CHAPTER -II

TREATMENT OF *ANUMĀNA* IN NYĀYA-VAIŚEṢIKA PHILOSOPHY:

A. Meaning of *Anumāna*:

Like all other systems of Indian Philosophy, the Nyāya-Vaiśeṣika system also deals with the epistemology. Except the Cārvāka, all the systems of Indian philosophy hold that *anumāna* is a distinct means of knowledge. The Nyāya and the Vaiśeṣika systems are allied. Both in the Nyāya and Vaiśeṣika systems, delineation of *anumāna* is identical.

Anumāna is the second source of valid knowledge. It is the process of reasoning in the course of which from one's invariable relation with other found previously, a new type of knowledge is deduced. *Anumāna* is a Sanskrit word which is used for two things; viz., *anumiti* (inferential cognition) and *anumitikaraṇa* (the instrument of inferential cognition). In this way, when the word stands for an abstraction and when it stands for the instrument, it implies a source of inferential cognition. *Anumāna* or inference literally means such knowledge as follows some other knowledge. The term *anumāna* consists of two parts, viz., *anu* and *māna*. *Anu* means after and *māna* means cognition or way of apprehension of object respectively. Thus, *anumāna* in a general sense means a kind of knowledge, which we get after some other knowledge, i.e., perception. It is a kind of reasoning where we pass from some perceived mark (*liṅga*) to something unperceived on the basis of the universal relation of invariable concomitance between the middle and the major terms. There is, however, a divergence of views with regard to the exact nature of *anumāna*. Let us see how the Nyāya-Vaiśeṣika system defines *anumāna* as a source of valid knowledge.

In the *Nyāyasūtra*, Gautama does not give any definition of *anumāna*. But he simply states that *anumāna* presupposes perception and it is of three kinds,[1] viz., (i) *pūrvavat*, (ii) *śeṣavat* and (iii) *sāmānyatodṛṣṭa*. Vātsyāyana in his *Nyāyabhāṣya* remarks, "it is the knowledge of an object due to a previous knowledge of some sign."[2] According to Jayanta, *anumāna* is the instrument of the knowledge of an unperceived probandum (*sādhya*) through the apprehension of a probans (*sādhana*) with five fold characteristics together with the recollection of the relation of invariable concomitance between the two.[3] Uddyotakara opines that *anumāna* is the argument from sign as aided by remembrance.[4] He interprets the compound '*tat pūrvakam*' in three ways, viz., (i) *tāni-pūrvakam*, in which case *anumāna* may presuppose all the pramāṇas; (ii) *tat-pūrvakam* implying that it presupposes perception only; and (iii) *te-pūrvakam*, meaning that it presupposes perceptions, i.e., (a) perception of the invariable relation between *liṅga* and *liṅgīn* and (b) perception of *liṅga* in the present case.[5] Some of the later logicians followed this above view. Bhāsarvajña, in his *Nyāyasāra*, defines *anumāna* as the means of knowing a thing beyond the range of the senses through its inseparable connection with another thing, which lies within their range. According to Gaṅgeśa, the founder of the

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[1] atha tatpūrvakam tribidhamanumānam pūrvavat śeṣavat sāmānyatodṛṣṭam ca. NS, i.1.5

[2] mitena liṅgena liṅgīno'rthasya paścānmānamanumānam.   VBh on NS, i.1.3

[3] pañca lakṣaṇakālliṅgād gṛhītānniyate smṛteḥ parokṣe liṅgīni jñānamanumānam.

NM, I – 101

[4] smṛtyanugṛhīto liṅgaparāmarśo'numānam.   NV, 1.1.5

[5] NV, 1.1.5, NVTT, 1.1.5

Navya-Naiyāyika, *anumāna* is the knowledge produced by the knowledge of a reason pervaded by a predicate existing in the subject.[6]

The Vaiśeṣika system of Indian philosophy accepts two pramāṇas, viz., perception (*pratyakṣa*) and inference (*anumāna*). Kaṇāda, the founder of the Vaiśeṣika system, holds that *anumāna* is the knowledge of probandum derived from the knowledge of the probans. According to this system, *anumāna* is the knowledge which is derived from the mark from which the existence of the probandum (*sādhya*) is inferred as its effect, or cause or conjunct, or antagonist or inherent. The mark is the means of inference, which is based upon the relation of causality, conjunction, opposition and inherence. The causal relation between the probans and the probandum is shown by the members of an inference (*anumāna*).[7] Kaṇāda is aware of invariable concomitance (*vyāpti*) of the probans with the probandum and its necessity for inference (*anumāna*). He calls it *prasiddhi* which is a general principle of universal relation.[8] A faulty reason (*apadeśa*) is not pervaded by the probandum (*aprasiddhi*). Praśastapāda, in his *Padārthadharmasaṁgraha*, defines *anumāna* as the knowledge which results from the apprehension of a sign (*liṅga*).[9] Annambhaṭṭa, in his *Tarkasaṁgraha*, defines *anumāna* as the peculiar cause of inferential knowledge (*anumitikaraṇaṁ anumānam*).

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[6] vyāptiviśiṣṭa pakṣadharmatājñānajanyam jñānamanumitiḥ.   TC, p.2

[7] asyedaṁ kāryaṁ kāraṇaṁ saṁyogī virodhī samavāyi ceti laiṅgikam. asyedaṁ kāryakāraṇa sambandhāścavayavād bhavati. heturapadeśo liṅgam pramāṇam kāraṇam. VS, ix.2.1, 2.4

[8] prasiddhipūrvakatvādapadeśasya.   VS, iii.1.14

[9] liṅgadarśanāt sañjāyamānam laiṅgikam.   PDS, p.200

Here, *anumiti* means inferential cognition resulting from *parāmarśa*.[10] Again, *anumitikaraṇa* means an instrument of inferential cognition. For example, 'where smoke is perceived, the fire is inferred, as in the hill'. But *anumāna* takes place only when the universal relation between smoke and fire is already known. This relation is called *vyāpti*.[11] Viśvanātha distinguishes between *anumāna* and *anumiti*. The former stands for the process of *anumāna* and the later stands for the result of process. He defines *anumiti* as the knowledge derived from *parāmarśa*.[12] According to Annambhaṭṭa, the term *parāmarśa* means the knowledge of *liṅga* residing in *pakṣa*, e.g., 'the hill has smoke', qualified by the knowledge of *vyāpti* , e.g., 'wherever there is smoke there is fire'.[13] Viśvanātha alternatively defines *anumāna* as the knowledge of something derived through the instrumentality of the knowledge of *vyāpti*.[14] But this definition is incomplete, because it does not make an explicit statement of the apprehension of *liṅga* which is as essential as the knowledge of *vyāpti*. According to Dharmakīrti, *anumāna* is the cognition of the inferable from the sign having a three fold character.[15] The three characteristics of a sign are –

   (i) its presence in the *pakṣa*.

   (ii) its presence in the *sapakṣa*.

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[10] parāmarśajanyam jñānamanumitiḥ.   TS, p.26

[11] yatra yatra dhūmastatra tatrāgniriti sāhacaryaniyamo vyāptiḥ.   *Ibid.*

[12] SM, p.238

[13] vyāptiviśiṣṭa pakṣadharmatājñānam,   TS, p.34

[14] vyāptijñānakaraṇakam jñānam,   SM, p.238

[15] trirūpālliṅgād yadanumeye jñānam tadanumānam.   NB, 2.3

(iii) its absence from the *vipakṣa.*

Like the definition of Jayanta, this definition of *anumāna* enumerates the conditions of validity rather than stating the essential nature of inference (*anumāna*). There is no mention of *vyāpti* in Dharmakīrti's definition of *anumāna.*

The most notable contribution of the Nyāya-Vaiśeṣika system is its the theory of inference or *anumāna*. It is the mediate knowledge of an object derived through the medium of the knowledge of a mark by virtue of the relation of invariable concomitance between them.

The constituents of *Anumāna* :

From the above definitions of *anumāna* it follows that there cannot be less than three terms and three propositions in it. *Anumāna* is the mental process of passing from one or more propositions to another proposition, which is justified by them. An *anumāna* has atleast three propositions, viz., major premise, minor premise and the conclusion. The conclusion is justified on the strength of the two premises. The justification of an *anumāna* is possible only with the three terms. The three terms of an *anumāna* are – the *liṅga*, which corresponds respectively to the middle, the *sādhya*, which corresponds the major and the *pakṣa* which corresponds the minor term of syllogism.

(i) The *Liṅga* (the middle term): The word *liṅga* is also called *hetu*, *sādhana* and *vyāpya*. *Hetu or liṅga* is the mark or sign which indicates the presence of the inferable object. It is called *sādhana* or *hetu* in so far as it is the ground of our knowledge of the *sādhya* or what is inferred. It is found once in relation to the *pakṣa* or the minor term

and then in relation to the *sādhya* or the major term. The *liṅga* (reason) is that which causes a thing to be known by the strength of invariable concomitance (*vyāpti*).[16]

For example –

The hill is fiery.

Because it is smoky.

Here, 'smoke' is the mark or sign. From the presence of 'smoke' in the hill as qualified by the knowledge that wherever there is smoke there is fire, we proceed to infer the presence of fire in the hill. This is called *anumāna*. So, the *liṅga* is really the ground of *anumāna*.

(ii) The *Sādhya* (the major term): The *sādhya* (major term) is the inferable character of the *pakṣa* or the minor term and corresponds roughly to the major term of the syllogism. It is the object of *anumāna* i.e., invariable character of the *pakṣa* or the minor term. The *sādhya* is that which we want to know or prove by means of any inference (*anumāna*). It is also called as *vyāpaka*, *liṅgīn* and *niyāmaka*. It pervades the *hetu*.

For example –

The hill has fire.

Because it has smoke.

Here, 'fire' is the *sādhya* or major term.

(iii) The *Pakṣa* (the minor term): The *pakṣa* is the subject under consideration in the course of the inferential reasoning; or *pakṣa* is the subject in which the predicate or

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[16] vyāptibalenārthagamakam liṅgam.   TB, p.7

inferable object is doubted.[17] It is the substratum processing of the *liṅga* and *sādhya*. The *pakṣa* is the subject in which the existence of character or a predicate is sought to be proved.[18] In relation to the *pakṣa* or minor term in any *anumāna*, a similar instance (*sapakṣa*) is one in which an inferable character or predicate is certainly known to exist. A dissimilar instance (*vipakṣa*) is one from which a predicate is certainly known to be absent.[19] In the example given above, 'the hill' is the *pakṣa* or minor term.

While the *pakṣa* is the subject of *anumāna*, the *sādhya* is the object of *anumāna*. It is that which we want to know or prove by means of any inference (*anumāna*). The *sādhya* is that character of the *pakṣa* or minor term, which is not perceived by us, but indicated by some sign present in it. The middle term is the reason as to why we relate the major to the minor term. The presence of the middle term in the minor term is called *pakṣadharmatā*. The knowledge of *pakṣadharmatā* as qualified by *vyāpti* is called *parāmarśa*.[20] There are five characteristics of the middle term (*liṅga*), viz., (i) *pakṣadharmatā*, (ii) *sapakṣasattva*, (iii) *vipakṣāsattva*, (iv) *abādhitaviṣayatva* and

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[17] saṁdigdhasādhyavān pakṣaḥ.   TS, p.32

Cf: nānupalabdhe na nirṇite'rthe nyāyaḥ pravartate kintu saṁśayite.   NBh, i.1.1

[18] siṣādhayiṣita dharma viśiṣṭo dharma pakṣaḥ.   NM, p.110

[19] niścitasādhyavān sapakṣaḥ; niścitasādhyabhāvavān vipakṣaḥ.   TS, p. 44

[20] vyāpyasya parvatādivṛttitvam pakṣadharmatā vyāptiviśiṣṭa pakṣadharmatājñānam parāmarśaḥ.   TS, p. 26

(v) *asatpratipakṣattva*.[21] Keśavamiśra in his *Tarkabhāṣā* also have discussed about these five characteristics of the middle term.[22]

(i) *Pakṣadharmatā*: Firstly, the middle term (*hetu*) must be found to be present in the subject (*pakṣa*), i.e. the *hetu* must be a characteristic of the minor term, e.g., 'smoke must be present in the hill.'

(ii) *Sapakṣasattva*: Secondly, it means that the major term (*sādhya*) must be present in all the instances in which the middle term (*hetu*) is present, e.g., 'smoke must be present in the kitchen where fire exists.'

(iii) *Vipakṣāsattva*: Thirdly, it means the non-existence of the middle term (*hetu*) in negative instances heterogeneous from the proven. In other words, it means the non-existence in dissimilar instances in which the predicate does not exist. For example, - 'smoke must be absent in the lake in which fire does not exist.'

(iv) *Abādhitaviṣayattva*: Fourthly, it means that the middle term (*hetu*) must not relate or be incompatible with the minor term, e.g., 'it must not prove the coolness of fire.'

(v) *Asatpratipakṣattva*: Lastly, it means the absence of counteracting forces. This means that there should be nothing else present in the minor term (*pakṣa*) alongwith the middle term (*hetu*), which is invariably connected with the absence of the thing whose presence we are going to establish.

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[21] pakṣadharmatvam sapakṣadharmatvam vipakṣādvyavṛttirabādhitaviṣayatvaṁ asatpratipakṣatvam ceti.   NM, p. 110, NSV, 1.2.4

[22] tāni pañcarūpāṇi pakṣadharmatvam sapakṣe sattvam vipakṣādvyavṛttiḥ abādhitaviṣayattvam asatpratipakṣattvam ceti.   TB, 48

All these five characteristics are necessary for a valid reason (*hetu*). A reason (*hetu*) with these characteristics is probative of the predicate.

In the Vaiśeṣika system, it is stated that *anumāna* is based upon real universal relation. Praśastapāda opines that the mark (*liṅga*) is inseparably related to the probandum (*sādhya*) in all times and places, which leads to the inference (*anumāna*) of it. He does not use the terms *pakṣa*, *sapakṣa* and *vipakṣa*. He uses *anumeya* in the sense of the subject of *anumāna*.[23]

B. Different divisions of *Anumāna* :

In Indian logic an *anumāna* is a combined deductive inductive reasoning consisting of at least three categorical propositions. In the Nyāya system, we find three different classifications of *anumāna*.

(i) According to the first classification, *anumāna* is of two kinds,- viz., (a) *svārthānumāna* and (b) *parārthānumāna*.

(ii) According to the second classification, *anumāna* is said to be of three kinds - viz., (a) *pūrvavat*, (b) *śeṣavat* and (c) *sāmānyatodṛṣṭa*.[24]

(iii) According to the third classification, *anumāna* is said to be of three kinds, viz., (a) *kevalānvayi*, (b) *kevalavyatireki* and (c) *anvayavyatireki*.[25]

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[23] yadanumeyena sambaddham prasiddham ca tadanvite /

tadabhāve ca nāstyeva talliṅgam anumāpakam //   PB, p.200

[24] NS, i.1.5

[25] trividhamiti, anvayi, vyatireki, anvayavyatireki ceti.   NV, 1.1.5

***Svārthānumāna* and *Parārthānumāna* :**

Though the division of *anumāna* into *svārtha* and *parārtha* is not found in the Gautama's *Nyāyasūtra* or Kaṇāda's *Vaiśeṣikasūtra*, its history definitely goes back to Praśastapāda who has mentioned it in his commentary on *Vaiśeṣikasūtra*.[26] In the Nyāya-Vaiśeṣika system, Annambhaṭṭa, the author of *Tarkasaṁgraha,* divides *anumāna* into *svārthānumāna* and *parārthānumāna*.[27] This is a psychological classification which has in view the use or purpose, which an *anumāna* serves. An *anumāna* is called *svārtha* when it aims at the knowledge of an unperceived object on the part of a man who employs that *anumāna*.[28] In a *svārthānumāna*, the premises are known from our own experience. For example, a man infers the existence of fire in a kitchen (*mahānasa*), because he first perceives a mass of smoke in it and then he remembers that there is a universal relation between smoke and fire. Whenever he goes out and happens to see smoke coming out of hill, his previous memory of the concomitant relation between smoke and fire arises and then he comes to a conclusion that wherever there is smoke, there is fire. Thus, this is a psychological process of *anumāna* for one's own sake.[29]

Yet another *anumāna* is called *parārthānumāna* or inference for others. *Parārthānumāna* is the logical process in which we try to convince others of its truth by stating all the members of syllogism in a formal manner. In *parārthānumāna*, premises

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[26] Vide Bijalwan, C.D., *Indian Theory of Knowledge*, p.142

[27] taccānumānam dvividham, svārtham parārtham ceti.   TS, p.9

[28] svārthaṁ svānumitihetuḥ.   *Ibid.*, p.27

[29] tathā hi svayameva bhūyo … tadetatsvārthānumānam.   *Ibid.*

are discovered by one man and imparted to another through the medium of language. That is why there is a greater possibility of occurrence of fallacies in *parārthānumāna* than in *svārthānumāna*. Annambhaṭṭa opines that *parārthānumāna* is the syllogistic expression of a thing which a person employs after inferring for himself. It is for other's sake. A *parārthānumāna* is illustrated when a man having inferred the existence of fire in a hill lays it down as a thesis and proves it as a conclusion following from the major and minor premises and their combination into a third premise.[30] A *parārthānumāna* consists of five constituent propositions (*pañcāvayava*), viz., *pratijñā*, *hetu*, *udāharaṇa*, *upanaya* and *nigamana*.[31]

In the *Tarkabhāṣā*, Keśavamiśra has also mentioned two kinds of *anumāna*, viz., *svārthānumāna* and *parārthānumāna.* The former is that process by which one gets convinced in his own mind[32]. For example, after ascertaining *vyāpti* between smoke and fire in the kitchen, etc. by the special perception. If one happens to go near a mountain and sees an unbroken line of smoke issuing from the mountain and reaching to the sky, he doubts the existence of fire there and immediately recollects the *vyāpti*, 'where there is smoke, there is fire', through the impression that gets aroused by the sight of smoke. Then he makes sure that such a (concomitant) smoke exists in the subject (*pakṣa*) before him and thereby concludes that there is fire (i.e.,mountain).This is called *svārthānumāna*.

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[30] *Ibid*., pp. 46 – 49

[31] pratijñāhetudāharaṇopanayanigamanāni pañcāvayavaḥ. *Ibid*.,p.29

[32] svārthaṁ svapratipattihetuḥ.   TB, 40, p.70

Again when someone after inferring for himself fire from smoke, puts forth a five membered syllogism to carry conviction to another, that inference (i.e.,the one that occurs in the hearer's mind) is called *parārthānumāna* (inference for others).[33]

In the Nyāya system, the second classification of *anumāna* is said to be of three kinds. Gautama, in his *Nyāyasūtra,* mentions these three kinds of *anumāna*, viz., (a) *pūrvavat* (b) *śeṣavat* (c) *sāmānyatodṛṣṭa.*

(a) *Pūrvavat*: A *pūrvavat anumāna* is that knowledge in which we infer the unperceived effect from a perceived cause. In this *anumāna*, the *liṅga* is related to *sādhya* as its cause and is therefore, antecedent to it. For example, "a future rainfall is inferred from the rising clouds."[34] Vātsyāyana gives two sets of interpretation of the term, *pūrvavat*. According to the first, *pūrvavat anumāna* is that in which the effect is inferred from the cause, e.g., when we see clouds rising, we infer that there will be rain.[35] According to the second interpretation, reason and effect belong to two different places. If the effect is already known or it does not exist, there can be no scope for *anumāna*. According to Vātsyāyana, it is a type of *anumāna* in which out of two things, one that is not perceived is inferred from the perception of the other on the basis of a former perception of both of these things taken together.

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[33] yattu kaścit svayam…tad yathā parvato agnimān. dhūmavatvāt…tenaitad

parārthānumānam. *Ibid*., 41, p.71

[34] pūrvavaditi yatra kāraṇena kāryamutpadyate yathā meghonnatyā bhaviṣyati bṛṣṭiriti.

NBh, i.1.5

[35] *Ibid*.

Jayanta interprets these three divisions of *anumāna* in another way, i.e., taking *vat* in *pūrvavat* etc. as the remainder of the suffix *vati* and holding that it is the universal concomitance between the reason and the consequence which is responsible for the establishment of one by another. According to him, *vat* is the remainder of the suffix *vati* and interprets *pūrvavat* likewise. Whenever we discover the universal relation of concomitance holding between the reason and the consequence on the basis of our previous perception of the same homogenous reason with the same homogenous consequence, then it is called *pūrvavat*. As for instance, in a kitchen, we find that smoke and fire co-exist. Therefore, when we see smoke in hill, we infer fire. According to Jayanta, the particular reason which is perceived along with its details establishes fire which is similar to the fire experienced before and that is why an act of *anumāna* is similar to that of perception.[36]

(b) *Śeṣavat*: A *śeṣavat anumāna* is that in which we infer an unperceived cause from a perceived effect. Here, the middle term is related as an effect to the major term. e.g., when we see that the water of the river is not as usual but is swollen and swifter, we infer that there has been rain. According to Vātsyāyana, a *śeṣavat anumāna* is that in which the knowledge of cause is derived from the perception of its effects, e.g., one seeing a river swollen infers that there was rain.[37]

Jayanta refers to the inference of cause from its effect and quotes the same example that Vātsyāyana gives to illustrate the process. He, however, comes to the

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[36] Vide Bijalwan, C.D., *Indian Theory of Knowledge*, pp. 138,139

[37] tad yatra kāryena kāraṇamanumīyate pūrvodakaviparītamudakaṁ nadyāḥ pūrṇatvaṁ śīghratvaṁ ca dṛṣṭvā srotaso'numīyate bhutā dṛṣṭiriti.   NBh, i.1.5

conclusion that it is not really the cause (rain), but the up-country which has heavy shower of rain, which is inferred from the abnormal swelling of the river; or a particular country may be the subject of *anumāna* instead of the river, holding that this country is in contact with another country which has heavy shower, because it has a river with a swollen stream.[38] As in the case of *pūrvavat*, Jayanta gives an alternative interpretation of *śeṣavat* also and holds *vat* as the reminder of the suffix *vati* propounding that the conclusion in this *anumāna* is arrived at through the method of elimination.

(c) *Sāmānyatodṛṣṭa*: A *sāmānyatodṛṣṭa* is the *anumāna* of an unperceived object from the mark which is perceived. It is based on the non causal relation. In *sāmānyatodṛṣṭa anumāna,* the *vyāpti* or the universal relation between the major and middle terms does not depend on a causal relation.[39] For example, we infer the existence of the soul substance from the qualities of cognition, pleasure, pain, desire, volition which must inhere in a substance. These qualities are similar to other qualities. Therefore, they must be inherent in a substance. This substance is called soul.

According to Vātsyāyana, *sāmānyatodṛṣṭa anumāna* is the knowledge of one thing derived from perception of another things with which it is commonly seen, e.g., one seeing a beast possessing horns, infers that it possesses also a tail, or one seeing smoke on a hill infers that there is fire on it.[40]

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[38] iyam vācoyuktiḥ kāryena kāraṇam anumīyate iti paramārthastu dharmo dharmavatvena dharmavānanumīyate iti sthitiḥ.   NM, I.118

[39] sāmānyatodṛṣṭam kāryakāraṇa bhinnaliṅgakam.   NSV, i.1.5

[40] sāmānyatodṛṣṭam nāmo yatrāapratyakṣe…..sthānāṁ ca ātmeti.   NBh, i.1.5

According to Jayanta, when we infer the consequent from the antecedent which is neither a cause nor an effect, then it is called *sāmānyatodṛṣṭa*. For example, the taste of a '*kapittha*' (wood apple) is inferred from its colour. Colour and taste inhere in '*kapittha*' and they are not causally related to each other. Jayanta holds that when an imperceptible object is inferred on the basis of concomitance between the universal, the antecedent (reason) and the universal of the consequent, it is called *sāmānyatodṛṣṭa anumāna*.[41]

In the Nyāya system, the third classification of *anumāna* is divided into three types. Uddyotokara is the first logician who recognizes *kevalānvayi, kevalavyatireki* and *anvayavyatireki* as the varieties of inference.[42] He rejects *pūrvavat* as an inference from a cause to an effect, and *śeṣavat* as an inference from an effect to a cause. He defines *sāmānyatodṛṣṭa* as an *anumāna* which is based on uniformity of co-existence as distinct from uniformity of causation. In addition to rejecting *pūrvavat*, *śeṣavat* etc, Uddyotakara expounds these three new types of *anumāna*. This division is based upon the different methods of establishing *vyāpti*. Now we shall discuss them elaborately:

(a) *Kevalānvayi*: An *anumāna* is called *kevalānvayi*, when it is based on a middle term which is only positively related to the major term. The terms agree only in presence; there is no negative instance of their agreement in absence.[43] For example, "all

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[41] Vide Bijalwan, C.D., *Indian Theory of Knowledge*, pp. 140,141

[42] trividhamiti, anvayi, vyatireki, anvayavyatireki ceti.   NV, 1.1.5

Cf: traividhyamanumānasya kevalānvayibhedataḥ /

   dvaividhyantu bhaved vyāptenvayavyatirekataḥ //   BP, *kārikā* 142

[43] yatra sādhyavyatireko na kutrāpyasti sa kevalānvayi.   TM, ch- II

knowable things are nameable; the jar is nameable, because it is knowable;" The reason is that knowability exists in all nameable objects. There are no knowable objects which are not nameable. The reason is not counter positive entity of the negation of the predicate.[44] In *kevalānvayi* inference (*anumāna*), the reason exists in the subject and similar instances and is devoid of dissimilar instances. For example :

Sound is non-eternal.

Because it is produced.

In *kevalānvayi anumāna* the middle term is positively related to the major term.

(b) *Kevalavyatireki*: In *kevalavyatireki anumāna*, the reason has negative invariable concomitance with the absence of the predicate. In this *anumāna*, the middle term is negatively related to the major term. It depends upon a negative invariable concomitance or uniform relation between the absence of the reason with the absence of the predicate, which is established by the method of agreement in absence. As for example, "Earth differs from the other elements, because it has odour." Or, "What is not different from the other elements has no odour." In this *anumāna*, the reason 'odour' is the uncommon attribute of the subject Earth. It is co-extensive with the subject; there is no similar instance in which it may exist. Therefore, it is called *kevalavyatireki*.[45] In *kevalavyatireki* inference (*anumāna*) the reason is the counter positive entity of the absence which pervades the absence of the predicate.[46]

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[44] asadvipakṣam atvantābhāvapratiyogīsādhyakam.   SM on *kārikā* 142-143, p.542

[45] asatpakṣaḥ kevalavyatireki.   *Ibid*.

[46] sādhyabhāvavyāpakibhutābhāvapratiyogītvam.   *Ibid*.

(c) *Anvayavyatireki*: An *anumāna* is called *anvayavyatireki*, when its middle term is both positively and negatively related to the major term.[47] *Anvayavyatireki* is an inference (*anumāna*) in which the reason exists in the subject and similar instances, but does not exist in dissimilar instances. For example, "sound is non-eternal, because it is perceptible through our sense organ, being possessed of a higher genus and a lower genus."[48] In *anvayavyatireki anumāna,* the *vyāpti* has been observed by a combination of a large number of instances of agreement in presence and agreement in absence. As for example, *yatra dhūmaḥ, tatra vahniḥ;* as in the *mahānasa.* There is a universal affirmative relation of the reason with the predicate as well as a universal negative relation between them in an *anvayavyatireki* inference (*anumāna*). The former is known by the method of agreement in presence and the later by the method of agreement in absence.[49] In this *anumāna*, the reason is present in similar instances and absent from dissimilar instances,[50] e.g., (1) "All smoky objects are fiery; the hill is smoky; therefore, the hill is fiery." (2) "No non-fiery objects are smoky; the hill is smoky; therefore, the hill is fiery." 'Smoke exists in similar instances', e.g., a kitchen. With such positive arguments it is called *anvaya anumāna*. And if the same is proved through negative example or dissimilar instances, e.g., a lake, in which fire does not exist, then it is called *anvayavyatireki anumāna*.

Jayanta does not accept this kind of division of *anumāna*. But Vācaspati Miśra, Gaṅgeśa and Viśvanātha followed the division set forth by Uddyotakara. Annambhaṭṭa

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[47] yatra sādhyam sādhyabhāvāśca anyatra prasiddhaḥ so'nvayavyatireki.   TM, ch-II

[48] NV, i.1.5

[49] gṛhītānvayavyatirekisādhyakam anvayavyatireki.   TCD, p.796

[50] satsapakṣavipakṣo'nvayavyatireki.   SM on *kārikā* 143, p.542

and Keśavamiśra refer to *kevalānvayi*, *kevalavyatireki* and *anvayavyatireki* as the types of *liṅga* (reason) and not as a division of *anumāna*.

In the Vaiśeṣika system, Praśastapāda divides *svārthānumāna* into two kinds, viz., *dṛṣṭa anumāna* and *sāmānyatodṛṣṭa anumāna*. An *anumāna* is called *dṛṣṭa*, in which the character of the familiar instances and the character that is inferred possesses specific unity pertaining to the same species. For example, we perceived a dewlap in a cow in a town. Then we perceived a dewlap in an animal in a forest. From this, we infer it to be a cow. This is called *dṛṣṭa anumāna*. There is an absolute identity in the genus of the animal perceived in the past and the animal perceived at present. The genus of cow (*gotva*) inferred in the individual perceived in the forest was already perceived in the cow in a town. Therefore, it is called *dṛṣṭa anumāna*.

Again, a *sāmānyatodṛṣṭa anumāna* is defined as that in which the perceived character and the inferred character have generic unity. As for instance, when seeing that the actions of a farmer, a merchant etc. lead to same results, we infer that such actions of the four castes as sacrifice etc., must lead to same results, then the result that is inferred, viz., the attainment of heaven, which is non secular, is of a species totally different from the former result, which is secular. This kind of *anumāna* is called *sāmānyatodṛṣṭa anumāna*.[51]

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[51] dṛṣṭaṁ prasiddhasādhyayoratyantājātyābhede'numānam. prasiddhasādhyayor atyantājātibhede liṅgānumeyadharmasāmanyānuvṛṭṭito'numānam sāmānyatodṛṣṭam.

PB, pp.507-508

C. Avayavas of *Anumāna* :

Like all the systems of Indian philosophy the Nyāya-Vaiśeṣika system also agrees in holding that the syllogism represents the typical form of an inferential reasoning. In *anumāna*, we can arrive at a truth through the medium of some other truths. The inferential knowledge is a deduction from certain propositions. In the Nyāya system, there are five members of syllogism. An inference for others (*parārthānumāna*) consists of five constituent propositions (*pañcāvayava*).[52] These are- (a) *pratijñā* (proposition), (b) *hetu* (reason), (c) *udāharaṇa* (exemplification), (d) *upanaya* (application) and (e) *nigamana* (conclusion).

The first member of syllogism is called *pratijñā* or proposition, which is the logical statement of the thesis to be proved.[53] According to Gautama, *pratijñā* is the declaration of that which is to be established.[54] Vātsyāyana illustrates Gautama's statement and holds that it is a judgement based upon the synthesis of a subject with a predicate. Uddyotakara's view also agrees to that of Vātsyāyana.

The second member of syllogism is called *hetu* or the reason, which states the reason for the establishment of the statement. Gautama states that *hetu* is the means for establishing *sādhya* through an affirmative or negative example. *Hetu* must exists in the

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[52] pratijñāhetudāharaṇopanayanigamanāni pañcāvayavaḥ.   TS, p.29

  Cf : NS, i.1.32

[53] sādhyavattayā pakṣavacanaṁ pratijñā.   TSD on TS, 42, p.19

[54] sādhyanirdeśaḥ pratijñā.   NS, i.1.33

subject. It must exists in similar instances. It must not exists in dissimilar instances.[55]

Vātsyāyana and Uddyotakara support Gautama's view and hold that both of the above mentioned types of example are necessary to ward off fallacy of reason. The *hetu* is the assertion of the middle term by which we know that the *pakṣa* or the minor term is or is not related to the *sādhya* or the major term.

The third member of syllogism is called *udāharaṇa* or exemplification a universal proposition showing the invariable concomitance between the *hetu* and *sādhya*.[56] Gautama refers to two types of example, viz., *sādharmyadṛṣṭānta* and *vaidharmyadṛṣṭānta*.[57] A *sādharmyadṛṣṭānta* is a familiar instance which is known to possess the property to be established, and which implies that this property is invariably contained in the reason given. For example, 'sound is non-eternal, because it is produced, whatever is produced is non-eternal, as a pot'. A *vaidharmyadṛṣṭānta* is a familiar instance which is known to be devoid of the property to be established and which implies that the absence of this property is invariably rejected in the reason given. For example, 'sound is non-eternal, because it is produced, whatever is not non-eternal is not produced, as the soul.' Either it states the invariable concomitance of the presence of the reason with the presence of the predicate, or it states the invariable concomitance of the absence of the predicate with the absence of the reason.

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[55] udāharaṇa sādharmyāt sādhyasādhanam hetuḥ tathā vaidharmyāt.   *Ibid*., i.1.34

[56] vyāptipratipādakamudāharaṇam.   TSD on TS, p.29

[57] sādhyasādharmyāttadharmabhābī dṛṣṭānta udāharaṇam /

    tadviparyayād vā viparītam //   NS, i.1.36,37

The fourth member of syllogism is called the *upanaya* or the application, which states the existence of the reason in the subject, which is invariably concomitant with the predicate as stated in the exemplification[58]. When the *udāharaṇa* indicates that there is a universal relation between the *hetu* and the *sādhya*, the *upanaya* states that the *hetu* abides in the *pakṣa*.[59] It is the application of a general principle to a particular instance.

The fifth and the last member of syllogism is called *nigamana* or conclusion.[60] It is the restatement of the proposition after the reason has been mentioned.[61] The proposition states what is to be proved, but the conclusion states what is proved.[62] It synthesizes all members of a demonstrative inference (*anumāna*) and proves the existence of the predicate in the subject.

The above mentioned five parts make up a complete demonstrative inference (*anumāna*). These five members of the Indian syllogism are called avayavas. The following is a typical Nyāya syllogism, —

(a) The hill is fiery (*pratijñā*).

(b) Because it is smoky (*hetu*).

(c) Whatever is smoky is fiery, e.g., a kitchen (*udāharaṇa*).

(d) So like the kitchen, the hill is smoky (*upanaya*).

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[58] udāharaṇāpekṣastathetyupasaṁhāro na tatheti vā sādhyasya upanayaḥ.   *Ibid*., i.1.38

[59] pakṣadharmatājñānam upanayaḥ.   TSD on TS, 42

[60] abādhitatvādikaṁ nigamanaprayojanam.   *Ibid*.

[61] hetvopadeśātpratijñāyāḥ punarvacanaṁ nigamanam.   NS, i.1.39

[62] nigamyante'nena pratijñāhetudāharaṇopanaya ekatreti nigamanam.   NBh, i.1.39

(e) Therefore, the hill is fiery (*nigamana*).

In addition to these five members of a syllogism, some old Naiyāyikas refer to five more constituents and thereby hold that *anumāna* has ten members of syllogism.[63] These additional five members of syllogism are –

(a) *jijñāsā*, which means desire to know an object of *anumāna*.

(b) *saṁśaya*, which means doubt as to the existence of the predicate.

(c) *śakyaprāpti*, which means capacity of the *anumāna* to prove the existence of the predicate.

(d) *prayojana*, which means the purpose of drawing the conclusion.

(e) *saṁśayavyudāsa*, which means removal of doubt due to certain knowledge between *hetu* and *sādhya*.

It has already been stated above that in the Vaiśeṣika system, Praśastapāda divides *svārthānumāna* into *dṛṣṭa* and *sāmānyatodṛṣṭa*. Recognizing *parārthānumāna* he only mentions five syllogism, viz., (a) *pratijñā* (proposition); (b) *apadeśa* (reason); (c) *nidarśana* (example); (d) *anusandhāna* (application) and (e) *pratyāmnāya* (conclusion)[64].

According to the Vaiśeṣika system, *pratijñā* is the statement of a proposition. It states that the subject of *anumāna* is proposed to possess the inferable property[65].

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[63] *Ibid*., i.1.32

[64] avayavaḥ punaḥ pratijñāpadeśanidarśanānusandhānapratyāmnāyaḥ.   PB, p. 565

[65] tatrānumeyoddeśo'virodhī pratijñā.   *Ibid.*, p. 566

Secondly, the *apadeśa* means the statement of the mark or probans which is invariably concomitant or connected with the probandum[66].

Thirdly, the *nidarśana* is of two kinds, viz., affirmative (*sādharmyanidarśana*) and negative (*vaidharmyanidarśana*).[67] The first kind of *nidarśana* explains the invariable concomitance between the presence of the probans in general and the presence of the probandum in general.[68] The second kind of *nidarśana* illustrates the invariable concomitance between the absence of the probans and absence of the probandum.[69]

Fourthly, the *anusandhāna* states that the probans are invariably accompanied by the probandum inherent in the subject of an *anumāna*[70].

Lastly, the *pratyāmnāya* is the restatement of the proposition in order to convince another person.[71]

The following is a typical Vaiśeṣika syllogism:

(a) The air is a substance (*pratijñā*)

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[66] liṅgavacanamapadeśaḥ.   *Ibid.*, p. 575

[67] dvividhaṁ nidarśanaṁ sādharmyena vaidharmyena ca.   *Ibid.*, p. 598

[68] tatrānumeyasāmānyena liṅgasāmānyasyānubidhānadarśanaṁ sādharmyanidarśanaṁ. *Ibid.*

[69] anumeyaviparyaye ca liṅgasya abhāvadarśanaṁ vaidharmyanidarśanam.   *Ibid.*,p.599

[70] nidarśane'numeyasāmānyena saha dṛṣṭasya /

liṅgasāmānyamanumeye'nvānayanamanusandhānam //   *Ibid.*, p.606

[71] anumeyatvenoddiṣṭe ca aniścite ca pareṣāṁ niścayāpādanārthaṁ pratijñāyāḥ

punarvacanaṁ pratyāmnāyaḥ.   *Ibid.*, p.611

(b) Because it has qualities and action (*apadeśa*)

(c) Whatever has action is a substance, e.g., an arrow. Whatever is a non-substance is devoid of action, e.g., beinghood, (*nidarśana*)

(d) The air has action (*anusandhāna*)

(e) Therefore, the air is a substance (*pratyāmnāya*).[72]

Here, *apadeśa* corresponds to *hetu*; *nidarśana* corresponds to *udāharaṇa*; *anusandhāna* corresponds to *upanaya*; and *pratyāmnāya* corresponds to *nigamana*.

D. *Vyāpti* and *Pakṣadharmatā:*

In *anumāna*, our knowledge of the *sādhya* or major term as related to the *pakṣa* or minor term depends on the knowledge of *vyāpti* between the middle and major terms. It is on the ground of *vyāpti* or a universal relation that the middle term leads to the knowledge of the inferred object (*vyāptibalenārthagamakam liṅgam*).[73] Thus, every *anumāna* is logically dependent on the knowledge of *vyāpti*.

Vyāpti and *pakṣadharmatā* are considered as the two main grounds for the operation of *anumāna*. If fire is inferred on the hill, when smoke is perceived in it, then it is called *pakṣadharmatā* and when universal relation between fire and smoke is known, it is called *vyāpti*. Though the conclusion in *anumāna* is not drawn exclusively from *vyāpti*, but from *vyāpti* and *pakṣadharmatā* jointly, *vyāpti* is more important.

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[72] Vide Sinha, J.N., *Indian Philosophy,* vol-1, p.322

[73] TB,35, p.58

Now, we shall discuss the nature of *vyāpti* in the following:

Anumāna is based upon *vyāpti* which is the invariable concomitance of the reason (*hetu*) with the predicate (*sādhya*). Etymologically *vyāpti* (*vi+apti*) is a special relation between two facts which is universal in its nature. Literally *vyāpti* means the state of pervasion, i.e., one of the facts pervades (*vyapaka*) and the other is pervaded (*vyapya*). It implies a definite correlation between two facts of which the pervader is present. For example- *parvato vahnimān dhūmavattvāt.* Here, smoke is the pervaded (*vyāpya*) and fire is the pervader (*vyāpaka*).

In the Nyāya system, Gautama does not use the term *vyāpti*. He speaks of *niyama* and *aniyama* in the sense of invariable concomitance and variable concomitance of the reason with the predicate. Gautama defines a discrepant reason (*anaikāntika*) as one which has variable concomitance with the predicate. He defines *jāti* as a sophistical refutation on the ground of mere similarity and dissimilarity of the subject with an example. This implies that it is based on mere similarity and dissimilarity unaccompanied by invariable concomitance of the reason with the predicate[74].

Vātsyāyana speaks of *avinābhāva* or inseparable relation of the reason with the predicate as the ground of inference (*anumāna)*. He does not use the term *vyāpti*. He speaks it as the relation of the reason (*liṅga*) with the predicate (*liṅgin*). It is the uniform relation between them which are found to co-exist in an example[75]. In the view of Vātsyāyana, the inference of a predicate from a reason on the ground of mere similarity

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[74] vyabhicārād ahetuḥ,   NS, iv.1.5

[75] so'yam ekasmin dvayor dharmayoḥ sādhya sādhanabhāvaḥ sādharmyād vyavasthita

   upalabhyate.   NBh, i. 1.36

or dissimilarity with an example is invalid, because it is not based on invariable concomitance between the reason (*hetu*) and the predicate[76]. Yet, Vātsyāyana regards *vyāpti* as the logical ground of inference (*anumāna*). Jayanta, Udayana, Vācaspati and Varadarāja define *vyāpti* as a uniform, (*niyata*) unconditional (*anaupādhika*) or natural (*svābhāvika*) relation between the reason and the predicate.

Jayanta, like Gautama, used the term *niyama*, but he also refers to other terms, viz., *vyāpti*, *avinābhāva* etc. According to Jayanta, first there is the perception of a mark; then there is the recollection of *vyāpti*; then there is the knowledge of the presence of the reason pervaded by the predicate in the subject (*parāmarśā*); then there is the inference of the predicate in the subject. The knowledge of *parāmarśa* is the direct cause of inference (*anumāna*), while the perception of *vyāpti* is its cause through its recollection. The knowledge of *vyāpti* is the logical ground of inference, (*anumāna*) while the *parāmarśa* is the psychological ground[77]. According to Gaṅgeśa, the Navya-Nayāyika, invariable concomitance (*vyāpti*) is non deviation (*avyabhicārītatva*) or the absence of variable concomitance. *Vyāpti* is the uniform absence of the reason (*hetu*) from the locus of the absence of the predicate (*sādhya*)[78]. Viśvanātha defines *vyāpti* as the co-presence, in the same locus of the reason with the predicate which is not the counter positive of the absence residing in the locus of the reason.[79] *Vyāpti* has been

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[76] sādharmyamātrena vaidharmyamātrena ca sādhyasādhane pratijñāyamāne syād

   avyavasthā,   *Ibid*., v.1.3.; iii 2.12

[77] NM, pp. 122-23

[78] sādhyābhāvavadvṛttitvam ,   TC, p. 27

[79] athavā hetumannisthāvirahā pratiyogīnā sādhyena hetoraikādhikaraṇyam

vyāptirucyate.   BP, *kārikā* 69

negatively defined as the non-existence of the middle term in all places in which the major term does not exist.[80]

In the Vaiśeṣika system, Kaṇāda seems to be aware of invariable concomitance (*vyāpti*) of the probans with the probandum and its necessity for inference (*anumāna*). He however calls it *prasiddhi*.[81] According to him, it is a relation between cause and its effect or effect and cause or between two things related by conjunction, inherence etc. Praśastapāda regards *vyāpti* as the ground of inference (*anumāna*). Wherever there is probans, there is probandum. Wherever there is the absence of probandum, there is the absence of probans. He calls *vyāpti* a general principle; (*vidhi*) of invariable concomitance between the probans and probandum known by the repeated observation of their agreement in presence and agreement in absence.[82] Annambhaṭṭa defines *vyāpti* thus-"The rule of concomitance as following case, taken as an example, wherever there is smoke there is fire called *vyāpti*." [83]

In the *Tarkabhāṣā*, Keśavamiśra begins with an apparently simple definition: *sāhacaryaniyamovyāptiḥ*. Here, *sāhacarya* means co-existence which is the same thing as *samānādhikaraṇya*. This co-existence should be invariable (*niyata*) and not adventitious. For example, wherever the *hetu* is, the *sādhya* should exist in the same place. The illustration of *vyāpti* , 'wherever there is smoke there is fire' undoubtedly

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[80] vyāptiḥ sādhyavadanyasminnasambandha udāhṛtaḥ.   *Ibid*., *kārikā* 68

[81] prasiddhapūrvakatvādapadeśasya.   VS, 3.1.14

[82]….evaṁ prasiddhasamayasyāsandigdhadhūmadarśanāt

sāhacaryānusmaraṇāttadanantaramagnyadhyavasāyo bhavatīti.   PB, p 491

[83] yatra dhūmastatrāgniriti sāhacharyaniyamo vyāptiḥ.   TS, p.58

gives some idea of this invariable concomitance but it does not furnish us with a sure test as to how *vyāpti* is to be found out and under what conditions it is valid. Two notions are involved in a *vyāpti*, viz., that of *sāhacarya* 'co-existence' or 'concomitance' and that 'universality' or rather the invariability of this *sāhacarya*. *Sāhacarya* is the *samānādhikaraṇya*, co-existence in one and the same place, of *hetu* and *sādhya*. When this co-exisrence of one thing with another is observed wherever the other thing exists, then the *sāhacarya* is called *niyata.*[84]

Having discussed the definitions of *vyāpti* offered by different logicians, we may proceed to the discussion of the importance of *vyāpti* in *anumāna.* It must be noted that if there is no *vyāpti*, there is no inference (*anumāna*). If the *vyāpti* is wrong, the inference (*anumāna*) will be wrong. While discussing the importance of the *vyāpti* relation we are to note that the extension of the *liṅga* and *sādhya* is not always the same. It very often happens that the *sādhya* is more extensive (*vyāpaka*) or pervasive than the *liṅga*, although it has been observed to be present, wherever the *liṅga* is present. Therefore, *sādhya* is also called less extensive (*vyāpaka)* and *liṅga* is called the *vyāpya*. For example, "wherever there is smoke, there is fire". But fire may be found to be present where there is no smoke. For this reason *sādhya* is called *vyāpaka* and *liṅga* is called *vyāpya*.

Vyāpti as the logical ground of inference (*anumāna*) may be defined either positively or negatively. Therefore, *vyāpti* is said to be of two kinds, viz., *anvaya vyāpti* and *vyatireka vyāpti*. The former is invariable concomitance of the presence of the predicate. The later is the invariable concomitance of the absence of the predicate with

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[84] TB, p. 61

the absence of the reason. In Indian philosophy, *anumāna* is considered to be a process of reasoning and depends on *vyāpti.* So, the most valuable question regarding inference relates to the way of getting the universal proposition. This is called *vyāptigrahopāya.* It is the method by which one arrives at it.

The Nyāya method of ascertaining *vyāpti* consists of four steps, viz., *anvaya*, *vyatireka*, *vyabhicārāgraha* and *tarka*. Firstly, we observe that there is a uniform experience of two things, i.e., their co-presence that is called *anvaya.* Secondly, we observe that there is a uniform experience of their co-absence that is called *vyatireka.* Thirdly, we do not observe any contrary instance in which one of them is present without the other that is called *vyabhicārāgraha.* It is observed that wherever there is smoke, there is fire also. In the same way, wherever there is no smoke, there is no fire. We never observe a case in which there may be smoke without fire. From the observed double agreement of smoke and fire in their presence and absence together with the non-observation of any exception the *vyāpti* between smoke and fire is known, i.e., there is a universal relation between smoke and fire. Fourthly, if even after this there remains any doubt regarding the un-conditionality of the *vyāpti*, it is removed by *tarka* or a hypothetical reasoning which indirectly proves its validity.[85] In the Nyāya system, Gautama states that a *pratyakṣa* is the cause of inference. Vātsyāyana elaborates the process and says that, firstly there is perception of a mark (*liṅga*), e.g., 'smoke'. Secondly, there is the recollection of invariable concomitance of the probans (*hetu*), e.g., 'smoke', with the probandum, (*sādhya*), e.g., 'fire'. Thirdly, there is the inference of the existence of the unperceived predicate (fire) in the subject (hill). If the *liṅga-liṅgī*

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[85] vyabhicārasyagraho atha sahacāragrahastathā /

heturvyāptigrahe,tarkaḥ kvacicchankānivartakaḥ // SM, *kārikā* 137

sambandha is taken to mean concomitance, it may be said that Vātsyāyana accepts perception as the basis of ascertaining *vyāpti*. Uddyotakara maintains the view of Vātsyāyana, but he adds that the three conditions mentioned by Vātsyāyana are three successive types of *pratyakṣa* and all of them are the instruments of inference (*anumāna*).[86]

In the Vaiśeṣika system, Praśastapāda holds that the invariable concomitance between the probans and the probandum is known by the repeated observation of their agreement in presence and agreement in absence. Udayana also holds that *vyāpti* is known through the method of double agreement and not by a single observation. The importance of *vyāpti* in inferential process is admitted by all the systems of Indian philosophy. Though they are not unanimous regarding its function, yet it may be said that in every inference (*anumāna*) there are atleast three steps. The first step involves knowledge of the middle term as related to the minor term (*liṅgajñāna*). Secondly, there is knowledge of a universal relation between the middle term and the major term (*vyāptijñāna*).In the last step, the conclusion is reached in which the major term is predicated of the minor term.

From the above discussion it is evident that the knowledge of *vyāpti* is the special cause (*kāraṇa*) of inference (*anumāna*) in the Nyāya-Vaiśeṣika system.

Pakṣadharmatā:

Every inference (*anumāna*) depends on the knowledge of *vyāpti* or a universal relation between the middle and the major terms. So, it depends on the relation of the

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[86] liṅgaliṅgīsambandhāddarśanam grāhyam pratyakṣam liṅgadarśanam dvitīyam....liṅga parāmarśarūpam anumānam bhavati.   NV, 1.1.5

middle term with the minor term.[87] It may be noted that, while *vyāpti* is the logical ground of inference (*anumāna*). *Pakṣadharmatā* or *pakṣatā* is the psychological ground of inference (*anumāna*).[88] In Indian logic, the minor term is called *pakṣa*. *Pakṣatā* is sometimes also known as *pakṣadharmatā* and it is the quality of something being a *pakṣa*. If there is to be any inference (*anumāna*) there must be a *pakṣa*. While the validity of *anumāna* depends on *vyāpti,* its possibility depends on *pakṣatā*. According to the Naiyāyikas, *pakṣatā* consists in the absence of that condition in which there are the presence of certainty and absence of the will to infer.[89] From the fact that the minor term is a subject about which we want to infer something, it will appear that the two obvious conditions of a minor term are absence of certainty about something (*siddhyabhāva*) and the will to infer it (*siṣādhayiṣa*). The old Naiyāyikas accept both of these conditions and they opine that *pakṣatā* consists in the presence of doubt about the *sādhya* or the major term.[90] According to Annambhaṭṭa, *pakṣatā* as the absence (*abhāva*) of certainty (*siddhi*) that is accompanied by (*sahakṛta*) the absence (*viraha*) of the desire to infer (*siṣādhayiṣā*).[91] According to the Indian logicians, a valid inference (*anumanā*) must satisfy at least two conditions. First, there must be a true proposition and secondly, it must imply another proposition. There is *pakṣatā* where there is a desire to infer, whether certain knowledge of the presence of the predicate in the subject is

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[87]anumānasya dve aṅge vyāptiḥ pakṣadharmatā ca,   TB, p.89

[88] NM, pp. 122-23

[89] siṣādhayiṣāviraha viśiṣṭasiddhabhāvaḥ pakṣatā.   SM, pp. 309-10 on *kārikā* 70

[90] na nirṇite'rthe nyāyaḥ pravartate kintu saṁśayite.   NBh, i.1.1

   Cf: saṁdigdhasādhyadharmādharmī pakṣaḥ.   TB, p.91

[91] siṣādhayiṣā viraha sahakṛta siddhyabhāvaḥ pakṣatā.   TSD, p. 26

present or whether it is absent. There is no *pakṣatā,* where there is certain knowledge of the presence of the predicate in the subject, and where there is no desire to infer, because such certain knowledge (*siddhi*) qualified by the absence of a desire to infer is present.[92]

While *pakṣadharmatā* or *pakṣatā* is the psychological ground of inference (*anumāna*), *liṅgaparāmarśa* is considered to be the immediate cause of inference (*anumāna*).

E. *Liṅga* – its varieties:

It has been already stated that every *anumāna* must involve at least three steps. The first is the knowledge of the middle term (*hetu*) related to the minor term (*pakṣa*). Secondly, there is the knowledge of a universal relation between major term (*sādhya*) and the middle term (*hetu*). Thirdly, there is the conclusion, in which the *hetu* is predicted of the minor term (*pakṣa*). In the discussion of *yathārtha anumāna*, it may be noted that while *vyāpti* is regarded as the special cause of *anumāna*, in the same way *liṅgaparāmarśa* is treated as the immediate cause of *anumāna*. It serves to make an *anumāna* most cogent and convincing. The Naiyāyikas hold that without *liṅgaparāmarśa*, as a synthetic correlation of the minor, middle and major terms, we cannot explain the transition from the premises to the conclusion. It is the operative cause of *anumāna*. The cause of an *anumāna* whether for one's own self or for another

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[92] yatra tu siddhirasti, siṣādhayiṣā ca nāsti, tatra na pakṣa.   SM on *kārikā* 70, p. 367

is simply the consideration of a sign, therefore the *anumāna* is just this consideration of sign.[93] On this analysis *anumāna* involves the following five steps.

 (a) the knowledge of *vyāpti* between the middle and the major terms.

(b) the perception of the minor term as related to the middle term.

(c) a recollection of the *vyāpti* between the middle and major terms.

(d) a contemplation of the middle as correlating the major and minor terms.

(e) the conclusion relating the minor term with the major term.[94]

Though the ancient Naiyāyikas regard *liṅga* as the instrumental cause of *anumāna*, yet some Navya Naiyāyikas criticize this view. According to them, the middle term (*hetu*) may be a thing of the present or the past or future. The middle term (*hetu*) cannot lead to the conclusion except through the knowledge of *vyāpti* between it and the major term. Hence, the knowledge of *vyāpti* or the universal relation between the middle and the major terms should be taken as the special cause (*kāraṇa*) of *anumāna*. But the knowledge of *vyāpti* does not immediately lead to the conclusion. It has for its function (*vyāpāra*) a synthetic view of the middle term as related to the major term, on the one hand, and the minor on the other (*liṅgaparāmarśa*)[95]. This is called *tritīyaliṅgaparāmarśa*, i.e., a consideration of the middle term for the third time. For example, 'smoke' (middle term) is known first when we acquire the knowledge of its invariable relation with 'fire' (major term) in the kitchen. It is known for the second

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[93] svārthānumitau parārthānumitau liṅgaparāmarśa eva karaṇam tasmālliṅgaparāmarśo' numānam.   TS, p.30

[94] yena puruṣena mahānasādau dhūme vahnivyāptigṛhitā paścāt sa eva.   BP, p.314

[95] vyāpārastu parāmarśaḥ karaṇam vyāptidhirbhavet.   BP and SM, *kārikā* 66

time in relation to the minor term, e.g., 'the hill'. It is considered for the third time when we know it as that character of the minor term which is universally related to the major term, as when we say, "the hill is possessed of such smoke as is always related to fire". It is through such *liṅgaparāmarśa*. *Liṅga* is said to be of three kinds. Annambhaṭṭa enumerates these three types of sign, viz., (i) *anvayavyatireki*, (ii) *kevalānvayi* and (iii) *kevalavyatireki*.[96]

Anvayavyatireki is that sign which is possessed of pervading inherence both in respect of its association and its absence.[97] For example, when it is said, "where there is smoke, there is fire, as in the kitchen", we have a case of concomitant presence. When it is said, "where there is no fire, there is no smoke also, as in a great deep lake", we have a case of concomitant absence.

According to Annambhaṭṭa, an *anvayavyatireki* probans are involved in a *vyāpti* through *anvaya* as well as *vyatireki*. In *Tarkasaṁgrahadipīkā* he gives the required explanation. In his view, the rule of concomitance obtained between a probans and a probandum is *anvaya vyāpti*.[98] In the *Tarkabhāṣā* also it is stated that the reason is of the affirmative-negative kind, in as much as it has invariable concomitance both in the affirmative-negative manner.[99] Again, the rule of concomitance obtained between the absence of the probans and the probandum is the *vyatireka vyāpti*.[100]

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[96] liṅgam trividham, anvayavyatireki kevalānvayi kevalavyatireki ceti.   TS, 44

[97] anvayena vyatirekena ca vyāptimad anvayavyatireki.   *Ibid.*

[98] hetusādhyayoḥ vyāptiḥ anvayavyāptiḥ.   TSD on TS, p.31

[99] sa cānvayavyatireki, anvayena vyatirekena ca vyāptimatvāt.   TB, 42

[100] tadabhāvayoḥ vyāptiḥ vyatirekavyāptiḥ.   *Ibid.*

Secondly, *kevalānvayi* is that sign which has no negative instance. A thing is said to be *kevalānvayi* when it is proved to be something that is not absent anywhere.[101] For example – 'the jar is nameable because it is cognizable, as cloth is', there is no instance of nameableness or of cognizable being present where the other is absent, because everything is both cognizable and nameable.[102] Keśavamiśra in his *Tarkabhāṣā,* also have mentioned that some other reasons are such as have only affirmative concomitance.[103]

Thirdly, *kevalavyatireki* is that sign, which is involved in a rule of concomitance through knowledge only of agreement in absence.[104] For example, 'earth differs from the other elements, because it has odour.' Or, what is not different from the other elements has no odour; earth has odour; therefore, earth is different from the other elements. Here, the reason 'odour' is the uncommon attribute of the inferential subject 'earth'. It is co-extensive with the subject. There is no similar instance in which it may exist. According to the *Tarkabhāṣā*, some reasons are such as have only negative concomitance, e.g., the reason 'presence of breath etc.'when put forward to prove the probandum 'presence of soul'.[105]

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[101] kevalānvayisādhyakam kevalānvayi. *Ibid.*

[102] anvayamātravyāptikam kevalānvayi, yathā…vyatireka vyāptirnāsti.   TS, pp. 30-31

[103] kaścidanyo hetuḥ kevalānvayī,yathā viśeṣo'bhidheyaḥ, prameyatvāt… tasmāttathā iti.   TB,47

[104] vyatirekamātravyāptikam kevalavyatireki. *Ibid.*

[105] kaścid hetuḥ kevalavyatirekī, tad yathā sātmakatve sādhye prāṇādimatvaṁ hetuḥ. *Ibid.*, 45

There are some differences between the ancient Naiyāyika and Navya-Naiyāyika regarding the knowledge of *liṅgaparāmarśa* in *anumāna*. However, we may conclude that *liṅgaparāmarśa* is not an essential condition of all *anumāna*, although it serves to make an *anumāna* most powerful.

F. Fallacy:

In Indian logic, fallacy is called *hetvābhāsa*. *Hetvābhāsa* is defined as something which seems to be a true *hetu* but which is wrong and which prevents us from arriving at an *anumāna*. Literally speaking, *hetvābhāsa* means a fallacious reason which looks like a *hetu* but is not *hetu* (*hetuvadābhāsate iti...*). In the *Tarkasaṁgrahadipīkā, hetvābhāsa* is defined as that which is the subject of a right knowledge that prevents a judgment.[106]

S.C. Chatterjee rightly holds, "The Nyāya account of the fallacies of inference is accordingly limited to those of its members or constituent propositions and these have been finally reduced to those of *hetu* or reason".[107] For the purpose of proof of an inference (*anumāna),* Gautama mentions five constituents of inference (*anumāna*), viz., *pratijñā*, *hetu*, *udāharaṇa*, *upanaya* and *nigamana*. The validity of an inference depends on the validity of these five constituent parts of it. If there is anything wrong with any of its members, the syllogism as a whole becomes fallacious. The fallacies of inference (*anumāna)* ultimately arise out of the fallacious reason (*hetvābhāsa*). There are no formal fallacies in the Nyāya system, which is not concerned with formal truth. The Naiyāyikas bring the fallacies of inference (*anumāna)* under the fallacies of the reason.

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[106] anumitipratibandhaka yathārthajnānavisayatvam hetvābhāsatvam ,   TSD on TS 46

[107] *The Nyāya Theory of Knowledge*, p. 218

Different kinds of *Hetvābhāsa*:

In the Nyāya system Gautama classified all the inferential fallacies under five heads,[108] viz., (i) *savyabhicāra,* (ii) *viruddha,* (iii) *prakaraṇasama,* (iv) *sādhyasama, and* (v) *kālātīta* or *bādhita.*

The fallacies of reason have been variously named and classified by various logicians, e.g.,

Gautama	:	*a) savyabhicāra*	*b) viruddha*
		c) prakaraṇasama	*d)sādhyasama*
		e) kālātīta (bādhita)	
Gaṅgeśa	:	*a) savyabhicāra*	*b) viruddha*
		c) satpratipakṣa	*d) asiddha*
		e) bādhita	
Bhāsarvajña	:	*a) asiddha*	*b) viruddha*
		c) anaikāntika	*d) kālātyayāpadiṣṭa*
		e) prakaraṇasama	
Kaṇāda	:	*a) aprasiddha*	*b) viruddha*
		c) saṁdigdha	
Praśastapāda	:	adds *anadhyavasita* in the list of Kaṇāda, but later on includes it under the sub types of *asiddha*	

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[108] savyabhicāraviruddhaprakaraṇasamasādhyasamakālātītā hetvābhāsaḥ.   NS, i.2.4

Keśavamiśra	:	*a) asiddha b) viruddha c) anaikāntika*
		d) prakaraṇasama e) kālātyayāpadiṣṭa
Annambhaṭṭa	:	*a) savyabhicāra b) viruddha c) satpratipakṣa d) asiddha e) avādhita*[109]
Viśvanātha	:	*a) anaikāntika b) viruddha*
		c) asiddha d) pratipakṣita
		e) kālātyayāpadiṣṭa

Jayanta also follows Gautama in naming the fallacies of reason but he surpasses almost all his predecessors in giving the detailed account of all the five types of fallacies of reason. Except for a slight difference in nomenclature, the Naiyāyikas and the Vaiśeṣikas are unanimous in holding that the fallacies of reason are five-fold. Now we shall discuss them in the following heads:

i) Savyabhicāra: In the Nyāya system, the first kind of inferential fallacy is called *savyabhicāra* or *anaikāntika.*[110] There are two views about this fallacy of reason. Gautama calls it *savyabhicāra* or *anaikāntika*, while Kaṇāda calls it *saṁdigdha.*[111] *Saṁdigdha* is the doubtful or inconclusive reason. He gives two examples, e.g., (i) "This is a horse, because it has horns." This is an example of the former type of fallacy. (ii) "This is a bull, because it has horns." This is an example of the second type of fallacy.

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[109] savyabhicāraviruddhasatpratipakṣāsiddhavādhitāḥ pañca hetvābhāsaḥ.   TS, p. 33

[110] anaikāntikaḥ savyabhicāraḥ.   NS, i. 2.5

[111] aprasiddho'napadeśo'san saṁdigdhaścānapadeśaḥ, yasmād viṣāni tasmād aśvaḥ; yasmād viṣāni, tasmād gauriti cānaikāntikasyodāharaṇam.   VS, iii.1.15-17

Praśastapāda interprets the *Vaiśeṣikasūtra* as mentioning three fallacies, contradictory, unproven and inconclusive reason. He equates *aprasiddha* with *viruddha*, *asan* with *asiddha* and *saṁdigdha* with *anaikāntika (savyabhicāra)*.[112]

Gautama defines an inconclusive reason (*savyabhicāra*) as one which has variable concomitance with the predicate.[113] The *savyabhicāra* is that reason which leads to more conclusions than one. In *savyabhicāra*, the *hetu* is found to lead to no single conclusion but to different opposite conclusions. The *savyabhicāra hetu* is not uniformly concomitant with the major term. It is related to both the existence and the non-existence of the major term. Therefore, it is called *anaikāntika*, or an irregular concomitant of the *sādhya*. It is of three kinds, viz., (a) *sādhāraṇa*, (b) *asādhāraṇa*, (c) *anupasaṁhārī*.[114] The *sādhāraṇa* or the ordinary fallacy of the irregular middle occurs when the middle term is in some cases related to the major and in the other cases related to the absence of the major.[115] In the *Tarkasaṁgraha* it is stated that a *sādhāraṇa hetu* is that where the reason or *hetu* may be present, when the property to be proved is absent. Here, the middle term is too wide.

For example:–

All knowable objects are fiery;

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[112] viruddhāsiddhasandigdham aliṅgam kāśyapo'bravit.   PB, p. 200

[113] anaikāntikaḥ savyabhicāraḥ.   NS, i.ii.4

[114] sa trividhaḥ, sādhāraṇāsadhāraṇānupasaṁharībhedāt.   TS, p. 33

Cf: ādyaḥ sādhāraṇastu syāt syadasādhāraṇaparaḥ /

tathaivānupasmhārī tridhā anaikāntiko bhavet //   BP, 72, p.388

[115] sādhāraṇaḥ sādhyavat tadanyavṛttiḥ.   NSV, 1.2.5

The hill is knowable;

So, the hill is fiery.

The second form of the *savyabhicāra* is known as *asādhāraṇa* or the extraordinary. It is just the opposite of *sādhāraṇa,* being found neither in *sapakṣa* nor in *vipakṣa*.[116] In it, the middle term is too narrow. It is related neither to things in which the major exists nor to those in which it does not exist.[117] Here, the middle term is only present in the minor term.

For example-

Sound is eternal;

Because there is 'soundness' or *śabdatva*. The nature of sound is a peculiar characteristic of the sound. Here, the middle term 'soundness' is related only to the minor term 'sound'. It is found neither in eternal objects like the 'soul' nor in other non-eternal things, like 'a jar.'

The third form of the *savyabhicāra* is called *anupasaṁhārī*, or the indefinite.[118] In the *anupasaṁhārī,* the middle term is non-exclusive and the minor term is all inclusive. These inclusive reasons are defined by Viśvanātha.[119] Here, in the *anupasaṁhārī,* the middle term is related to a minor term that stands not for any definite individual, but indefinitely for all objects.

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[116] sarvasapakṣavipakṣavyāvṛtto'sādhāraṇaḥ.   TS,46

[117] asādhāraṇaḥ sapakṣavipakṣa vyāvṛttaḥ.   NSV, 1.2.5

[118] anvayavyatirekadṛṣṭāntarahito'nupasaṁhārī.   TS, p. 56

[119] sādhāraṇaḥ sādhyavadanyavṛttiḥ; anye tu sapakṣavṛttirasādhāraṇaḥ; anupasaṁhārī cātyantābhāvāpratiyogī sādhyakādi.   SM, pp. 388-389 on *kārikā* 72

For example:

'All objects are eternal',

Because they are knowable.

Here, the validity of this inference (*anumāna*) depends on the validity of the major premise, viz., 'all knowable objects are eternal'. But the validity of the major premise cannot be proved since beyond all objects we have no instances of the concomitance between the knowable and the eternal. According to Uddyotakara there are sixteen sub-kinds of inconclusive reasons.[120] In the Nyāya system, Jayanta's view is identical with that of Vātsyāyana, regarding the etymology of the term *anaikāntika*. According to Jayanta, if a reason does not belong to similar instances, it is faulty and is to be called *anaikāntika*.[121] In the *Tarkabhāṣā*, Keśavamiśra opines that *savyabhicāra* is of two kinds, viz., *sādhāraṇa* and *asādhāraṇa*. The common strayer or *sādhāraṇa hetu* is that which exists in all the three, i.e., *pakṣa, sapakṣa* and *vipakṣa*.[122] On the otherhand, the peculiar strayer or *asādhāraṇa hetu* is that which is absent from both *sapakṣa* and *vipakṣa* but exists only in *pakṣa*.[123]

ii) *Viruddha*: The second kind of inferential fallacy is called *viruddha*. In the *Nyāyasūtra*[124] and *Nyāyabhāṣya,* it is stated that the contradictory is the reason which opposes what is be established. For example, 'a pot is produced, because it is eternal'.

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[120] Vide Bijalwan, C.D., *Indian Theory of Knowledge*, p.177

[121] *Ibid.*

[122] tatra pakṣasapakṣavipakṣavṛttiḥ sādhāraṇaḥ.   TB, 55

[123] yasapakṣādvipakṣāccha vyāvṛttaḥ pakṣe eva vartate so'sādhāraṇaḥ.   *Ibid.*

[124] siddhāntamabhyupetya tadvirodhī viruddha.   NS, i.ii.6

Here, the reason is contradictory. Because that which is eternal is never produced. Kaṇāda refers it as *aprasiddha*.[125] The unsubstantial is called fallacious arguments. According to Uddyotakara, it is called *viruddha* since it contradicts an admitted truth.[126] For example, 'sound is eternal', 'because it is produced.' Here the reason, 'producedness' contradicts the proposition, 'sound is eternal' instead of proving it. Vātsyāyana states that the fallacy of the *viruddha* consists in the opposition of one doctrine to a previously accepted doctrine.[127] Thus, it is a contradiction between the different parts of a system. In the *Tarkasaṁgraha*, Annambhaṭṭa opines, that is called *viruddha* or the contradictory middle, which is pervaded by the absence of the major term.[128] The result is that such a middle term instead of proving the existence of the major in the minor term, which is intended by it, proves its non-existence there in. In the *Tarkabhāṣā* it is stated that the contradictory reason is that which has invariable concomitance with the negation of the probandum, e.g., sound is eternal, because it is a product.[129] From the definition it is clear that a *viruddha hetu* can exist only in *vipakṣa* and so lacks the characteristic *vipakṣāsattva*. According to Gaṅgeśa, the *viruddha hetu* proves the non-existence of the predicate, though it is advanced to prove its existence. Jayanta is quite aware of the difference between the interpretations offered by Vātsyāyana and Uddyotakara. In the above discussion, it is observed that there is a

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[125] aprasiddho'napadeśaḥ.   VS, iii.1.15

[126] pratijñāhetvorvā virodhaḥ.   NV, 1.2.6

[127] NBh, 1.2.6

[128] sādhyābhāvavyāpto heturviruddhaḥ.   TS, p. 57

[129] sādhyaviparyayavyāpto heturviruddhaḥ, sa yathā śabdo nityaḥ kṛtakatvāt gagaṇavat.

TB, 54

slight difference between the fallacies of the *savyabhicāra* and the *viruddha*. The difference is that while in the former, the middle term is universally related neither to the existence of the major nor to its non-existence. In the later, the middle term is universally related to the non-existence of the major term. As a whole it means that the *savyabhicāra hetu* fails to prove the conclusion whereas the *viruddha hetu* proves the contradictory proposition.

iii) *Prakaraṇasama* **or** *Satpratipakṣa***:** The third kind of inferential fallacy is known as *prakaraṇasama* or *satpratipakṣa*. Gautama, in his *Nyāyasūtra*, states that here the middle term is contradicted by another middle term.[130] Vātsyāyana interprets it as the oscillation of mind between two contradictory characters of an object brought about by mutually opposed and equally strong arguments and counter arguments[131]. It means that when a middle term oscillates between two opposite views we have a case of the *prakaraṇasama* middle. In the *Tarkasaṁgraha,* Annambhaṭṭa states that when the reason is counterbalanced by another reason which proves the negation of what is to be proved then it is called the fallacy of equalization or *satpratipakṣa*.[132] Gaṅgeśa thinks that *satpratipakṣa* is a temporary flaw in an inference (*anumāna*) which remains till a doubt about one of the reasons is removed.[133] Keśavamiśra refers that the *prakaraṇasama* is also called *satpratipakṣa* or that which is opposed by another reason

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[130] yasmāt prakaraṇacintā sa nirṇayārtham apadiṣṭaḥ prakaraṇasamaḥ.   NS, i.2.7

[131] NBh, i.2.7

[132] sādhyābhāvasādhakaṁ hetvāntaraṁ yasya vidyate sa satpratipakṣaḥ.   TS, 46

[133] TC, p. 1141

which proves the existence of the opposite of the proposed probandum.[134] Jayanta refers to *asatpratipakṣatva* as one of the five characteristics of a valid reason. He maintains that if a reason is faced with the existence of an equally strong counter reason (*pratipakṣa*), it is fallacious since the opposite reasons counteract with each other and fail to establish the conclusion. He distinguishes a counterbalanced reason (*prakaraṇasama*) from an inclusive reason (*anaikāntika*). In the former, two different characters of the minor term are taken as the middle terms leading to opposite conclusions. In the later one, the same character of the minor term is taken as a middle term that may lead to opposite conclusions. Again, it is also different from the *viruddha hetu* or contradictory middle. The former is not known to exist or not to exist in similar instances; nor is it known to exist in dissimilar instances, while the later is known to exist in dissimilar instances.[135]

iv) Sādhyasama or Asiddha: The fourth kind of inferential fallacy is called *sādhyasama* or the *asiddha*. Gautama defines an unproven reason (*sādhyasama*) as one that requires to be proved like the predicate.[136] An *asiddha hetu* is one that has *doṣa* called *asiddhi* and *asiddhi* is the absence of *siddhi* which consists in the true cognition of the *sādhyavyāpyahetu* as a property of *pakṣa*; or briefly speaking, *asiddhi* is the non-production of *parāmarśa*. The word *sādhyasama* means a middle term which is similar to the *sādhya* or the major term. Vātsyāyana regards it as not different in logical validity from the predicate in as much as it requires to be proved like it. His illustration of this

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[134] prakaraṇasamastu sa eva yasya sādhyaviparītasādhakaṁ hetvantaraṁ vidyate.

TB, 56

[135] NM, pp. 602-603; NSV, 1.2.6

[136] sādhyāviśiṣṭaḥ sādhyatvāt sādhyasamaḥ.   NS, i.2.8

fallacy runs as 'shadow is a substance, because it possesses motion.' Here, unless it is really proved that shadow possesses motion, it cannot be accepted as the reason for the proposition that shadow is a substance.[137] Uddyotakara, however, mentions it as *asiddha* and sub-divides it into three kinds; viz., *prajñāpanīyadharmasamāna*, *āśrayāsiddha* and *anyathāsiddha*.[138] Jayanta refers to this fallacy by both of the names, i.e., *sādhyasama* and *asiddha.* According to him, a predicate is called *sādhya* if it stands in the need of proof. In the same way, if a reason itself stands in need of proof, it is *sādhyasama* and therefore fallacious.[139] In the Vaiśeṣika system, Praśastapāda refers four sub-types of *asiddha*. These are- (i) *ubhayāsiddhaḥ* (ii) *anyatarāsiddhaḥ* (iii) *tadbhāvāsiddhaḥ* and (iv) *anumeyāsiddhaḥ*.[140] The main forms of the fallacy of *asiddha*, is of three kinds, viz., (i) *āśrayāsiddha*, (ii) *svarūpāsiddha* and (iii) *vyāpyatvāsiddha*.[141]

In the *āśrayāsiddha*, the minor term is the locus of the middle term. If the minor term is unreal and fictitious, the middle term cannot be related to it; consequently, in such a case, the minor premise in which the middle term is related to a fictitious minor term becomes false, e.g., "a skylotus is fragrant, because it is a lotus, like a lotus in the pond". Here, skylotus is the subject and that is totally non-existent.[142] The middle term

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[137] NBh, I.II.8

[138] Vide.Sinha, J,N., *Indian Philosophy*, (vol-1) p.531

[139] NM, II-162

[140] tatrāsiddhaścaturvidhaḥ

ubhayāsiddhaḥ,anyatarāsiddhaḥ,tadbhāvāsiddhaḥ,anumeyāsiddhaśceti.   PB, p.577

[141] tatra asiddhastrvidhaḥ, āśryāsiddhaḥ svarūpāsiddho vyapyatvāsiddha iti.   TB, 53

[142]gagaṇāravindaṁ surabhi, aravindatvāt, sorojāravindavat. atra

gagaṇāravindamāśrayaḥ sa tu nāstyeva.   *Ibid*.

having no locus standi, we have a fallacy of the *āśrayāsiddha* or the baseless middle.

From the example *āśrayāsiddha* can also be defined as- *pakṣe pakṣatāvacchedakābhāvaḥ* or simply *pakṣatābhāvaḥ.*[143]

The *svarūpāsiddha* is a middle term which cannot be proved to be real in relation to the minor term. It is a middle term which is not found in the minor term.[144] In it, the *hetu* itself is *asiddha*. A reason must exist in the subject. If it does not exist, it can not afford to provide the basis of inference. For example – "sound is eternal, because it is visible, like a pot." Here we find that the visibility is not present in the subject and its assumption in sound is wrong and is not justified by facts. This differs from *āśrayāsiddha*. In the *svarūpāsiddha*, the locus is either false or not proper. It may be defined as - *pakṣe hetvābhāvaḥ*. The *svarūpāsiddha* consists in many sub-types, such as – (i) *śuddhāsiddha*, (ii) *bhāgāsiddha*, (iii) *viśeṣaṇāsiddha* and (iv) *viśeṣyāsiddha*. The general characteristic of these sub-varieties is that in all these, the reason is non-existent in the minor term.

The *vyāpyatvāsiddha* is a middle term whose concomitance (*vyāpti*) with the major term cannot be proved.[145] A valid inference requires that the middle term must be concomitant with the major term. If this condition is not fulfilled, the inference becomes invalid. The fallacy of *vyāpyatvāsiddha* may be of two types- (i) It may be on account of the non-concomitance of the middle term with the major term. It means the first is caused by the absence of any evidence to grasp the *vyāpti*.

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[143] *Ibid.*, p.98

[144] svarūpāsiddho yathā, śabdo'nityaḥ cākṣuṣatvāt, ghatavat. *Ibid.*

[145] pakṣe vyāpyatāvacchedakābhāvaḥ. *Ibid.*

For example –

all reals are momentary,

sound is real,

therefore, sound is momentary.

There is no evidence which enables one to ascertain the *vyāpti, yat sat tat kṣaṇikam*. Here, the major premise is false. Because there is no universal relation between the 'real' and 'momentary'. (ii) Or, it may be on account of the presence of a condition (*upādhi*). For example – "the hill is smoky, because it is fiery." Here, the relation of the middle term (fire) to the major term (smoke) is conditional since a fire is smoky if there is a wet fuel.[146] This fallacy of the conditional middle is technically called *vyāpyatvāsiddha*.[147]

v) *Kālātīta or Bādhita*: The fifth kind of inferential fallacy is called *kālātīta* or *bādhita hetu*. The *kālātīta* literally means a middle term which is vitiated by the lapse of time.[148] Vātsyāyana interprets it in this manner- "sound is durable, because it is manifested by conjunction, like colour." Here, the argument is fallacious, since in the case of colour the manifestation takes place simultaneously with the contact between light and the coloured thing. But the manifestation of sound is separated by an interval of time from the contact between two objects. So, here, the reason is not congruous with the instance

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[146] *Ibid.*

[147] NVTT, p. 345

[148] kālātyayāpadiṣṭaḥ kālātītaḥ.   NS, i.2.9

and is not capable of establishing the predicate.[149] Uddyotakara gives the same meaning of *kālātyayapadiṣṭa*, as Vātsyāyana does.[150] But Vācaspati takes it in the sense of a contradicted reason (*bādhita*). It is contradicted by perception, inference and Vedic testimony. According to the *Tarkasaṁgraha*, a *bādhita hetu* is that where the negation of what is to be proved is established without doubt by another proof.[151] In the *Tarkabhāṣā,* Keśavamiśra opines that the term *kālātyayāpadiṣṭa* means a *hetu* put forward after the lapse of proper time; i.e., after the negation of the probandum has been ascertained by a more trust-worthy proof. It is also called *bādhita*.[152] Gaṅgeśa clearly states *bādhita* in the list of fallacious reason. According to Jayanta, in this fallacy the reason refers more than one event which succeed one another in time. He, however, incorporates the absence of uncontradictoriness as a characteristic of *kālātyayāpadiṣṭa* and thereby seems to hold *bādhita* as another name of *kālātīta*. While the *kālātīta* stands for a middle term vitiated by a limitation in time, the *bādhita* means a middle term which is contradicted by some other source of knowledge. The fallacy of *bādhita* is different from the fallacy of *satpratipakṣa*. In the former, an inference is contradicted by a non-inferential source of knowledge, while in the later one inference is contradicted by another inference.

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[149] kālātyayena yukto yasyārthasyaikadeśo'padiśyamānasya sa kālātyayāpadiṣṭaḥ

kālātīta iti uchyate…..evamudāharaṇasādharmasyābhāvādasādhanamayaṁ

heturhetvābhāsa iti.   NBh, i.2.9

[150] NV, i.2.50

[151] yasya sādhyabhāvaḥ pramāṇāntarena niścitaḥ sa bādhitaḥ.   TS, 46

[152] pakṣe pramāṇāntarāvadhṛtasādhyābhāvoheturbādhitaviṣayaḥ kālātyayāpadiṣṭa iti

cochyate.   TB, 57