

The Problem of Induction in Indian Logic: An Empirical Issue in Indian Philosophy

Raghunath Ghosh, Professor of Philosophy, University of North Bengal, Siliguri, W.B. is specialized in Indian Philosophy (classical and modern). He has published twelve books, one hundred forty papers in different professional journals and edited volumes. Ghosh has widely travelled and lectured in different Universities in the Netherlands, France, England, Japan, Germany, U.S.A., Poland, Finland, Singapore, China and Malaysia apart from Bangladesh and researched with Professor Kuno Lorenz, University of Saarland, Germany under the auspices of DAAD. He was a Visiting Fellow in the Universities of Puna, Jadavpur, Rabindra Bharati, Midnapur and Utkal and a recipient of Best Book Award by Indian Council of Philosophical Research, New Delhi. He was Dean, Faculty of Arts, Commerce & Law, University of North Bengal, Director, Buddhist Study Centre, NBU, Director, Ambedkar Study Centre and Course Coordinator, SAP (DRS-II).

Abstract

Ghosh approaches the problem of Induction in Indian Logic as an issue that has had a perennial import in the very development of argumentation (discourse on the process of derivations) in the altercation between the Carvakas, Nyayayikas and Buddhists. He emphasizes that it still characterize the nuanced readings into the classical texts as well as interpretations of contemporary events.

Keywords: vyapti, pramana, causation, inference

I

In the history of Indian Philosophy the Carvakas believe that inference cannot be taken as a source of valid cognition (*Pramā*) because the knowledge of *Vyāpti*, the uncommon cause (*karāṇa*) of inference, cannot be known by any means and hence prediction about future is not justifiable. To them if some one gets fire from the knowledge of smoke, it is merely accidental which is technically called *yādṛcchikī*, which is exemplified by the phrase *maṇimantrauśadhādivat*. Just as an individual being gets his desired object after holding some jewel or after chanting some *mantra* or applying some medicine, a man can get fire from the knowledge of smoke, which has no causal basis. *Vyāpti* cannot be ascertained through perception in which internal sense-organ acts as an instrument. As internal sense-organ depends on external sense-organ in knowing an external object, it cannot produce the perceptual knowledge of an object independently. The internal sense-organ has got capacity to reveal the mental situations which are going on within, but not to reveal other objects that are capable of being perceived through external sense-organs. Inference cannot provide the cognition of *vyāpti* on account of the fact that the knowledge of *vyāpti* is the precondition for applying an inference. If the knowledge of *vyāpti* depends on an inference, the inference itself also will depend on the knowledge of *vyāpti*. Thus the knowledge of *vyāpti* or

inference will never be attained due to the defect of *Infinite Regress* (*anavaśthā*). Verbal testimony fails to ascertain *vyāpti*, because the import (*samketa*) existing in a term known from the meaning of a particular word is understood through the auditory perception of the words. The knowledge of the import regarding a particular meaning of a particular word is attained from the conventional usage (*vṛddhavyavahāra*), which is a form of inference. Hence the above-mentioned defect i.e., infinite regress will again occur here. According to some, *vyāpti* is a relation free from extraneous adjunct (*upādhi*) (*nirupādhiko sambandho vyāptih*). If it is accepted, the knowledge of the absence of extraneous adjunct is highly essential. If it is known by inference, there would occur the defect called *infinite regress* (*anavaśthā*). If something has an equal pervasion with the probandum not being pervader of the probans, it is called *upādhi* (*sādhyanāvyāpakatve sati sādhyasamavyāptih*). The cognition of *upādhi* is not at all possible as it will involve the defect of mutual dependence (*anyonyāśraya*). Without the cognition of *vyāpti* the equal pervasion with the probandum (*sādhyasamavyāpti*) cannot be properly understood. The terms like 'vyapya' and 'vyāpakatva' are relative in the sense without the proper idea of *vyāpti* these terms are unintelligible and hence without the proper knowledge of *vyāpti* the knowledge of *upādhi* are not possible. For this reason the defect of *anyonyāśraya* occurs. Depending on the foregoing arguments it is concluded that the knowledge of *vyāpti* cannot be attained through perception etc leading to the impossibility of inference as a source of valid cognition (*pramāṇa*).¹

II

In connection with the refutation of the view of the *Cārvākas* regarding the impossibility of the ascertainment of *Vyāpti* (*Vyāptigraha*), the Buddhists have come forward and are of the opinion that *Vyāpti* can easily be ascertained with the help of identity (*tādātmya*) and causality (*tadutpatti*). To them *vyāpti* remains between an object and the particular nature remaining in it. In the inference-'It is a tree, as it has got the property remaining in *Śīmśapā'* (*ayaṁ vṛkṣaḥ śīmśapātvāt*) *śīmśapā* is an object in which there is the invariable relation of treeness. If the causal relation remains in two objects, the *vyāpti* in the form of *tadutpatti* remains between them. In the inferential form-'The mountain has got fire, as it has got smoke' (*parvato vahnimān dhumāt*) there is the relation of cause and effect between smoke and fire, which is *vyāpti*. The inseparable relation in the form of *vyāpti* is called *avinābhāva*. The term '*vinā*' means the locus of the absolute negation of a *sādhyā* (*sādhyātyantābhāvavān*). The meaning of the negative particle '*nañ*' (*nañartha*) is connected with an absence (*abhāva*). Hence the meaning of the term '*avi-abhāva*' would be the locusness of the absence of the superstratumness determined by the locus of the absence of the probandum (*sādhyābhāvavadvṛttiyabhāvavattvam*).

Criticizing the *Cārvākas* the Buddhists argue whether they forward any argument

1 Raghunath Ghosh, *The Justification of Inference: A Navya Nyaya Approach*, Delhi, Bharatiya Vidya Prakashan, 1990. *Salesian Journal of Humanities and Social Sciences*

in support of their statement or not. If not, they cannot justify their standpoint and their position becomes baseless (*aśiraska*). A proposition, which is alone i.e., not guarded by any ground, cannot establish the content of the proposition. ('*Ekākinī pratijñā hi pratijñātam na sādhyet*'- *Sarvadarśanasamgraha, Baudhdadartana*). If the answer in the positive, they may be charged for making a self-contradictory statement (*svavyāghāta*) like '*mama mātā vandhyā*' (i.e., My mother is barren) etc. Moreover, to distinguish between *Pramāṇa* and *Pramāṇābhāsa* (*pseudo-pramāṇa*), to know others judgments as contradictory, to know the absence of something, to know the intention of others etc they virtually take recourse to inferential cognition.²

Udayana has raised some problems against the view of the *Crāvākas*. First, what is the meaning of the term *sambhāvanā*? The probability is nothing but a kind of doubt ('*sambhāvanā hi sandehah*'), which does not exist in an object already seen. The object is ascertained as soon as it is seen. Hence there is no scope of doubt. It cannot also exit in an object not seen earlier at all. For the non-cognition of an object points to its absence.³

Secondly, if the sense organs like eye etc were excluded from the causes of perception on account of the fact that they are not perceptible in nature, perception would not be accepted as a source of knowledge.⁴ If it is not accepted that they are existent even though they are not seen, it goes against the basic presupposition of the *Cārṇvākas*.⁵

Lastly, if there is fear or doubt, there is inference. If there is the doubt of deviation between two objects existing in different time and place, the knowledge of different time and place is established through inference.⁶

III

To *Viśvanātha* the knowledge of the co-existence of the probans and probandum along with the absence of the knowledge of deviation of the probans is the cause of ascertaining *Vyāpti*.⁷ As the knowledge of deviation counters the knowledge of

2 '*Pramāṇaśadābhāsavivasthapanam, paragatavipratipattiḥ vacanalingeneti*' etc., in *Sarvadarśanasamgraha, Baudhdadartana*, translation and elucidation in Bengali by Satyajoti Chakraborty, Kolkata, Sahityashree, 1383, (BS).

3 '*Sambhāvanā hi sandehah, sa ca dr̥ṣṭau nāsti tasya niścayāt adṛṣṭau ca nāsti anupalabdḥau tadabhāvasya nirmayāt*'- *Nyāyakusumāñjali*, 3/6 in *Udayana*, Varanasi *Nyāyakusumāñjali* with Prakasa etc., Chowkhamba, 1957.

4 '*Hetau pratyakṣakarāṇe cakṣurādau vādhite sati pratyakṣamapi pramāṇam na syāt*', *Ibid*

5 '*Anupalabdḥikāle'pi tasya sattve tu vyabhicārāt nanupalabdhirabhāvadhāraṇe hetuḥ*', *Ibid*

6 '*Taddeśatatkālayorvyabhicārābhavaniścayāt kālāntaradeśāntaraśṭhayorvyabhicāraśamkā syat kālāntaradeśāntaraśṭhajñānañcānumānadeveti siddhamanumānaḥ*', *Ibid*

7 *vyabhicāravirahasahakrtam saha cāradarśanam vyāptigrāhakaḥ*', (*Tattvacintāmani*

Vyāpti, the absence of it should be considered as the cause of ascertaining *Vyāpti*.⁸

The repeated observations of the co-existence between *hetu* and *sādhya* cannot be regarded as the cause of *Vyāpti*. For, *Vyāpti* may sometimes be ascertained by a single observation of the co-existence of a *hetu* and a *sādhya* in a particular locus if the knowledge of deviation does not arise⁹ as we find in the case –‘It has this-colour, as it has this-taste (*etadrūpavān etadrasāt*). In this case the knowledge of *Vyāpti* is in the form-‘this-taste is pervaded by this-colour’ (*etadraṣaḥ etadrūpavyāpyaḥ*) of which ‘this-taste’ is a qualificand and ‘the pervasion determined by this-colour’ is a qualifier. From the single observation of the coexistence of the two in the above-mentioned inference the knowledge of *Vyāpti* is ascertained. As it is ascertained from the single observation of the existence of the two when there is the absence of the knowledge of deviation (*vyabhicāra*), the repeated observation cannot be the violation of the rule-‘the method of agreement in absence’ (*vyatirekavyabhicāra*).

What is to be understood by the absence of the knowledge of deviation (*vyabhicārajñānaviraha*)? It is an absence whose counter-positiveness is limited by the property of being knowledge existing either in the definite knowledge of deviation or in the knowledge of deviation in the form of doubt. The knowledge of deviation may be attained sometimes definitely but sometimes not. If in a case of inferential procedure *vyāpti* or invariable relation, not being known definitely, gives rise to the slightest doubt about it, it should be described as the knowledge of deviation. Hence ‘the cognition of the absence of deviation’ (*vyabhicārajñānaviraha*) requires certain knowledge of *vyāpti*, which is free from doubt. The cognition in which the probans is known as qualificand (*viśeṣya*) and the co-existence of the probans with the probandum in the same substratum as qualifier (*prakāra*) is to be known by the term-‘*sahacāragraha*’ (the knowledge of coexistence) (*sahacāragrahaśca hetuviśeṣyaka-samānādhikaraṇyaprakārakam jñānam*). It can be explained with the help of the following instance. In the cognition-‘Smoke is coexistent with fire in the same locus’ (*dhūmaḥ vahnīsamānādhikaraṇaḥ*) the ‘smoke’ (*dhūmaḥ*) is the qualificand (*viśeṣya*) and ‘the coexistence of the smoke with the fire in the same substratum’ (*vahnīsamānādhikaraṇa*) is the qualifier (*prakāra*). By the term ‘*sahacāragraha*’ such an apprehension should be taken into account. Both the knowledge of existence of the probans and the probandum in a particular locus and the absence of the knowledge of deviation are the causes of ascertaining *vyāpti* (*tadubhayamapi vyāptiniścaye kāraṇam*). Repeated observations, of course,

, *Vyāptigrāhopāya* portion), in Kamakhyānath Tarkavāgīṣa (Ed.), *Tattvacintāmaṇi* with *Māthurī*, Calcutta, Asiatic Society, 2nd Edition, 1974.

⁸ ‘*vyabhicāragrahasya vyāptigrāhe pratibandhakatvābhāvaḥ kāraṇam*’, (*Siddhāntamuktāvalī* verse 137), in Gurunath Vidyanidhi, *Bhāṣāpariccheda* with *Siddhāntamuktāvā-īi*, (Bengali translation and elucidation), Calcutta, 1376 (B.S.) and Cfr., Gopal Chandra Tarkatīrtha, *Bhāṣāpariccheda* with *Siddhāntamuktāvalī*, (Bengali translation and elucidation), Burdwan, Burdwan University, 1980.

⁹ ‘*Bhūyodarśanam tu kāraṇam vyabhicārāsphurtau sakṛddarśane’pi kvacidvyāptigrāhāt*’, (*Siddhāntamuktāvalī* verse 137).

sometimes act as a promoter (*prayojaka*) in ascertaining *Vyapti* by removing the doubt of deviation.¹⁰

There are two kinds of knowledge: the definite knowledge and the knowledge in the form of doubt. The doubt of deviation may arise in some cases from the doubt of extraneous adjunct and sometimes from the knowledge of some common attributes like co-existence etc along with the absence of the knowledge of the specific characteristic features of them. The doubt of deviation can be removed sometimes by *Tarka* or sometimes by the absence of the collocation of causes of doubt, which is called *svatahsiddha*.¹¹ If doubt is not dispelled through repeated observation of the co-existence between *hetu* and *sādhyā*, the method of *tarka* is to be resorted to (*yatra tu bhūyodarśanādapi śamkā nāpaiti tatra vipakṣabādhakatarko'peksitah*). *Tarka* is the end of doubt (*tarkaḥ śamkāvadhiḥ*), as it is dispelled through the application of this method. *Tarka* is a kind of hypothetical reasoning (*āropa*). It is an imposition of the pervader through the imposition of the pervaded (*vyāpyāropeṇa vyāpakāropa*). It is of two types- determining the definite nature of an object (*viāyapariṣodhaka*) and removing the doubt of deviation (*vyabhicāraśamkānivartaka*). The former is in the form: 'If it does not possess fire, it would not possess smoke' (*yadyam vahnimān na syāt tadā dhūmavān na syāt*). It determines the certainty of the existence of fire in a particular locus. In this context through the absence of the *āpādya* or the consequence (i.e., by the absence of the negation of smoke) the certainty of the existence of the absence of the *āpādaka* (the absence of the negation of fire) is ascertained. Through the knowledge of the existence of smoke the existence of fire is ascertained. In this way the doubt as to the existence of fire on the mountain in this context may be removed by applying this type of *tarka*. The observation of the co-existence is to be taken as the cause of ascertaining causal relation (*kāryakāraṇabhāva*) between smoke and fire.¹²

The latter type of *tarka* is in the following form: 'If smoke be deviated from fire, it will not be caused by fire' (*dhūmo yadi vahnivyabhicār syāttarhi vahnijanyo na syāt*). If the first part is true, the second part would also be true. But it is experienced that the second part is not true in so far as we do not get any smoke, which is not caused by fire. From the falsity of the second half the falsity of the first half is determined. *Tarka*, being a mental construction, is useful for removing doubt and hence it is otherwise called *āpatti* i.e., imposition of the undesired through which

10 'Vyabhicāraśamkāvidhūnanadvārā bhūyodarśanamupayujyate', (*Siddhāntamuktāvalī* verse 137). See also *Gādādhari on Tattvacintāmaṇi*, p. 64

11 'Jñānaṁ niścayaḥ śamkā ca. Sa kvacidupādhisandehāt, kvacid viśeṣādarśanasa hitasādhāraṇadharmadarśanāt, Tadvirahaśca kvacid vipakṣavādhakatarkāt, kvacit svatahsiddhaḥ eva' *Tattvacintāmaṇi*, *Vyāptigrahopāya*-portion; 'svatahsiddhaḥ iti tarkaṁ vinā anyena prayuktah'-*Māthuri on Tattvacintāmaṇi*, 'svatahsiddhaḥ=svasāmagrīv irahaprayojyah'- *Nṛsinghaprakāśikā on Tarkasamgraha*. Cfr also, Raghunath Ghosh, 'Role of *Tarka* in the Phenomenon of *Vyāptigraha*', *Purnatrayi (Ravi Verma Granthavali Journal)*, Vol.XVI No.2, 1989, Govt Sanskrit College, Tripunithura, Kerala.

12 'Yadyam vahnimān na syāt tadā dhūmavān na syāt, kāraṇaṁ vinā kāryānutpādāt' *Siddhāntamuktāvalī* on verse no 137

a desired standpoint is established. It is a kind of indirect method through which the truth is ascertained. If the negation of p is proved as absurd, it would automatically follow that p is true. *Tarka* cannot be applied to all cases where doubt stands on the way of our knowledge. If there does not arise any doubt due to some contradiction (*vyāghāta*), inference can be drawn without the application of *tarka*.

The doubt of deviation (*vyabhicārasamkā*) does not arise in the *vyāpti* existing inside *tarka*, because it would lead to the involvement of contradiction in respect of one's own activity (*svakriyāvyāghāta*) and hence there does not arise any necessity of another *tarka*. It is a fact that an individual is allowed to doubt so long as there does not arise any contradiction in respect of one's own practical activity. He is not allowed to entertain doubt about *vyāpti*-relation existing between smoke and fire, because he seeks fire to get smoke without any hesitation in the empirical level. Had he possessed a slightest doubt as to it, he would not have sought fire for smoking. The existence of doubt in this context will contradict one's own activity. Thus habitually a man takes food to satisfy his hunger and takes the help of language to make others understand his desire etc.¹³ If there is a case where an effect is produced without any cause, the effect would be doubted as having any cause or uncaused (*ahetuka*). If this doubt persists, it would surely lead to contradiction in respect of one's own action (*svakriyāvyāghāta*). In fact such doubt, if nourished, surely leads to contradiction, which is undesirable. Hence it is better not to entertain doubt.¹⁴ One's own activities indicate the absence of doubt in them. For, the activities are regarded as impediment to a doubt. In spite of this if someone goes on doubting without caring to the fact of self-contradiction, it would be taken as a pathological one. Hence the phenomenon of doubting would be taken as an object of doubt.

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

13 'Vyāptigrahaśca sāmānyalakṣaṇapratyāsattiyā sakaladhūmādiviṣayaka', *Tattvacintāmaṇi*, 'Prasiddhadhūme vahnīsambandhāvaḡamāt kālāntariyadeśāntarīyadhūmasya mānābhāvenājñānāt. Sāmānyena tu sakaladhūmopasthitau dhūmāntare viśeṣādarśane samśayo yujyate' *Ibid*.

14 *yadi hi kāraṇaḡ vinā kāryaḡ syāt tadā dhūmārthaḡ vanheṣṭṛptyarthaḡ bhojanasya vā niyamata upādānam tavaiva na syāditi*, (*Siddhāntamuktāvalī* verse 137), in Visvanatha, *Sidhantamuktavli on Bhasapariccheda*, Gopal Chandra Tarkatirtha (Bengali translation and elucidation), Burdwan University, 1980.

With the aid of such supernormal connection through universal the invariable relation (*vyāptisambandha*) can be established between two objects. Such relation existing between all cases of smoke and fire cannot be known through the normal way of seeing. The cognition of the coexistence between a particular smoke and a particular fire leads to the perception of their corresponding universals i.e., smokeness and fireness. With the help of these an invariable relation between smoke-in-general and fire-in-general existing in three times can be established. In this context the universal 'smokeness' serves as a *pratyasatti* through which we get all the cases of smoke. Generally doubt arises concerning all cases of smoke and fire existing in different place and time that are beyond the range of our sense organs. Any type of doubt presupposes the knowledge of its object. Hence an object must be known previously to justify doubt and the previous perceptual knowledge of all cases of smoke is highly essential. This is possible through universal (smokeness). This is another way of justifying, *sāmānyalakṣaṇā* which ultimately assists in ascertaining *Vyāpti* in the way mentioned above.¹⁵

In this case the term '*lakṣaṇā*' means *svarūpa* or nature. The connection in which universal becomes the nature is called *sāmānyalakṣaṇā* (*sāmānyam lakṣaṇam yasya ityarthah*). The definition, if taken into account, everybody would have acquired the knowledge of all cases of smoke through the connection of smokeness, which is eternal and remains in all smokes through the relation of inherence. But in actual life such cognition is not possible. Hence a different type of definition is proposed. By the term '*sāmānyalakṣaṇasannikarṣa*' we mean the universal, which has become a qualifier in the knowledge of which the object connected with sense organ is a qualificand (*indriyāmbaddhavisayaka*). In the case of a particular manifestation of smoke the 'smoke' has become a qualificand connected with sense organ. In such 'smoke' the property or universal 'smokeness' inheres as a qualifier (*prakāribhūta*). All the cases of smoke existing in past, present and future can be perceived through super normal connection through smokeness existing in a particular smoke¹⁶

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

15 *yadi hi kvacit karanam vina kāryam bhaviṣyati tadāhetuka eva bhaviṣyatīti tatrāpyāśamkā bhavet tadā sa svakriyāvyaḡhātādapasarānya, Ibid*

16 '*tatra dhṃmatvena sannikarṣena dhūmā ityevaṃ rūpam sakaladhūmaviṣayakam jñanam jāyate*', (*Siddhāntamuktāvalī* verse 45)

IV

First, Viśvanātha thinks that even from a single observation of the co-existence of *Hetu* and *Sādhya* the *Vyāpti* between them can be ascertained if there is the absence of the knowledge of deviation, e.g., *Etadrūpavān etadrasāt*. It is not clear to us how *Vyāpti*-relation between them is known from a single occurrence, as the knowledge of relation presupposes the repeated observation of them. Secondly, in order to know whether there is any case of deviation or not it needs more than one case to observe so far as our common sense goes. Hence the question of repeated observations remains as relevant in this context. Lastly, the meaning of *svataḥsiddha* i.e., substantiation of *vyāpti* without taking recourse to *Tarka* is not, I think, sufficient. There may be some cases where the doubt of deviation may be removed through the repeated observations (*bhūyodarśana*). The meaning of the term *svataḥsiddha* is not confined with that which is caused by something other than *Tarka*, but it may be extended to that which is not even caused by *bhūyodarśana*. (*Tarkena bhūyodarśanena ca vinā anyena prayuktah*).

The Navya Nyāya thinkers may offer a solution. Someone knows the *Vyāpti*-relation between 'colour' and 'taste' of a particular type of object after observing their co-existence in different place and time. What is applicable to all individuals is applicable to a particular (*vyākti*). On the strength of this factor one could understand both *sahacara* and *vyabhicārābhāva*. The phenomenon of *bhūyodarśana* has got a prominent role in determining the co-existence between a *Sādhya* and a *Hetu* (*sahacāra*) and the absence of the knowledge of deviation (*vyabhcārābhāva*). In order to ascertain the said co-existence and the absence of the knowledge of deviation it needs more than one case. Otherwise, how can the co-existence of them be confirmed? If repeated observations (*bhūyodarśana*) is taken as a sole cause of ascertaining *Vyāpti*, it would lead to a problem as to the exclusively affirmative (*kevalānvaī*) inferences like-'This is nameable, as it is knowable' (*idaṁ vācyam jñeyatvāt*). The invariable relation between 'nameability' (*vācyatva*) and 'knowability' (*jñeyatva*) can be known through their occurrence in a single case only. But this is also not problematic on account of the fact that this relation is known in a single instance, because we are confirmed that whatever is existent is expressible and nameable. Hence from the fact of an object's nameability its knowability can be known from a single occurrence of them due to gathering confidence from the previous instances. Hence the importance of repeated observations of the co-existence of *hetu* and *sādhya* cannot be ruled out. From the single occurrence of a particular *hetu* and a particular *sādhya* we can have the cognition of *vyāpti* if there exists a universal rule of the coexistence between two general things, which is established through repeated observation.

What the Naiyayikas have said has got relevance in the present world. On the basis of repeated observations (*bhuyodarsan*) of the co-existence of the cause and effect we infer the effect on the strength of cause. Just after seeing certain components in the blood the physicians infer or diagnose the disease, e.g. after seeing the bite of a particular

mosquito the disease 'malaria' is diagnosed. In the same way, an individual desirous of having cigarettes wants to have fire in the practical life. Similarly, if some one wants to wash his clothes or feels thirsty, s/he wants water. Because fire and water have the efficacy to produce smoke and washing or drinking respectively, which is, in fact, inferred. Had there been a slightest doubt about the system of causality, no one would have depended on this, resulting in total loss of public behaviour (*loka-vyavahara*). We live in the society and act upon many things after depending on the relation of causality through which the universal concomitance or *vyāpti* is known. Though the philosophers of Science like Karl Popper etc do not believe in this type of causality yet it is to be borne in mind that every effect or action is due to some cause. Hence we cannot deny causality. It is also found in the present society that if some one says something absurd, it is necessary to accept his absurd position *for the time being* only to show through logic or argumentation that his position is absurd which is accepted in Mathematics as *Reductio-ad-absurdum* method. In Indian Logic the same method is called *Tarka*, more specifically *vipaksa-badhaka-tarka* (argument countering *prima-facie* view). If some one is called a cow, s/he will start arguing that if s/he be a cow there would have been the property of cowness in him/her. But actually there is no such property like cowness in him/her and hence the existence of cowness in a wo/man is an impossible phenomenon. Due to absurdity of the existence of cowness in him/her, it is proved that s/he is a wo/man, but not a cow. Such method is always adopted by us in our society. The ordinary human beings like cultivators, labourers etc are also found to adopt spontaneously the methods of repeated observation (*bhuyodarsana*) and *Reductio-ad-absurdum* (*tarka*) even without knowing them properly, not to speak of the educated persons.¹⁷ In fact, we cannot move even an inch without taking recourse to inference, because a great domain of our knowledge does not come under the purview of perception. Hence inference has to be admitted as a proper source of knowing through proper ascertainment of universal concomitance (*vyāpti*), which is possible through the methods as shown above.

17 Cfr. Raghunath Ghosh, *Knowledge, Meaning and Intuition: Some Theories of Indian Logic*, Delhi, New Bharatiya Book Corporation, 2000.