*prakāra*) or ‘determinans’ in the object of an *anubhava*. Here ‘*tat*’ is a variable for the determinans of a cognition varies from case to case and that is why it has been translated here as ‘something’ (P) without having any constant value. The term ‘*tad-vat*’ is also a variable like the former one with the meaning that which has the something the change of ‘*tat*’ to ‘*tad*’ is just an euphonic one in the Sanskrit language. The seventh case ending ‘*ni*’ has been added to ‘*tad-vat*’ and thereby the term ‘*tad-vati*’ is formed. It means ‘when there is that which has the something (P)’. This is what is about the meaning of the individual terms inserted to the definition. The meaning or sense of the definition as a whole stands – veridical cognition or *pramā* is an ‘*anubhava*’ which has for its determinans (*prakāra* – object) ‘something’ when the determinandum (*viśeṣya*-object) is that which has that something.’⁶ This version is somehow similar to that of the correspondence theory of truth.

But Annambhatta in his definition shows that the definition does not cover some cases of veridical cognition and it thereby

suffers from the fallacy of under-coverage (*avyāpti*). Say, for example, the cognition of 'potness in a pot' presented to be presented to a percipient subject, as a veridical one beyond doubt. But as long as the definition given in *TS* goes

this cognition does not come under the purview of veridical cognition. This knowledge has 'potness' for its determinandum (*viśeṣya*) and 'pot' for its determinans (*prakāra*). It would conform to the aforesaid definition of true cognition if the 'pot' (here the *prakāra*) would have been present in 'potness' (here the *Viśeṣya*). But actually the case is otherwise, for potness is present in pot, not the vice – versa. The definition requires that there just actually be the '*tad-vat*' which is obviously absent from the knowledge concerned. Since, if '*tat*' in the present case stands for the *prakāra* 'pot' the '*tadvat*' should be the *viśeṣya* 'potness' as having 'pot'. But 'potness' cannot surely have 'pot' for its determinans. Thus the required '*tad-vad*' is absent from the case in question and therefore the definition of veridical *anubhava* given in *TS* in terms of '*tad-vad*' fails.

In order to make the definition free from the defects already mentioned, the author proposes the phrase '*tad-vati*' in the place of '*tad-vat*' is his *TSD*. '*Tad-vati*' is a phrase which means 'when there is that which has a relation to the 'something' (P)'. In the case of the knowledge under discussion 'pot' obviously has a relation to 'potness' and thereby it conforms to the definition of valid cognition given in *TSD*.⁷

It is worthy to note that as between 'pot' and 'potness' though 'potness' can be said to be present in 'pot' it can not be said otherwise. 'Potness' is known as '*pratiyogin*' (the relatum) and 'pot' the '*anuyogin*' (the locus) of the relation that potness bears to pot. As 'potness' and 'pot' are related entities both can truly be said to bear some relation. But it should be pointed out that the relation that 'potness' bears to pot is not similar with but different from the relation that 'pot' bears to potness in status and that is why, though the former one can be expressed indifferently in terms of 'in' and 'has', latter one cannot .

The term 'has' used in *TS* definition bears some meaning which is different from the meaning it usually bears. In other words, the term '*tad-vat*' has been used here in its secondary sense but not in its primary sense. The scope of the former one is, no doubt, broader than that of the latter one and thus the author becomes successful in making the *TS* definition of true knowledge free from the charge of undercoverage.

Here, again, one thing should be highlighted . The term '*pramā*' has been used by different philosophers belonging to various schools. But the *Nyāya* usage of this term is different from others to some extent. For instance, the term '*pramā*' as used in *Vaiśeṣika*-texts means true cognition of all types. But as long as the *Nyāya* usage is concerned, '*pramā*' means only a veridical *anubhava*.

Non-veridical anubhava :

The definition of non-veridical *anubhava* (*apramā*) given in *TS* stands ; " Non-veridical *anubhava* is a cognition which has for its determinans (*prakāra*) something 'P' when its determinandum (*Viśeṣya*) is characterised by the absence of that something . To cite an example, 'the perception of snake' in respect of rope. Here this perceptual cognition has for its determinans (*prakāra*) 'snakeness' but its determinandum (*Viśeṣya*) is actually characterised by 'absence of snakeness'.⁸

But Annambhatta in his *TSD* maintains that the *TS* definition of *aprama* or non-veridical *anubhava* is not sound, since it remains to be the subject of the charge of overcoverage. Some explanation is needed to understand this difficulty. 'Conjunction' according to *Nyāya*, is a quality which exists in the substances conjoined with each other. For instance, when there is a book on the table, it implies that there is a relation between them known as conjunction . This relation of conjunction resides between the table and the book. But at the same time it is also true that this relation does not reside in them . For it is present in some of the parts of them and absent from some of the parts too.

If this is the case then the cognition - This table has contact with a book may as well be described as 'a cognition which has for its determinans (*prakāra*) something 'P' when its determinandum (*Viśeṣya*) 'the table' is not characterised by 'P' or is characterised by the absence of 'P'. Thus the definition of non-veridical *anubhava*

mentioned in *TS* would apply to the cases of knowledge like this which is surely accepted as valid one. So the *TS* definition of false cognition is too wide.

To overcome this difficulty the *TSD* defines false cognition in the following way : "A false cognition is that which has for its determinans (*prakāra*) something 'P' in a certain relation 'r' (*sambandha*) to a certain aspect (*avacchedaka*) of the determinandum (*Vīśeṣya*), when the latter has the absence of something 'P' in that relation 'r' (*Yatsambandhābhāvāna*) to that aspect a (*Yadavacchedaka*)." ⁹ *TSD* points out that a cognition conforms to the definition of false cognition , if it has for its determinans qualified conjunction, i.e. conjunction in a certain relation to a certain aspect of the object. But in the case under discussion, the cognition has for its determinans unqualified conjunction. So this definition of false cognition or non-veridical *anubhava* cannot be applied here in this case and thus it remains free from the charge of overcoverage.

After giving the definition of veridical *anubhava* or *pramā* and non-veridical *anubhava* or *apramā*. Annambhatta turns to the classification of them. Veridical *anubhava* or *pramā* , he says, is of four kinds – *pratyakṣa*, *anumiti*, *upamiti* , and *śābda*. And its special condition (*kaṛaṇa*) which is also known as *pramāṇa* also can be classified into four kinds – *pratyakṣa*, *anumāna* , *upamāna* and *śābda* . Here we shall deal not with the veridical *anubhava* or *pramā* but with the non – veridical *anubhava* or *apramā* . So, let us drop the

discussion of veridical *anubhava* and go on only with the non-veridical one.

Non – veridical cognition or apramā :

Non- veridical cognition is of three kinds of doubt, error and *Tarka*.¹⁰ But , it should be noted that in *TSD* an objection has been raised against this classification , given in *TS*. *TSD* maintains that dreaming too should be considered to be cognitive state of mind and therefore it should be enumerated as the fourth kind of non-veidical cognition . But this objection can be met by saying that actually dreaming is not different from but similar with error. But since it is not owing to any defect in the external sense-organs nor due to any defect in external nature, it must be because of some internal defect. So, it is called as a kind of subjective or internal error.

Here, we shall drop the discussion of the first two i.e. doubt and error just by hinting at and go through in details with the last one (*tarka*).

Doubt :

Doubt is the apprehension in respect of the same substantive . That is, it is characterised by many mutually opposed characters. For instance, “ May it be a post or a person ?”¹¹

But one may raise an objection by saying that this definition is too wide since this would also cover a selfcontradictory statement like “ This is both a stick and a man “. A contradictory statement can

hardly be considered to be the case of knowledge for it does not represent any cognitive state of mind.

But doubt, on the contrary, is definitely knowledge since it represents a cognitive state of mind. That is why, the aforesaid definition of doubt cannot be accepted.

Another more plausible objection may be raised that doubt in fact, should not be considered to be invalid cognition. Since the cases where there is the definite assertion of a certain character in regard to a subject to which it does not really belong is taken to be invalid cognition. But this is not applicable to the case of doubt, on the contrary, it involves some suspense of judgement – this suspense is due to many contrary suggestions.

But this objection does not hold good in the case of Indian philosophy. 'Invalid cognition' used in Indian philosophy is different from 'invalid cognition' used in western philosophy to some extent. In western philosophy, the phrase 'invalid cognition' is indeed associated with a judgement. But the phrase 'invalid cognition' used in Indian philosophy, particularly in *Nyāya*, stands for any cognition which fails to fulfil its function of delivering the truth about a thing. Doubt fails to fulfil its purpose just said, so, doubt is regarded as an invalid cognition.

With a view to making the *TS* definition of doubt free from the blemish of over-coverage, the author, Annambhatta gives the definition of the same in *TSD*. This reformed definition reads as

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“Doubt is the apprehension, in respect of the same substantive.....”¹²

. The word ‘same’ in this definition prevents it from being too wide by concluding the application to what is called *samūhāmbana-Jñāna* or a cognition which has many things for its object and has for its predicate, many characters which are severally ascribed to the many things which constitute its subject. This sort of knowledge is expressed in terms of compound judgements having mutually opposed characters as predicate. A compound judgement of this type is not in respect of one and the same substantive, but in respect of many substantive and that is why, it is not covered by *TSD* definition of doubt.

The phrase ‘mutually opposed’ has been inserted to the definition to prevent it from being vitiated by the fallacy of over-coverage again. Had this phrase not been inserted then it would have been applied to judgement as “A pot is a substance”. Because this judgement is one having more than one character – ‘potness’ and ‘substancehood’ and one subject “pot”. But the definition with that phrase excludes this judgement since the characters concerned i.e. ‘pothood’ and ‘substancehood’ are not mutually opposed, for, they can well reside in the same thing at the same time.

The term ‘many’ has been inserted to the definition to exclude the judgement like “This is possessed of pothood which is opposed to ‘clothhood’ from the purview of doubt. For although in this judgement two characters mentioned are opposed to each other yet only one of them, ‘pothood’, has been ascribed to the subject.

Error or Viparyaya :

TS defines *Viparyaya* simply as false cognition, meaning false *anubhava* . And the example given is 'this is silver' in respect of shell.

¹³ But this definition tends to include *samśaya* or doubt. That is why *TSD* explains that *viparyaya* is a *sure* perceptual cognition having for its predicate, a character which does not belong to the subject of the knowledge in question. But doubt is a knowledge which is not certain at all and thereby remains untouched by the *TSD* definition . ¹⁴

Tarka :

Tarka is the third non-veridical '*anubhava*' as enumerated by *TS* . Generally '*Tarka*' means argument . But it should be noted that here in *Nyāya* system the term '*Tarka*' has been used not in a general sense but in a highly technical sense.

Tarka has been defined as the false assumption of something through the false assumption of another thing which is invariably concomitant with that something, for example, 'If there were no fire, then, there would be no smoke'.¹⁵ It is the knowingly false cognition (*āropa*) of something 'B' on the basis of the knowingly false cognition (*āropa*) of some other thing 'A' which is invariably concomitant with 'B' . Here both 'B' and 'A' are known to be unreal and yet a relation between them is asserted. Here the Sanskrit term '*āropa*' means a false assumption or a false ascription entertained for a while, knowingly fully well that what is assumed is false. So '*āropa*' does not

mean the same as what the 'error' means. For in the case of an erroneous knowledge, the person concerned does not know that the knowledge in question is wrong but in the case of an 'āropa' the person concerned is quite aware that it is false. This sort of wilful assumption of what is known to be false is called *āhārya jñāna* (meaning literally a piece of knowledge which is artificial and brought about by an act of consciously wilful distortion).

So, it is obvious that *Tarka* is a false assumption. But it is worthy to note that every false assumption is not necessarily a *Tarka*. A false assumption should be considered to be *Tarka* only when it is entertained on the basis of another false assumption, through the knowledge of an invariable concomitance between two things. If we entertain the presupposition that there is in the kitchen no smoke in spite of knowing that it is actually there in it (Kitchen) , then no doubt it will be an instance of *āropa* or false assumption, but it would not be correct to say that it is an instance of *Tarka*. If a person perceives smoke in the hill and yet entertains the presupposition that there is no fire in it. Here he assumes absence of fire as a consequence of his assuming 'absence of smoke' which he knows to be invariably concomitant with 'absence of smoke'. A false assumption or *āpora* like this is called *Tarka*.

'*Tarka*' then is clearly a case of erroneous cognition and is admitted to be so by Annaṁbhatta in his *TSD*. So, naturally a question arises – why then has he enumerated it in *TS* as a separate variety of false *anubhava* or *apramā* ? The author replies this question by saying that it plays an important role in helping a

cognitive instrument (*Pramāṇa*) , such as inference , to perform its appropriate function which the other erroneous cognitions fail to do and is regarded as a subspecies of *apramā* like error and doubt and not as a sub-species of error.

But again our question is – How does *Tarka* help *pramāṇa* like inference ? The author , Annambhatta himself remains silent on this point and it is Nīlakantha who gives a little elucidation. Sometimes *pramāṇa* fails to produce its proper result because of some obstacles, such as doubt. Let us suppose that one infers the existence of fire in the hill on the perception of smoke in it. And he does this on the basis of the invariable concomitance (relation of *Vyāpti*) between smoke and fire i.e. *hetu* and *sādhya* . But one may doubt in the very invariable relationship between them and thereby doubt in the varacity of the inferential cognition itself. And as long as this doubt persists the process of inference would fail to generate its appropriate valid cognition, “There is fire in the hill”. This doubt can be ruled out through the proper application of *Tarka* in the following way. “If there were no fire, there would not have been smoke”. This *Tarka* in its turn is based on an established causal law holding between smoke and fire like ‘smoke is caused by fire’. So to doubt the validity of *Tarka* amounts to doubt the validity of the theory of causality itself. But no one questions the validity of the latter and thereby he has no proper right to doubt the validity of the former too. Thus by removing doubt *Tarka* helps a *pramāṇa* to perform its appropriate function.

Chapter - II

THE CONCEPT OF TARKA IN OLDER NYĀYA :

In this chapter, we shall deal with the different opinions regarding '*Tarka*' as proposed and suggested by various thinkers belonging to old Nyāya-system.

Tarka is accepted one among the sixteen categories adopted in *Nyāya*.

The definition of *Tarka* given by Goutama is as follows : " *Tarka* or *Reductio-ad-absurdum* is a form of deliberation (*Ūha*) which is applied for the purpose of determining the specific nature of 'an object whose real nature is yet be known' by pointing out some real grounds in favour of it."¹

The principal objective of *Tarka* is to reveal the right knowledge of an object. It is important to note that *Tarka* can be applied neither for the revelation of an object which is purely unknown nor for the revelation of an object which purely known. It can be applied for the revelation of an object which is partially known and partially unknown.

As to an object not known properly an enquiry may be seen in an individual. Afterwards the individual concerned in some cases becomes confused by seeing the existence of two contrary characteristic features in the enquired object. As long as confusion persists, one cannot know the enquired object. So ultimately he removes his doubt by way of ascertaining one of the characteristic

features of the same object on the strength of some proofs found in favour of this alternative. In other words, the particular individual has got some proofs in favour of particular alternative, which automatically eliminates the other one.²

Let us try to understand the method following the line of Vātsyāyana, with the help of an example. Let us suppose an individual has got desire to know the real nature of the self or knower who knows all the knowables. Afterwards, he may have doubt in the form 'whether it possesses the properties of something which is produced or those of something which is not produced. How to eliminate one of the two alternatives ? In order to show the method , Vātsyāyana opines that the individual proceeds to eliminate one alternative by applying some arguments of the following type. He thinks that, if the knower or self possesses the properties of something not produced, which is otherwise called eternal, it can enjoy the result of *karma* performed in the previous birth . In *Nyāya* philosophy it is believed that among suffering, birth, inclination, evil and false knowledge each of the succeeding one causes the preceding one which is the state of liberation. On account of this an individual will have both transmigratory as well as liberated states.³ If the knower, on the other hand , is taken as possessing the properties of the produced, he will not have these. For, the knower after being produced becomes associated with body, sense organ, happiness, miseries etc. On account of which he does not have any scope for enjoying the result of *karma* done by him as he is non-eternal in nature. For the knower does not exist before his coming into being.

The knower who does not exist before or who is absolutely destroyed at the time of the destruction of his body is not capable of enjoying his result of *karma*. As the knower is non-eternal, like other non-eternal objects he has no existence before his coming into being and then he is completely destroyed at the destruction of his body. If this be the case, the relation of a knower with more than one body and the absolute cessation of body, i.e. absolute cessation of birth would be impossible. Leading to the impossibility of liberated and transmigratory states.

But liberation, according to Nyāya, is a fact, so, the second alternative, i.e. self as possessing the produced properties cannot be taken as granted because of the absence of proper ground mentioned above. This type of argumentation or this method of elimination is called *Tarka*.⁴

But it is important to note that the method of *Tarka* as described by Vātsyāyana is a promoter to the ascertainment of right knowledge, but not the instrument of the right knowledge itself. *Tarka* cannot be taken as the instrument of the right knowledge itself, because, by pointing out some grounds, it asserts one of the alternatives, but it does not point out this alternative definitely as having such and such characteristics. In other words, *Tarka* does not definitely assert a particular alternative, in the form, 'This object is of such nature'. So, the main characteristic features of the object are not deliberated through this method.⁵

Vācaspati Miśra and Uddyotkara think that *Tarka* or reasoning does the act of elimination. Sometimes we see two competing alternatives to be present in one and the same enquired object at the same time. Unless and until one of the alternatives is eliminated the actual nature of the enquired object cannot be revealed to us and thereby remains unknown. *Tarka* is a process which helps us in eliminating one of the competing alternatives on the very superior logical strength of one of them. Reasoning thus indicates that one of the alternatives is logically impossible and by the method of elimination it is found that the remaining alternative is the possible truth.

And *Tarka* is a promoter to the instrument of right knowledge, because, it, after pointing out some grounds in favour of the ascertainment of the right knowledge of an object, i.e. correct alternative, becomes auxiliary to the *pramānas*. As *pramāṇa* is associated with *Tarka*, the power of it would be enhanced and this enhanced power becomes helpful for the revelation of the right knowledge (*tattva*).⁶

Here '*tattva*' means 'thatness' i.e. to know an object as it is. In other words, the positivity of the positive and the negativity of the negative entity may be described as '*tattva*' i.e. the absolute sameness or non-contrary.⁷ This ideal nature of an entity is revealed through *pramāṇa* associated with *Tarka*, the promoter.

Vācaspati Misra agrees with Vātsyāyana in respect of the status of *Tarka*. Both of them are of the opinion that *Tarka* is an

auxiliary factor to the independent instrument of knowledge like, perception, inference, etc.

Vācaspati considers that the true contribution of *Tarka* lies in the aspect of elimination . It is thus the *reductio-ad-absurdum* of the two contrary competing possibilities. Reasoning enables us to conclude in some steps.. In the first step it enables us to think that both these alternatives cannot belong to one and the same thing at the same time. In the second one it enables us to reject one of the alternatives which is shown to be logically impossible by putting forward considerations against it. And ultimately the remaining alternative which is the real nature of the object in question is revealed to us. So Vācaspati maintains that *Tarka* serves to demonstrate the absurdity of the truth-claim of the false competitors and this demonstration of absurdity subserves the purpose of the instrument of knowledge. He uses to think that when an individual begins to enquire the nature of anything, sometimes he falls in doubt due to the presense of two conflicting possibilities. At this stage *Tarka* spreads its hand to help him to know the truth by removing the doubt.

So far as the foregoing discussion is concerned it is obvious that the services and functions performed by *Tarka* are of indirect and negative character. *Tarka* helps us to know any object not directly by pointing out the real nature of it but indirectly by rejecting the false nature of it.

And Udayana like Vātsyāyana and Vācaspati also is of the opinion that reasoning or *Tarka* is not regarded as an independent instrument of valid knowledge because it has no direct bearing upon the determination of positive truth. It only helps us to reject a false conclusion by showing its absurdity and thereby paves the way of other independent instrument of knowledge e.g. inference.

On the basis of the discussion so far we may think that Udayana completely agrees with Vacaspati about the nature of service performed by *Tarka*. But actually this is not the case. Vācaspati holds that *Tarka* serves to remove the doubt which comes into being due to the imposition of two conflicting alternatives in one and the same enquired object at the same time. But Udayana here differs from Vācaspati though he is a commentator of him (Vācaspati).

Udayana says that, in fact, doubt is due to the incapacity to find out conclusive reasons in favour of one of the conflicting alternatives and these reasons are nothing but the characteristics which belong to one and one only of the alternatives. By citing an example we may clear this idea. Let us suppose, I perceive an entity standing in front of me in a dim light and become perplexed whether it is a man or a tree. Unless and until the doubt is removed, knowledge cannot be taken place. Let us suppose, after a while I recognise the hands and feet and then come to know that the entity is nothing but a man. So, here the doubt is rulled out through the knowledge of such

Udayana also agrees with Vācaspati Miśra and endorses his (Vācaspati's) position by saying that *Tarka* serves to eliminate the opposite issue by showing the absurd consequences, in the opponent's position as a matter of logical necessity. Let us make this idea clear by citing an instance. Let us suppose the sceptic questions as to the causal efficiency of water in quenching thirst. But how the sceptic's position can be shown to be wrong?

Udayana proves their position to be wrong by resorting to *Tarka* in the following way, "If water did not allay thirst, nobody would drink water when thirsty." As a matter of fact, people drink water to allay thirst and nobody has been disappointed in his expectation. The form and the function of *Tarka* resembles the form and the function of *reductio-ad-absurdum*. In the instance just cited *Tarka* like the *reductio-ad-absurdum* serves to demonstrate that the doubt or denial would entail rejection of an admitted truth. Here in this *Tarka* the established fact is rejected and thereby the absurdity of the rejection of this established fact is demonstrated subsequently.⁸

But, Udayana says, that another type of *Tarka* is there in which we accept an unestablished fact to be true for the time being and subsequently the absurdity of the acceptance of this nonestablished fact is demonstrated. For, example, let us suppose one says that drinking of water causes burning. Here water's burning is a nonestablished fact. Here his position can be shown to be absurd by applying *Tarka* in the following way. "If water causes burning then drinking of water gives rise to the burning sensation which becomes clearly invalidated and false by our day to day practical experience."

characteristics, as hands and feet which can belong to a human being and a human being only, not to a tree. But can we say that this knowledge of this crucial evidence i.e. the knowledge of hands and feet in terms of which the doubt is removed is derived through *Tarka*? Certainly not. This knowledge is derived through perception. So it is clear that *Tarka*

does not directly help us in removing doubt which is thought to be the case by Mishra.⁹

Here sharing this view of Mishra on this point I want to negate Udayana's view. No doubt, in the instance cited the knowledge of hands and feet is derived through perception, not through *Tarka*, as Udayana maintained. But the mere knowledge of hands and feet alone cannot be the cause of removing doubt. The knowledge in terms of which the doubt under consideration is removed is the knowledge of hands and feet as the specific characteristics of man and not of others. This knowledge cannot be derived through perception.

This idea may be made more clear by citing an instance. Let us suppose one perceives smoke in a hill and comes to the conclusion that there is fire in it. Here undoubtedly, the knowledge of smoke is derived through perception. But this knowledge alone cannot be the ground of the knowledge of fire in the hill. The knowledge which is the ground of the knowledge in question is the knowledge of smoke as a necessary con-comitant of fire which cannot be derived through perception. In the above example the knowledge that the object

concerned is a man is not perceptual one as the knower does not perceive the man directly. It is an inferential knowledge as it is based upon the knowledge of hands and feet as the specific characteristics of man. And though the knowledge of hands and feet is derived through perception, the knowledge of hands and feet as the specific characteristics of man can never be ascertained in terms of perception. So, the view of Udayana cannot justifiably be accepted.

The knowledge of necessary concomitance between smoke and fire is established through *Tarka* along with some other means, likewise the knowledge of hands and feet as the specific characteristics of man is ascertained through *Tarka* accompanied by some other means.

Udayana's position can be understood more clearly if we go through the elucidation given by Bhatta Vadindra. He says that two types of characteristics are found to belong to an object. One of them is the common and the other is special. An entity shares the first one in common with some other entities, say for example, in the instance already cited man shares the features as straightness, height etc. with trees, whereas, it also possesses some characteristics without sharing with others, man for example possesses hands and feet without sharing with trees.

Vadindra argues that the knowledge of the common characteristics accompanied by the lack of the knowledge of the specific ones of the enquired object gives rise to doubt. This doubt can be removed only through the knowledge of the specific features.

In the example given doubt is ruled out due to the knowledge of hands and feet which are the specific characteristics of a human being. But it is *Tarka* not perception which yields this specific knowledge. So, perception nothing to do with removing doubt. That is why; Udayana's position cannot be maintained in respect of the status of the service of *Tarka*.¹⁰

Another sound argument has been advanced by Udayana to stand his own position by rejecting the position of Vācaspati Mishra in this regard. He holds that *Tarka* would have been competent to remove doubt if it were opposed to doubt in contents. But the fact is otherwise. With a view to making this idea clear an instance may be cited. Let us suppose a man is in doubt of the existence of fire in a hill where he sees smoke. The doubt is of the form. "Is the hill possessed of fire or not?" To be free from this doubt the man in question resorts to *Tarka*. And the form of a *Tarka* is hypothetical one, namely, "If the hill did not possess fire, it would be "devoid of smoke." Here it is obvious that doubt and reasoning under consideration are not opposed in contents. The existence or non-existence of fire in a place where the smoke exist is the content of doubt. And the absence of smoke is the content of *Tarka* for it asserts that the absence of fire would entail a necessary consequence, the absence of smoke, which certainly is not opposed to the presence of fire. The absence of fire is opposed to the presence of fire, similarly, the absence of smoke is opposed to the presence of smoke. So the consequence, namely, the alleged absence of smoke being not antagonistic to the presence of fire, the reasoning in question cannot logically remove the doubt of

the presence or absence of fire which made the appeal to reasoning necessary.¹¹

On the basis of the foregoing discussion, it is clear to us that *Tarka* does not directly help us in removing doubt. So, here naturally the following question arises. What is the instrument through which doubt under consideration can be removed? In reply, it is said that the instrument is the knowledge of the specific characteristics of one alternative. In the instance cited smoke is a specific characteristic of fire and thereby smoke is the necessary concomitant of it (fire). So here the perception of smoke as the necessary concomitant of fire is the instrument of the removal of doubt of the presence of fire. Doubt comes into being due to the absence of knowledge of its specific characteristics, smoke as the necessary concomitant of fire. So as soon as the knowledge of this specific characteristics of fire is attained, the doubt of the presence of fire is ruled out. Thus doubt is removed not by the knowledge of absence of smoke entailed as consequence by reasoning (*Tarka*) but by the recognition of smoke as the concomitant of fire, which is completely different from what is entailed by *Tarka* (reasoning).

In replying to the argument advanced by Udayana we can maintain that one doubts the existence of fire in a hill in spite of seeing the smoke in it, because he doubts the necessity of the relation between smoke and fire. But when Udayana observes that the perception of smoke as the necessary concomitant of fire is the instrument of removal of doubt of the presence of fire, he grants the said relation to be necessary. The necessity of this relation itself

demands to be free from doubt. So, Udayana has no right to take this relation as granted and therefore his account of removing doubt cannot be accepted.

Perception can afford us only the knowledge of smoke. But this knowledge cannot eliminate the doubt in question. The knowledge through which this doubt is removed is the knowledge of smoke as the necessary concomitant of fire which is established in terms of *Tarka* along with some other means.

We may raise a question : – If *Tarka* has no bearing upon removing the doubt, why do we resort to it ? What is the nature of its service then ? In reply, Udayana says that *Tarka* serves to remove the desire for knowledge of opposing alternative and not doubt. It is important to note that Udayana maintains that, no doubt, doubt is a necessary condition of the application of *Tarka* but it is not a universal condition. That doubt is not a universal condition of *Tarka* can be understood clearly with the help of an example where *Tarka* is requisitioned though there is no doubt at all. Let us suppose a hungry man sits to eat a plate of food and a friend warns him that the food is poisoned and will prove fatal if consumed. Now this warning, if logically stated, should be expressed as follows. "If you take food in question, you will die", which is the form of statement in which the reasoning is necessarily expressed. The warning here is a *reductio-ad-absurdum* which is the usual form of reasoning. So, this is the case where *Tarka* is present but doubt is absent.

What is the result suggested by Udayana through the application of *Tarka*? We have already seen that *Tarka* is called for when we are in confusion due to the imposition of two contrary alternatives on one and the same thing at the same time. One of the alternatives is undesirable. And this one alternative is undesirable again because its consequence is undesirable. *Tarka* serves its function i.e. it removes the desire for knowledge of the opposing alternative by demonstrating an undesirable consequence of the acceptance of that alternative. In the example cited above *Tarka* removes the desire of the hungryman for the consumption of the food under consideration by showing the undesirable consequences that would necessarily follow.¹²

Udayana is of the opinion that even in the cases where doubt furnishes the occasion for resorting to reasoning, the service of it consists in the removal of desire for the opposite alternative, though the removal of doubt comes as a remote consequence. In the case of doubt about the existence or non-existence of fire, reasoning serves to remove the knowledge of the non-existence of fire by demonstration of the undesirable consequence, namely, the absence of smoke. The doubt of the possibility of the non-existence of fire is ruled out by the knowledge of fire which is attained indirectly through the knowledge of the presence of smoke-as-concomitant of fire.¹³

But even if what has been said by Udayana is taken to be true, a strong objection may be raised against him. He holds that opposition of contents is the determinant of logical opposition between two propositions. But if this is the case then obviously the

opposition of *Tarka* to the desire for knowledge cannot be considered as the logical opposition since they are not opposed one from another in their contents. Udayana argues that *Tarka* has nothing to do with removing doubt because *Tarka* and doubt are not logically opposed and again they are not logically opposed for they are not opposed in their contents. In the same way we can argue that *Tarka* fails to rule out the desire for knowledge of opposing alternative as *Tarka* and the desire concerned are not logically opposed and again they are not logically opposed since they are not opposed in their contents. So, Udayana's view is not better than that of Vācaspati Miśra in anyway.¹⁴

Besides, 'desire' is something without having any logical value which plays a vital role in the explanation of Udayana.

But inspite of these limitations, Udayana's view can be shown to be superior to that of Vacaspati Mishra to some extent by representing the superiority of the opposition of *Tarka* with desire for the knowledge of the opposing alternative as maintained by Udayana to the opposition of *Tarka* with doubt as Vācaspati holds. The opposition of reasoning with doubt as Vācaspati maintains would be a case of specific causality which was not deduced from a general proposition, whereas, the opposition of the untoward consequence, shown by reasoning with desire for the belief or the action proceeding from such a belief, is one which is deducible from the general proposition. This can be understood through the explanation given below :

We desire so many things in our day to day life. But all of them are not similar in their nature . Some of the things are desired by us on their own accounts e.g. pleasure, happiness etc. and some of them are desired on account of their consequences which are desirable but not for their own sake e.g. wealth. We desire wealth because it is a means of securing happiness. Likewise aversion or cessation of desire has reference to thing, which is either undesirable on its own account or which is an instrument of an undesirable consequence.

The relation between cessation of desire and knowledge of an undesirable consequence is thus necessary and universal. When reasoning demonstrates an undesirable consequence to follow from a belief or a course of action based upon such belief the opposition of the later to desire for entertaining such a belief or consequential action is only, an instance of this universal truth. So the opposition is not at par with the opposition between a frustrating agent and an expected happening. Thus Udayana's contention seems to be more agent than that of Vācaspati Miśra.

Here a question arises - What is then the cause of the removal of doubt according to Udayana ? In reply to this question, Udayana says that it is inference through which doubt is removed. We can clear this idea by citing an example. An individual sees smoke coming from a hill and goes to infer the existences of fire in it. But meanwhile a doubt about the necessary relation between smoke and

fire crops up and prevents an individual from drawing an inference. The doubt is of the form that smoke in question may be possible in the absence of fire. Here *Tarka* can be applied by him. The individual argues that if smoke be not the effect of fire as it is not known to be the effect of anything else the smoke would be an uncaused effect which is an absurdity. This realisation of this absurdity removes the desire for belief in a fireless smoke. And now inference of the existence of fire is taken place through which doubt concerned is ruled out. So, doubt, Udayana thinks, is always eliminated by inference.¹⁵ This view of Udayana can be criticised first by showing the fallacy of circularity as inference is possible due to *vyāpti* and vice versa.

Udayana observes that one's inference about the existence of fire in the hill from the perception of smoke in it is not taken place due to the doubt about the necessary relation between smoke and fire. So, inference in question cannot be taken place unless and until the said doubt is eliminated. But he maintains that afterwards through the imposition of *Tarka* the inference in question is taken place and the doubt concerned is removed by that inference subsequently. That means, according to him, inference is taken place before the removal of doubt. But actually, this cannot be the case. As if here he puts the cart before the horse. Here, the possibility of inference presupposes the absence of doubt, for as long as doubt persists the very question of the possibility of inference does not arise at all. So, it is absurd to maintain that it is inference through which doubt under consideration is ruled out.

However, so far as our discussion is concerned it is clear that Vātsyāyana, Vācaspati Miśra, Udayana, all of them agree on the point that *Tarka* is resorted to when object is in confusion due to having the existence of the two contrary characteristic features. And ultimately this doubt is removed through *Tarka* directly or indirectly with the elimination of the other possibilities.

But if we ponder over the problem, we can see that the above view cannot be accepted to be true due to a problem. So long as the elimination through *Tarka* is concerned, we are adopting *Tarka* in each and every case of knowledge. We are going on eliminating one object from another following this process of elimination. Say for example, when the knowledge of a cow is attained, the cow is eliminated, though unconsciously, from the 'non-cow'. We are unconsciously following the methodology of *Tarka* in the form: "If this cow were horse etc., it would not have possessed the characteristics existing in a cow." From this we draw our conclusion in the form – "As this cow does not possess the characteristic features of a horse etc. this animal is cow." In this way each and every piece of knowledge is the outcome of *Tarka* though we are not always aware about the technicalities of the method. That is why, the Buddhists have given much emphasis on the concept of *Apoha*. In fact, Ramanuja has explained the term '*Apohana*' found in the *śloka* of the *Bhāgavadgītā* I, as *Ūha* or *Tarka*. Venkatanatha in his *Nyāyapariśuddhi* has admitted the above mentioned meaning of the term '*Tarka*' and has mentioned Ramanuja's view. From this it

follows that *Tarka* has wider perspective. It is used in each and every case of knowledge, not to speak of the object which is in confusion.

From the foregoing analysis it is found that we are going on applying *Tarka* even when the object is known. In other words, it automatically comes to our mind that the known object i.e. 'jar' is different from 'non-jar' is known on the strength of the knowledge of the characteristic features of a jar as well as 'non-jar'. So, the concept of *Tarka* of the above mentioned thinkers should have been much more wider.

In response to the above mentioned problem, one solution may be offered to substantiate their position. It is true that we are going on eliminating when we attain the knowledge of an object. Though it is done automatically, it would be improper for us to give justification of the knowledge of an object which is not at all in confusion. If it were not in confusion what is the use of providing *Tarka* (in a demonstrative way) for the justification of its knowledge? To provide justification or proof for the object which is already established gives rise to a logical defect called *Siddhasādhana*. Though this method of elimination is adopted unconsciously, the intellectual demonstration of the method gives rise to the defect mentioned above; as this attitude is nothing but an effort to prove the object already established. Keeping this in view the ancient Nyāya thinkers mentioned have emphasised that *Tarka* is to be applied in an object which is not specifically known. This view of them is strengthened when Vātsyāyana opened that argument is to be provided in the case when the object is neither

ascertained nor unknown (completely) but in confusion . This theory is applicable in any type of argumentation, not to speak of *Tarka*.

Moreover, this method or *Tarka* is highly essential in the *Vāda* category of debate. It is mentioned in the *Sūtra* and *Bhāṣya* that one should establish one's position and refute other's with the help of *pramāna* and *Tarka* in the *Vāda*. If the object were completely known, there would have no provision for *Vāda* and hence no question of applying *Tarka* there.

Chapter - III

THE CONCEPT OF TARKA IN NAVYA NYAYA :

Śrīvallabha, the author of the *Nyāyalīlāvati* has seen the function of *Tarka* from a different angle and criticised the position of Udayana in particular and that of the other former thinkers in general . He maintains tentatively that the application of reasoning may result in one of these three consequences , namely (1) the cessation of desire for belief in the opposite; (2) cessation of the doubt about the opposite; (3) the weakening of the opposite alternative . Now he shows that the first alternative is not entertainable. The argument given by him in support of his view is the following . The desire for belief or knowledge of the opposite does not and cannot stand as an obstacle to the operation of an instrument of knowledge so the cessation of such knowledge is entirely useless¹. In fact, desire has nothing to do with the happening of the resultant knowledge , for , it follows as a matter of necessity if the all other conditions of such knowledge are fulfilled . For instance a man perceives a tiger as a tiger though he desires to perceive a deer . The same can truly be said in the case of inference. Such a desire is neither a necessary nor a universal condition of inference . That is why, it has nothing to do with inference . The immediate as well as necessary condition of inference is the combined knowledge of the major and the minor premises . So, Udayana's position is proved to be soundless and unacceptable .²

Being agree with Śrīvālabha I myself also consider that the desire for the knowledge of the opposite cannot act as an impediment to the operation of any instrument of knowledge . If all the conditions for the operation of any instrument of knowledge are materialised then the operation cannot but be taken place in spite of the desire for the knowledge of the opposite alternative .

Śrīvālabha denies the second alternative too . He is of the opinion that in fact the doubt about the opposite is removed by inference itself . If reasoning were competent to eliminate the doubt, it would not have resorted to inference . Nor can reasoning be supposed to effect the assurance of the removal of doubt achieved by inference . This is also done by inference . For inference is not only capable of eliminating doubt but also producing assurance of such removal . It should be noted that this second view criticised by Śrīvālabha is the position of Vācaspati Miśra .³

But I think that the position or view of Vācaspati Miśra can be substantiated by negating that of Śrīvālabha by the same argument which was produced against the view of Udayana earlier . Here in fact, the doubt about the opposite alternative takes its birth from the doubt about the necessary concomitance between *hetu* and *sādhya*. In other words, the doubt about the opposite alternative results in the doubt about the relation of *vyapti* . But the relation of *vyapti* is a necessary precondition for the possibility of inference . So, obviously, the inference has nothing to do with removing the doubt in

question . To accept the view of Śrīvallabha is to put the cart before the horse.

The third alternative is also rejected by Śrīvallabha . He says that even if the third alternative is taken to be true, the result would be at most a hightened presumption for the true alternative, which would not amount to certitude until and unless the possibility of the weakened alternative is eliminated with absolute certainty . This can be done by inference only . If this is the case then the necessity of *Tarka* for the said purpose is not only problematic but also superfluous. Thus Śrīvallabha rejects all the three alternative consequences alleged to be the results of the application of reasoning.⁴ The third view seems to be the position of Jayanta Bhatta. He maintains that *Tarka* serves to produce a strong presumption in support of the probandum. The implication of this strong presumption weakens the possibility of the opposite alternative which is criticised by Srivallabha in the *Nyāyalīlavatī* .⁵

Śrīvallabha further maintains that *Tarka* cannot be looked upon as the necessary function of inference. Inference is an instrument of knowledge beyond doubt. An instrument is taken to be one which exercises an operation. Operation again is one, the presence of which is necessary for the production of the effect for which the instrument is to be resorted to. This implies that an instrument cannot operate its service if it is destitute of exercise of the same function. Inference, as an instrument, is nothing but the probans found in the minor term understood as necessarily related to the

probandum. And this understanding is operated by the instrument of inference. Therefore, obviously, it would be wrong to suppose *Tarka* as an operation of inference. Even if the knowledge of the conclusion i.e. understanding of the necessary relation of the probans with the probandum and of the subsistence of the same probans in the subject is there, it can not be produced by *Tarka* in the absence of such an understanding. So, *Tarka* has no bearing upon the function of an instrument of inference. This applies *mutatis mutandis* to the other instruments of knowledge.⁶

This criticism again goes against Vācaspati Miśra and Udayana who are of the opinion that *Tarka* has got an efficiency to act as a cognitive instrument.

Reasoning as conceived by the ancient *Nyāya* thinkers can be brought under two categories. One is *Viśayapariśodhaka* and the other is *Vyāpatigrāhaka*. The first one removes an obstacle to the clear understanding of the subject matter and the second one is conducive to the knowledge of the universal concomitance between the probans and the probandum.⁷

The first one sponsored by Vācaspati Miśra accompanied by his followers is vehemently criticised and thereby rejected by Śrīvallabha. He only admits the second one.

Vācaspati Miśra with his followers thinks that sometimes the instrument of knowledge cannot operate its proper function due to the

having an obstacle namely, doubt .As a result knowledge is not taken place . The first type of *Tarka* just mentioned is called for. This *Tarka* serves either in eliminating the doubt or in removing the desire for the knowledge of the opposite and thereby paves the way of the instrument of knowledge . Ultimately knowledge is taken place . So, this *Tarka* plays an important role according to them and that is why, this *Viṣayapariśodhaka Tarka* has been admitted by them . But Śrīvallabha thinks that in fact such doubt does not and can not stand against the operation of any instrument of knowledge as an impediment . So, the very question of admitting the first type of *Tarka* does not arise at all through which the doubt in question is said to be removed . He holds that if all conditions for the operation of any particular instrument are fulfilled then doubt can not stand against the materialisation of the operation of the instrument . So, to admit this first type of *Tarka* is not only useless but also superfluous.

This idea will be clear if an example is considered. Let us imagine that an individual has a doubt about whether "Mr. X is mortal or not. The individual in question knows very well that all men are mortal and recognises Mr. X to be a man . Now it is very evident that the doubt under consideration can not prevent him from deducing the conclusion, " Mr. X is mortal". The doubt is resolved by the result of inference, and though unresolved before, it could not frustrate the operation of inference . So, we need not admit any *Tarka* of first type.⁸

Apparantly we may tend to think that Śrīvallabha is successful in negating the position of the older *Naiyāyikas* as long as he

maintains that *Viṣayapariśodhaka Tarka* is useless and superfluous. But our careful and critical reflection will clearly show that Śrīvālabha's argument is not as sound as they appear to be. Śrīvālabha holds that if all other conditions of knowledge are fulfilled then doubt can not stand as an impediment on the way of the materialisation of knowledge . But here he commits a blunder in not counting the removal of doubt as one of the necessary conditions of knowledge . One cannot properly claim to know any thing unless and until one can be sure and certain about the thing . But as long as doubt persists how can one be sure and certain about the thing he goes to know ?

Śrīvālabha cites an example of inference in support of his own view . But in fact that instance has nothing to do with substantiating his own position . He observes that if an individual has doubt about whether Mr. x is mortal or not and if he knows that all men are mortal and Mr. x is a man, then he obviously concludes that Mr. x is mortal in spite of that doubt . So, here doubt can not act as an impediment to the operation of the instrument of knowledge.

But to maintain what Śrīvālabha observes is to maintain that one has knowledge of both the major and minor premises but yet he has doubt about the conclusion . But the case cannot be so . If one is sure of both the major and minor premises one cannot be in doubt about the conclusion, and again if one is in doubt about the conclusion one cannot be sure of both the major and minor premises . Doubt of the conclusion follows from the doubt of the major premise. If an individual is sure that all men are mortal then he cannot have doubt

that Mr. x is mortal ,and again if he has doubt about the fact that Mr.x is mortal then he cannot be sure that all men are mortal. The same thing can truly be said about the case of smoke and fire cited earlier. One has doubt about the existence of fire in the hill in spite of seeing the existence of smoke in it because has has doubt about the major premise - "Where there is smoke there is fire." As long as doubt in the major premise persists doubt in the conclusion,i.e.the existence of fire in the hill will continue to exist. In other words the doubt in the conclusion i.e. existence of fire in the hill necessarily presupposes the doubt in the major premise – "Where there is smoke there is fire." Similarly, the doubt in the conclusion – ' Mr. x is mortal' necessarily implies the pre-existence of doubt in the major premise – 'All men are mortal'. Consequently, inference is not taken place.

On the basis of the foregoing discussion it is clear that doubt acts as an impediment due to which the instrument of knowledge cannot operate its proper function. And this doubt, Mishra with his followers maintains, is eliminated through the application of *Viṣayapariśodhaka Tarka*. So, the importance and necessity of this *Tarka* can be denied in no way. *Viṣayapariśodhaka Tarka* is as important and needful as *Vyāptigrāhaka Tarka* is.

A strong objection has been raised by Bhagiratha Thākkura, the subcommentator of the *Nyāyalīlāvati* against the view of Śrīvallabha that *Viṣayapariśodhaka Tarka* is useless as the doubt about the subject matter which is claimed to be eliminated by it does not and cannot be an obstacle to the deduction of the conclusion if all other

conditions of inference are fulfilled. In the first step Bhagiratha elucidates the position of Srivallabha and in the next step he beautifully shows that the necessity of *Viṣayapariśodhaka Tarka* cannot be denied. This *Tarka*, he observes, is of service even in inference by eliminating enquiry about the opposite possibility as held by Udayana. The aforesaid view of Śrīvallabha cannot be accepted to be true as it contradicts to our common experience that the expected cognition does not take place if a disturbing agent crops up, in spite of the fulfilment of all other conditions. He makes this idea more clear by citing *Naiyāyikas* favourite example of a disturbing agent i.e. thought of a women. The thought of a women relates to an object, which is opposed to that of the expected knowledge and thereby stands as an obstacle on the way of the actualisation of the expected knowledge. From this example it is very clear that, no doubt, thought of a contrary object is a disturbing condition, as it frustrates the actualisation of the expected result. So, keeping this in view it can quite justifiably be maintained that the thought of the opposite of the probandum would work as a genuine obstacle to the operation of inference even after the combined knowledge of the premises.

Now, Bhagiratha Thākkura thinks that here the view of Śrīvallabha can be substantiated in the following way :- If one has the knowledge of the existence of the probans in the subject known to be necessarily concomitant with the probandum then the very question of his thinking of the opposite of the probandum does not arise at all. Say for instance if a man perceives smoke arising from hill and remembers that smoke is necessarily concomitant with fire,

then is it possible for him to have doubt regarding the possibility of absence of fire ? Certainly not for such doubt can be resolved only by the knowledge of the necessary relation of the probans and the probandum which is *exhypothesi* present at the time. The absence of doubt, which is the cause of the diversion of enquiry about the opposite possibility, clearly implies the absence of that diversion of enquiry which is the effect of it. So, *Viṣayapariśodhaka Tarka* is useless to admit for there is neither doubt nor even diversion of enquiry about the opposite possibility produced by doubt, which is claimed to be eliminated by it.

But Bhagiratha observes that though what Śrīvallabha maintains apparantly seems to be well grounded, actually this is no so. The view of Śrīvallabha cannot universally be maintained. That is to say, knowledge of the combined premises, does not always necessarily result in the knowledge of the conclusion. Were it so, contradicted probans (*bādha*) or countermanded probans (*satpratipakṣa*) could not be included in the list of fallacies. They are fallacies for they thwart the realisation of inference. Now let us explain the case with the help of the fallacies. Let us suppose a person on the basis of knowledge of the combined premises " All substances are cold " and " fire is a substance " goes to conclude that " fire is cold ". Let us suppose again, that subsequently he touches the fire and feels it to be hot. This subsequent perception of hot fire directly counters the inference of coldness in fire without anoling the major or the minor premise. The same can truly be said about countermanded reason which is known imediately after the combined

knowledge of premises. Let us suppose a man goes to infer that word is imperishable as he know that all impalpable things are imperishable and word is impalpable. Let us suppose, again, immediately after he realises that all products are perishable and word is a product. This cognition directly prevents the man from deducing the conclusion that word is imperishable without falsifying the major and the minor premises. It is worthy to note that though as a matter of fact the major premise comes to be known as false, this knowledge is rather the result not the condition of the knowledge of the contradiction.

So far as our foregoing discussion is concerned, it is clearly evident that the knowledge of the opposite truth acts as a genuine abstacle to the operation of inference. For it is seen that the combined knowledge of the premises cannot result in the knowledge of the conclusion, as long as it is frustrated by the knowledge of the opposite truth. So, unless and untill the diversion of the knowledge of the opposite truth is eliminated deduction of the conclusion from the premises cannot be taken place. And that diversion can be eliminated only through *Viṣayapariśodhaka Tarka* . So, the necessity of this *Tarka* cannot be denied. Bhagīratha observes that *Tarka* thus serves as an auxiliary to the condition of inference after words inference set to work. That is why, it should be regarded as a subsequent suborgan (*Uttarāṅga*) of the instrument of inference. But it should be noted that the application of the first type of reasoning as maintained by Bhagīratha, is limited only to cases where an opposite mode of knowledge creates doubt about the object of inference and

subsequently produces a diversion. Bhagiratha holds that what is true about the knowledge of the opposite is also true about doubt of the opposite with the only difference that, while the former permanently precludes the knowledge of the conclusion, the latter operates as a temporary setback. This interpretation seems to be the most faithful and loyal exposition of Udayana's position.

To reject the view of Śrīvallabha and substantiate the view of Udayana regarding the necessity of *Viśayapariśodhaka* Tarka the account given by Rucidatta, a distinguished logician of Mithilā is very worthy to note here. His position on the necessity and function of reasoning in his work *Makaranda*, a gloss on Vardhamāna's commentary on the *Nyāyakusumāñjali* demands for his originality of views and critical insight. Like Bhagiratha Thākkura, Rucidatta too first deals with the possible objection that may be raised against the view of Udayana and then he replies to that objection and thereby substantiates Udayana's position.

Udayana holds that doubt about the contrary of probandum is the cause of enquiry about the contrary of probandum. Let us suppose a man in going on to infer fire in hill gets doubt whether the hill is actually possessed of fire not. There are two alternatives side by side. One is positive i.e. presence of fire and another is negative i.e. absence of fire. Doubt about the negative alternative induces an enquiry for the absence of fire. But enquiry amounts to a desire for knowledge. So, it can be said that doubt about the absence of fire gives birth to a desire for the absence of fire. But it seems to be

absurd, as when a man goes to infer the presence of fire it is natural for him to entertain a desire for the knowledge of fire and not of the opposite. Doubt too cannot be considered as the cause of desire of desire for knowledge. For the object of desire is a means to the realisation of a desired end. An individual having an interest in the discovery of fire cannot properly take the absence of fire to be a means to the satisfaction of his desired end. Instead, he should entertain a desire for the ascertainment of fire for the satisfaction of his interest. Hence, as far as our discussion is concerned, Udayana's contention that doubt induces an enquiry for the opposite alternative and *Tarka* is to eliminate such desire which precludes the case of the elimination of doubt. But Udayana considers it to be the case of the result of enquiry about the opposite. But both of these views may be taken to be illogical as reasoning is opposed neither to doubt nor to enquiry in the subject matter as already shown in our exposition of the position of Udayana. But in response to this charge Rucidatta says that holding a causal relation between two phenomena does not necessarily presuppose that the phenomena must be opposed to each other in their subject matter. In other words, logical opposition between two phenomena is not a necessary precondition for holding a causal relation between them. The precondition may be factual also. And it is the latter but not the former condition which is not in the case concerned. The truth of both of the contentions of Vācaspaeti Miśra and Udayana is established in terms of the experience of our day to day life. Through our day to day experience it is seen that application of *Tarka* results in the elimination of doubt, which is the position of Mishra and in the elimination of opposite enquiry which is

the position of Udayana. So, the causal relation between the application of *Tarka* and the elimination either of doubt or of opposite enquiry cannot be called into question. One point is very important to note here. Though the opposition between *Tarka* and doubt as maintained by Misra and the opposition between *Tarka* and opposite enquiry as observed by Udayana are of factual yet they do not belong to one and the same level which has already been shown earlier. The latter one is an instance of a universal law but the former one is not. It can be explained on the postulation of specific causal relation determined by specific observation of concomitance in agreement and deference.

From the above discussion so far, it is clearly evident that both Rucidatta and Bhagiratha negate the view of Śrīvallabha and substantiate the position of Udayana. But though they do not differ in their aim, they differ in their *modus operandi* of reasoning. The procedure explained by Rucidatta is as follows :-

The whole procedure consists of some steps. First, an individual observes smoke arising from a hill and then he falls in doubt whether the hill is possessed of fire or not. This doubt, in its turn, induces an enquiry about it. So, here a diversion of enquiry is taken place. As long as this diversion endures, the knowledge of the relation of *vyāpti* between fire and smoke already ascertained in the kitchen does not occur and sub-sequently the synthetic judgement, which could be produced by the knowledge of the two premises does not materialise and conclusion is not taken place. Here the only

obstacle, which thowarts the whole inferential procedure is the diversion of enquiry for the opposite possibility. So, now *Tarka* is implored to eliminate that obstacle subsequently, the knowledge of *vyāpti* is the knowledge of the universal concomitance of smoke with fire and of the accurance of smoke in the hill, produces the synthetic judgement (*parāmarśa*) which immediately eliminates the knowledge of the conclusion .

Now if the steps of the above mentioned *modus operandi* as observed by Rucidatta are analysed very carefully then it easily be understood that the necessity of *Viṣayapariśódhaka Tarka* cannot be denied. Here in the case concerned, the conclusion is not taken place because of the doubt about the subject matter of the synthetic judgement i.e. probans as existent in the subject but not because of the doubt about the universal concomitance , for the individual concerned is quite sure and certain about his knowledge of the universal concomitance. So, obviously, here *Tarka* becomes instrumental to elimenate the doubt about the subject matter. And this *Tarka* is nothing but *Viṣayapariśódhaka* one as alrady stated. That is why the necessity of this *Tarka* cannot be denied. So, as long as our description is concerned, we can see that Srīvallabha maintains, that *Vaṣayapariśódhaka Tarka* is useless for the doubt about subject matter which is claimed to be climinated by it cannot be a genuine obstacle, and hence cannot be accepted to be true. No doubt the doubt about subject matter, i.e. the doubt or enquiry about the opposite possibility which is different from the doubt about the universal concomitance does serve as a genuine obstacle. Though

the person concerned is quite sure and certain about his knowledge of the universal concomitance he, cannot draw the conclusion. For his certitude was rendered ineffectual by the diversion of enquiry and so the synthetic judgement, the immediate antecedent of inference as held by the Naiyāyikas could not take place. As soon as this obstacle i.e. the diversion of enquiry is eliminated through the application of *Tarka*, conclusion is taken place. So, *Viśayapariśódhaka Tarka* is as useful and necessary as *Vyāpatigrāhaka* one .

From the aforesaid discussion it is seen that both Rucidatta and Bhagiratha substantiates the position of Udayana by criticising what Śrīvallabha maintains. But yet some important differences are noticed between them. Bhagiratha observes the diversion of enquiry is a subsequent event to the synthetic judgement produced by the knowledge of the premises whereas Rucidatta holds it to be an antecedent event to the same. Secondly, according to Bhagiratha, the elimination of the obstacle is related to the knowledge of the probandum but Rucidatta makes it centre round the probans as the subject matter of synthetic judgement. Thirdly, *Tarka* is held by Rucidatta as an antecedent suborgan of the instrument of inference, whereas, *Tarka* is taken by Bhagiratha as the subsequent suborgan of the same. Rucidatta also maintains that the function of *Tarka* is of two folds, conducive to the knowledge of the universal concomitance , and conducive to the realisation of synthetic judgement .

Here I agree with both Bhagiratha and Rucidatta as long as they are holding that doubt or diversion of enquiry of the opposite alternative serves as a genuine obstacle to the clear understanding of the subject matter and that is why *Viṣayapariśodhaka Tarka* has to be admitted through which the obstacle in question is claimed to be eliminated. But I cannot agree with them so far as they are substantiating the position of Udayana and rejecting that of Vātsāyana by maintaining that it is not the doubt but the diversion of enquiry of the opposite alternative which is eliminated through the *Viṣayapariśodhaka Tarka*. According to my observation, it is the doubt but not the diversion of enquiry of the opposite alternative which is actually eliminated in terms of the *Tarka* under discussion. So, I like to negate the position of Udayana and substantiate the view of Vātsāyana in this regard. So far as the aforesaid discussion of Bhagiratha and Rucidatta are concerned it is clearly evident that doubt about the opposite alternative is the cause of the diversion of enquiry about it. It would be absurd to maintain the elimination of an effect without maintaining the elimination of its corresponding cause. As doubt is the cause and the diversion of enquiry is the effect, the latter one can be eliminated only through the elimination of the former one which is the view of Vātsāyana. To maintain the position of Udayana is to maintain that an effect can be eliminated without eliminating its correspondent cause which is no doubt is an absurd position. Therefore, it is not the view of Udayana but the view of Vātsāyana which can be accepted to be true.

But though Śrīvallabha rejects the first type of *Tarka*, he admits the second one i.e. *Vyāpatigrāhaka Tarka*. According to him, *Tarka* is of service in the elimination of doubt about the infallibility of the relation between two terms. Say, for example, of the relation of smoke and fire. The necessity of the observed association of smoke with fire may be called in question by any person. Here this doubt may be eliminated in the following way by resorting to *Tarka*. We know that smoke is an effect. And it is admitted by all that an effect must have a cause as its antecedent. So, what then is the cause of smoke? The application of the joint method shows that fire is the cause of smoke. And as it is a causal relation, it can never be accidental other than necessary. Reasoning is of a hypothetical form 'if smoke were not necessarily concomitant with fire, it could not be its effect.' If it were not the effect of fire, as it is known not to be the effect of anything other than fire, it would be an uncaused event which amounts to an absurdity. Thus *Tarka* by demonstrating the absurdity of the opposite possibility helps to determine the observed relation between the probans and the probandum to be an invariable and essential case of ontological necessity.⁹

But here an objection may be raised against Śrīvallabha. The relation of concomitance known as *vyāpti* is a necessary relation and therefore it is not contingent. Śrīvallabha holds that the second type of *Tarka* is necessary because this is called for when doubt arises about the necessity of the relation under consideration. But in fact to doubt about the necessity of the relation between the probans and the probandum amounts to doubt the absence of the fallibility and

the contingency of that relation which is the desired object of knowledge . So, doubt about this absence of contingency is on a par with the doubt about the objective of knowledge . And the doubt about the objective of knowledge which is called in Nyāya – terminology *grāhyasamsaya*, Śrīvallabha opines, has nothing to do with preventing the materialisation of the resultant knowledge sought to be achieved . So, the very question of eliminating this doubt also does not arise at all and therefore the second type of *Tarka* is also unnecessary which is resorted to in order to remove the doubt in question . So, the ground due to which Śrīvallabha rejects the first type of *Tarka* is the ground because of which he has to reject the second one also , for the status of both of the arguments is one and the same.¹⁰

But Śrīvallabha beautifully meets this objection by saying that though apparently the doubt about the necessity of the relation called *vyāpti* seems to be similar to the doubt referred to by the ancient Nyāya thinkers but in fact this is not the case . Actually these two doubts are different from one another in their status . The second one is an initial doubt about a truth which has not yet been proved . And an initial doubt does not and cannot prevent the realisation of the truth . But the first one mentioned above is not an initial doubt like the second one . It is a doubt about an accepted belief , on the basis of which conclusion may be deduced ; which is certainly an obstacle to the realisation of any truth . So, to eliminate this doubt about the accepted belief the second type of *Tarka* is resorted to and therefore, the admission of this *Tarka* is quite justified .

Now let us turn to Gaṅgeśa Upādhyaya , the writer of *Nyāyatattvacintāmani* , who is an epoch – maker Navya Nyāya thinker . Gaṅgeśa agrees with Śrīvallabha on the point that the classification of *Tarka* as suggested by the ancient Nyāya thinkers is not tenable . He maintains that *Tarka* is important in ascertaining *vyāpti* which is the nerve centre for the possibility of inference . Inference is quite impossible unless and until *vyāpti* is established . That is to say , *vyāpti* is the necessary precondition of inference , for the possibility of inference necessarily presupposes the possibility of *vyāpti* or universal concomitance between the probans and the probandum . But how that *vyāpti* can be ascertained ? As to the answer to this question a diversity of opinion as well as a burning controversy is found among the philosophers .

Some scholars are of the opinion that *vyāpti* can be ascertained through the repeated observation of the co-existence of *hetu* (probans) and *sādhya* (probandum) . But this view is not accepted to be true by the Navya Nyāya thinkers . According to them, the observation in question is one of the conditions but not the only condition for attaining *vyāpti* . It is one of the promoters in ascertaining it .¹¹ They hold that the knowledge of co-existence between *hetu* and *sādhya* accompanied by the knowledge of the absence of deviation of the same is the cause of ascertaining *vyāpti* .¹² Gaṅgeśa observes that there can be no conviction of the necessity as well as universality of the co-association between *hetu* and *sādhya* if there be doubt of the said association . So, the doubt

in question is to be ruled out . For unless and until this doubt is eliminated , *vyāpti* cannot be established . But how that doubt can be removed ? In reply to this question Gaṅgeśa with other *Navya Nyāya* thinkers say that it is *Tarka* through which the said doubt can be eliminated . So, *Tarka* along with the observation of the co-association of *hetu* and *sādhya* and non-observation of the deviation (*vyābhicāra*) of the same is considered to be the cause of ascertaining *vyāpti* .

Now let us consider that how *Tarka* as suggested by *Navya – Nyāya* thinkers , helps in eliminating the doubt about the necessity and universality of the concomitance found between the *hetu* and the *sādhya* . But to do so, first of all we have to find out how and why the doubt under consideration is taken place . That doubt comes into being for either of the two attributes coupled with the lack of the knowledge of the specific attributes of the enquired object. And secondly, it is because of the doubt about the presence of condition (*Upādhi*) . This condition is one , which has by its nature necessary concomitance with the *sādhya* , but not with the *hetu*. So, the concomitance of the *hetu* with the *sādhya* is really due to the presence of a condition with which the *hetu* may be accidentally associated. So, for instance, the concomitance of fire with smoke cannot be considered to be a necessarily universal though that concomitance is found in a large number of cases. The said concomitance is not regarded as necessarily universal for fire is associated with smoke only when the former is in contact with carbohydrate. Thus the concomitance concerned is subject to the

condition mentioned and therefore accidental. But the concomitance, which is taken to be the condition of inference, necessarily be unconditional . More clearly to say this concomitance must be due to the intrinsic character of the *hetu* and the *sādhyā* but not due to anything extraneous.¹³

The doubt owing to the first cause already mentioned can be eliminated by the definite knowledge of the specific characters of one of the terms. For the sake of better understanding an instance may be cited . The characteristics of invisibility is found to be shared by both sound and space . Eternity is known to be another characteristic feature of space . Suppose a doubt arises here whether this eternity is also shared by sound in common with space . Now this doubt about the concomitance of sound with eternity can be ruled out by the definite knowledge of the specific characteristics of sound that sound as a product cannot be eternal and vice-versa. So, as the sound is produced, it can never be eternal .

The doubt which is due to the second cause pointed out can be removed only by the demonstration of impossibility of an extraneous condition . But how it can be confirmed that the concomitance in question is whether due to any extraneous condition or is necessary and integral to the essential nature of the terms ? It is *Tarka* in terms of which it can be confirmed by eliminating the doubt , which operates as a *reductio-ad absurdum* of the opposite possibility .¹⁴

But here an objection has been raised against the *Navya – Nyāya* thinkers. The opponents maintain that *Tarka* cannot serve to eliminate the doubt in question due to a fallacy called *infinite regress*, as *Tarka* itself presupposes the knowledge of the necessary and universal concomitance; namely, *vyāpti*. The opponents view can be understood through the consideration of the following explanation.

Nīlakānṭhī commentry of *Dīpikā* of *Tarkasamgraha* defines *Tarka* in the following way: “*Āhāryavyāpavayattā bhramajanyah āhāryavyāpakavattā-bhramastarkah*.”¹⁵ That is *Tarka* is an imposed (*āhārya*) invalid knowledge of the existence of the pervader (*vyāpaka*) which is produced by another imposed invalid knowledge of the existence of the pervaded (*vyāpya*). But what do we mean by ‘imposed knowledge’ (*Āhāryajñāna*)? In reply it is said that the knowledge which is produced, out of one’s desire at the time when there is the existence of the contrary knowledge is known as imposed knowledge (*Virodhijñānakalīnecchāprayajyajñānatvam āhāryajñānatvam*). For example, if the knowledge in the form ‘There is fire in the lake’ (*hrado_vahnimān*) is produced out of one’s desire at the time when there is contrary knowledge in the form ‘There is the absence of fire in the lake’ (*hrada_vahnyabhāvavān*) it is called an imposed knowledge (*āhāryajñāna*).

Tarka, as defined by the *Navya-Nyāya* thinkers, consists of two parts. The first part is called *āpādaka* or ground and the second part is called *āpādya* or consequence. And as *Tarka* is a hypothetical

argument its consequence i.e. *apadya* is necessarily deduced from its ground i.e. *āpādaka*. This clearly implies that a universal and necessary concomitance is there in between *āpādaka* and *āpādya*. So, *Tarka* itself is based upon the universal and necessary concomitance known as *vyāpti*. Let us clear our idea by citing an example. In the case of smoke and fire, the form of *Tarka* can be expressed as – “ If smoke be deviated from fire, it would not be caused by fire” . (*Dhūmo yādi vahnivyābhicārī syāt tarhi vahnijanyo na syāt*). The first part of it i.e. the absence of smoke from fire is called *āpādaka* and the second part i.e. the denial of being a product of fire is known as *āpādya*. And as the second part of it i.e. *āpādya* (the denial of being a product of fire) is necessarily seemed to follow from its first part i.e. *āpādaka* (the absence of smoke from fire) an invariable concomitance called *vyāpti* is to be admitted to be present between them. The form of the *vyāpti* is : where there is deviation of fire, there is negation of being a product of fire (*Yatra Yatra Vahnivyābhicāritvam Tatra Tatra Vahnijanyatvabhāvah*) .¹⁶

As long as our discussion is concerned, it is obvious that *Tarka* is based upon *vyāpti* as well. Now this *vyāpti*, on which *Tarka* is founded, being itself a case of universal and necessary concomitance, is exactly on the same footing with the other case of *vyāpti*. And therefore, the *vyāpti* existing then in *Tarka* is open to doubt like the *vyāpti* remaining in inference. So, our question is : How this doubt of *vyāpti* of *Tarka* which is of the form “ Whether *āpādaka* is pervaded by *āpādya* “ can be eliminated ? In reply it can

be said that to remove the said doubt another *Tarka* is to be adopted . And in this second *Tarka* again there is another *vyāpti* which also the subject to doubt like the former one . So how that doubt of the *vyāpti* of the second *Tarka* can be ruled out ? In reply, it can again be said that for that purpose another *Tarka* is to be resorted to . Consequently the fallacy called *infinite regress* comes into being .

But Udayana observes that the objection mentioned above is not sound at all and therefore it can not be accepted . He says that *Tarka* is applied to remove doubt as long as there is no contradiction in respect of one's own practical activity . As soon as the contradiction in respect of one's own practical activity arises the doubt in question is ruled out by that contradiction itself . That is why; the application of *Tarka* becomes useless and unnecessary . An individual is found to seek for food, whenever he is hungry . A person again is seen to look for fire whenever he is in the need of smoke . The individual goes to seek for food because he knows very well through his previous experience that his hunger be satisfied by taking food . Similarly, the person seeks for fire whenever he is in the need of smoke for he does know that smoke is produced from fire . And why such a man who certainly knows that smoke is the product of fire can apply the *Tarka* as " If smoke be deviated from fire, it cannot be produced by fire " . In this circumstances , the doubt whether smoke exists in a place without fire, be contradicted with the practical activity the person concerned and ultimately that doubt will be eliminated through that contradiction itself. So, the very question of

applying another *Tarka* and thereby that of the fallacy called *infinite regress* does not arise at all.¹⁷

But the above mentioned view of Udayana under the charge of Śrīharsa. Śrīharsa maintains that the doubt under consideration cannot be eliminated through the contradiction, for contradiction itself here is necessarily connected with doubt. So, where there is contradiction, there is doubt also side by side. But the question is – why does Śrīharsa maintain that contradiction itself is necessarily connected with doubt? In reply, Śrīharsa says that contradiction must be in between two terms. Here the contradiction is seen to take place in between the doubt on the one hand and the practical activity on the other. So, to admit the contradiction and to deny any one of the terms at the same time is quite impossible. So Udayana cannot justifiably maintain the presence of contradiction and the absence of doubt. This is the ground because of which Śrīharsa is of the opinion that contradiction is necessarily connected with doubt. And as contradiction is necessarily connected, it has nothing to do with removing doubt. Therefore, the charge of the said fallacy of *infinite regress* cannot be over come by showing the contradiction between doubt and practical activity.¹⁸

But Gaṅgeśa Upādyaḃya “beautifully meets the charge of Śrīharsa raised against Udayana. Gaṅgeśa says that Śrīharsa fails to understand the actual sense of the term “contradiction” as used by Udayana. The sense of the contradiction as used by Udayana is different from the sense of the contradiction as understood by

Śriharsa . The contradiction understood by Śriharsa necessarily presupposes the two terms, doubt and practical activity . But the contradiction used by Udayana necessarily presupposes only one term . i.e. practical activity . Here the other term.i.e. doubt does not and cannot come into being for doubt and practical activity cannot be co-existent . Where there is doubt , there is no practical activity and the vice-versa . In other words, the presence of doubt implies the absence of practical activity and presence of practical activity implies the absence of doubt . From the discussion so far, it is clear that the two terms, doubt and practical activity between which the contradiction is supposed to be held by Śriharsa cannot be coexistent . Therefore, the objection of Śriharsa that where there is contradiction there is doubt, cannot be accepted . Here the contradiction is the contradiction of practical activity only . If one becomes the subject of doubt as whether smoke is the product of fire, he cannot look for fire to get smoke . So, the contradiction of one's own practical activity implies the absence of doubt.

Udayana observes that if an individual entertains the doubt as to whether smoke can exist in a place without fire, he cannot seek for fire to get smoke without any hesitation . So, one's unhasitatingly looking for fire clearly implies that the individual concerned does not entertain the doubt in question . Here the doubt cannot take its birth either because of the lack of some necessary condition for the origination of doubt or because of any other opposite issue . And as the doubt does not and cannot come into being the charge of Śriharsa does not hold good at all . Gaṅgeśa further maintains that

even if it is taken for granted that Udayana holds the contradiction as understood and explained by Śridharsa as the remover of doubt yet Śriharsa's aforesaid objection cannot stand . Gaṅgeśa says that the contradiction in question eliminates doubt in the same way in which a particular perception does " The charge raised by Śriharsa against the contradiction used by Udayana can also truly be applied in the case of a particular perception. Suppose, in the case of an object standing at some distance doubt arises in the form – whether it is a man or a poll . Let us suppose again, after a while through a particular perception the doubt is dispelled and I become sure that the object is a poll so, a contradiction is there between doubt on the one hand and certainty on the other . Now if what Śriharsa says is true then contradiction and doubt should co-exist . And consequently, doubt cannot be eliminated . But our day to day experience clearly shows that the fact is otherwise . Therefore, Śriharsa's objection is baseless and unjustified.

Now Gaṅgeśa explains his own view to show that the fallacy of infinite regress does not arise at all in the case of the application of *Tarka* . It is worthy to note that the argument of Gaṅgeśa bears similarity with that of Udayana to a great extent . But Gaṅgeśa observes that the objection mentioned above is not sound at all and therefore unacceptable . According to him, the doubt of deviation does not arise at all in *vyāpti* of *Tarka* , as it would involve contradiction . So, the very question of applying another *Tarka* does not arise at all . Gaṅgeśa's view can be explained in the following way. Smoke and fire are known to be concomitant . But this

concomitance may be called into question by any individual . Now this doubt can be eliminated through *Tarka* in the following way . As smoke is produced in a certain time, it is a product. So like all other products smoke also must have a cause of its own . Now smoke necessarily be a product either of fire or of not –fire, it cannot be otherwise . That is to say, it cannot be said that smoke is a product but it is considered to be the effect neither of fire nor of not fire .

If smoke be not the product of either fire or not fire , it cannot be regarded as a product at all . But smoke, having a definite time of occurrence cannot but be a product . The doubt about its being a product or not is thus precluded by contradiction of an undeniable truth.²⁰

Our day to day experience shows that smoke is an effect of fire and not of not –fire. So the relation between smoke and fire is a causal relation. So where there will be smoke there necessarily will be fire. Therefore, one cannot have a doubt about the existence of fire in a place where he sees smoke.

The same objection has been beautifully answered by Gangesa with the other *Navya – Naiyāyikas* by showing a good argument . They observe that *Tarka* cannot be brought under the charge of the fallacy of *infinite regress* for it would involve contradiction in respect of one's own practical activity. One can doubt so long as there does not arise any contradiction in respect of one's own practical activity. One is not allowed to bear any doubt about *vyāpti* between smoke

and fire, as he seeks fire in his day to day life to get smoke without any hesitation. If he has a slightest doubt regarding the *vyāpti* in question, then he would not seek fire for having smoke. If there is any doubt it will contradict his own activity. So, one's own activities indicate the absence of doubt in them. Moreover, if one goes on doubting without stopping his doubting would be the subject of doubt. So each and every case is not subject of doubt. So doubting is not an endless process.²¹

They also maintain that the application of *Tarka* is also not an *infinite process*. It has also a limit. *Tarka* is applied not in all the cases of inference. The very purpose of the employment of *Tarka* is to eliminate doubt. So, it is applied only in those inferences the *vyāpti* of which are the subject of doubt. But there are some cases of inference whose *vyāpti* is absolutely free from doubt. So, the very question of using *Tarka* in those inferences does not arise at all. Say for example, the baby is found to move on to suck mother's breast without turning to other objects. The reason behind this inclination of a new born baby is the knowledge of its conduciveness to the desired object. The reason behind its absence of inclination to other objects is the knowledge of their conduciveness in gaining objects that not desired. But how does a baby come to know of the conduciveness to the desired object? As the baby has got no scope for experiencing conduciveness to the desired object in this life, it is assumed that in the previous birth he had acquired the knowledge of *vyāpti* in the form: "Where there is the means for the maintenance of my life, there is the means attaining my desired object." (*Yatra*

Yatra majjivanarakṣopāyatvaṁ_tatra tatra madīṣṭasādhanatvam) .
 The impression of the knowledge of *vyāpti* gathered in the previous birth remains in the soul of new-born baby. After the awakeing of the impression, *samskara*, the baby attains the knowledge of *vyapti* which gives rise to the inference .²² In this inference there is no scope for applying *Tarka* , since he bears no doubt the efficacy of sucking mother's breast and so, there would not arise the fallacy called *infinite regress (Anāvasthā)* .

Here as long as my observation is concerned I partially agree and partially disagree with both of Śrīharsa and Gaṅgeśa . I agree with Śrīharsa as far as he maintains that contradiction is necessarily held between two terms . But I can not agree with Gaṅgeśa as long as he observes that the contradiction as used by Udayana is held in one term only i.e. practical activity . Again I agree with Gaṅgeśa as long as he holds that practical activity and doubt cannot co-exist , and therefore , Udayana is quite successful in maintaining the absence of doubt in terms of the presence of practical activity. And I disagree with Śrīharsa who opines that practical activity and doubt co-exist and therefore the former cannot be eliminated by the latter as Udayana maintains.

Following Śrīharsa I myself also like to maintain that contradiction must be held between two terms . It cannot be of one term only. It always be between some things but never be of something. Let us suppose that two persons A and B have a discussion on a certain topic in a room. Let us suppose again that

another person C enters into the room and hears B to say " It is contradictory ". Now if B intends to interfere the discussion then the intelligible question asked by C to B is –contradiction between what ? But not contradiction of what ? The second question also may become intelligible if some addition is made to it saying – contradiction of what with what ? But to ask this question amounts to ask the former one . The two questions do not differ in their sense . In both of the questions two terms have been admitted between which contradiction is supposed to be held . So it is quite clear that Śriharsa justifiably observes that contradiction is necessarily held between two terms.

But Śriharsa unlike Gaṅgeśa and Udayana wrongly maintains that practical activity and doubt between which contradiction is supposed to be held can be co-existent . Actually the terms between which contradiction is held must be opposite to each other in their character. And the two terms having opposite character cannot co-exist . Say for examples light and darkness are two things having opposite character and so they cannot co-exist. If there is light in a certain place at a certain time then there cannot be darkness in that place at that time and vice versa . The something can truly be said about doubt and practical activity . One may oppose the above view by pointing out that doubt and practical activity are not opposite in the sense in which light and darkness are. So, what is true in the case of light and darkness cannot be true in the case of doubt and practical activity. But here this misconception takes its birth from the very misunderstanding of the proper sense of the terms ' practical activity '.

. Here practical activity stands for certainty . One seeks for fire unhasitatingly to get smoke because he is dead sure and certain of it . Here practical activity results in certainty and thereby the former amounts to latter . And no one questions the fact that doubt and certainty are opposite to each other in their character in the same sense in which light and darkness are. If this is the case then it can properly be maintained that what is true in the case of light and darkness should be equally true in the case of doubt and certainty and again the same can justifiably be held in the case of doubt and practical activity as practical activity stands for certainty. So, as long as our discussion is concerned it is very clear that doubt and practical activity cannot co-exist. The presence of one confirms the absence of another . Therefore Gṅgeśa and Udayana rightly observes that doubt is eliminated through practical activity for the presence of the latter implies the absence of the former.

CHAPTER - IV

THE CONCEPTION OF TARKA IN SOME OTHER SCHOOLS:

In the preceding chapters we have dealt with *Tarka* after *Nyāya* School. Now let us turn our attention to *Tarka* as discussed and conceived by other Indian Schools as well.

THE CONCEPT OF TARKA IN JAINA SCHOOL:

The Jainas observe reasoning as the organ of cognition of universal and necessary concomitance between two terms .¹

The discussion of *Tarka* as conceived by the *Jainas* presupposes the discussion of the *Jaina* concept of knowledge and its classification . The *Jainas* maintain that knowledge is of two kinds immediate (*aparokṣa*) and mediate (*parokṣa*). The former one is further divided into *Avadhī* , *Manahparyāya* , and *Kevala* , and the latter one into *Mati* , and *Śrūta* .

Avadhī is clairvoyance which functions within a particular area and upto a particular time. It cannot go beyond spatio – temporal limits. *Manahparyāya* is a kind of telepathic awareness. It is the direct knowledge of the thoughts of others and like *Avadhī* is also limited by spatial and temporal conditions. In both *Avadhī* and *Manahparyāya* the soul has direct knowledge unaided by the senses and the mind. So, inspite of being limited they are immediate knowledge. *Kevala* is omniscience which is unlimited and absolute. This knowledge can be

acquired only by the liberated souls. Unlike the former two *Kevala* is not limited by spatio-temporal conditions. ²

Mati includes perceptual as well as inferential knowledge. *Śruta* is the knowledge derived through authority. One point should be noted here. Usually perceptual knowledge is considered as immediate. But the *Jainas* observe that this knowledge also like the inferential and testimonial ones presupposes the activity of thought and that is why should be regarded as mediate.

Mati, the *Jainas* hold, again is of two kinds direct and indirect. The direct one includes *Avagraha*, *Ūha*, *Āvaya* and *Dhāraṇā* while the indirect one includes *Tarka*, *Vāda*, Criticism and memory. So, *Tarka*, according to the *Jainas*, is one kind of indirect *Mati-Jñāna*.

A position of supreme importance has been accorded to *Tarka* by the *Jainas*. They are of the opinion that *Tarka* should be regarded as a separate as well as independent source of knowledge in the same way in which perception and inference are. Knowledge of universal and necessary concomitance between two terms (*hetu* and *sādhya*) is the nerve-centre for the possibility of inference and this knowledge, the *Jainas* hold, can be derived only through *Tarka*. The form in which *Tarka* delivers itself is as follows : "A occurs only and necessarily when B occurs, and is not seen to occur as a matter of universal necessity when B is absent". The content of this cognition is the universal and necessary relation between two terms eg. A and B. ³

The *Jainas* maintain that the knowledge of the universal and necessary concomitance can be derived neither through perception nor through inference. Two arguments can be shown because of which perception cannot actually be taken as the source of this knowledge. First, through perception we can have the knowledge of any object which is visible but not the knowledge of any relation held between two objects which is not visible. The knowledge under consideration, no doubt, is a knowledge of a relation held between *hetu* and *sādhya* e.g. smoke and fire and therefore cannot be ascertained through perception. Secondly, perception is not capable of being the source of the said knowledge because the jurisdiction of it is limited only to present individual data. But the knowledge of the universal and necessary concomitance is pervaded in the past, present and future. So, it is obvious that this knowledge can hardly be derived through perception.

The inference, according to the *Jainas*, also cannot be the source of the knowledge of universal and necessary concomitance. If inference is taken for granted as the source of this knowledge then we have to face two vital problems which cannot be overcome in any way. The first problem may be made clear by citing an example in the following way. Let us suppose inference no. 1 is the source of the knowledge of the universal and necessary concomitance called A. But we know that each and every inference necessarily presupposes the knowledge of a universal and necessary concomitance. So, as inference no.1 is an inference, it must presuppose a universal and necessary concomitance suppose called B. Then another inference,

let us suppose inference no.2 is to be admitted through which concomitance B can be established . But again inference no.2 being an inference it also presupposes another universal and necessary concomitance. So to derive that concomitance a third inference has to be admitted. Thus the fallacy called *infinite regress* comes into being.

Secondly, we know that inference necessarily presupposes the knowledge of the universal and necessary concomitance called *Vyāpti* and if it is held that this knowledge itself is ascertained through inference then this knowledge also presupposes inference. So the fallacy of circularity would crop up. Hence it is clear that inference like perception also cannot be the source of the knowledge of the universal and necessary concomitance. And it is *Tarka* through which this knowledge can be ascertained.⁴

THE CONCEPT OF TARKA IN VAISĒṢIKA SYSTEM :-

The reference of *Tarka* is seen neither in *Śūtra* nor in *Praśastapāda_Bhāṣya* of *Vaiśeṣika*, but in *Bhāṣyaṭikā* known as *Nyāyakandālī* . Śrīdhara Bhatta after admitting *Vicārātmaka Tarka* considers the knowledge "*Prasanga*" conceived by *Vaiśeṣika* as *Tarka*. Sridhara Bhatta observes that if any doubt is raised by the opponent in the case of any knowledge in the field of metaphysics then that doubt can be ruled out and the opponent would be defeated through the application of *Tarka* and thereby indirectly the truth of the knowledge in question be established. For example, if the nature of the soul is called in question as whether the soul is produced or nonproduced then that doubt can be removed through *Tarka* in the

following way :- If the soul were produced or noneternal then bondage and liberation would have been impossible. So, the soul must be nonproduced or eternal. Sridhar Bhaṭṭa further maintains that *pramāṇa* as *karana* cannot operate its function without the aid of its promoter (*itikartarvātā*). It is equally true in all the *Laukika*, *Vaidika* and metaphysical aspects. But *Tarka* acts as a promoter to the *pramāṇa* only in the purview of metaphysics. *Tarka* as a promoter to the *pramāṇa* becomes the cause of the metaphysical knowledge through the consideration of the nature of any metaphysical objects.⁵

But Shivāditya, on the contrary holds that *Tarka* is *Samśayātmaka* (i.e in the form of doubt) . He says in *Saptapadārthī* that the *aniṣṭāprasaga* of unexpected pervade is *Tarka*. This *Tarka* as *aniṣṭāprasanga* being nonjudgemental or *anavadhāraṇātmaka* is included by doubt. Madhava Samaswati also agrees with Shivaditya on this point . Samaswati says in the commentary is nothing but doubt . Since, if there were no fire there would be no smoke- such type of knowledge and inclusion are there in *Tarka* , it confirms the existence and non-existence of anything.

As far as our discussion is concerned a controversy regarding the nature of *Tarka* as conceived by *Vaisesika* between Shivaditya and Madhava Samaswati on the one hand and Sridhar Bhaṭṭa was the other is seen. Shivaditya and Mādhavasamaswati maintain that *Tarka* of *Vaishesika* is *samsayātmaka* (i.e in the form of doubt) while Śhrīdhar Bhaṭṭa observes that the *Tarka* in question is *Vicārātmaka* (i.e in the form of reasoning) .

But here one point should be noted. A divergence of opinion is seen between Sridhar on the one hand and the *Naiyāyikas* on the other regarding whether *Tarka* should be regarded as a promoter to the *Pramāṇa* or as an independent *Pramāṇa*. While the *Naiyāyikas* maintain that the reasoning or *Tarka* should be considered as a promoter or an auxiliary factor to an independent means of knowledge (*pramāṇānugrahaka*) Śridhar Bhaṭṭa observes that it should be regarded as an independent means of knowledge. The *Naiyāyikas* further hold that reasoning is an invalid knowledge, whereas, Śridhar is of the opinion that it is a valid cognition. We have already discussed in the previous chapters why the *Naiyāyikas* maintain that reasoning would be treated as an illusory knowledge and also as a promoter to the *Pramāṇas*. Now let us see why Śridhar disagrees with the *Naiyāyikas* on this point and regards reasoning itself as a *Pramāṇa*. He says that *Tarka* is adopted by one to establish his own view by rejecting its contrary view raised by his opponent. In this process, unless and until the contrary view is ruled out as an impossibility the own view of the subject concerned also cannot be established. So, the establishment of one's own view necessarily presupposes the proof of the impossibility of its contrary view. So, it is quite evident that the primary task of the reasoning is to prove the opponent's view as an impossibility. But reasoning has nothing to do so, if it is invalid as maintained by the *Naiyāyikas*.⁶ Say for example, the knowledge of bondage and liberation would be impossible if the soul were produced or non eternal. Were it invalid, the proposed alternative advocated by the opponent would not be ruled out as an impossibility. And consequently, the view of the

proponent concerned, that is, the proof of the immortality of the soul would not be possible. But as a matter of fact through the application of *Tarka* the opponent's position is proved to be absurd and thereby the view in question is established to be true. And this fact implies that *Tarka* must be valid, as an invalid reasoning is incapable of doing so. If this be the case then it must be subsumed under a recognised organ of knowledge like perception or inference.⁷

The form and characteristics of reasoning resemble with that of inference. So, it should be regarded as inference. Reasoning shows that the soul cannot be mortal and the assertion of the impossibility of mortality is tantamount to the assertion of the immortality of the soul. So, it is nothing but an inference.⁸ Even if this proof of the absurdity of the assertion of mortality be not regarded as tantamount to the proof of its immortality, but rather as a logical ground of this proof, yet the validity of reasoning as an independent organ cannot be denied. Reasoning, proves the absurdity of the opponent's position by means of a logical probans and by reason of the necessary concomitance between the probans and the probandum. So, its form exactly resembles with that of inference and thereby it is proved once again that reasoning is nothing but inference.

Vyomāśivācārya, the author of the *Vyomāvatī*, being agreed with Śrīdhara Bhaṭṭa on this point, says that the finding of reasoning is necessarily valid. So, the attempt to deny validity to reasoning is suicidal.⁹ If reasoning were invalid then no contribution to determine the truth would be derived from it. But in fact reasoning establishes what is true by ruling out what is false in the form of

reductio-ad-absurdum. And this fact clearly indicates that reasoning must be a valid one. That is why Vyomāsivācārya maintains that reasoning must be an organ of knowledge and subsumed either under perception or inference.

TARKA IN BUDDHIST LOGIC:-

The application of *Tarka* is found in the *Baudha* system too. *Tarka* has been described as *prasanganumana* or *aniṣṭa-prasanga* by the *Buddhist*.¹⁰ The inference called *anistāprasanga* is one through which the absurdity of the views of the opponents is established.

Tarka is seen to be employed by the *Buddhists* to establish a good number of their own views. Here an instance can be cited. They proved the momentary character of all the existent entities in the light of the distinction between fried seed (*Kushelastha*) and nonfried seed (*Kṣhitrasha bīja*). And this distinction, in turn, is made in terms of *anistāprasanga*. The fried seeds are incapable of sprouting, for they are *ankurakārins*. Here the *Buddhists* want to infer the major term, the incapability of sprouting in the minor term, the fried seed. To infer this they introduce the *Vyātireki-Vyāpti* and say that if one becomes capable of doing any particular activity then that very activity is performed by it. For example, the seed associated with the promoting factors. Here the invariable concomitance is shown in between the capability and actuality. As this invariable concomitance is pervaded by the middle term of the inference of the incapability of the fried seed, undoubtedly, it is a *Vyātireki-Vyāpti*. The fried seeds

are incapable of sprouting as they are *ankurakārins* in this inference the incapability and actuality are the major term and minor term respectively. So, *Vyāterekī – Vyāpti* of the inference of incapability is - that which is incapable of doing any particular task, it cannot perform the same type of inference where the incapability of the fried seeds is inferred through the *Vyātireka-Vyāpti* known as *prasanga* or *Prasanganumāna*.

This *prasanga* also can be represented in a different way through the invariable concomitance between *ankurakāratva* and incapability : If the fired seeds were capable of sprouting then they would sprout. In this inference the incapability of sprouting of the fried seeds is established through the elimination of the possibility of deviation.¹¹

As far as our discussion is concerned it is quite evident that the invariable concomitance is made free from doubt by the *Prasanga* as admitted and conceived by the *Buddhists* in a very similar way in which it is done by the *Tarka* of the *Naiyāyikas*; So, it is justifiably said that the *prasanga* of the *Buddhists* stands for the *Tarka* of the *Naiyāyikas*. But the *Buddhists* consider the *Prasanga* as a variety of inference.¹²

TARKA IN SĀMKHYA SYSTEM :

Tarka plays a vital role in *samkhya* school too. In *Sāmkhakārikā* eight types of *Siddhis* have been pointed out by

shāwarkrishna and *Ūha* is one of them. Vācaspati Mishra in his *Tattvakaumudi* describes this *Ūha* as *Tarka*.

In explaining this *Ūha* Vācaspati says that *Ūha* is the justification of the statements of *Vedas* or *Āgamā* in the light of some arguments. But here one point should be noted. The argument in terms of which the Vedic statements are justified cannot be contradictory to the *Vedas*. Say for example, the cow-dung and conch-shell are taken to be auspicious things in the *Vedas*. Now one may prove these things to be inauspicious by putting forth an argument.¹³ One may say that any refuse (*biṣṭhā*) is an inauspicious thing. And as cow-dung is kind of refuse, *biṣṭhā*, it cannot but be an inauspicious thing. Similarly any bone of any animal is an inauspicious thing. And since conch-shell is a bone of an animal, it must be an inauspicious thing as well. The soundness of these arguments cannot be called in question. But yet these arguments cannot be considered as *Tarka* only because they are contradictory to the *Vedas*.

Another point should be highlighted here. We should explain what does actually the abovementioned justification mean? Here justification is nothing but the establishment of Vedic authority by removing the doubt imposed or proving the soundlessness of the argument raised by the opponents.

TARKA IN MIMĀMSĀ SYSTEM :

Now let us deal with the *Tarka* as advocated and conceived by the *Mīmāṃsā* school. The principal objective of *Mīmāṃsā* is to establish *dharma*. To serve this purpose the *Mīmāṃsakas* employ some arguments. According to the *Mīmāṃsaka*, *dharma* is to be known through the statement of the scriptures alone. In order to prove *dharma* it is essential to determine the meaning of the Vedic sentences. The argument through which this meaning of the Vedic statement is established is called *Tarka*. This is the view particularly of Kumarila Bhaṭṭa about *Tarka*.

But *Tarka* as conceived by another *Mīmāṃsāka*, namely Nārāyaṇa Bhaṭṭa is quite of a different type. He observes that when one proceeds to establish anything with the help of some *pramāṇa* he may be objected by his opponent who claims the possibility of the object as being substantiated otherwise. In that critical situation the person concerned may be proving his opponent's position to be absurd and groundless taking the help of some argument.¹⁴ This type of argument is regarded as *Tarka*. To clear this point his own example may be cited here. Let us suppose someone is going on to infer the existence of fire in a particular locus on the basis of the perception of smoke in it. Now if some other person doubts in the existence of fire and claims that there is no fire in that locus at all, then the person in question may confirm his own position proving his opponent's claim as groundless and absurd, by putting an argument in this form "if there is no fire then there cannot be any smoke too."

TARKA IN VEDĀNTA SYSTEM :

Tarka in Advaita and Vishistādvata school:

Vedanta School also is seen to deal with *Tarka*. *Advaita* system like the *Nyāya* admits *Tarka* as the promoter to the *pramāṇa* (*pramāṇānugrahaka*). But while the *Navya-Nyāya* recognises *Tarka* as a promoter particularly to the inference, *Advaita Vedāntins* hold *Tarka* as the same particularly to the Vedic-testimony. They observe that the knowledge of *Brahman* can be attained through Vedic, testimony. But our mind being the subject of limitations confronts with doubt on the way to attain that knowledge. And that doubt is ruled out through *Tarka*. As *Tarka* paves the way for the Vedic-testimony by removing the impediment, doubt, it is regarded as the promoter to the Vedic-testimony.¹⁵

In *Tattvānusandhāna* Mahadevi Saraswati says that doubt concerning the knowledge of *Brahman* is wiped out in terms of *Tarka*. *Tarka* is considered as *anistāprasanga* where the parvaded is established through the parvader. For example, if *Paramātmā* were not identical with the self then being non-self it would have been non-eternal like the post.

Madhusūdana Saraswati, in *Sidhāntabindu* following the subjectmatter of *Sārirakasūtra* of the *Vedanta* philosophy maintains that *Tarka* is of four kinds :- (a) *Dr̥gdr̥syānvaya Vyātireka* (*Samanyayadhyāya*) (b) *Sāksiśākṣyānvaya Vyātireka* (*Aviradhādhyāya*) (c) *Āgamāpayitadavadhyānvaya Vyātireka*

(*Sādhānādhyāya*) (d) *Duḥkhiparamapremāspadānvaya Vyātireka* (*Phaladhyāya*). Besides these four kinds of *Tarka* Madhusudana admits another type of *Vyātireka* called *Anuvrttavvyāvrttānvaya Vyātireka*.

Now let us deal with the special forms or patterns of the five kinds of *Tarka* mentioned above :-

(a) *Dṛgdrśyānvaya – Vyātireka (Sāmānvayādhyāya) :-*

Dṛg = *Anvayī*, *Dṛśya* = *Vyātireka* .

If the visible objects established by the agreement with the self evident *Dṛk* is true then quite evidently they cannot be material.

(b) *Sākṣisākṣyanvaya - Vyātireka (Aviradhadhyāya) :-*

Sākṣi = *Anvayī* , *Sakṣa* (*Sākṣibhāsyā*) = *Vyātirekī*.

If the material objects established by the agreement with the indeterminate snake is true , then that material objects cannot be determinate. ¹⁶

(c) *Āgamāpayitadavadhyānvaya – Vyātireka (Sādhānādhyāya) :-*

Āgamāpayī = Productive and destructive , *Abādha* of it = the self which is without having any production and destruction. *Dharmī* = *Anvayī* , *Jagat* = *Vyātirekī*.

If the material world established through the agreement with the eternal-self is true that world cannot have any production and destruction.

(d) *Duḥkhiparamāpamāspadanyāya – Vyātireka (Phaladhyāya) :-*

Paramapremāspadatva of self = *Anvayī*, *Duḥkhitva* of self = *Vyātirekī*.

If the material world established by the *Vyatireka* agreement with the Blissful *Brahman* is true then there cannot be any suffering in this world.

(e) *Anuvrttavāvr̥ttanyāya - Vyātireka :-*

Anuvratta = consciousness subsisting in all objects *Vyāvrtta* = Visible. If the world established as identical with the all-pervading conscious *Brahman* is true then they cannot be visible each other. Thus through the *Tarka* of *Vedānta* the significance of *Upaniśada* is expressed and thereby the actual nature of the *Brahman* is established. This is the view of *Advaita Vedānta* about *Tarka*.¹⁷

Now let us discuss the *Tarka* of *Viśiṣṭādvaita*. We see that the *Tarka* as conceived by *Advaita Vedānta* is neither a separate and independent *pramāṇa* nor even is included by any other *pramāṇa*. But *Viśiṣṭādvaita* observes that *Tarka* actually, is included by the *pramāṇa* of perception. According to this school, *Tarka* is included by memory and memory again is included by perception and thus *Tarka* itself is included by perception indirectly through memory.

Here one point should be made clear to understand the *Tarka* of *Viśiṣṭādvaitins* – why memory is conceived by them as *pramāṇa* and included by perception? In response to this question they maintain that *pramāṇa* is one which remains *avinābhūta* with *prameya* or the object of knowledge. And '*pramāṇa* remains *avinābhūta* with *prameya*' means – the knowledge of the *prameya* (object) ascertained through a *pramāṇa* in a particular space and time remains the same and is not otherwise at any time. And memory is one through which an object is known exactly in the same form in which it was known earlier. So, memory like any other *pramāṇa* remains *avinābhūta* with the *prameya* and therefore is justifiably considered as *pramāṇa*. But it is worthy to note that though the *Viśiṣṭādvaitavādins* regard memory as *pramāṇa* they do not regard it as an independent and separate *pramāṇa*. They hold that memory is included by perception. But why they are of the opinion that perception includes memory? They reply to this question very beautifully by saying that as memory is a consciousness derived only through *saṃskāra* the root of it lies there in perception and thereby memory is included by it.

Thus *viśiṣṭādvaitavādins* establish the *saṃśaya* and *Tarka* as *pramāṇa* through the proof of memory as the same. Similarly, *Tarka* is proved to be included by perception indirectly, in terms of the inclusion of memory by the same.

To show that the *saṃśaya* is a valid knowledge included by memory an example may be cited in the following way :-

Let us suppose seeing a tree standing at a certain distance one becomes confused as – whether it is a tree or a man ? And this cannot be considered as a single knowledge having both treehood and manhood, for both of them cannot belong to one and the same enquired object at the same time. If the object in question is known as tree then it cannot be known as man and again if it is known as man then it cannot be known as tree. Both of the knowledge separately are valid. Seeing the object standing at some distance, in first stage a feeling of something tall comes into being in the mind of the person concerned. In the immediate next step both of the tree and man are remembered as both of them are tall . So, this is a complex process consisting of two steps – *Samskāra* and memory respectively. The objects remembered are actually valid. Therefore, it is seen that as long as doubt persists the knowledge of the object under consideration as memory also remains valid. So doubt included by memory, as shown by the *Viśiṣṭādvaitavāda*, is a valid cognition. It further maintains that like doubt *Tarka* is also valid as a cognition. For the *Ūha* or *Tarka* confirms one of the alternatives by eliminating the rest. And at the time of confirming the object in question is remembered and thereby the knowledge of that object as memory remains valid.¹⁸

TARKA IN MADHVAS' SCHOOL:-

The concept of Tarka in Mādhvas' School as explained in the
pramānapaddhati by Jayatīrtha :-

Jayatīrtha, an outstanding writer has made an epoch making work on logic and epistemology from the view point of *Mādhvas'* School. The explanation of *Tarka* or reasoning given in his work, *Pramānapaddhati*, is no doubt, highly excellent. *Mādhvas* do not agree with the nature of reasoning as given by the *Nyāya-System*. Consequently a burning controversy is seen between the two schools- *Mādhva* and *Nyāya*.

In the previous chapters we have already seen that the *Naiyāyikas* unanimously consider *Tarka* as an auxiliary factor to an independent means of knowledge. But the *Mādhvas* are of the opinion that reasoning should not and cannot justifiably be regarded as a helping condition to an independent organ of knowledge. So, quite naturally the said view of the *Naiyāyikas* cannot be accepted. The *Mādhvas* observe that reasoning fulfils all the conditions which are taken to be essential for being an independent means of knowledge. Therefore, it is quite proper to consider reasoning as an independent means of knowledge and not as an auxiliary factor to it. This view has been explained very beautifully by Jayatīrtha in his two epoch-making works *Pramānapaddhati* and *Nyāyasudhā*.

Jayatīrtha regards reasoning as an independent means of knowledge and subsumes under inference. In the chapter of

inference of *Pramāṇiapaddhati*, he deals with the classification of inference. Here several ways of classification of inference have been suggested by him. One of them brings inference under two

broad heads – (a) inference for establishing a conclusion (*sādhana-numāna*) and (b) inference for refutation of the opponent's view (*duṣaṇa-numāna*). The latter one has again be subdivided into two kinds, viz . (i) inference for proving the defect in the argument employed by the opponent (*duṣṭipramitisādhana*) and (ii) reasoning (*Tarka*).¹⁹ The first one is employed in proving the incompetency of the probans which is used to establish the probandum. And reasoning or *Tarka*, the second one, is called in to refute the position of the opponent in the form of *reductio-ad-absurdum*. So, as far as our discussion is concerned we see that reasoning has been considered by Jayatīrtha as a variety of inference for refutation of position of the opponent (*duṣaṇa-numānaviśēsa*). *Tarka* has been defined as an admission of an undesirable contingency necessitated by the admission of false issue.²⁰ To understand the reasoning as conceived by Jayatīrtha, the observation of the commentator, Janārdan Bhaṭṭa, is worthy to note. He maintains reasoning as the enforced admission of a contingency as the condition and presupposition by the admission of a fact necessarily conditioned by the former, through the reason of the necessary concomitance between them. When 'A' is necessarily ocured by B, that is to say, A cannot be taken place without B, then A is considered to be a necessary concomitant (*vyāpya*) and B as the determinant of the concomitance (*vyāpaka*). Here B, the determinant of concomitance

(*vyāpaka*) is infired on the ground of the determinate in concomitance (*vyāpya*). So, the meaning of Janārdana's aforesaid comment stands thus : The admission of a determinate concomitant makes the admission of a determinant concomitant inevitable.²¹ Janārdans like Jayatīrtha, uses to think that reasoning, in fact, is nothing but inference. And he proves his contention through inference in the following way :- " Reasoning is a species of inference , for it generates mediate cognition by virtue of necessary concomitance, in the same way in which the well known case of the inference of fire from smoke is taken place in terms of the necessary concomitance, held between smoke and fire".²² Reasoning resembles inference in its form and nature. All the essential conditions which are seen present in and fulfilled by inference are also found present in and fulfilled by reasoning. Say for example, the ground of reasoning which are hypothetically assumed stands for the probans of inference for both of them work on the basis of necessary concomitance. Besides, necessary concomitance is the foundation and nerve centre for both of the inference and reasoning. So, it is quite proper and justified to consider reasoning as an inference.

Jayatīrtha thinks that some objections may be raised against his aforesaid view. So, he notes those possible objections and also replies to them from his own view point. One may observe that though reasoning appears to be an inference actually this is not the case. We think that reasoning should be considered to be inference for it fulfills all the necessary conditions for being an inference. But if we ponder over the problem, we shall see that the fact is otherwise.

Two conditions are taken to be necessary for an inference – (i) the probans is shown to stand in necessary concomitance with the probandum in major premise (*vyāpti*), and (ii) Probans is shown to be actually present in the subject in the minor premise (*Paksadharmatā*). The former one is seen to be fulfilled by the reasoning too. For the ground of reasoning is necessarily related to its consequent . But the latter one is not fulfilled as the ground is never actually present in the subject in the case of a reasoning. On the contrary the subject is qualified by the absence of the probans, the ground. Here, in reasoning , the ground is hypothetically superimposed upon the subject and the arguer is quite conscious of this super imposition. To make this position more clear an instance may be cited. "If the lake were possessed of smoke, it must be possessed of fire," is a case of reasoning. In this reasoning in fact, the ground, the presence of smoke, is absent in the subject, i.e. in the lake. And the arguer is definitely aware that smoke is not and cannot be actually present in the lake. The lack of the minor premise, that is to say, the lack of the actual presence of the probans in the subject is known as the fallacy of the non-existent probans. Thus reasoning becomes the subject of this fallacy and therefore cannot be regarded as an inference proper as maintained by Jayatīrtha. Moreover, in an inference, the knowledge of the probans is the ground depending upon which the knowledge of the probandum is established . For example, in the inference "There is fire in the hill because there is smoke in it" one gets the inferential knowledge of fire, probandum, on the basis of the perceptual knowledge of smoke i.e. probans. And this condition again is seen not to be fulfilled by reasoning, since, there is no such thing as

knowledge of the ground or the knowledge of the consequent but only an assumption in either. Inference is a case of definite and authentic knowledge. It is also categorical. But reasoning is a case of assumption and hypothetical supposition and therefore not knowledge at all. So it is proved once again that reasoning or *Tarka* cannot justifiably be considered as inference.²³

Now, Jayatirtha replies to the objections mentioned above clearly as well as beautifully. He maintains that the aforesaid objection has been raised due to the lack of the proper

understanding of the logical value of the fallacy called the 'non-existent probans'. The second condition that the probans be actually present in the subject is held to be a necessary condition for inference. But actually this is not the case. This is nothing but a logical convention. And this convention is mistaken for a necessary condition. Though the actual presence of the probans in the subject is the general rule of inference, it is not an essential condition at all. What is essential is the belief in the presence of the probans in the subject and this belief again is the condition of the belief in the presence of the probandum. And this condition is fulfilled by the reasoning, so far as the opponent is concerned, as he believes that the probans or the ground under consideration is present in the subject and again this probans, ground, actually stands in the relation of a necessary concomitance to the probandum or the consequent. As the opponent believes in the presence of the ground and its necessary relation to the consequent, so just on the basis of this belief, the belief in the consequent can be deduced.²⁴

One point is very important to note here. Though reasoning is an inference, it is not an ordinary type of inference. Consequently, it does not exactly tally with an ordinary inference in all its characteristics. So, just on the basis of the differences mentioned, if one concludes that reasoning is not an inference, then it will be a great mistake. Reasoning is an inference of a special type, having some special properties and acting as *reductio-ad-absurdum*. As it is a special type of inference and its speciality does not resemble the ordinary ones we are generally acquainted with we think that reasoning is not a case of inference. And the speciality of this inference lies in the fact that this inference is applied by a person to stand his own position indirectly by showing the absurdity of the position of his opponent, and here, the probans is accepted not by both of the opponent and proponent. The probans is accepted to be true only by the opponent and it is only hypothetically assumed by the proponent. So as far as our discussion goes it is quite clear that the arguer or the proponent does not believe in the presence of the probans in the subject in such cases of inference. But this lack of belief from the part of the proponent has nothing to do with affecting the validity of inference so far as the opponent is concerned, for the latter believes in the presence of the probans. And the probandum is shown to be only a logical necessary conclusion by the proponent just on the basis of the opponent's belief in the probans. So, the validity of this type of inference is determined only by the belief of the opponent. Even the proponent's belief makes this type of inference useless and impossible. Because, it is already seen that type of inference is caused by a an arguer who holds a different view from

that of the opponent. The main objective is to show the later view as absurd and therefore unacceptable and hence the former view is true and acceptable. So, the difference of the views between the arguer and the opponent is the only cause due to which this inference is used and applied. If the arguer like the opponent believes in the presence of the probans in the subject then it means that both of the parties agree in their views. Consequently, the very question of applying this type of inference does not arise. So, it can be concluded that the belief in the presence of the probans in the subject from the part of the opponent and disbelief in the same from the part of the arguer are essential conditions for the application of such inference.²⁵

To understand the above view more clearly an example may be cited. "If the lake were possessed of smoke , it would be possessed of fire. But as a matter of fact it is not possessed of fire. So it cannot be possessed of smoke."

This argument represents both the absurdity of the opponent's position and the truth of the position of the arguer. The opponent's view consists in the belief in the presence of smoke in the lake, whereas, the arguer's view is just opposite to it, that is to say, arguer believes in the absence of smoke in the lake. Here this argument is applied to show the absurdity of the opponent's view. More clearly to say, if the opponent's view i.e. the presence of smoke in the lake is taken as granted then as a logical necessity an absurdity will follow. The presence of smoke stands in relation to a necessary concomitance with the presence of fire. So, to believe in the former amounts to believe in the latter, and this latter belief in turn gives birth

to an absurdity. Thus through the application of this type of argument the position of the opponent is reduced to an absurdity and thereby through the backdoor the arguer's view is proved to be true and acceptable. So, if the proponent would believe in the presence of smoke in the lake as the opponent does, and yet would apply this argument, then it would become self-defeating or suicidal for it would cancel what he likes to establish. Thus the foregoing discussion shows that the probans of the reasoning is believed to be present in the subject only by the opponent and not by the proponent and yet it should justifiably be considered as an inference proper, as far as it fulfills all the necessary conditions for being an inference.²⁶

Jayatirtha thinks that another objection from a different point of view may be raised against him. He puts that objection and also replies to it. Reasoning becomes the subject of another logical fallacy called the fallacy of contradicted probans (*bādha*) as long as the absence of the probandum in the subject in conclusion is concerned.²⁷ But the *Mādhvas* react to this objection by saying that this objection too is applicable only to the categorical type of inference and it is already stated that reasoning is not a categorical inference at all. So, this objection cannot be applied to reasoning which is an inference of the type called *reductio-ad-absurdum*.²⁸ Even to endorse this inference to make free from the fallacy in question is to push it into another fallacy called acceptance of a position opposite to his own accepted conclusion (*apasiddhānta*). For fire, in the example given above, the absence of fire in the lake is an established fact of which the arguer is fully conscious. Now if the

arguer intends to establish the probandum in the subject, i.e. the existence of fire in the lake then, no doubt, it would give birth to the said fallacy.

Reasoning as maintained by Jayatīrtha, has two conclusions side by side – a false conclusion and a negative conclusion . The former one remains in the explicit form, whereas, the latter one lies in the implicit and hidden form . Both of the conclusions are implied by the reasoning but not in the same way. The false conclusion is implied directly but the negative conclusion, on the contrary, is implied indirectly. As the negative conclusion remains in the implicit form, generally it is over looked by us. And we think that reasoning like the categorical inference has only one conclusion. Thus , only the one half which is, infact, incomplete is mistakenly held by us to be whole and complete.²⁹ This misconception leads us to think that reasoning becomes the subject of the charges mentioned. As soon as we can be free from this misconception we can understand that the aforesaid objections are groundless and pseudo.

Jayatīrtha's view can be substantiated through the clarification and consideration of the Western view regarding *reductio-ad-absurdum*. The European logicians also consider *reductio-ad-absurdum* as a kind of inference. Hence their view is somehow similar to that of the *Mādhavas*. But one point is worthy to note here. A vital difference is found between the Western and the Indian logic. The Western logic is concerned only with the formal validity, while the Indian logic is concerned with both the formal and material validity. The logic of *Mādhva*-school belongs to the Indian one. So, the

material condition cannot be ignored by them in the case of the determination of the validity of inference. Reasoning does not satisfy any material condition, as long as the minor premise and the conclusion do not correspond to the fact. Hence, the *Mādhavas* are not justified in regarding reasoning as an inference in the true sense of the term. But this objection can again be beautifully met from the viewpoint of Jayatīrtha. If we look into the full formed reasoning as conceived by him already mentioned then only the minor premise is seen not to be materially true. But both the major premise and conclusion do correspond to the fact and therefore materially true. So, the objection in question raised against Jayatīrtha's view does not hold good.

In order to have a clear conception of Jaytīrtha's view regarding reasoning another point should be highlighted. Jayatīrtha partially agrees and partially disagrees with the *Naiyāyikas* in observing the nature and status of reasoning. He agrees with *Naiyāyikas* in maintaining that reasoning acts as a helpful condition by eliminating doubt and thereby paving the impediment from the way of the means of knowledge. But he disagrees with them in pointing out that reasoning sometimes acts as an independent organ of knowledge. So, according to the *Naiyāyikas*, only one type of activity is performed by reasoning, but to Jayatīrtha two fold activities are seen to be performed by reasoning.³⁰ For the sake of better understanding two instances may be cited. : When a person is deterred from inferring fire in a hill on the ground of the perception of smoke by a doubt of

the necessary of fire's occurrence, reasoning stands by him to eliminate that doubt.

Reasoning here acts as an auxiliary factor to an independent categorical inference. But in another instance let us suppose a controversy is seen between two persons in the form – "The hill is either possessed of fire or not". Here reasoning may be resorted to in the following way :- "If the hill were devoid of fire, it would be devoid of smoke. But it is a fact that hill is not devoid of smoke and so it is not devoid of fire too". Here in this case, reasoning as a hypothetical argument establishes the conclusion that the hill cannot be devoid of fire and so by the negation of absence of fire establishes by implication that the hill is possessed of fire.³¹ Here reasoning serves to establish a conclusion independently of a categorical inference and therefore performs the second type of activity mentioned.

Jayatīrtha further observes that the function of reasoning as a helping factor does not and cannot stand against the performance of it as an independent organ of knowledge. The same thing is admitted by the *Naiyāyikas* when they declare the possibility of convergence of several cognitive organs on a self same object of knowledge (*pramāṇasamplava*).³² To make this position more clear a concrete instance can be taken. A is told by a reliable person B that there is fire in the hill nearby. As A goes closer to the hill sees smoke there and infers the existence of fire in it. Ultimately he reaches the hill and perceives fire. Here, in this case, one and the same knowledge i.e. the knowledge of fire is derived through three different independent means of knowledge, testimonial, inferential and perceptual. And the

first knowledge is confirmed by the second and the second by the third. So, last two i.e. the inferential and the perceptual knowledge act as an auxiliary factor. But yet they are properly considered as independent organs of knowledge. The same can truly be said in the case of reasoning. No doubt some times reasoning is seen to act as an auxiliary factor to other independent means of knowledge . But this does not mean that it is incapable of being an independent organ of knowledge itself.

Thus Jayatīrtha establishes his own view that reasoning is an accredited means of knowledge which can be subsumed under inference by rejecting the view that it is only an auxiliary factor as maintained by the *Naiyāyikas*.

Chapter – v

SOME CRITICAL OBSERVATIONS :

Criticism of Jaina view of Tarka:-

An objection has been forwarded against the *Jaina* view . It is a universal rule that in cognition other than perceptual, the cognition of the relation between it and the object is a necessary precondition of the cognition of the object. Say for example in inference cognition of smoke is the ground of the cognition of fire ; only because it is preceded or accompanied by the cognition of the necessary relation between the probans and the probandum. i.e. smoke and fire. *Tarka* is regarded as the species of knowledge different and distinct from perceptual one, so it also must follow this rule. Hence the very possibility of *Tarka* presupposes the possibility of the cognition of the relation between *Tarka* on the one hand and universal concomitance on the other. What is the source of this cognition ? Certainly perception has no authority of being the source of this knowledge as the jurisdiction of it is limited only to present data and universal concomitance is ex-hypothesi thought to extend beyond all limitations of space and time .

The inference also cannot be the source of the said knowledge as the fallacy called infinite regress comes into being. It cannot be supposed again that a second *Tarka* helps in deriving the knowledge of the relation between the first reasoning and its object, namely, universal concomitance. The second reasoning will be in the

same position as the first. So both of them are the subject of the same limitation. Nor again can any other organ of knowledge serve that purpose, since being different from perceptual cognition, it too presupposes the knowledge in question.

But the *Jainas* rule out the objection mentioned above proving to be soundless in the following way. They maintain that the said universal rule of knowledge of the *Naiyāyikas* is nothing but a result of hasty generalisation. No authentic ground can be established due to which perceptual cognition be the subject for the reservation concerned. Both perceptual and nonperceptual knowledge belongs to the same category, namely, knowledge. So none of them should be related to its object. But it does not mean that *Tarka* presupposes the cognition of that relation as a necessary precondition. It directly delivers the knowledge of the universal and necessary concomitance by its inherent and necessary power. So the very question of arising the said problem is absurd. The *Jaina* view again becomes the subject of another stronger objection. *Tarka* can be considered to be the source of knowledge only if it can deliver the knowledge of an objectively existent fact. And as the object of *Tarka* is the universal concomitance, our question is whether that concomitance is an objectively existent fact or not. If the said concomitance be an objectively existent fact then the two terms between which this concomitance is supposed to be held must be either in an identical area of space, or in a determinate period of time, or in both. But if we ponder over the problem very sincerely then we find that neither of the alternatives is true. For, firstly, for example, smoke and fire

between which universal concomitance is supposed to be held are not found to be spatially co-present. Fire exists in a particular part of the hill but the volume of smoke wanders in the sky. The same is true in the case of rainfall and flood between which a universal concomitance is thought to be held. This is about the first alternative. Now let us turn to the second alternative. Temporal co-presence between rainfall and flood also cannot be seen as there is no flood when there is rainfall and vice versa. Similarly, the rise of the star namely ,Rittika is supposed to be the ground of inference of the rise of Rohini. But they are not seen to appear simultaneously.

But this objection too has been beautifully answered by the *Jainas*. They observe that the problem in question arises because of a prevented misconstruction of the data of experience and the failure to distinguish between essential characteristics and unessential accidents . The relation of necessary concomitance is held between two terms in their essential character. Two terms are found to be related with each other because of the fact that the essential nature of one necessarily involves or presupposes the essential nature of the other. The essential natures, for example, of smoke and fire are smokeness and fireness respectively upon which the relation of universal concomitance is based. And as space and time are not essential character of anything, they have nothing to do with the relation in question. So the objection dealt with is proved to be groundless. The relation under consideration is held between fire as such and smoke as such without reference to time and space which inspite of being the unavoidable setting are nothing but external

determinations. In one sense, the *Jaina* thinkers are correct in describing *Tarka* which is otherwise known as *ūha* as a separate *Pramāṇa*. If we deeply ponder over this we may find the following justification in calling it a *Pramāṇa*. The derivative meaning of the term *Pramāṇa* is the instrumental to *Pramā* or valid cognition (*Pramā – Karaṇam pramāṇaīm*). As per this etymological meaning *Tarka* may be taken as the instrumental to *Pramāṇa* because through the application of it our cognition becomes confirmed. The *Jainas* are correct in considering this aspect of cognition. Not only sense – organ etc. serve as a mediator or instrumental to *Pramā* but also many things that somehow assist in generating true cognition is also *Pramāṇa*. From this point of view the *Jaina* and some of *Dvaita Vedāntic* schools admit *Tarka* as a valid cognition or instrumental to a valid cognition (*Pramāṇa*).

From the above discussion one may presume that the *Naiyāyikas'* position is weak as *Tarka* is not alone a *pramāṇanugrāhaka* or instrumental to *Pramāṇa*, but a *Pramāṇa* itself. This type of *Pramāṇatva* is accepted in the western logic where it is called indirect proof or proof by *Reductio – ad – absurdum*, which is called by the *Naiyāyikas* as a *Vipaksa – vādhakatarka*. There are two types of knowledge the definite knowledge and knowledge in the form of doubt. The doubt of deviation may arise in some cases from the doubt of an extraneous adjunct and sometimes from the knowledge of the common attributes between *Hetu* and *Sādhyā* like the co-existence etc. alongwith the absence of the knowledge of the specific characteristic features of them. That is to say, the absence of the

specific characteristic features of them. In other words, the absence of the knowledge of specific characters as well as common attributes like co-existence etc. give rise to the doubt of deviation. Such doubt can be removed by *Tarka* in Indian Philosophy which is called *Reductio – ad-absurdum* in the west. The main function of it is to remove the opposite stand point (*Vipakṣavādhaka Tarka*). Sometimes the removal of doubt is caused by the absence of the collection of causes of doubt (*svataḥsiddha*). (*Jñānam niścayah śāṅkā ca. Sā ca Kvacidupādhisandehāt. Kvacit Vipakṣavādhakatarkāt, Kvacit svataḥsiddha eva' Tattvacintāmani, Vyāptigrāhopāya chapter*).

According to Mathurānath, the removal of doubt is caused by another cause except *Reductio – ad – absurdum*. If there is the non-existence of other causes except *Tarka*, the absence of the causes or the absence of the collection of the causes is the cause of the removal of doubt. “ *Svataḥsiddha eva iti=itarakāraṇaviraḥasthale tādrsākāraṇaviraḥaprayukta evetyarthah*”.- *Nīlākanthi Prakāśikā* on T.S. p.263, Chowkhamba).

Tarka is the limit of doubt, as it can be removed by the application of it. Hence, *Tarka* along with the perception of the co-existence of *Hetu* and *Sādhya* and non-perception of the deviation (*Vyabhicāra*) of the same becomes the cause of ascertaining *Vyāpti*. *Tarka* is a kind of hypothetical argument. Both the parts of *Tarka* are full of unreal thought. If smoke, as for example, is endowed with the doubt of deviation of fire, it would not be caused by fire. If the first part

is true , the second one would also be true. But it is known through experience 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 (i.e. smoke deviated from fire) is determined . So the doubt of deviation of fire with smoke can be removed by applying *Tarka* . In our daily life we remove doubt in respect of some object after following the method of argumentation. From the knowledge of the consequence the idea of antecedent is revealed. We generally aware of the intricacies of the method. *Tarka* as being a kind of mental construction, is useful in removing the doubt and hence *Tarka* is otherwise known as *āpatti* i.e, introduction of the undesired (*anista*) through which the truth is ascertained . It is called indirect proof for the following reasons. If the negation of p is proved as absurd, it would automatically follow that p is true. It may be argued that if *Tarka* is the basis of *Infinite Regress* (*anavasthā*), how can it be removed ? In reply, it can be said that in all cases of inference doubt does not arise hence there is no necessity of *Tarka*. If there is no doubt due to contradiction (*vyāghāta*), inference can be done without *Tarka*. (*Samkāyā avadhīstarkah, tannivartakatvāt. Nanu tarkepi vyāpti-mūlakatayā tarkāntarāpekṣāmanavasthām — .T.C. "Na yāvadāsamkāṁ tarkaṇusaraṇāt . Yatra ca vyāghātena sāmkaiva nāvatarati tatratarakaim vinaiva vyāptigrāhaḥ" — Ibid).*

From the above discussion it is proved that *Tarka* is the promoter to the ascertainment of *Vyāpti*, which is the pillar of inference. Why is it not called *Pramāna* as per definition – *pramākarāṇam pramāṇam* ? . Though the *Jainas* and others have

accepted it as a separate *Pramāṇa*, the *Naiyāyikas* are reluctant in admitting due to the following reason. Both the parts of *Tarka* are imaginary in nature which has no correspondence to the nature .

Had smoke been deviated from fire, it would not been caused by fire' (*dhūmo yadi vahni – vyābhiçarī syāt tarhi vahnijanyo na syāt*). In the practical world smoke is deviated from fire and it is also known through experience that smoke is caused by fire. In spite of this a deliberately false cognition which is called *Tarka* has no character of *tadvati tatprakāratva* i.e an object associated with its own feature (*prakāra*) . A jar can be known as true , if it is associated with jarness, otherwise it is false. In the case of *Tarka* there is no possibility of *tadvati tatprakārakāñāna*, because the sentence represents an utopian or absurd idea from which another consequence of the same type follows . Hence both of the parts are false. It is true that sometimes false cognition can provide a true cognition through various means. It can never be said that if the means is true, the cognition may also be true always . Means may generate right cognition . If it is true, the 'means' may be taken as '*karana*' and the result attained through it is the result which is a *karma* here. If this is accepted there would arise a fallacy called *Kartr-karana-virodha*. (i.e. contradiction between agent and instrument) . The instrument as being a *Karana* cannot be described as *Kartā* or agent. Though we come across many passages where such usages are not maintained e.g. *Sthālyā pacati* (cooking with a pot) should be written as *sthāli pacati*, the usage – '*Kāṣṭhena pacati*' should be used as *kaṣṭham pacati* . In this way, we may find expressions which are figurative (*lākṣaṇika*).

Another vital reason can be shown for which *Tarka* is not regarded as an independent instrument of knowledge by the *Nyāya* thinkers. We know that an argument is taken to be a valid inference if it fulfills some conditions prescribed. There are some prescribed conditions and two types of truths i.e. formal truth and material truth are among them. If the conclusion of any argument is deduced from its premise or premises by following the relevant rules then that argument can be taken to be formally true. And if the premise or premises and the conclusion of any argument correspond to the fact then that argument is said to be materially true.

Some arguments are there having both formal as well as material truth. No one questions the validity of these arguments. Sometimes we meet some arguments which have neither the formal truth nor even the material truth. So these arguments are admitted to be invalid by all. Again some arguments are found which have the formal truth only. And the validity of these arguments appears to be a controversial issue to the philosophers. The western philosophers are of the opinion that these arguments are also valid. But the Indian philosophers, on the other hand, maintain that these arguments are invalid.

Tarka or reasoning only satisfies the formal conditions of inference in as much as it is based upon the necessary connection between the opponent's position, which serves the purpose of the logical ground i.e premises and the absurd issue, which follows as a

necessary consequence. But *Tarka* cannot satisfy the material truth, for, the premise of it does not correspond to fact. Say in the case of the example cited water in fact allays thirst. So *Tarka* is an argument belonging to the third type just mentioned as it does not have any material truth and this is another important reason for which *Nyāya* thinkers do not accept *Tarka* as a valid inference and thereby as an independent instrument of knowledge.

Criticism of Bauddha and Jaina view of Tarka :-

The *Jaina* and the *Buddhist* view of *Tarka* can be criticised from the very analysis of the definition of the same given by them. In defining *Tarka* they maintain – “ *Uplambha-anupalambha nimittam Vyāptijñānam Ūha*” . As far as this definition of *Ūha* or *Tarka* is concerned *Vyāptijñāna* and *Tarka* are one and the same , i.e. they are identical. When it is said – ‘ *Vyāptijñānamūhaḥ,*’ it suggests that *Vyāptijñāna* itself is *Ūha* known through their identical statement. From the identity of *Vyāptijñāna* and *Tarka* a number of problems crop up which can be shown as follows :-

It is a matter of common sense that there must be a difference between the cognition and the instrument of the same . This difference holds good as far as the *Nyāya* concept of *Tarka* is concerned. The *Naiyāyikas* maintain that *Tarka* is employed to ascertain the knowledge of *Vyāpti* which is the pillar of inference. So, one is the cognition and other is the instrument of that cognition. But the *Jaina* and the *Buddha* view of *Tarka* denies the difference in

question by identifying one with another and thereby contradicts the common-sense view accompanied by the *Nyāya* one. It is stated in *Nyāya* that *Tarka* is the means through which an inferential cognition is possible by way of removing the doubt of deviation. Hence, *Tarka* is to be taken as an instrument to the attainment of valid cognition. In this sense *Tarka* can be taken as an instrument of valid cognition (*pramā-karaṇam*) and hence one could give the *Tarka* a status of *Pramā*. But the *Buddhists* and *Jainas* do not accept any difference between *Pramā* and *Pramāṇa*.

The above problem again brings forth another problem in turn. The difference between *Karāṇa* and *Karma* is also an established truth. But if we agree with the aforesaid definition of *Tarka* as given by the *Jaina* and the *Buddha* then this well-accepted distinction also cannot be maintained. As per the *Jaina* and *Buddha* view, *Karāṇa* merges into *Karma* and vice versa. If it is said that the cognition of *Vyapti* is equivalent to *Tarka* then there would arise a defect called *Karāṇa-Karma-Virodha* i.e a defect centering the contradiction between *Karāṇa* and object (*Karma*). Each and every *Kārika* has been accepted by the *Grammarians* to fulfil a specific purpose. The linguistic formation is made as per rule of the *Kārika*. In this way a grammatically incomplete sentence comes into being. An entity which is an agent can never be object at the same time. If some one tries to do it, it will lead to the said defect.

To substantiate the view that there is no difference between cognition and the instrument of the same, and between *Karāṇa* and

Karma the *Buddhists* resort to their famous theory called *Kṣanabhaṅgavāda*. The *Buddhist* theory of momentariness states that each and every thing changes moment to moment. The difference under consideration becomes plausible if and only if we admit that a thing at least at two moments remains unchanged . At the first moment the instrument or *Karaṇa* takes place and at the next moment cognition or *Karma* takes its birth. Following the theory of momentariness we can maintain that at the first moment there is no cognition or *Karma* when there is the instrument or *Karaṇa*, and again at the second moment there is no instrument or *Karaṇa* when there is cognition or *Karma*. That is to say, they are not co-existent . But without being co-existent how one can be caused by another ? Due to this reason the *Buddhists* hold that the cognition and the instrument to it , and *Karaṇa* and *Karma* are identical . So, it is found that as long as the *Buddhist* view of momentariness is concerned the concept of *Tarka* as maintained by the *Bouddha* school somehow be accepted. But the *Jaina* view of the same cannot be justified due to the lack of any proper ground.

But if we ponder over the problem we can find out some limitations even in the *Buddhist* view . In maintaining the distinction between valid (*avisamvādi*) and invalid (*visamvādi*) cognition the *Buddhists* resort to the idea of successful inclination (*pravṛtti – sāmārya*) . Say for example , one perceives water at a long distance. Now if he has to justify the validity of his perceptual knowledge under discussion then he has to go to that place where he sees water and has to test it by drinking . If drinking is possible and

allays thirst then the knowledge in question is proved to be true, but if it is otherwise then the same be proved as invalid. But it seems to us that here they forget their theory of momentariness . If the theory of momentariness is true then the test of the validity of knowledge through *Pravritti-sāmarthya* cannot be possible . The cognition and the test of the same can not be possible at the same moment of time . Cognition comes into being at one moment and the test of it is carried at another moment . Being agree with momentariness we can say that both of the cognition and the test of it cannot be simultaneously existent. So, if the *Buddhist* theory of momentariness is true then they cannot hold the distinction between valid and invalid knowledge through *Artha-Kriyā- Kāritva*. And again if they are to maintain the latter, they have to deny the former (the theory of momentariness) . They cannot maintain both of them as it would be self- contradictory. If the *Buddhists* maintain the distinction in question by rejecting their theory of momentariness, then they are pushed to go to the shade of the same umbrella of the *Naiyāyikas* that cognition and the instrument to the same are different. From this it also follows that the cognition of *Vyāpti* and *Tarka* , the instrument are not identical. This implies that the definition of *Tarka* of the *Buddhist* already mentioned cannot be accepted.

Though the *Buddhists* and the *Jainas* have not accepted the distinction between *pramā* and *pramāna*, the *Buddhists* view in this regard can some how be admitted, because they feel that an object is perceived for only one moment. Hence the object itself is *Svalaksana* (self-illuminated). A cognition originates at the same

moment when other factors like *prāmānya* etc. originate. Hence there is no meaning in distinguishing factor through which *prāmānya* can be distinguished from *pramāna*. An entity known after a moment is called *Sāmānyalaksana* which is generally taken as *anumāna*. The objects exist for a single moment is *śalaksana* but not *sāmānyalaksana*. Due to having such metaphysical presuppositions the philosophers change their views keeping these in mind. The *Buddhists* believe in the theories of *Kṣanabhangavāda*, no-soul etc. which actually preoccupied their mind when they suggest a definition. Why do the *Jaina* – philosophers accept the view? Because they do not possess exactly the same position of *Buddhists*. There is no point in believing *Kṣanabhangavāda*, no soul theory etc. Hence, *Buddhist's* logic cannot be applied here.

There is another paradox according to the *Buddhists*. Though to them each and every object is momentary which is the mark of being *sat* existent as per the famous dictum- '*Yat sat tat kṣanikam*', I do not think that this is logically a tenable position. A momentary entity is existent. Though this is a famous dictum, one can raise a question how the existence of an entity can be proved through momentariness? A moment is too minute that there is no way to test its existence. To know that something exists depends on its causal efficacy (*arthakriyākāritva*) which again creates a problem. It is also said that an entity is said to be existing if and only if it has got some causal efficacy (*arthakriyākāritvalakṣanam sat*). Is it possible to know the causal efficacy of an object in a single flush of moment? Obviously not. Because, if we want to test that our acquired

knowledge of water is real or not, we need a few moments to judge. When we come to conclusion that the acquired cognition is correct the object about which the judgement is passed is changed. Hence, it is not correct to say for the *Buddhists* that the cognition of *Vyāpti* attained through the method of agreement and difference is called *Vyāpti*.

Criticism of Tarka in Vaisesika System:-

Tarka of *Vaiśeṣika* is generally classified into two kinds *vicārātmaka Tarka* and *samsāyātmaka Tarka*. *Samsāyātmaka Tarka*, I think, is highly defective and therefore, cannot be accepted. Both Śivāditya and Mādhva Samaswati observe that either *Tarka* is included by doubt or it itself is doubt. But actually this is not the case. The principal function of *Tarka* as admitted by the majority is to remove the doubt and thereby paves the way of the other means of knowledge. So, the very fact that *Tarka* is the remover of doubt, clearly implies that it is neither included by doubt nor it itself is doubt. If *Tarka* were identical with doubt or included by doubt then it could not eliminate doubt, for doubt itself cannot remove doubt, as darkness itself cannot eliminate darkness. Therefore, by identifying *Tarka* with doubt, both Śivāditya and Mādhva Samaswati have not done justice to the concept.

But *Vicārātmaka Tarka* is free from the defect mentioned above and much more superior to *samsāyātmaka Tarka*. The form of this type of *Tarka* is more or less similar to that of the *Tarka* of *Naiyāyikas*. *Vicārātmaka Tarka* resembles to that of the *Naiyāyikas*

not only in form but also in purpose. Sridhar Bhatta maintains that through the application of *Tarka* the doubt raised by the opponent is ruled out and thereby the knowledge in question is established indirectly. The *Naiyāyikas* also observe the same.

But the *vicārātmaka Tarka* also is not absolutely free from all sorts of defects and limitations. Śridhar Bhatta holds that *Tarka* is applied to remove doubt in the field of metaphysics. So, the use of the *vicārātmaka Tarka* is confined only to metaphysical world . But the application of *Tarka* in the physical world also should not be undermined in any way and that fact can easily be understood through our day to day experience. For example, if the inferential knowledge of fire in the hill through the perceptual knowledge of smoke in it becomes the subject of doubt then that doubt can be eliminated by the application of *Tarka*. This has been already discussed following the line of the *Naiyāyikas*. Here *Tarka* is used to remove doubt in the physical world. So, *Vicārātmaka Tarka* suffers from the fallacy of undercoverage.

A controversy is seen between *Naiyāyikas* and Śridhar Bhatta regarding the nature of *Tarka*. The *Naiyāyikas* are of the opinion that *Tarka* should be considered as a promoter to the *pramana* whereas, Sridhar Bhatta observes that *Tarka* as advocated by the *Vaiśeṣika* should be regarded as a *pramāṇa*, but not as a promoter to a *pramāṇa*. Furthermore, the *Naiyāyikas* opine that *Tarka* is an invalid knowledge but Sridhar Bhatta, on the other hand, maintains that *Tarka* of *Vaiśeṣika* is a valid knowledge.

Śrīdhara Bhaṭṭa, in order to establish his own view, says that *Tarka* performs some sort of activity. It serves some purpose. *Tarka* is adopted by one to establish his own view by rejecting its contrary view raised by his opponent. Unless and until the contrary view is ruled out as an impossibility the own view of the subject concerned cannot be established. So, the establishment of one's own view necessarily presupposes the proof of the absurdity of the contrary view. It is *Tarka* through which the contrary view is proved as absurd. So, the principal function of *Tarka* is to prove the opponent's view as an impossibility. Śrīdhara holds that if *Tarka* were invalid, as maintained by the *Naiyāyikas*, then it would not serve the purpose mentioned.

But the argument produced by Śrīdhara Bhaṭṭa, in support of his own view, is not sound at all. Performance of some activity or satisfaction of some purpose is not defining mark of a valid knowledge. If it were so, then dream, illusory perception and even hallucination would have been valid knowledge as some sort of function or purpose is satisfied by them also. In an illusory perception, for example, one perceives a snake in the place of a rope and crosses it by jumping. So, here, illusory perception makes one jumping and thereby performs some sorts of activity.

Hallucination also may serve some sorts of activity by making one frightened. Let us suppose, one is crossing a grave yard at night in a dim light of the moon. Suddenly, he perceives someone as

standing at some distance. But just after an interval, at the next moment he finds no one as standing there. Naturally, he gets nervous thinking it as a ghost. So, here, the activity of making one nervous is served by hallucination.

The same is true in the case of dream also. As far as the explanation of dream given particularly by Sigmund. Frued and his followers is concerned our mind consists of Id , ego and super – ego. Id has a lot of desires to satisfy. But ego and super – ego stand against the satisfaction of some of them thinking of the prohibition imposed by our society. In dream, these unsatisfied desires of Id, become satisfied. So, our dream serves the satisfaction of some desires of our mind. So, on the basis of the above discussion it can be maintained that if owing to the performance of some activity or satisfaction of some purpose *Tarka* is regarded as valid cognition then illusory perception, hallucination and dream too should be considered as valid one. But Śrīdhar himself does not accept the validity of the latters as cognition. So, how can the validity of *Tarka* as knowledge be maintained ?

Tarka conforms to the definition of invalid cognition given by the *Naiyāyikas*. The definition of invalid cognition (*apramā*) given in TS stands : “ Non – veridical *anubhava* is a cognition which has for its determinans (*prakāra*) something , when its determinandum (*visēṣya*) is characterised by the absence of that something.” Let us suppose, someone is going to infer the existence of fire in the hill on the perception of smoke in it. Here if one doubts

the existence of fire in the hill in spite of the perception of smoke in it, then the inferer concerned resorts to *Tarka* in the following way, to establish his own view proving his opponents' view as an impossibility. "If there were no fire, then, there would be no smoke". Here *Tarka* has for its determinans (*prakāra*), absence of smoke, but its determinandum (*visésya*) is actually characterised by the absence of the absence of smoke. That is why, the *Naiyāyikas* regard *Tarka* as an invalid cognition. And as far as our discussion is concerned the observation of the *Naiyāyikas* is correct.

The view of Sridhar Bhatta that *Tarka* is an independent *pramāna*, but is not a promoter to a *pramāna* as the *Naiyāyikas* hold, cannot be accepted. *Tarka* should not justifiably be considered as a *pramāna* for the following two reasons:-

First, a *pramāna* must have a direct bearing upon the ascertainment of truth. The main characteristic features of the object of knowledge are deliberated through *pramāna*. But *Tarka* has no any direct bearing, rather it has an indirect bearing upon the determination of truth. *Tarka* by pointing out some real grounds asserts one of the alternatives, but it does not point out this alternative definitely as having such and such characteristics. In other words, *Tarka* does not definitely assert a particular alternative, in the form, 'This object is of such nature'. So, the main characteristic features of the object are not deliberated through the method of *Tarka*. The real nature of an object be known only through the relevant cognitive instrument like perception, inference etc.

Second, *pramāṇa* is adopted to ascertain the knowledge of an object, whereas, *Tarka* is applied to eliminate doubt which acts as an impediment to the attainment of knowledge. *Pramāṇa* is applied independently to other *pramāṇas*. But the application of *Tarka* is not independent of other *pramāṇas*. Say for example, to know the colour of the flower in my garden I have to resort to perception. Here application of other *pramāṇas* before hand is not essential. That is to say, the application of a *pramāṇa* does not necessarily pre-suppose the application of other *pramāṇas*. The application of one *pramāṇa* may be preceded by that of another *pramāṇa*. Say for example, I can infer the existence of fire in the hill on the perception of smoke in it. But to be sure of it I may go to the hill and have a perception. Here inferential knowledge is confirmed by perceptual one. Prior application of one *pramāṇa* of the other is desirable but not essential. But *Tarka* is adopted only when some independent means of knowledge is applied before hand. In other words, the application of *Tarka* necessarily pre-supposes the application of other *pramāṇas*. If some means of knowledge is already applied but it cannot operate its proper function due to the imposition of doubt only then *Tarka* is resorted to in order to eliminate the doubt in question. These are the above two reasons because of which *Tarka* cannot be regarded as a means of knowledge.

But though *Tarka* does not directly issue any knowledge , it becomes an auxiliary factor in issuing it ; just by eliminating the doubt, the impediment on the way of the ascertainment of knowledge.

So, the *Naiyāyikas* are quite justified in their observation that *Tarka* is not a *pramāṇa* but a promoter to a *pramāṇa*.

Criticism of Tarka in Samkhya system:

A little consideration will reveal the fact that though *Tarka* has been admitted both by the *Śāṅkhya* and the *Nyāya* yet both of them cannot demand for the same credit. *Nyāya Tarka* is much more superior to and sophisticated than *Śāṅkhya*.

The application of *Tarka* in *Śāṅkhya* system is limited only to the vedic world. But they should keep in their mind that the vedic world is not the only world. Over and above we have another world of our day to day life the importance of which cannot be ignored in any way. And very often we are to confront with various types of burning controversy on different issues of our practical life, a great number of them can easily be solved taking recourse to *Tarka* which is beautifully shown by the *Naiyāyikas*. So, no doubt, the *Tarka* conceived by the *Śāṅkhya* is vitiated by the fallacy of one – sidedness.

Besides this , *Tarka* of *Nyāya* system is more sophisticated than that of *Śāṅkhya*. *Tarka* , particularly admitted by the *Navya Nyāya* is highly logical, consistent and coherent.

Criticism of Tarka in Mimamsa system:

Tarka as forwarded and conceived by Kumāril Bhaṭṭa more or less becomes the subject of one and the same charges which have been raised just above against the concept of *Tarka* as accepted in *Sāṃkhya*. For this *Tarka* also is applicable only to the vedic world or the world of *dharma* and therefore vitiated by the fallacy of onesidedness. Moreover, the logical excellence of this *Tarka* cannot be compared with that of the *Tarka* of *Naiyāyikas*.

But these two charges can not justifiably be applied in the case of Nārāyana Bhaṭṭa. His *Tarka* overcomes the limitation which is found in the *Tarka* of Kumānila Bhaṭṭa. This *Tarka* can be applied not only in the field of *dharma* but also in the field of our day to day life. Besides, the very purpose for which *Tarka* is employed by Nārāyana, is more or less one and the same with the purpose due to which *Tarka* is accepted and applied by the *Naiyāyikas*. Nārāyana Bhaṭṭa like the *Naiyāyikas* describes *Tarka* as *anistāprasanga*, limit of the doubt etc. The *Tarka* conceived by Nārāyana Bhaṭṭa is also logical and consistent like that of *Naiyāyikas* to some extent.

Criticism of the Advaita and Viśiṣṭādvaita view of Tarka :-

In dealing with the *Tarka* as conceived and discussed by *Advaita* and *Viśiṣṭādvaita Vedānta* in the previous chapter we have

seen that *Advaita Vedāntins* consider *Tarka* as a promoter to a *pramāṇa* of vedic testimony . Whereas, the *Vishishtādvaitins* regard *Tarka* as a separate and independent *pramāṇa*. So, the *Advaitins* agree with the *Naiyāyikas* as far as they maintain that *Tarka* plays the role of a promoter to a *pramāṇa*. But they disagree with the same as long as they hold that *Tarka* acts as a promoter to a *pramāṇa* only to the Vedic testimony. Here the *Advaitins* face one and the same objection which was raised earlier against the *Sāṃkhya* and Kumārila Bhatta that *Tarka* as conceived by them is vitiated by the fallacy of one sidedness as they hold that the use of *Tarka* is limited only to the Vedic world. We have already seen in the previous chapter particularly in dealing with the concept of *Tarka* of the older *Naiyāyikas* that *Tarka* is applied as a promoter not only to the Vedic testimony but to the other *pramāṇas* as well.

In criticising the *Viśiṣṭādvaita* view of *Tarka* it can be maintained that both the *Jaina* and *Viśiṣṭādvaita Vedānta* more or less become the subject of one and the same charge already mentioned in the criticism of *Jaina* view of *Tarka*, as both of them observe that *Tarka* should be considered as a separate and independent means of knowledge. We need not discuss the same thing to avoid repetitions.

Criticism of Tarka in Mādhva's school :-

As long as the observations of Jayatīrtha, as found in his works *Pramāṇapaddhati* and *Nyāyasudhā* and of his commentator, Janārdana Bhatta from the view point of *Mādhva's* school are

concerned it is seen that they vehemently criticise the status of *Tarka* as an auxiliary factor to the instrument of knowledge as given and stated by the *Naiyāyikas*. They hold that *Tarka* or reasoning should be considered as an independent and separate means of knowledge for it fulfils all the necessary as well as sufficient conditions for being so. So, as *Tarka* itself is an independent means of knowledge, it cannot justifiably be taken as an auxiliary factor to it as the *Naiyāyikas* hold. They maintain that the form of reasoning exactly tallies with that of inference. The ground of reasoning which is hypothetically assumed and the conclusion of it stands for the probans and the probandum of inference respectively. Besides, necessary concomitance is the foundation and nerve centre for both of the inference and reasoning. That is why, they regard reasoning as a species of inference. Being a species of inference *Tarka* like inference is a separate and independent instrument of knowledge, but is not a helping condition to it.

No doubt, the arguments produced by Jayatīrtha and Janardana Bhatta to substantiate their own view by negating the view of *Naiyāyikas* are apparently seemed to be excellent and sound. But I think that if we ponder over them then it can be understood that actually they are not as excellent and sound as they appear to be. Weakness and falsity of those arguments will reveal to us if they are considered in the light of the definition, characteristics and the test of a proper instrument of knowledge as suggested and stated by *Naiyāyikas*. One of the vital questions the theory of knowledge deals with is how the validity of *pramāna* be established? The *Niyāyikas*

say in reply that it is inference through which the validity of *pramāṇa* be established. The inference is as follows :-

Pramāṇam arthavat, Pravrttisāmarthyāt :-

That is, *pramāṇa* is invariably connected with the object it indicates, since it gives rise to successful activity. And by 'Pramāṇa which is invariably connected with the object it indicates' it means that an object as well as its nature as indicated by the *pramāṇa* are really so and never otherwise. A pseudo -*pramāṇa* or instrument of knowledge cannot be invariably related to the object it indicates. So, the object and its nature as indicated by a pseudo-*pramāṇa* is not really so. The validity of the instrument of knowledge is the inference of the invariable relationship between instrument and the object it indicates. The probans of this inference is *pravrttisāmarthya* which means the capability of producing successful activity. *Pramāṇa* produces successful activity for it is invariably related to the object it indicates, whereas, a pseudo-*pramāṇa* does not do so, as it is not invariably related to the object it indicates. Say for example, the pseudo perception of water in mirage cannot lead to the quenching of the thirst but a genuine perception of water leads to the same. Now if the validity of *Tarka* or reasoning as *pramāṇa* is tested in terms of the inference mentioned then it can easily be understood that *Tarka* cannot be regarded as *pramāṇa* proper. It is not *pramāṇa* for it is not invariably connected with the object it indicates. That is to say, object as well as its nature as indicated by *Tarka* are different from what they actually are. And owing to that reason *Tarka* cannot lead to a

successful activity. This can be illustrated by citing an example to get a clear conception that *Tarka* cannot properly be considered as *pramāṇa* since it does not fulfil all the necessary and sufficient conditions for being a *pramāṇa* as it is held by Jayatīrtha and Janārdana. "If there were smoke in the lake then there would be fire too" – is a form of *Tarka*. Here, the object indicated by *Tarka* is the presence of fire in the lake. But, in fact, there is no fire in the lake. So, *Tarka* is not invariably connected with the object it indicates and thereby it cannot lead to a successful activity. As far as our foregoing discussion is concerned it is evident that the necessary condition for being a *pramāṇa* is not satisfied by *Tarka* as long as it is not invariably connected with the object it indicates. That is why *Tarka* or reasoning cannot be properly taken as *pramāṇa*. So, the view of Jayatīrtha and Janārdana cannot be accepted.

Here a number of objections raised by the *Naiyāyikas* against the view of Jayatīrtha and the defences from the part of him be noted down and ultimately my personal reflection against these defences of Jayatīrtha be recorded.

First, to my mind, the view of Jayatīrtha and Janārdana that *Tarka* is a species of *anumāṇa* falls from its ground if it is considered from the point of view of the very meaning of the term '*anumāṇa*'. The term '*anumāṇa*' consists of two different terms '*anu*' and '*māṇa*'. '*Anu*' means latter and '*māṇa*' means knowledge. So, the etymological meaning of the whole term '*anumāṇa*' is the knowledge that follows some other knowledge. In other words, *anumāṇa* is a kind of

knowledge that comes depending upon some other knowledge. So, it is an indirect knowledge. But the knowledge depending upon which *anumāna*, the indirect knowledge comes into being, must be direct one. And being direct it necessarily be perceptual knowledge, since perceptual knowledge is the only direct knowledge as particularly the *Navya-Naiyāyikas* maintain. Let us explain this by citing an example. Let us suppose one perceives smoke arising from hill and infers that there is fire in it. Here the knowledge one ascertains through inference is the knowledge of the existence of fire in the hill. And this knowledge is based upon the perceptual knowledge of smoke in the hill accompanied by the knowledge of necessary concomitance between smoke and fire. If one does not perceive smoke in the hill and does not know that where there is smoke there necessarily be fire then the very question of one's inferring the existence of fire in the hill does not arise at all. So, the perceptual knowledge is a necessary pre-requirement for the inferential knowledge. Now keeping this in view, let us examine whether *Tarka* satisfies this necessary precondition for being an inference. In the case of *Tarka* also it is seen that the knowledge established through it necessarily follows some other knowledge i.e. the knowledge of the ground alongwith the knowledge of the necessary concomitance between the ground and the consequent. But it is worthy to note that the knowledge of the ground is not a perceptual one like that of inference. Rather it is just an assumption. So, *Tarka* cannot fulfil the said necessary pre-requirement of having the perceptual knowledge as its ground which is the case with inference. Moreover, unlike inference reasoning or *Tarka* negates its conclusion what is perceptual depending upon the

assumption in its ground. In inference, indirect knowledge is established on the ground of the direct knowledge. whereas , in *Tarka* direct knowledge is negated on the basis of indirect knowledge or assumption . Now let us explain this point with the help of an example. Let us suppose that A infers the existence of fire in the hill on the basis of his perceptual knowledge of smoke in it. Let us again suppose that 'B' inspite of entertaining 'A's perceptual knowledge of smoke in the hill. does not accept his inferential knowledge of fire in it (hill). Now to stand his own view and to negate his opponent's i.e. 'B' s view 'A' resorts to *Tarka* in the following way :- 'If there were no fire in the hill, then there cannot be smoke in it.' Here this *Tarka* can be divided into two parts – ' If there were no fire in the hill' and 'then there can not be smoke in it.' The first part is called *āpādaka* or ground and the second part is known as *āpādya* or conclusion. Here in this *Tarka* , like in inference, conclusion or *āpādya*, i.e. the absence of smoke is deduced on the basis of the ground or *āpādaka*. i.e, the absence of fire accompanied by the knowledge of the necessary and universal concomitance between the ground (*āpādaka*) and the conclusion (*āpādya*). But here the knowledge of the ground, i.e, the knowledge of the absence of fire is not perceptual like inference rather it is an assumption. In *Tarka* depending upon the assumption, i.e. the absence of fire in its ground the direct or perceptual knowledge of smoke in its conclusion is negated.

Secondly, Jayatīrtha and Janārdana can be charged from the view point of another special characteristics of Indian Logic called *Pakṣadharmatā* i.e. the presence of probans in the subject. This

characteristic is not satisfied by *Tarka* as the ground of it which stands for the probans of inference is not present in the subject. In the example already cited the smoke is not present in the lake. So, *Tarka* cannot be considered as a case of *anumāna*. But here Jayatīrtha observes that this characteristic is not a necessary condition for an *anumāna*. He further maintains that what is necessary is the belief in the presence of probans in the subject. And this condition is fulfilled by *Tarka* as far as the opponent is concerned, since he believes in the presence of the ground in the subject. Say for example, the opponent believes in the presence of smoke in the lake. So, according to Jayatīrtha, all the necessary conditions of inference are fulfilled by *Tarka* and that is why it is a species of inference.

Thirdly, The *Naiyāyikas* observe that a charge of a fallacy of contradicted probans (*bādha*) be advanced against the inferential status of *Tarka* as maintained by Jayatīrtha as the probandum which is necessarily deduced in *Tarka*, does not actually belong to the subject. Say for example, in the case of *Tarka* " If there were smoke in the lake then there would be fire too" both the probans, namely, the presence of smoke and the probandum, namely, the presence of fire, do not exist in the subject, lake. The *Naiyāyikas* further hold that another objection called the fallacy of the admission of a contrary conclusion (*apasiaddhānta*) be raised against the view of Jayatīrtha, since, the arguer concerned infer an unreal probandum in opposition to his previous commitment regarding the absence of the probandum.

Jayatīrtha replies to the aforesaid objections by maintaining that the charges of contradiction be applied only in the case of inference where the person in question intends to establish the conclusion independently. But in the case of *Tarka* the arguer does not like to establish the conclusion independently, rather he seeks to establish the same on the ground of the admission of the opponent. The arguer, in *Tarka*, demonstrates only the logical connection between the ground and the consequent. In other words, the arguer likes to imply that the admission of the ground necessarily entails the admission of the consequent, but he does not like to imply that the ground and the consequent are actual historical truth. Thus Jayatīrtha shows that the charges of contradicted reason and contradiction of the accepted position do not hold good in the case of *Tarka*.

Fourthly, the *Naiyāyikas* argue that in the case of *Tarka* the necessary concomitance between the probans and the probandum is not real, since the probans, namely, the presence of smoke and the probandum, namely, the presence of fire do not co-present in the subject, lake. And this falsity of the necessary concomitance invalidates the claim of Jayatīrtha that *Tarka* is a case of inference. But Jayatīrtha, from the view point of *Mādhvās*, replies to the objection by saying that the said objection is nothing but a result of misconception of necessary concomitance. He observes with the *Mādhvas* and the *Jainas* that necessary concomitance between the probans and the probandum is not necessarily one of co-existence in the same substratum. Necessary and universal concomitance be established where the one term cannot be conceived to be possible

without the presence of the other. Spatio-temporal co-presence is not a necessary factor of universal concomitance. Besides this, the the *Mādhvas* and the *Jainas* hold that the objective concomitance between the ground and the consequent is not a necessary requirement in *Reductio-ad-absurdum* called *Tarka*.

Fifthly, another vital objection has been shown by the *Naiyāyikas* against the inferential status of *Tarka*. The conditions of inference proper and that of *Tarka* are basically different and this difference, in turn, brings a fundamental difference in the character of the result. Accredited inference entails categorical assertions and the probans of it is admitted to be materially true by both the parties, the opponent and the proponent, whereas, *Tarka* consists of a hypothetical minor premise and the probans affirmed of the subject is materially false. This difference gives birth to another material difference in the result. In the inference proper the result is a true conclusion, but in the case of *Tarka* the conclusion is a false issue. But, in response to this objection Jayatīrtha maintains that though the difference in conditions appears to be fundamental but actually this is not the case. The fundamental conditions of both of the categorical inference and the hypothetical inference called *Tarka* are one and the same. So, the aforesaid difference of conditions actually is nothing but a negligible one. And this negligible difference in conditions does not entail a fundamental difference in the character of the result.

But as far as my personal observation is concerned the aforesaid five defences of Jayatīrtha against the five objections mentioned above

are not actually sound and firm footed as they appear to be. One of the fundamental differences between the Western and the Indian logic lies in the fact that while the former aims at satisfying only the formal condition, the latter aims at satisfying both the formal and material ones. In so far as an inference follows all the rules prescribed for it, the inference is said to have fulfilled its formal condition, whereas, as long as the premise or premises and the conclusion correspond to the fact an inference is said to have satisfied its material condition. Now keeping this point in view it can be maintained that *Tarka* can not be regarded as a case of inference for even if it satisfies the formal condition, it can never meet the material one as neither the ground nor the consequent of it which are taken to stand for probans and probandum or conclusion of inference respectively correspond to the fact. In the case of the example mentioned above neither smoke nor even fire is seen to exist in the lake. Thus Jayatirtha's defences are proved to be groundless.

Even if *Tarka* is judged from the view point of the defining characteristics of knowledge as suggested and stated by the Western philosophers, *Tarka* cannot be taken as a case of knowledge in the true sense of the term. Even if we put aside the fourth condition of knowledge as suggested by E.L. Gettier knowledge be defined as justified true belief. As far as this definition is concerned the following three conditions are the necessary and sufficient conditions for knowledge :-

(1) Belief condition, (2) Truth condition and (3) Justification condition. More clearly to say, if one claims to know a proposition called *p*, then his claim be valid if and only if firstly he believes that *p* is true, secondly, *p* is really true and thirdly, he is justified in his belief that *p* is true. Now let us examine whether *Tarka* fulfils these three necessary and sufficient conditions of knowledge. The *Mādhvas* and the *Jainas* maintain that *Tarka* is a case of knowledge proper and it subsumed under inference. The ground and the consequent in *Tarka* stand for the probans and the probandum respectively in inference. Inference aims at providing the knowledge of the probandum on the basis of the knowledge of the probans accompanied by the knowledge of the necessary concomitance between the probans and the probandum. Likewise, *Tarka* demonstrates the knowledge of the consequent on the basis of the knowledge of the ground accompanied by the knowledge of the necessary concomitance between the ground and the consequent. Keeping this similarity in view Jayatīrtha also observe that *Tarka* is a case of knowledge and a sub-species of inference. But only keeping this aforesaid similarity in view it should not be justified to identify one with another. If we ponder over the problem we see that inference and *Tarka* differ, one from another, to a great extent. Inference satisfies all the necessary and sufficient conditions of knowledge mentioned, whereas *Tarka* does not fulfil the same. This can be illustrated clearly by citing a concrete example. Let us suppose, 'A' infers the existence of fire in the hill on the basis of his perception of smoke in it. Here in this inference first he believes in the existence of fire in the hill, secondly his belief is true since fire really exists in the hill and thirdly his belief is

justified by virtue of his perceptual (perception of smoke) and rational (necessary concomitance between smoke and fire) evidence. Inference is a case of knowledge proper, for it fulfils these three conditions. But *Tarka* does not meet these conditions. Let us suppose that 'B' also perceives smoke in the hill but yet he raises objection against the inference of the existence of fire in it. Now 'A' resorts to *Tarka* in order to negate the position of 'B' in the way : " If there were no fire then there cannot be smoke." Here in this *Tarka* absence of fire is the ground or probans and absence of smoke is the consequent or probandum. Let us suppose P stands for the consequent or probandum. Here, neither the opponent 'B' nor even the arguer 'A' believes in P. Secondly, P is not true , for actually hill is qualified not by the absence of smoke but by the presence of smoke. Thirdly, since none of 'A' and 'B' believes in P the very question of the justification of their belief is absolutely absurd . So, as far as *Tarka* is concerned, it is seen that the necessary and sufficient conditions of knowledge as prescribed and stated by the Western philosophers are not satisfied. Thus it is proved once again that *Tarka* is not a case of knowledge proper, and therefore, Jayatirtha's defences mentioned are in vain.

Jayatirtha maintains that inferences can be brought under two heads – categorical and hypothetical called *Tarka* . These two types of inference differ in their conditions. In the case of categorical inference all the factors of it must be accepted to be true by both of the parties , the opponent and the proponent . If difference of opinion is seen between the opponent and the proponent regarding the

validity either of the probans or of the necessary concomitance or the universal proposition or of both, then inference is brought to a standstill, and it can be set in motion only by keeping aside the differences. But this is not true in the case of *Tarka*. In this inference the apparatus be accepted to be true by the opponent and not by the arguer. The defect of categorical inference is not the defect of hypothetical inference called *Tarka*. Rather the defect of the categorical inference is the condition of *Tarka*. The falsity of the minor term and of the probans, for example, is the defect in categorical inference but these are not only not defects in *Tarka* but rather are the conditions of it. The arguer is quite conscious of the falsity of the probans, namely, the absence of fire, yet he assumes the probans, for bringing out the absurd consequent or probandum, namely, the absence of smoke. But as far as the observation of Jayatīrtha regarding the conditions of *Tarka* goes we fully agree with him. We also go hand in hand with Jayatīrtha in maintaining that the belief in the presence of the probans in the subject from the part of the opponent and disbelief of the same from the part of the proponent is the very condition of *Tarka*. If both of the opponent and the proponent would believe the same then the very question of the application of *Tarka* does not arise at all. We only disagree with Jayatīrtha when he maintains that *Tarka* is a case of knowledge proper and subsumed under inference. He holds the *Tarka* is a case of a special type of inference. But even if it is a special type of inference it is not a special type of knowledge of course. It may be a different species of the same genus called knowledge. But it is already shown that *Tarka* is not a case of knowledge. So, its being a subspecies of knowledge is

absurd. And since *Tarka* is not a subspecies of knowledge, it cannot also be subcategory of inference.

In the strongest and most important defence against the charge of material invalidity of *Tarka* as an inference, a vital defect in Indian logic, Jayatīrtha maintains that a misconception regarding the component parts of *Tarka* gives birth to this charge. Jayatīrtha observes that in fact *Tarka* has two conclusions side by side, of which one is false and the other is negative. The false conclusion remains in the explicit form but the negative conclusion lies in implicit form. So, two conclusions are implied by *Tarka* at the same time. But they are implied not in the same way. The false conclusion is implied directly but the negative conclusion, on the contrary, is implied indirectly. As the negative conclusion remains in the implicit form it is generally overlooked by us and we tentatively think that reasoning like categorical inference has only one conclusion. Thus we wrongly take only the one half which is, in fact, incomplete for the whole and complete. If we look into the full formed reasoning or *Tarka* then we can see that only the minor premise is materially false. But both the major premise and conclusion do correspond to the fact and therefore materially true. This can clearly be illustrated in the following way. "If there were no fire in the hill then there can not be smoke. But as a matter of fact there is smoke in the hill. So, there is also fire in it". For the sake of better understanding we can divide this full formed *Tarka* into two halves. "If there were no fire in the hill then there can not be smoke" and "As a matter of fact there is smoke in the hill. So, there is also fire in it". The first part of *Tarka* does not correspond to the fact

but the second part of it corresponds to the fact. So, *Tarka* does not satisfy the material condition of inference as long as the first half of it is concerned but it meets the same as far as the second half of it is concerned. So, if *Tarka* is seen in its full form then it would be evident that the aforesaid objection of material invalidity is fully out of place in the case of *Tarka*.

But as far as my observation is concerned, I think that Jayatirtha here commits a blunder of taking two different instruments of knowledge for one. Actually, the instance of the full formed *Tarka* already cited is nothing but the combination of two different means of knowledge, one invalid and another valid. Each and every half mentioned above makes a separate instrument of knowledge. The first part "if there were no fire in the hill then there cannot be smoke" is called *Tarka*. This is an instrument of invalid knowledge. And why this instrument is regarded as a means of invalid knowledge has already been dealt with in the first chapter. Now let us examine why the second half mentioned above is considered as a separate instrument of knowledge. The second half "As a matter of fact there is smoke in the hill. So, there is also fire in it", is an instrument of knowledge called inference. It is an inference for it satisfies all the necessary and sufficient conditions of an inference. In this example, hill, smoke and fire are the subject, the probans and the probandum respectively. Through this instrument the knowledge of the probandum, namely, the presence of fire is operated on the basis of the perceptual knowledge of the probans, namely, the presence of smoke coupled with the knowledge

between the probans and the probandum. And this knowledge of the probandum, that is the knowledge of the presence of fire in the hill is valid as per as the defining marks of valid cognition as suggested and stated by both of the Indian and the Western philosophers are concerned. Besides, the explanation given by Jayatīrtha itself substantiates my own position and falsifies the position of Jayatīrtha himself. Jayatīrtha holds that *Tarka* has two conclusions, one is false and the other is negative. But how can one and the same inference possess as the two conclusions at the same time? It is quite plausible to maintain that one argument possesses only one conclusion. So, the statement that *Tarka* in its full-form has two conclusions- implies clearly that it is nothing but the combination of the two different instruments of knowledge. Jayatīrtha himself fails to understand the actual implication of his own statement. And his defence mentioned above is the result of his misunderstanding just said. Thus it is shown that the full formed *Tarka* as stated by Jayatīrtha is nothing but a combination of the two separate instruments of knowledge, invalid and valid. So, *Tarka* as stated above never satisfies the material condition of inference as it is maintained by Jayatīrtha.

But two points are important to note here. First, the two instruments mentioned are closely connected and secondly, the term 'instrument' has been used in the two cases in two different senses. Let us first explain the second one. The term 'instrument' has been used in the case of inference in question in the sense of accredited means of valid knowledge, whereas, the same has been used in the

case of *Tarka* in the sense of an auxiliary factor to an accredited means of valid cognition. Now let us turn to the illustration of the first point. The aforesaid inference here does not and cannot operate its function due to some impediment, called doubt, imposed by the opponent. In this situation the arguer resorts to *Tarka* to eliminate the impediment. And how *Tarka* helps in eliminating the impediment and thereby become an auxiliary factor (promoter) to an accredited organ of knowledge has already been discussed. So, we need not deal with the same to avoid repetition.

Tarka as elucidated in the Nyāyasudhā by Jayatīrtha:-

Nyāyasudhā, an authoritative standard work, is a commentary written by Jayatīrtha on Mādhavācārya's *bhāṣya* on the *Brahmasūtra*. In his comment on the *Brahmasūtra* iii, ii, i, Jayatīrtha has discussed in details on *Tarka* and has given the views of the writers of the *Nyāya* school beginning with the author of the *Nyāyasūtra* and coming down to Udayanācārya.¹ It should be noted that the observation by Jayatīrtha regarding the status of *Tarka* as recorded in the *Pramāṇapaddhati* has already been dealt with. But *Pramāṇapaddhati* is not a primary source. It is a secondary source based on *Nyāyasudhā*, the original source. The *Pramāṇapaddhati* is just a succinct summary of the *Nyāyasudhā*. So, to give a clear picture of the account of Jayatīrtha's observation on *Tarka*, it is highly essential to go to the primary source in the *Nyāyasudhā* even at the risk of some amount of reduplication.

Jayatīrtha holds that a debater whether in the role of a proponent or an opponent is primarily concerned with a two fold task of establishing his own position, and negating the thesis of the other party.² In the case of the former one, that is to establish one's own position, all the factors of syllogistic reasoning, namely the subject, the probans, necessary concomitance and the example cited by one must be acceptable to both the parties.³ For example, in the syllogism "The hill is possessed of fire, because it is possessed of smoke. All that is possessed of smoke is possessed of fire, as for example, the kitchen." The hill as the subject, smoke as the probans, the universal proposition and the kitchen as the example, are accepted by both the parties.

The inference employed to accomplish the second objective, that is to refute the thesis of other party, may be of assuming two forms : (1) this is not possible, (2) the admission of it leads to an undesirable consequence. In the case of the first type of inference, all the factors of it (inference) must be acceptable to both the parties, like the inference used to establish one's own position, as shown in the preceding paragraph .⁴ A concrete example may be cited. Kumāṛila Bhaṭṭa observes that word is a substance but the *Vaiśeṣika* holds that it is a quality. The *Vaiśeṣika* maintains that the observation of Kumāṛila is unacceptable and in support the following syllogism is advanced : "Word is not substance, since it is perceptible by the organ of hearing. All that is so perceptible is not a substance, just as the universal is"⁵. In this inference the probans is accepted to be true by both the parties. The same is true in the case of the necessary

concomitance held between the probans and the probandum. If any difference of opinion is seen regarding the validity either of the probans or of the necessary concomitance or the universal proposition, or of both, then inference is brought to a standstill, and it can be set in motion only by pushing away the difference. Jayatīrtha holds that these two types of argument mentioned, where unanimous apparatus is essential, are categorical inference.

But the condition of the second type of inference, the admission of which leads to an undesirable consequence, is purely different from that of the former two already shown. In this inference the apparatus, namely, the probans and the universal proposition be accepted by the opponent and not by the proponent. This type of inference is called reasoning and assumes the form of a hypothetical proposition ⁶. The example of this type of inference is the following : “ If the hill were devoid of fire, it would be devoid of smoke.” This argument consists of two parts. The first part states the ground or the probans and the second part states the consequence or the probandum. Here, in this argument ‘the absence of fire’ is the probans or the ground and ‘the absence of smoke’ is the probandum or the consequent. In this argument the probans i.e. absence of fire is accepted only by the opponent and it is assumed by the arguer. If it were not so, the hypothetical inference would not act as *reductio-ad-absurdum*. Another condition of this inference is that the universal concomitance between the ground and the consequent need not also be objectively true. What is necessary is that it is accepted to be true by the opponent. Jayatīrtha defines *Tarka* in the following way : The

type of inference, in which the major premise and the minor premise are necessarily accepted to be true by the opponent and only assumed by the arguer for bringing out an absurd consequence, which necessarily follows from the assumed ground, is called reasoning or *Tarka*.⁷ According to Jayatīrtha, the defect of categorical inference is not the defect of hypothetical inference called *Tarka*. Rather the defect of the former is the condition of the latter. Say for example, the falsity of the subject or minor term and of the probans which are considered as a real defect in categorical inference, is not only not a defect in *Tarka* but rather is the condition of it. The arguer is quite conscious of the falsity of the probans, namely, the absence of fire. Yet he assumes the probans, for bringing out the absurd consequence or probandum, namely, the absence of smoke.

The *Mādhvas* and the *Jainas* beautifully meet another objection raised by the *Naiyāyikas* against their view that *Tarka* is an accredited type of inference. The *Naiyāyikas* argue that the necessary concomitance held between the probans and the probandum is not real, since the probans, namely, the absence of fire, and the probandum, namely, the absence of smoke, do not co-present in the subject i.e. in the hill. Thus, the falsity of the necessary concomitance invalidates the claim of the *Mādhvas* and the *Jainas* that *Tarka* is an inference. But in reply to this objection, the *Mādhvas* and the *Jainas* maintain that necessary concomitance between the probans and the probandum is not necessarily one of co-existence in the same substratum.

Necessary and universal concomitance can be established where the one term cannot be conceived to be possible without the presence of the other.⁸ Spatial or temporal co-presence is not a necessary factor of universal concomitance. A concrete example may be cited. Perceiving the flood in the lower region of the river we infer a heavy rainfall in the upper region of it. No doubt, there is a necessary and universal concomitance between a heavy rainfall in the upper region and the occurrence of the flood in the lower region, but still, there is neither temporal nor spatial co-presence between them.⁹ Besides this, the *Mādhvas* and *Jainas* argue that the objective concomitance between the ground or probans and the consequent or probandum is not a necessary requirement in *reductio-ad-absurdum* called *Tarka*.

One of the fundamental objections put forth by the *Naiyāyikas* against the claim of *Tarka* to the status of inference is that, the conditions of inference proper and that of *Tarka* are basically different which, in turn, brings a fundamental difference in the character of the result. Accredited inferences consist of categorical assertions and the probans is admitted to be materially true by both the parties, the opponent and the proponent, whereas, *Tarka* consists of a hypothetical minor premise and the probans affirmed of the subject is materially false. This is what is about the difference of the conditions of inference proper and that of *Tarka*. This difference gives birth to another material difference in the result. In inference, the result is a true conclusion, but in *Tarka*, the conclusion is a false issue. But

Jayatīrtha meets this objection by saying that this difference in conditions is not vital at all. He holds that the fundamental conditions of both of the categorical and hypothetical inference called *Tarka* are one and the same. So, the negligible difference of conditions does not entail a fundamental difference in the character of the result. To substantiate his own view a nice explanation has been given by Jayatīrtha. Jayatīrtha maintains that three types of inference have been accepted to be valid by the *Naiyāyikas*, namely, exclusively affirmative (*Kevalānvayi*), exclusively negative (*Kevalavyātirekī*) and affirmative cum negative (*anvayi-vyātirekī*). But the conditions of all the three types of inference are not one and the same. The conditions vary from inference to inference. Say for example, the following five characteristics are regarded as the essential conditions of the affirmative cum negative inference, viz., (1) Presence of the Probans in the subject (*Pakṣattva*), (2) Presence of the probans in the homologue, (*Sapakṣattva*), (3) Absence of the same in the heterologue (*Vipakṣattva*), (4) Immunity from opposition by a countermanding probans (*asatpratipakṣattva*), and (5) Immunity from contradiction (*abādhitva*). Exclusively affirmative inference is never seen to possess the heterologue, while, exclusively negative inference is not found to entail homologue. So, the third and the second characteristics are absent from the exclusively affirmative and exclusively negative inference respectively¹⁰. Here it can be maintained that as these two inferences do not possess all the five characteristics mentioned they are not inference proper¹¹.

But to defend themselves the *Naiyāyikas* may argue that the said two lacking characteristics are not necessary conditions, they are nothing but contingent ones. Exclusively affirmative and exclusively negative inference do not differ from the affirmative cum negative one as far as the fundamental characteristics are concerned. The fundamental conditions consist of the minor premise and the major premise, in other words, the presence of the probans in the subject and the necessary concomitance of the probans with the probandum. The five characteristics listed above are only systematic of the necessary concomitance between the probans and the probandum. So, the lack of one or other characteristic does not disqualify a probans, provided its necessary concomitance with the probandum is certified.

But in answer to the defence of the *Naiyāyikas* Jayatīrtha maintains that the defence of the *Naiyāyikas* is no doubt excellent but unfortunately they have failed to gauge the relative value and cogency of the conditions asserted by them. Jayatīrtha observes that logical necessity is not a matter of empirical fact as long as the deduction of the conclusion is concerned, whereas, presence in the subject is only a matter of the empirical truth. So, the presence in the subject has nothing to do with the logical necessity which lies in the necessary concomitance of the probans with the probandum. The minor premise aims at establishing the actual incidence of the probandum in the conclusion on the basis of the incidence of the probans. The deduction of the probandum is made possible by the necessary concomitance but not by the minor premise. So, the

necessary concomitance alone is the sufficient guarantee and warranty of the validity of inference and the presence of the probans in the subject is nothing but an irrelevant accident as the presence in the homologue and the absence in the heterologue are. Jayatīrtha holds that this necessary concomitance, the only necessary condition of an accredited type of inference is equally operative in (1) *Tarka* or reasoning, (2) Categorical inference for disproof (*duṣaṅānumāna*) and (4) implication (*arthāpatti*). All these four types of arguments are nothing but inference as far as the observation of *Mādhvas* are concerned. The difference in details is only due to their variation as sub-species of the same genus, namely, inference.

The purpose served by the inference varies from case to case. The purpose for the satisfaction of which categorical inference is employed is not one and the same with the purpose for meeting which hypothetical inference called *Tarka* is applied. The arguer resorts to a categorical inference with a view to establishing the necessary incidence of the probandum in the subject. But one adopts *Tarka* to demonstrate the undersirable consequence or absurdity of the opponent's position. The demonstration of the incidence of the probandum in the subject is inspired by the practical consideration and so, the incidence of the probans in the subject is to be shown as a matter of practical necessity, but not as a matter of logical necessity. So, the material truth of the minor premise, in other words, the incidence of the probans in the subject is taken as a material condition for categorical inference in general as far as the practical interest of the arguer is concerned. But the material truth of the minor

premise has no bearing upon the satisfaction of interest of the arguer adopting *Tarka*. Consequently, the objection of the absence of the minor term, namely, the probans in the subject by the *Naiyāyikas* against the status of *Tarka* as a subspecies of inference does not hold good¹³.

The *Naiyāyikas* also produce two vital objections, in addition to the earlier one, against the status of *Tarka* as inference. The first one is that if *Tarka* is given a status of inference then it would be the subject of a fallacy of contradicted probans, since, the probandum, which is necessarily deduced in *Tarka*, does not actually belong to the subject. Say for example, in the case of *Tarka*, "If the hill be devoid of fire, it would be devoid of smoke," both the probans, namely, absence of fire and the probandum, namely, absence of smoke do not exist in the subject, namely hill. The second objection is that the inference of an unreal probandum in opposition to one's previous commitment regarding the absence of the probandum, what is technically called the admission of a contrary conclusion (*apasiddhānta*) and the perpetration of this defect deprives the arguer of victory in a debate.

In response to the objections mentioned above, Jayatīrtha argues that the charges of contradiction do not hold good in the case of *Tarka*, since the arguer does not intend to establish the conclusion independently, rather he likes to establish the same on the ground of the admission of the opponent. When the opponent denies the presence of fire in spite of the presence of smoke in the hill, then the

arguer intends to show that the denial of fire entails the denial of smoke in the hill as a matter of logical necessity. Jayatīrtha maintains that the fact of the minor premise given in a hypothetical form, namely, "If the hill be devoid of fire, it will be devoid of smoke" clearly implies that the arguer's intention is not to establish the absence of smoke in the hill independently. The case exactly the same with the hypothetical proposition "If you swallow poison, you will die". This hypothetical proposition only implies the necessary connection between two events namely, swallowing of the poison and death, but not the actual historical truth of events. Likewise *Tarka* aims at demonstrating only the logical connection between the ground and the consequent. And the implication of it is that the admission of the ground makes the admission of the consequent inevitable and not that the ground and the consequent are actual historical truth. Thus it is shown that the charges of contradicted reason (*bādha*) and of contradiction of the accepted position (*apasiddhānta*) are out of place in *Tarka*.¹⁴

Another charge has been advanced by the *Naiyāyikas* against the status of *Tarka* as inference. The *Mādhvas* have broadly classified inferences into two kinds, namely (1) one for proof of one's own position and (ii) another for refutation of the position of the opponent. *Tarka*, the *Mādhvas* hold, belongs to the second class of inference. But, the *Naiyāyikas* maintain that the *Mādhva's* observation is not correct as *Tarka* cannot even be considered as an inference for refutation. Inference for refutation is valid only if it serves

to generate the valid cognition of a real defect, but *Tarka* seeks to establish a cognition of an apparent defect but not a real one.¹⁵

Mādhvas meet this objection by maintaining that *Tarka* is in the same position as casuistry (*Chala*) and sophism (*Jāti*).¹⁶ In the case of casuistry and sophism the logical apparatus, namely, the probans and the probandum are admitted to be true by the opponent alone. So, the objection that the logical apparatus must be objectively valid and the same must be accepted by both the parties, namely the opponent and the proponent levelled against *Tarka* should be raised against casuistry and sophism also. And owing to this charge casuistry and sophism can never be proved to be forms of sophistry, which they actually are. But it is to be noted that though *Tarka* is a case of inference like sophism, yet there is a difference between them. The latter is vitiated by self-contradiction whereas, the former culminates in a conclusion, which is contradicted by an accredited organ of knowledge. But actually, this difference is not fundamental, rather it is apparent, since the admission of a proposition contradicted by the testimony of an accredited organ ultimately amounts to self-contradiction. To make an assertion opposed by the testimony of all accredited organs is to make an assertion subversive of a truth accepted universally and so by the assertor himself also. So, both sophism and *Tarka* are seen to serve the same purpose, that is to say, both of them end in convicting the opponent of self-contradiction. Thus, it is proved once again that the status of both sophism and *Tarka* is one and the same. So, if sophism is regarded as inference, *Tarka* must be considered as inference also.

Tarka as elucidated in the Tarkatāndava by Vyāsatīrtha :-

In the beginning it is important to mention that the part of the *Tarkatāndava* written by Vyāsatīrtha which deals with inference is yet to be published. But fortunately, Prof. Sitansusekhar Bagchi, author of *Inductive Reasoning* got the chance to go through that unpublished part in a manuscript copy which was available in the possession of the Prof. S.N.Dasgupta.

Vyāsatīrtha has been greatly influenced by Jayatīrtha. Vyāsatīrtha endorses the conclusion of Jayatīrtha and follows up the argument produced by him. Naturally, one may think that it is nothing but a waste of time to reproduce what has already been produced. But actually the treatment of Vyāsatīrtha, in spite of being directed by the thought of Jayatīrtha, abounds in original reflection not only in manner but also matter.

Tarka, Vyāsatīrtha observes, is a case of inference. He tries to establish his own position by negating the view of the *Naiyāyikas* through different arguments. The *Naiyāyikas* hold that *Tarka* is a case of conscious ascription (*āropo*). But to substantiate his own position Vyāsatīrtha first of all seeks to show that the observation of *Tarka* as conscious ascription by the *Naiyāyikas* is not tenable. Vyāsatīrtha maintains that *Tarka* is not a case of ascription as far as the finding registered by reasoning is concerned. He says that the finding of

Tarka is of a categorical nature and gives an altogether new orientation to the conception of the nature of *Tarka* and its result. Vyāsatīrtha observes that an important difference is there between ascription and *Tarka*. In the case of ascription knowledge is operated by the help of the visual organ or the mind as aided by it, whereas, in the case of *Tarka* knowledge is necessitated by the knowledge of the necessary concomitance alone. Owing to this difference, a case of wilful ascription cannot be regarded as a case of *Tarka*. As *Tarka* is exclusively based upon the necessary concomitance between the ground and the consequent namely the probans and the probandum as the case is exactly on a par with inference, the inferential nature of reasoning cannot be denied.¹⁷

Thus Vyāsatīrtha shows that *Tarka* cannot justifiably be regarded as a case of ascription and defines it in the light of categorical knowledge as follows : “ *Tarka* is the valid cognition of the negation of the probans or ground as the determinant concomitant of the negation of the probandum or the consequent as admitted by the opponent.” Vyāsatīrtha observes that the same can be defined as a valid cognition of the unavoidable admissibility of the negation of the probans entailed by the admission of the negation of the probandum¹⁸. The denial of fire in a smoking hill is tantamount to the admission of the negation of smoke. The negation of fire necessarily entails the negation of smoke and *Tarka* only brings home the knowledge of this truth. Thus the careful analysis of the definition of *Tarka* as given by Vyāsatīrtha clearly implies that *Tarka* is a genuine case of an organ of knowledge.

Here the two vital objections , namely, the objection of the false minor premise and the false conclusion from the part of the *Naiyāyikas* may be advanced against the view of Vyāsatīrtha. In our preceding discussion it is shown that the same objections are leveled against the view of Jayatīrtha. It is also maintained side by side how Jayatīrtha beautifully meets these objections by saying that those allegations hold good only in the case of categorical inference but not in the case of hypothetical inference. Tarka , Jayatīrtha observes, belongs to the class of hypothetical inference. So, the objections in question are out of place in the case of *Tarka*.

But it is important as well as interesting to note that Vyāsatīrtha replies to the objections mentioned above without taking cover under the privilege of hypothetical inference. Vyāsatīrtha opines that though *Tarka* appears to be a case of hypothetical inference but actually this is not the case. *Tarka*, in fact, is nothing but a categorical inference.

Vyāsatīrtha maintains that the objections of false minor premise and false conclusion are nothing but pseudo ones. Vyāsatīrtha believes that neither the minor premise nor even the conclusion of *Tarka* is false. So he thinks that the objections are false creation of the *Naiyāyikas*, arising from their misconceptions of the nature of *Tarka*. *Tarka* is adopted when there is doubt. Now, the doubt that a smoking hill may be destitute of fire may be generated only in either of the following ways : First, negation of smoke may not be the determinant (*Vyāpaka*) of the negation of fire. Secondly , though one

may be the necessary concomitant of the other and negation of smoke be the determinant of the negation of fire, negation of smoke may yet be possible in the subject ¹⁹. Here the first case of doubt is dismissed by the hypothetical proposition "If it be devoid of fire, it must be devoid of smoke", which implies that negation of fire is a determinate of the negation of smoke. The hypothetical form does not mean that the proposition does not assert a categorical truth. Vyāsatīrtha maintains that, in fact, necessary concomitance between two sets of facts is usually asserted in a hypothetical form. The following hypothetical propositions, for example, "If the Gayal be similar to the cow, the cow also must be similar to the gayal", "If there be smoke there must be fire", "If a person alive is not at home, he must be present outside" assert a necessary and universal truth as the former one does. In these hypothetical propositions the second clause entails the conclusion which necessarily follows from the first one as the premise. Thus it is seen that hypothetical form is the usual medium through which a necessary relation between the antecedent and the consequent clauses is expressed ²⁰. The second case of doubt is dismissed by showing the inadmissibility of the negation of smoke in the subject, which is directly perceived to be issuing smoke.

It is important to note that a vital difference is seen between the observations of the *Naiyāyikas* and Vyāsatīrtha regarding both of the nature and composition of *Tarka*. The *Naiyāyika* observes that in the *Tarka* "If the hill be devoid of fire, it will be devoid of smoke",

'negation of fire' is the probans and 'negation of smoke' is the probandum.

Tarka consists only of one statement having two clauses of which one clause entails the probans and the other contains the probandum. But Vyāsatīrtha, on the other hand, maintains that *Tarka* is composed not only of one statement but two statements, one of them is in the explicit and the other in the implicit form. It can be said that the *Naiyāyikas* wrongly consider *Tarka* consisting only of one statement since the other statement is in the implicit or the hidden form. The whole proposition in the explicit form is the statement of the probans, in which the negation of smoke is shown to be the determinant concomitant of the negation of fire. The statement in the implicit form is that the negation of the negation of smoke is the determinate concomitant of the negation of the negation of fire, which entails the probandum. The cognition of the aforesaid probandum is attained through the instrument of the cognition of the aforesaid probans. Both these cognitions are true, since the negation of the determinant is the determinate concomitant of the negation of the determinate. To clear our idea a concrete example may be cited : Smoke is the determinate concomitant (*Vyāpya*) of fire and fire is the determinant concomitant (*Vyāpaka*) of smoke, but the negation of fire is the determinate concomitant of the negation of smoke. The determinant concomitant can be inferred through the determinate concomitant and not the other way round, since the determinate cannot exist independently of the determinant but the determinant can exist without depending upon the determinate. So, smoke is the

determinate of fire, for it cannot exist independently of the latter. But fire can exist independently of smoke, so the negation of smoke does not entail the negation of fire. But smoke is never possible in the absence of fire, so the negation of fire necessarily entails the negation of smoke. Thus it is seen that relative position of two terms qua determinant and determinate is reversed in the case of their negatives. If the positive term is determinant then the negative of the same becomes determinate. The digression is made to dismiss the doubt that there may be smoke without fire by showing that fire is the determinant concomitant of smoke and negatively by showing that the negation of fire necessarily implies the negation of smoke, the latter being the determinant concomitant of the former. Similarly, the negation of smoke is the determinate concomitant of the negation of the negation of fire.

Tarka is seen to meet all the necessary conditions for being an inference, namely, (i) it consists of the two propositions, probans and probandum, (ii) both of the propositions are true and (iii) there is a necessary concomitance between the probans and the probandum. This can be illustrated by citing an examples in the way: "If A were devoid of fire, it would be devoid of smoke", this proposition shows that the negation of fire is the determinate concomitant of the negation of smoke and so the former necessarily entails the latter. It is a true assertion and serves as the probans of the assertion, "The negation of negation of smoke is the determinate concomitant of the negation of negation of fire," which is to be regarded as the probandum by virtue of fact that it necessarily follows from the

previous assertion. The first proposition is true , because it states a necessary univesal truth and the second is also true, as it also states the same which follows from the former. These two are universal propositions asserting the necessary universal concomitance between two terms. The former assertion namely the hill is not devoid of smoke is based upon an objective fact and the latter one, namely, it can not be devoid of fire follows from the former as a matter of necessity. Thus Vyāsatīrtha beautifully shows that the probans, the probandum and the necessary concomitance, all the three lying in *Tarka* are true . So, the objections of false probans and probandum raised by the *Naiyāyikas* against the inferential status of *Tarka* are themselves false and groundless. And this falsity of these charges implies that *Tarka* is nothing but an inference.

The *Naiyāyikas*' objection to the validity of *Tarka* is nothing but a result of their misconception that 'negation of fire' is made the probans and the negation of smoke is made the probandum in *Tarka*. Jayatīrtha inspite of being agree with the *Naiyāyikas* in this respect, beautifully shows that the allegations of false probans and probandum brought by the *Naiyāyikas* against the inferential nature of *Tarka* is unjustified. Jayatīrtha observes that these charges bear significance as far as the categorical inference is concerned, where the probans is asserted as objective facts. But those charges do not hold good in the case of *Tarka* since here the false probans and probandum are only assumed for argument's sake and not independently stated as objective facts. Such false assumptions are

not any defect of *Tarka* but are the necessary precondition of *Tarka* as *reductio – ad – absurdum*.

Criticism of *Tarka* as elucidated in the *Tarkatāndava* by *Vyāsatīrtha* :-

Vyāsatīrtha has been gratefully influenced by *Jayatīrtha* regarding the concept of *Tarka*. *Vyāsatīrtha* endorses the conclusion of *Jayatīrtha* and follows up the argument produced by him. So, the concept of *Tarka* of both of them is the subject more or less of the same type of charges. We have already dealt with the charges leveled against the views of *Jayatīrtha*. So, we need not discuss the same to avoid repetition. In addition to the earlier ones some new charges can be brought against *Vyāsatīrtha* in respect to his concept to *Tarka* as an accredited organ of knowledge called inference.

The *Naiyāyikas* maintain that *Tarka* is a case of ascription (*aropa*). But *Vyāsatīrtha* observes that actually *Tarka* can not be regarded as a case of ascription because of two reasons. First, the finding registered by *Tarka* is of a categorical nature and secondly in the case of ascription knowledge is operated by the help of the visual organ or the mind as aided by it, but in the case of *Tarka* knowledge is necessitated by the knowledge of the necessary concomitance alone. But I think that the position of the *Naiyāyikas* can be substantiated by proving both of the reasons of *Vyāsatīrtha* as invalid. Let us first consider the second one. In the case of *Tarka* knowledge actually is operated by the help of both of the visual organ and the

knowledge of the necessary concomitance, but not by the knowledge of the necessary concomitance alone as it is maintained by Vyāsatīrtha . The Sanskrit term '*āropa*' means a false assumption or a false ascription entertained for a while, knowing full well that what is assumed is false. Let us suppose for instance, the object standing in front of one is known to be a tree and not a human being. Let us suppose again that the person still deliberately insists on regarding it as a human being. This is a case of ascription or *āropa*. Now , in defining *Tarka* the *Naiyāyikas* maintain that *Tarka* is a false assumption of something through the false assumption of another thing where the latter is invariably concomitant with the former. For instance, it is the false assumption of something , namely, 'B' on the basis of the false assumption of some other thing called 'A' where 'A' is invariably concomitant with 'B'. So, the very analysis of the definition of *Tarka* just given clearly implies that in the case of *Tarka* there are two ascriptions, one is the ascription of the ground and the other is the ascription of the consequent, and the ground is invariably concomitant with the consequent. When in order to show the absurdity of the opponent's view the arguer resorts to *Tarka* in the form – "If there were no fire, then there could be no smoke" then, no doubt, the arguer concerned is fully aware of the presence of both of the fire and smoke. In spite of being well conscious of the presence of both of the fire and smoke the arguer insists the absence of them only with the intention to demonstrate the absurdity of the opponent's position. In the case of the *aropa* already cited the knowledge of the tree is operated by the help of the visual organ, likewise in the case of *Tarka* the knowledge of the presence of smoke is operated by the

visual organ. Besides, in the case of *Tarka* the ground is invariably concomitant with the consequent, that is why the assumption of the latter is based upon the assumption of the former. Thus it is shown that in *Tarka* knowledge is operated both by the visual organ or the mind as aided by it and the necessary concomitance.

Now let us deal with the first reason noted above. Vyāsatīrtha observes that *Tarka* is not a case of assumption because its finding is of a categorical nature. Two important objections, namely, the objection of the false minor premise and the false conclusion have been leveled against the inferential status of *Tarka*. Both Jayatīrtha and Vyāsatīrtha have tried their best to meet these objections but from the different view points. Jayatīrtha is of the opinion that these charges hold good only in the case of categorical inference. But *Tarka* is a hypothetical inference. So, the objections of the false minor premise and the false conclusion are out of place in the case of *Tarka*. But Vyāsatīrtha replies to the aforesaid objections without taking cover under the privilege of hypothetical inference. He says that *Tarka*, infact, is a categorical inference. The objections can be met quite legitimately in spite of maintaining *Tarka* as a case of categorical inference. Vyāsatīrtha observes that neither the minor premise nor the conclusion of *Tarka* is false, so, the objections are false creation of the *Naiyāyikas* arising from their misconception of the nature and component parts of *Tarka*. According to the *Naiyāyikas*, *Tarka* consists only of one statement having two clauses of which one clause entails the probans and the other contains the probandum. Say for example, in the *Tarka* " If the hill be devoid of

fire, it will be devoid of smoke", 'the negation of fire' is the probans and 'the negation of smoke' is the probandum. But Vyāsatīrtha, on the contrary, holds that *Tarka* actually consists of two statements, one of them remains in the explicit and other in the implicit form. The whole proposition in the explicit form is the statement of the probans, in which the negation of smoke is shown to the determinant of the negation of fire. The statement in the implicit form is that the negation of the negation of smoke is the determinate concomitant of the negation of the negation of fire which entails the probandum. The cognition of the aforesaid probandum is ascertained through the instrument of the aforesaid probans. Both these cognitions are true, since the negation of the determinant is the determinate concomitant of the negation of the determinate. This can be illustrated with the help of a concrete example, smoke is the determinate concomitant of fire and fire is the determinant concomitant of smoke, but the negation of fire is the determinate concomitant of the negation of smoke. The determinant concomitant can be inferred through the determinate concomitant but not vice versa, since the determinate, so, fire be inferred on the basis of smoke. And again negation of fire is the determinate concomitant of the negation of smoke, so the latter can be inferred on the ground of the former. *Tarka* is adopted, says Vyāsatīrtha, to dismiss the doubt that there may be smoke without fire. And this doubt be eliminated by showing that fire is the determinant concomitant of smoke and negatively by showing that the negation of fire necessarily implies the negation of smoke, the latter being the determinant concomitant of the former. The same can

be shown by maintaining that the negation of the negation of smoke is the determinate concomitant of the negation of the negation of fire.

Now Vyāsatīrtha shows that both of the minor premise and the conclusion are true. *Tarka*, he thinks, consists of the two statements. "If the hill be devoid of fire. It would be devoid of smoke" and "The negation of the negation of smoke is the determinate concomitant of the negation of the negation of fire". The former statement stands for the probans and the latter one stands for the probandum, since the latter necessarily follows from the former. The first proposition is true for it shows that the negation of fire is the determinate concomitant of the negation of smoke, which is a necessary universal truth. The second proposition is also true because it also states a necessary universal truth which follows from the former. Both of the propositions are universal which assert the necessary universal concomitance between two terms. The former assertion, namely, the hill is not devoid of smoke is based upon an objective fact and the latter one, namely, it can not be devoid of fire, follows from the former as a matter of necessity. Thus it is shown that both the minor premise and the conclusion of *Tarka* are true. So, the charges of the false minor premise and the conclusion against the inferential status of *Tarka* do not hold good.

But... here the same can consistently be said against Vyāsatīrtha which was maintained earlier against Jayatīrtha that the two statements as the component parts of *Tarka* as it is stated by Vyāsatīrtha actually stand for two separate instruments, one for *Tarka*

and the other for inference. We need not go in details as it is already elaborately discussed earlier. We should just show how the second statement of *Tarka* maintained by Vyāsatīrtha itself can be turned into an inference. Keeping the fact in mind that double negation means affirmation we can say that the second statement of *Tarka* mentioned above " The negation of the negation of smoke is the determinate concomitant of the negation of the negation of fire," can be transformed into " The presence of smoke is the determinate concomitant of the presence of fire". The second statement obviously is a case of inference where the existence of fire is inferred on the basis of the existence of smoke. Here in this inference smoke is the probans and fire is the probandum, since, the former is necessarily concomitant with the latter.

Besides, the observation of Vyāsatīrtha that the finding of *Tarka* is of a categorical nature is not tenable. Vyāsatīrtha maintains that *Tarka* operates a knowledge of a necessary universal concomitance between two terms. Say for example, in the case of the instance already cited *Tarka* demonstrates the knowledge of the necessary universal concomitance between the smoke and fire . But actually this is not the case. *Tarka*, actually, brings forth the assumption of the consequent on the basis of its ground coupled with the knowledge of the necessary concomitance of the ground with the consequent.

In the aforesaid example, *Tarka* establishes the assumption of the absence of smoke on the basis of assumption of the absence of

fire coupled with the knowledge of the necessary universal concomitance of the latter with the former.

So, *Tarka* aims at demonstrating not the knowledge of the necessary universal concomitance between two terms as it is stated by Vyāsatīrtha, rather it seeks to demonstrate the enforced admission of the consequent on the basis of the assumption of the ground accompanied by the knowledge of the necessary universal concomitance of the ground with the consequent. So, the knowledge of the necessary universal concomitance is not the end but the means to satisfy the end in the case of *Tarka*. Thus it is proved once again that *Tarka* is not a case of categorical inference but a case of ascription or *āropo*.

The definition of *Tarka* given by Vyāsatīrtha itself proves that *Tarka* is not a case of an inference whether categorical or hypothetical. Vyāsatīrtha defines *Tarka* as follows " *Tarka* is the valid cognition of the negation of the probans or ground as the determinant concomitant of the negation of the probandum or consequent as admitted by the opponent." So, as far as this definition is concerned the aim of *Tarka* is to demonstrate the knowledge of the negation of the probans, but we know very well that an inference seeks to establish the knowledge of the probandum but not the knowledge of the negation of the probans. So *Tarka* is not a case of inference.

Vyāsatīrtha argues that even if we agree with the explanation of the probans and the probandum of *Tarka* as stated by the *Naiyāyikas* yet the charges of the falsity of the minor premise and the conclusion can be proved to be invalid. The *Naiyāyikas* maintain that in the *Tarka* "If the hill were devoid of fire, it would be devoid of smoke," 'the negation of fire' stands for the probans and 'the negation of smoke' stands for the probandum, which do not actually belong to the subject i.e. the hill. So the minor premise and the conclusion are false. But Vyāsatīrtha holds that even if the explanation of the probans and the probandum just given by the *Naiyāyikas* are taken for granted yet it can quite consistently be maintained that both the minor premise and the conclusion are true.

Vyāsatīrtha says that the *Naiyāyikas* admit two kinds of relation, one is actual by which the actual incidence of the one term in the other is determined and the other is one through which we understand that one term is related to another term, though there is no factual incidence of one in the other. Conjunction, inherence and according to some, identity belong to the former kind of relation. But the relation between a subject and an object or between cognition and its content belongs to the latter kind of relation. Here though one cannot factually be related to another yet they are related somehow. The logical requirements for the validity of an inference that there must be true minor premise and a true conclusion, in other words that the probans and the probandum must stand in relation to the subject, are satisfied irrespectively by both the two kinds of relation. Keeping this in view if *Tarka* is judged then it can be seen that both the minor

premise and the conclusion of it are true. Both the probans , namely, the negation of fire and the probandum, viz, the negation of smoke do stand in a relation to the subject, namely, the hill. Negation of fire is asserted to be true of the hill by the opponent and this means that negation of fire stands in the relation of being admitted to be present in the hill. Probandum, on the other hand, is asserted by the arguer as the necessary consequent of the assertion of the negation of fire by the opponent . Thus, the negation of the probandum stands to the hill in the relation of being one to be necessarily admitted by the opponent. Thus Vyāsatīrtha shows that both the minor premise and the conclusion of *Tarka* are true. So, the aforesaid objections are groundless.

Vyāsatīrtha replies to the objections of the false minor premise and the false conclusion following the above mentioned two kinds of relation as admitted by the *Naiyāyikas*. As instance of the second kind of relation he says of the relation between the subject and the object of knowledge, between the knowledge and the content of it, and then the relation in question be considered to belong to the second kind of relation . But I think that Vyāsatīrtha commits a blunder by taking the relation in question belonging to the second kind of relation already mentioned. The relation in question is neither the relation between the subject of knowledge and the object of knowledge, nor even the relation between the knowledge and the content of it, but, it is the relation between the object of knowledge and the locus of it. So. this relation does not belong to the second kind. And that this relation does not belong to the second kind is

understood if we consider the following concrete example. Let us suppose, I pass a statement " There is a table in my room". Here my statement 'there is actually a table in my room' be true not because I assert it but because it corresponds to the fact. So, assertion has nothing to do with the truth or falsity of any statement as it is maintained by Vyāsatīrtha. And as a matter of fact, the object of knowledge, namely, the table is there in the locus, namely, the room in a relation of the first type. The same can truly be said in the case of the relation between the probans, absence of fire and the subject or locus, the hill, and between the probandum, absence of smoke and the hill. The minor premise and the conclusion of *Tarka* be true not by virtue of the assertion of the opponent or the proponent but by virtue of the correspondence of them to the fact. But in fact, in the subject, the hill, there is neither the absence of fire nor the absence of smoke. So the question of the correspondence of the statements, namely, the probans and the conclusion to the fact, namely, the absence of fire and the absence of smoke is quite absurd. And as the probans and the probandum do not correspond to the fact they can not be true. So, the defence of Vyāsatīrtha against the charges of the false minor premise and the conclusion is invalid.

Criticism of the Nyāya – view and the answers to those criticisms:-

It is wellknown to us that inferential knowledge plays a vital role in the seven other schools of Indian philosophy in general and in the

Nyāya school in particular. But the knowledge of *Vyāpti* is the nerve – centre for the possibility of the inferential knowledge. So, the question is – how the knowledge of *Vyāpti* can be ascertained ? In respect of the means of ascertaining *Vyāpti*, there is a diversity of opinion among the scholars.

The *Navya-Naiyāyikas* think that the knowledge of co-existence between *hetu* and *sādhya* accompanied by the knowledge of the absence of deviation of the same is the cause of ascertaining *Vyāpti*. The knowledge of the co-existence between *hetu* and *sādhya* can easily be derived. But it is very difficult to get the knowledge of the absence of deviation. At best we can say that as far as our experience is concerned there is no deviation. But how can we give the guarantee in the case of the future which is yet to come in our experience ? So, this knowledge remains open to the doubt of deviation. And this doubt, the *Navya-Naiyāyikas* think, can be removed by the application of *Tarka*.

My concentration, in this context, is to show that the argument in terms of which the *Navya-Naiyāyikas* think that through the application of *Tarka* the doubt of deviation can be ruled out may be criticised by those who will consider this from the Western viewpoint. But inspite of this criticism the *Nyāya* view can be substantiated from the Indian viewpoint.

The *Naiyāyikas* formulated the definition of *Tarka* in the following way :-

“*Āhārya-Vyāpyavattā — bhrama — janyaḥ āhāryavapakavattā-bhramastarkaḥ*” That is *Tarka* is an imposed (*āhārya*) illusory knowledge of the existence of the pervader (*Vyāpaka*) which is caused by another imposed illusory knowledge of the existence of the pervaded (*Vyāpya*). Now what is to be understood by ‘imposed knowledge’ (*āhārya jñāna*)? In reply it is said that knowledge which is produced out of one’s desire at the time when there is the existence of the contrary knowledge is known as imposed knowledge. Say for example, if the knowledge in the form ‘There is fire in the lake’ is produced out of one’s desire at the time when there is contrary knowledge in the form – ‘There is the absence of fire in the lake’ it is called an imposed knowledge.

The *Navya Naiyāyikas* are of the opinion that *Tarka* is of two types : *Viśayapariśodhakaḥ* and *Vyābhicārasaṅkānivartakaḥ*. The first one determines the definite valid knowledge and the second one removes the doubt of deviation . The form of the second type of *Tarka* is as follows : “ If smoke be deviated from fire, it would not be caused by fire”. The first part of this form of *Tarka* is known as *Āpādaka* and the second part is *Āpādya* or consequence. In *Āpādaka*, there is invariable concomitance determined by *Āpādya*.

So, in the form of *Tarka* there is *Vyāpti* also. The form of this *Vyāpti* is : where there is deviation of fire, there is the negation of being a product of fire. In this form of *Vyāpti* the first part is *Vyāpya* (pervaded) and the second one is *Vyāpaka* (pervader). In the same

way, it can be said that the *Āpādaka* – part is the pervader and *Āpādya* – part is pervaded.

On the basis of the foregoing discussion, it is found that invariable concomitance or *Vyāpti* is included in *Tarka* also. And the doubt of deviation is still there in this *Vyāpti* in the same way in which it is in the case of *Vyāpti* of inference. So our question is : How this doubt of deviation in *Vyāpti* of *Tarka* can be removed ? In reply it can be said that to remove this doubt of deviation another *Tarka* is to be adopted. And this second type of *Tarka* also is not free from the doubt of deviation. So again our question is -how the doubt of deviation of this second *Tarka* can be ruled out ? In reply it can again be said that for that purpose another *Tarka* is to be resorted to, and in this way the fallacy called infinite regress comes into being.

But according to the *Navya – Naiyāyikas*, the above mentioned problem can be solved in the following way : Here I quote Dr. Raghunath Ghosh from his book enlisted in bibliography. "The doubt of deviation does not arise at all in *Vyāpti* of *Tarka*, for it would involve contradiction in respect of one's own activity. Hence the necessity of applying another *Tarka* does not arise at all. One can doubt so long as there does not arise any contradiction in respect of one's own practical activity. An individual is not allowed to bear any doubt about *Vyāpti* between smoke and fire as he seeks fire in his practical life to get smoke. If he had a slightest doubt regarding *Vyāpti* between smoke and fire, he would not seek fire for having smoke. If there is any doubt it will contradict his own activity. Hence one's own

activity clearly indicates the absence of doubt in them.” Thus the *Navya – Naiyāyikas* maintain that in fact *Tarka* does not become the subject of the doubt of deviation. And this view, they have tried to establish by showing a contradiction of practical activity.

But as far as my observation is concerned one may raise an objection particularly from western viewpoint by saying that the contradiction concerned, actually cannot be the limit of the doubt of deviation. Contradiction may be of two types – logical and empirical. Logical contradiction is a contradiction to the very process of our thinking which obviously is not the case with the empirical contradiction. Empirical contradiction is the contradiction only to our experience. To think A and $\sim A$ to be true at the same time gives rise to a logical contradiction. If we think that A is true then we cannot think that $\sim A$ is true also, because both of them cannot be true at the same time. And this contradiction is the contradiction of the very process of our thinking. This contradiction, no doubt, is the limit of our doubt. If A is true then there is no room for doubt that $\sim A$ is not true. But empirical contradiction is quite different from the logical one. We are habituated in seeing only black crows in our day to day experience. Here to think of a white crow gives rise to a contradiction as we have not seen such crows in our experience. This contradiction is called an empirical contradiction. And this contradiction, I think, cannot be the limit of doubt in the strict sense. For we may easily think the existence of both of the black and white crows side by side without being self – contradicted in our thinking. This empirical contradiction may be the limit of doubt only for the time

being. Say for example, as far as my experience was concerned even a few years ago, then the thinking of white crow was a matter of contradiction for me. And then that contradiction was the limit of the doubt of the existence of white crows. But as soon as I came to know that there is black crow in Singhal that contradiction fails to be the limit of the doubt said.

The contradiction of the practical activity as understood by the *Naiyāyikas* is obviously an emperical contradiction . To think the absence of fire and the presence of smoke in one place and at the same time is not a logical contradiction. To think the absence of fire and the presence of fire at the same time in the same locus is a logical contradiction. Similarly thinking of the presence of smoke and the absence of smoke at the same time in the same place is a logical contradiction. So, we may think the absence of fire and the presence of smoke at the same time in the same place without being logically self-contradicted. The relation of *Vyāpti* to establish which *Tarka* is resorted to, is a logical relation. And that logical relation can be established only through logical contradiction but not through emperical one.

Doubt is something which comes from the faculty of our thinking. Unless and until the door of that faculty is shut up doubt may come out from that faculty. And it is only the logical contradiction by which the door of the said faculty can be made shut up and thereby the possibility of the emergence of doubt be ruled out. But as the contradiction of practical activity mentioned by the *Navya* –

Naiyāyikas is not logical, the said purpose for which it has been employed cannot be served.

But the above objection can be answered in the following way. The Indian thinkers, however, did not take the term logic in the rigid sense. It is a kind of reasoning by which a person is inclined to some activity. When we feel hungry, we ask for food. Can it be said as illogical? Certainly not. Had there been no logic, we would not have asked for the same. Here the satisfaction of hunger is the logic behind the asking of food. Each and every human activity presupposes some logic behind. Otherwise, it would have been taken as irrational. If we take logic in this liberal sense, the above – mentioned problem, I think, will not arise at all. Our Indian thinkers have used the term 'logic' in this sense and hence, they are very much consistent in their position.

One may raise another objection against the *Navya – Naiyāyikas* from the western viewpoint. The *Navya Naiyāyikas* are trying to eliminate doubt by *Tarka* taking the theory of causality as granted. They formulate the argument in this way " If smoke be deviated from fire, it would not be caused by fire. Our experience shows that smoke is caused by fire so it cannot be deviated from fire ". So, the theory of causality has already been taken to be necessarily true by them. But whether this theory of causality itself is necessary or not is a matter of controversy. So, this theory itself is not free from doubt. And the theory which itself is a subject of doubt has nothing to do with removing the doubt.

But I think that the *Navya – Naiyāyikas* will be able to maintain their position by giving a proper answer to the objection mentioned. The necessity of causality is the subject of doubt to the western philosophy but this is not the case with the Indian philosophy. So, the objection raised above cannot hold good. Because, in Indian tradition the nature of invariability between cause and effect is accepted. According to the Indians, there is no doubt as to the fact that an effect follows from the cause. The complication arising from necessary and sufficient conditions does not occur in Indian minds.

It may be argued that the *Tarka* has got a tremendous importance as a methodology of Indian philosophy. Various methods have been adopted by the Indian thinkers to arrive at the truth, and *Tarka* is one of them. It is an indirect proof to come to a particular conclusion. That is why, *Tarka* serves the purpose of such indirect proof which counters the opponent's standpoint. It is a great philosophical enterprise to refute the view of the opponents. The method of refutation may be of two types : directly to say that he is telling nonsense and indirectly to prove that his standpoint is non – acceptable. If someone raises a question whether self exists or not and if I personally disagree with him. Thus disagreement may be expressed in two ways : first, initially to say his position is meaningless and secondly the man who disagrees may for the time being admit the opponent's position and may say - 'Let us suppose your standpoint is true'. Though initially there is an agreement, ultimately the opponent's position is falsified by way of showing some

inconsistencies or contradiction or absurdity in his standpoint . In this way an individual can prove his standpoint justified. This method is always adopted by an individual when an individual wants to conclude some. It can also be described as implication, which indicates that if something occurs it is from something else. Hence methodologically it is very much valuable.

REFERENCE NO OF CHAPTER NO - I

1. *“Sarvavyavahārahetuḥ guṇaḥ buddhiḥ jñānam. Sā divividha –Smṛtiḥ anubhavaḥ ca.”*

Annambhaṭṭa(Trans. by Gopinath Bhattacharya), *Tarkasamgraha Dīpikā on Tarkasamgraha*, progressive, 1983. Text No 34.

2. *“Buddheḥ Lakṣaṇam āha- ‘Sarva iti. Kālādau ativyāptivāraṇāya ‘guṇa’ iti. Rūpādāu ‘ativyāptivāraṇāya ‘sarvavyavahāra’ iti jñānam iti anuvyavavasāyagamyajñānatvam eva lakeṣaṇam itiyarthaḥ. Buddhim vibhajate- ‘Sā’ iti.”*

Annambhaṭṭa, *Tarkasamgraha-Dīpikā*. Text No 34

3. *“Saṁskāramātrajanyam jñānam smṛtiḥ.”*

Ibid. Text No 35.

4. *“Smṛteḥ lakṣaṇam āha - ‘saṁskāra’ iti. Bhāvanākhyāḥ Saṁskārah. Saṁskāradhvaṁse ativyāptivāraṇāya ‘Jñānam’ iti. Ghaṭādipratyakṣe ativyāptivāraṇāya ‘saṁskārajanyam’ iti. Pratyabhijñāyām ativyāptivāraṇāya ‘mātra’ iti.”*

Tarkasamgraha-Dīpikā or *TSD* .Text No 35.

5. *“Tadbhinnam jñānam anubhavaḥ. Sa dvividhaḥ, Yathārthaḥ ayathārthaḥ ca.”*

Ibid. Text No 36.

6. “*Tadvati tatprakārah anubhavaḥ yathārthah.* (yathā rajate idamrajatam’ iti jñānam). Sā eva pramā, iti Ucyate.”

Ibid. Text No 37

7. “*Yathārathānubhavasya Lakṣaṇam āha – ‘tadvat’ iti. Nanu ‘ghaṭe ghaṭatvam’ iti pramāyam avyāptih, ghaṭatve ghaṭābhāvāt iti cetna; Yatra Yatsambandhaḥ asti tatra tatsambandhānubhavaḥ ityarthāt ghaṭatve ghaṭasambandhaḥ asti iti na avyāptih iti. Yathārthānubhavaḥ eva śāstre ‘pramā’ iti ucyate ityarthah.*”

Tarkasamgraha-Dīpikā Text No. 37

8. “*Tadabhāvavati, tatprakārah anubhavaḥ yathārthah; Yathā śuktau ‘idam rajatam’ iti jñānam. Sa eva ‘pramā’ ityucyate.*”

Tarkasamgrah – Text No 38.

9. “*Ayathārthānubhavam lakṣayati – ‘tadabhāvavati’ iti. Nanu ‘idam samyogi’ iti pramāyam ativyāptih iti cet na; yadavacchedena yasambandhāvāvaḥ tadavacchedena tatsambandhajñānasya vivakṣitatvāt. Samyogābhāvāvacchena samyogajñānasya bhramatvāt samyogāvacchedena samyogajñānasya pramātvāt nativyāptih.*

Tarkasamgraha Dīpikā. Text No. 38

10. “*Ayathārthānubhavaḥ trividhaḥ- samśaya – viparyaya – tarkabhedāt.*”

Tarkasamgraha. Text No. 70

11. “*Ekasmin dharmiṇi viruddha – nānādharmavaiśiṣṭāvagahijñānām saṁśayaḥ. Yathā – ‘sthānuḥ va pursaḥ vā’ iti.*”

Tarkasaṁgraha. Text No. 71.

12. “*Samśayalakṣaṇam āha – ‘ekasmin’ iti. ‘Ghaṭapatāu’ iti samūhālabane ativyāptivāraṇāya ‘ekah’ iti. ‘Ghaṭaḥ dravyam’ ityādāu ativyāptivāraṇāya ‘virūddha’ iti. Paṭatvaviruddhaghaṭatvavān ityatra itivyāptivāraṇāya ‘nānā’ iti.*”

Tarkasaṁgraha Dīpikā. Text No. 71

13. “*Mithyājñānam viparyayaḥ. Yathā śuktau ‘rajatam’ iti.*”

Tarkasaṁgraha. Text No. 72.

14. “*Viparyayalakṣaṇam āha – ‘mithyā’ iti. Tadabhāvavati tatprakāraṇaṁ śāntam ityartham.*”

Tarkasaṁgraha – Dīpikā. Text No 72

15. “*Vyāpyā’ - ropena Vyāpākāropah tarkah; Yathā ‘yadi Vahniḥ na svāt tarhi dhūmah api na svāt’ iti.*”

Tarkasaṁgraha. Text No. 73.

REFERENCE NO OF CHAPTER – II

1. "Avijñātataṭṭva'rthe kāraṇopapattitas – tattvajñānārthamūhastarkah." Nyāyasūtra. Calcutta Sanskrit Series, I.i.40
2. "Avijñāyamānattattverthe jijnāsātāvajjāyate Jāniya imamiti. Atha jijnāsitasya Vastuna vyāhatau dharmān Vibhāgena Vimṛśati kaimśvidityevamāhosvinnaivamiti, Vimṛśyamānayordharmayorekataram Kāraṇopapattiyā'nujānāti. Sambhavatyasmin kāraṇam pramāṇam heturiti."

Vātsyāyanabhāṣya on Sūtra no.1.1.40.

3. "Tatranidarsanaṃ yo'yam jñāta jñātavyamarthaṃ jānīte taṃ tattvato jānīyati jijnāsā. Sa kimutpattidharmako' thānutpattidharmaka iti vimarśah. Vimṛśyamāne' Vijñātataṭṭve'rthe yasya dharmasyābhyānujñā – kāraṇamupapadyate, tāmanujānāti, yadyayamunutpattidharma kastath svakṛtasya karmaṇaḥ phalamanubhavatjñātā. Duḥkhajanmapravṛtti – doṣo – mithyājñānāmuttaramuttaram pūrvasya pūrvasya kāraṇam, uttarottarāpāyetadanantarāpāyadapavarga iti syātām saṃsārāpavargau".

Ibid.

4. "Utpattidharmake jñātari punarna svātām. Utpannaḥ khalu jñātā dehendriyabudhivedanābhih. Sambadhyata iti nasyadam svakṛtasya karmaṇaḥ phalaṃ. Utpannaseha bhutvā nabhavatitiasyāvidyamānasya

niruddhasya vā Svaktakarmanah phalopabhago nasti, tadevamekasyānekasarīrayogah sariraviyogaseātyantam na syāditi, yatra kāraṇamanupapadyāmanam paśyati, tannānujānāti so 'yamevamlakṣana ūhastarka ityucyate."

Ibid.

5. *"Katham punarayam tattvajñānārtho na tattvajñānameveti, anavadhāraṇāt anujānātyayamekataram dharmaṁ kāraṇopapattyā, tvavadhārayati na vyavasyati na niścinoti evamevedamiti."*

Ibid.

6. *"Katham tattvajñānārtho iti, tattvajñānaviṣayābhyanujñālakṣanādūhād bhāvitāt prasannādanantaram pramānasya sāmartyātattvajñānamutpadyata ityevam tattvajñānārtha iti."*

Ibid.

7. *"kim punastattvam? Sataśca sadbhāvah asataścāsadbhāvah. Sat Saditi grhyamānam yathābhūtamaviparitam tattvam bhavati."*

Vātsyāyanabhāṣya (Introduction)

8. Sitansusekhar Bagchi, *Inductive Reasoning : a Study of Tarka and Its Role in Indian Logic. P.7. Calcutta Publication. 1953 ?*

9. Ibid., pp.9 – 10.

10. Ibid., p. 10.

11. Ibid., p. 11.
12. Ibid., p. 12.
13. Ibid., pp. 12–13.
14. Ibid., pp. 13 – 14.
15. Ibid., pp. 14 – 15.

REFERENCE NO. OF CHAPTER NO.III

1. *nanu kim etasya phalam ? Vipakṣajijñāsānivr̥ttih Śāṅkānivr̥ttir vā tannyūnatā vā ? nādyah anumānād eva tatsiddheh.*
Nyāyalīlāvati, chowkhamba Sanskrit Series pp. 514 – 15.
2. Ibid., p.12
3. *na dvitīyah anumānavaiyarthiyāt niścayārtham tad iti cet ? na tata eva Śāṅkānivr̥tter api siddheh. Ibid,* pp.516 – 17.
4. *na tritīyah nyūṇaya anyūṇaya vā anumānanivartaniyatvena tannyūnatvapadanavaiyarthiyat. Ibid.,* p.517
5. *Sāṅdigdhe r'thenyatarapakṣānukūlakāranadarśanāt tasmin sambhāvanāpratyayastarkah.*
Nyāya Mañjari, Vizianagram Sanskrit Series, p.8
6. Henceforth, *Nyāyalīlāvati,* pp.517 – 18.
7. *Tarkaśca dvividho viśayapariśodhaḥ to vyāptigrāha kaś ceti.*
Henceforth, NL p.5.
8. Henceforth, NL, p.517.
9. *na ca parāmarśād eva śāṅkānivr̥ttir iti mūlanivr̥tttau jijñāsayā api nivr̥tteh kim tarkena iti vācyam ?*

Nyayalilabati prakasavivrti, chowkhamba sanskrit series p.519.

10. *Svārasikaśāṅkānivṛttāvapi*

*virodhipramānasadbhāvanibandhanaśāṅkāyāḥ sunabhatayā jijñāsāyā
api sulabhatvāt.*

Henceforth, NLPV.p.519

11. *Nanu samśayo na jijñāsāhetuḥ, tasya icchatvena
jñāneṣṭasādhanatājñānasādhyatvāt. Sādhyārthinaś ca
sādhyābhāvajñānam neṣṭasādhanam iti na tatra jijñāsā. Tathā ca
katham tannivarttakatā tarkasye' ti cet ?*

*Nyayakusumanjaliprakasamakaranda, chowkhamba sanskrit Series,
ch 111, pp. 4-5*

12. *Nanu virodhiviṣayātvabhāvāt tarkah katham samśayajijñāsayor
nivarttaka iti cet ? na,...icchāyām anīṣṭapratibandhānatvenā' pi
virodhitvācca, madhuvisasampṛktānnabubhukṣādau tathā darsānāt.*

Henceforth, NKuPM. Chapter 111, p.5

13. Henceforth, NKuPM, ch. 111 p.5

14. *...tad āha tatraiva Vardhamānaḥ "tarko nyāyasya pūrvāṅgam
nyāyavisayapariśodhakatvāt, vyāptigrāhakatvāc ca" ity āhuh.*

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15. Nyāya Līlavati, chowkhamba sanskrit series. P. 518.
16. Henceforth NL, pp.517-19.
17. “ Kvacid Vyabhicāraśamkā vidhūnanadvārū
bhūyadarśanamupayujyate ”³
Siddāntamuktāvalī, on verse 137. Henceforth, SM.
“Bhūyadarśanavyahetutve’ pi kvacid prayojakatayā tadādarah”
Dinakarī on S.M. Verse No. 137
18. “Vyābhicārajñānavirahasahakṛtam Sahacāvadaṅsanain
vyāptigrāhakam” Tattvacintāmaṇi (vyāptigrāhopāya chapter) Edt.
By K. N Tarkavagīśa Henceforth, P.O.
19. Vyabhicārajñānavirahasahakṛtam Sahacāradarśanam
vyāptigrāhakam jñānam niścayaḥ śamkāca. Sā ca kvacid
upādhisandehāt. Kvacid
viśeṣādarśansahitasādhāraṇadharmadarśanāt. Tadvirahasāca kvacid
vipakṣabādhakatarkāt kvacit svataḥ siddha eva.

Tattvacintāmaṇi with Gadadhari, Chowkhamba sanskrit series. P.662.
20. Henceforth, Tcm. P. 662.
21. Tarkasamgraha (with seven commentaries, chowkhamba, p. 376).

22. “Kāryakāraṇabhāvaniścaye tu pratyakṣatānvayavyātireka Sahacarajñānām kāraṇamiti dhyeyam. Atha dhumavānna syatvahnimanna syaditi tarkasya viśayapariśodhakasya vyāptigrāhanaupayikatvāt asaṃgatirityārthah dhuma yadi vahnivyābhicāri syattarhi vahnijanyo na syaditi tarkavatnraya Tatkarani bhutam āpādyavyāpyapadakavattajñānamapi darsayati.”

Kiranāvali on S.M. chowkhamba sanskrit series, p. 450.

REFERENCE NO OF CHAPTER IV

1. *Upalambhā* *nupalambhasambhavanam*
*trikālikalitasādhyasādhanasāmbandhādhyalambanam idam asmin saty
eva bhavatiity ākāram samvedanam ūhāparanāmā tarka iti.*

Pramananayatattvalokalamkara, Motilal Ladhaji poona 500.

2. ..kutas tatsambandhapratipattih ? na tāvāt pratyakṣāt, tasya tadavi-
sayatvāt.

Syadvadaratnakara, Motilal Ladhaji, poona. P. 503.

3. nāpyanumānāt, anavasthānusaṅgāt.

Henceforth, SVR.

4. tarkasyā'pi svayogyatāviśeṣāmarthyād eva
svavisayāpratyāyanasiddhir bhavatu.

Henceforth, SVR.

5. "Na hi tatkarānām loke vede vā kiñcididṛśām. Itikarttavyatā sadhye
yasya nānu graherthita"

Praśastapādabhāsyā, p.416.

6. ādye pakṣe pramāṇam eve'dam. Jñātur anityatve saṁsārāpavargayor
asambhava iti jñānam yady apramāṇam nā smād
vipakṣābhāvasiddhiḥ. apramāṇena kasvacid arthasya siddher ayogād
ity anumānasyā pravṛttir eva visavavivekābhāvāt.

Nyāyakandali, Vizianagram sanskrit series. P. 103.

7. *atha siddhyaty asmād vipaksabhāvas tadā pramānam idam
pratyaksādisu kasmimścid antarbhavisyati.*

Ibid.

8. *Vipaksabhāve pratite svapaksasambhāvano 'pajayate iti
vipaksabhāvapratiṭir asya karanam iti cet ? tarhi
vipaksabhāvalingakam anumanam evai tat.*

Henceforth, NK, P. 104.

9. *Sa tu tasmims tad itirūpatvān niścaya eva. Vyomavativṛtti,
chowkhamba sanskrit series. P.533.*

10. Introduction, *Nyāya Darśan*, Phani Bhusan Tarkabāgish, Paschim
Banga Rajya Pustak, July, 1981.

11. Dinanath-Tripathi, *Atmatattvavivek*, p.85

12. Ibid.

13. "*Agamāvirodhirāvenāgamārthaparīkṣanam Parīkṣanāncā
samśvāpuryapaksanirākarananenottarapakṣavyavasthāpanam.*"

Vācaspati Mishra, *Tattvakaumudi*.

14. "Pramānena sādhyamanasyārthasya anyathātvasamkāyām tannirasārthamanyathatva doṣakathanam tarkah."

Mānameyodaya, Sri Dinanath Tripathi Navathirtha, First part, calcutta sanskrit college, Research Series No-cxxxviii, 1990.

15. "Atah śāstrapramā nadutpannāpi brahmavidyā cittadoṣapratibaddha tarkam sahayamapeksya pascād viṣayam niscinoti" Tarksyā pramānabhutasya svatantryeno bastuniścayakatvepi, nātyantamupakāritvam ...ataeva pramānānāmanugrāhakastarka iti tarkavidah"

Vivaran Prameya Samgraha, Second part, p.220

16. *Tattvānusanbhāna*, asiyaatik society, pp.279-286.

17. *Advaita vedāntejñāna*, Minati Kar, p.p.253-254.

18. "Prāyḥ puruṣenānena bhavitavyanetaduhah purah kim samjñeyako 'yam brkṣa ityanadhyavasāya jñānam samśaya uktah. Etayorapi pratyakṣe antarbhavah."

Patanjal Yoga Darsāna, Srimad Hariharananda Aranya, p.155.

19. sādhanānumānam dūṣanānumānām ce'ti. Dūṣanānumānam api dvedhā. Dūṣtipramītisādhanam tarkaś ce'ti.

Pramānapaddhati Ed.T.R.Krishnamacharya, Kumbhakonam, p.36

20. *kasyacid dharmasy āṅgikāre 'rthāntarasy āpādanam tarkah.*

Ibid, pp.36-37

21. *Pramāna paddhatitikā of Janardana Bhatta*, Ed. T.r. Krishnama charya, kumbhakonam. Pp-36-37.

22. 'tarko' numānam vyāptibalena paroksajñānanajanakatvāt.

Ibid, p.38.

23. Henceforth pp, pp. 38-39. Vide also PPT, pp. 38-39: *nanu tarkasy' ānumānatve āpādakam nirvahnitvam nirdhimatvam,prati lingam iti vācyam. Nirvahnitvasya vahnimati parvate pakṣe' siddhatvena katham tarkasy' ānumānatvam.*

24. *Anumānatve 'pi tarkasy āpādakāsiddhir aduṣaṇam parābhyupagamamātrasya tatra siddhipadārthatvāt.*

Henceforth PP, pp. 38-39.

25. *Vastutah pakṣe vidyamanatve apadakatva vyaghatah. Katham anyatha na ca'yam nirdhumah tasman na niragnika iti viparyaye paryavasanaṁ. Tadabhava ca tarka eva' bhasah syat.*

Henceforth. PPT, p.39.

26. Henceforth, PPT, pp.39.

27. *Nanu tathā'pi na tarkasy'ānumānatvaṃ saṅgacchate. Tarkasy'ānumānatve hy āpādyam nirdhūmatvaṃ lingi'ti vācyam. Tasya dhūmavaty abhāvād bādhaḥ.*

Ibid.

28. *Sādhyarūpasy aiva lingiino bādho doṣaḥ. Na tv āpādyarūpasya. Āpādyatvavyāghātāt. Yad āpādyam tat pramāṇabādhitam eva. Anistam hy āpādyam, pramāṇabādha evā'nīṣṭatvam. Na cā'tra nirdhūmatvaṃ sādhyam.*

Ibid.

29. *Yathā sādhanānumāne na vyāptimātram, nā'pi pakṣadhar matāmātram sādhyapramitisādhanam kintu militam eva. evam anīṣṭapādanam viparyaye paryavasānam co'bhayam militam evā'numitisādhanam bhavati' titarkasya prāmāṇyam upapadyate.*

Henceforth, PP, p.40.

30. *Kvacid viparitasāṅkānirasana^ādy^āreṇa pramāṇanām anugrāhako'pi bhavati'ti.*

Ibid.

31. *Adrir agnimān na ve'ti vipratipattau sādhanānumānaṃ vinai'va yadi niragnikah syāt tarhi nirdhūmaḥ syāt na cā'yam nirdhūma iti tarkarūpānumānen aiva' gnisiddheḥ.*

Henceforth, PPT, p.40.

32. *Tasmād yathā pramāṇasamplave dvitīyaṃ pramāṇabhūtam eva, prathamadārdhyahetutvena pramāṇanugrāhakaṃ tathā tarko'pi pramāṇam eva pramāṇanugrāhakaḥ.*

Ibid.

REFERENCE NO OF CHAPTER NO. V

1. *Nyāyasudhā*, Ed.T.R.Krishnamacharya, Kumbhakonam, pp.477-78
2. *Dvividham hi kāryam kathakasya svapakṣasādhanam parapakṣadūṣanam ce'ti.*

Henceforth, Nsu, p.478

3. *Tatra sādhanam svaparasaṃmatair eva nyāyair kāryam nā'nyataramātraśiddhair.*

Ibid.

4. *Dūṣanam tu dvividham. Idam ittham na bhavati ti vā anīstopadarśanena vā. Tatrā'dyam ubhayasiddhanyāyair evā kāryam.*

Ibid.

5. *śabdo na dravyam śrotragrāhyatvāt sāmānyavad iti.*

Ibid.

6. *dvitīyām tu parasiddhair eva nyāyair(kāryam).....Tad eva ca tarka iti vyavahriyate.*

Ibid.

7. Henceforth, Nsu, P.478.

8. *yaddeśakālasambaddhasya yasya yaddeśakālasambaddhena yena vinā anupapattiḥ tasya tena sā vyāptiḥ. Manuscript of the Tarkatandava* (Belonging to the late prof. S.N.Dasgupta. pp.3-4 (chapter of inference))

9. *etena sāhacaryaniyamo vā, anaupādhikaḥ sambandho vā, sādhyātyantābhāvavadavṛttivam vā vyāptir iti nirastam. Vyadhikaranayoḥ pūravṛstyoḥ deśataḥ kālato vā sāhacaryasya sambandhasya vā asamभवāt nadipūrasya vṛstirūpasādhyābhāvavadadhodeśavṛttivāc ce 'ti.*

Ibid.

10. Henceforth, Nsu, p.478.

11. *Anyathā kevalānvayidharmasya —kevalavyatirekiny abhāvāt tasyānanumānatvāpatteḥ.*

Ibid.

12. *vyāptyapeksayā gamakatvasya tarke ' pi vidyamānatvāt.*

Ibid.

13. Henceforth, Nsu, p.478.

14. Henceforth, Nsu, p.479.

15. *Dvividham evā' numāṇam, sādhanam dūṣaṇam ca. tatra tarko na sādhanam iti tāvat bhavatām api sammatam, nā'pi dūṣaṇam, duṣṭipramājanakam hi dūṣaṇam nāma. na ca tarkasya tatsambhavati... ..asādhunā ca jñāpyamāna duṣṭir ābhāsabhūtai ve'ti katham tarko 'numāṇam ?*

Ibid.

16. *chalajātyor duṣṭatvamūlavvyutpādanenai vai tat samānayogakṣemam... ..*

Ibid.

17. *tasmāt tarkaḥ anumānaviśeṣa evā, vyāptibalena gamakatvāt.*

Henceforth, TT.Ms.P.194.

18. *manmate tv aṅgikṛtena sādhyābhāvena saha anaṅgikṛtasya sādhanābhāvasya vyāpakatvaprāmā vā Sādhyābhāvāṅgikāranimittikā sādhanābhāvasyā ngikartavyatvaprāmā vā.*

Ibid, pp. 194-95.

19. *sadhūmo 'piniragniko'sti iti śāṅkā hi dvedhā sambhavati. Niragnikatvaṃ prati nirdhūmatve vyāpakatvasy aiv'ābhāvenavā, saty api vyāpakatve pakṣe nirdhūmatvasy' āpi sattvena vā.*

Ibid, p.201.

20. *tatr'ādyah nirdhūmatvasya vyāpakatvapradarsākena yadi niragnikahtarhi nirdhūmah ity anena nirasyate.*

Ibid.

BIBLIO GRAPHY

Annambhatta (Trans. by Gopinath Bhattacharya)	<i>Tarkasamgraha</i> <i>Dīpikā on Tarka Saṁgraha</i>	Progressive	1983
Annambhatta	<i>Tarkasamgraha</i> (<i>Dīpikā Nyāya</i> <i>Bodhini Saṁskṛiti</i>)	Nirneya Sagar Press.	
Barad Raj	<i>Tarkik Raksha</i>	Chowkhamba	
Dr. B. C. Guha	<i>Navya Nyāya System</i> <i>of Logic</i>	Bharatiya Vidya prakasan, Varanasi	1968
Dr. B.K. Motilal	<i>The Navya Nyāya</i> <i>Doctrine of Negation,</i> <i>The Semantics and Ontology</i> <i>of Negative statements in</i> <i>Navy Nyāya Philosophy.</i>	Harvard University Publication	1968
C.D. Sharma	<i>A Critical Survey of</i> <i>Indian Philosophy.</i>	Bombay	1979
Debiprosad Chottapadhyaya	<i>Bharatiya Darsan</i>	N.B.A	1960
D.M. Datta	<i>six ways of knowing</i>	Calcutta University Publication	1972

Debiprasad Chattapadhyaya & Mrinal Kanti Gangopadhyaya	<i>Nyāya Philosophy</i>	Indian Studies		1975
Gangesh Upadhyaya	<i>Tattvacintamani</i>	Asiatic Society		
Gopikamohan Bhattacharya	Navya Nyāya: Some Logical problems in Historical perspective.	Delhi		1978
Maharshi Goutam	<i>Nyāya Sūtra</i>	Calcutta Saṅskṛit Series.		
Maharshi Goutam	<i>Nyāya Darsan</i>	Sri Anantalal Thakur	Mithila Vidyapith vaishali	1967
H.H. Ingalls	<i>Materials for the study of Navya Nyāya Logic</i>	Harvard Oriental series		1951
Jayanta Bhatta	<i>Nyāya Manjari</i>	Joykrishna Haridas Gupta	Chowkhamba sanskrit series office Banaras	1936
Jayatirtha	<i>Pramāṇapadhati</i>	T.R. Krishnama-charya	Kumbhakaranam	
Jayatirtha	<i>Nyayasudha</i>	T.R. Krishnama-charya	Kumbhakaranam	
Madhavacharya	<i>Sarva Darsan saṅgrahā (in hindi)</i>	Umasankar sharma Rishi	Chowkhamba Vidya Bhavana	1964
M. Hiriyanna	<i>Outlines of Indian Philosophy</i>		London	1932
M. Hiriyanna	<i>Popular Essays in Indian Philosophy</i>		Mysore	1952

Max Muller	<i>Six Systems of Indian philosophy</i>	London		1899
N.S. Janunkar-Goutam	<i>The Nyāya Philosophy</i>	Motilal Banarsidass		1978
Niranjansvarup Brahmacari	<i>Tarkāsaṅgraha: with Dīpikā</i>	Niranjansvarup Brahmacari	Baranasi-1 Dandaswami srimad anandabodhasram	year of publication not mentioned.
Sri Narāyan chandra Goswami	<i>Tarkāsaṅgraha (sathik)</i>	Sri shyamapada Bhattacharya	Sanskrit Pustak Bhandar,calcutta	
Pandit Phanibhusan Tarkabagis	<i>Nyāya Darsana (Goutam Śūtra) Vātsayana Bhasya, vol-1</i>	Illucidated, translated and edited by Phanibhusan Tarkabagish.	Paschimbanga Rajya pustak parsad.	1981
Pandit Phanibhusan Tarkabagis	<i>Nyāya Parichaya</i>		Paschimbanga Rajya pustak parsad.	1981
Pulin Bihari Chakravarty	<i>Yukti Dīpikā</i>		Calcutta Publication.	
Radhakrishnan	<i>Indian Philosophy</i>		The Machmillan Lodon	1962
Dr. Raghunath Ghosh	<i>The Justification of Inference a Navya Nyāya Aproach</i>		Bharatiya Vidya prakasani	1990

Satis Chandra Vidya bhusan	<i>A History of Indian Logic</i>	The Machmillan, London	1971
Sri Satis Chandra Nyayacharya	<i>Jain Darsaner Dikdarsan</i>	saṅskrit college	1975
Sri Sukhamoy Bhattacharya	<i>purva Mimamsa Darsan</i>	Pashim Banga Rajya Pustak parsad.	1983
Sri Sukhamoy Bhattacharya	<i>Mimarṁsa Darsan</i>	Visva-Bharati granthalaya calcutta	1354
S.N. Dasgupta	<i>A History of Indian Philosophy</i>	Cambridge University Press.	1951
S.C. Chatterjee	<i>The Problem of Philosophy</i>	calcutta	1949
S.S. Bagchi	<i>Inductive Reasoning. A study on Tarka and its role-in Indian Logic</i>	Calcutta Publication.	1953
Sabita Misra	<i>Navy Nyāya Anumiti</i>	Calcutta Prograssive Publication	1372

Satish Chandra chatterjee	<i>The Nyāya Theory of knowledge. A critical study of some Problems of logic and Metaphysics</i>	Calcutta Publicaton.	1950
Sridhara	<i>Nyāyakandali</i>	Vizianagram Sanskrit Series.	
Srivallabha	<i>Nyāyalilavati</i>	Chowkhamba saṅskṛit series	
Dr. Tarasamkar Bhattacharya	<i>Nature of Vyāpti</i>	calcutta saṅskṛit college Research series No-Lxx11	1970
Udayanacharya	<i>Nyāyakusumanjali</i>	Chowkhamba Saṅskṛit series.	
Udayanacharya	<i>Kiranaivali</i>	Chowkhamba Saṅskṛit series.	