Navya-nyāya is a modern school of Indian logic, which was established by Gangesopādhyāya in the thirteenth century, and it has developed a method of unique expression in determining terms. Take for example the concept of ‘invariable concomitance’ (vyāpti), in a proposition like ‘where there is A (smoke), there is B (fire)’, the Prācīna-Naiyāyikas or traditional logicians could define it only in a passive manner like ‘avinābhāva’ or ‘sāhacaryaniyama’ etc. In this case, A and B refer to indefinite entities, and they did not hit upon any idea as to how to express a term denoting indefinite entity or ‘unknown quantity’, to say nothing of the way of expressing it by symbols. Though there exists an indication by yat tat in Sanskrit, the interpretation as such is liable to lead to ambiguity and misunderstanding if many terms are taken into consideration at one time. Even Navya-naiyāyikas did not find a satisfactory solution of this problem, and they devised some kinds of expression for that. But if any particular entity be substituted for A, B is expressed, though in an indirect procedure, through the property (dharma) and relation (sambandha) derived from A, and consequently a way is open to more analytical and subtle scrutiny about the above question. In case any term be determined, its qualifier or characteristic difference is given. Though smoke can be determined by its essential property i.e. dhūmatva inherent in the smoke, such expression does not bring out much positive meaning. They put a primary emphasis on the conditional state of two entities, placing them in such a correlative relation (nirūpya-nirūpaka-sambandha) as cause-effect relation etc. Accordingly, when smoke and fire happen to be a cause and its effect respectively, the smoke has cause-ness (hetutā) and the fire effect-ness (sādhyatā); these relational abstracts can be inherent in whatever happens to be hetu or
sādhya. Such being the case, the cause in question can logically assume the form of smoke, only when its conditional property i.e. hetutā is limited or determined by its essential property (i.e. dhūmatva) and its particular relation (i.e. contact or saṁyoga), by which the hetutā of smoke or \textit{the state of its being a hetu} in a locus (e.g. mountain or hearth) is affirmed. Here dhūmatva is considered as avacchedakadharma (limiting-property), and the saṁyoga as avacchedakasambandha (limiting-relation). Therefore any relational abstract should be determined by two limitors; one is property and the other is relation. Hence the smoke in question comes to be related to the fire as its effect in the following way: (dhūma-) niṣṭha-dhūmatva-avacchinna-saṁyoga-avacchinna-hetutā — nirūpita — sādhya-ya, and sādhya-ya-vat is regarded equipollent to the fire in question, which is, in turn, characterised by ‘vahnitva-avacchinna-saṁyoga-avacchinna-sādhyatā-vat’. These three factors, abiding in the same entity viz. smoke or fire, play the most important role in determining terms in Navya-nyāya. In such a way as above-mentioned, they made every possible attempt to reduce all the descriptive and verbal phrases to relation- and property-factors, which are, in a sense, substitute signs and do not bear any longer verbal significance but symbolic one.

As regards the one unique characteristic of Navya-naiyāyikas’ argument, they first set forth a definition of a certain term, then examine it from every aspect, and finally make it complete by adding exhaustive supplementary-explanations: thus the first definition becomes extraordinarily enlarged in its Sanskrit structure with the addition of terrifying technical terms, and very often the first fresh interpretation turns out far-fetched and hair-splitting. This process is technically called ‘pariskāra’. It is indeed such avacchedaka and avacchinna that frighten the students of Indian logic, and the Naiyāyikas were bent on the task of analysing and specifying the concept of each term, making the interpretation more and more unintelligible. There even exists a special treatise dealing with these limiting-factors.

§ Avacchedaka-sambandha (Limiting-relation)
Relation (sambandha) is possible between relative entities, and as such exists in each sambandhin. Take for instance a proposition ‘ghaṭo bhūtale bhavati’ (a pot is on the ground), saṃyoga relation abides both in the pot and in the ground, and moreover this saṃyoga has two aspects i.e. pratiyogitā and anuyogitā; by anuyogitā the saṃyoga is connected to the ground, and by pratiyogitā it is in the pot. Suppose we see the saṃyoga relation (R) between A (adhikaraṇa e.g. the ground) and B (ādheya e.g. a pot), in which relation R stands to A and to B? Next how other relations R’ and R”, which are obtained by R-A, and R-B respectively, are connected to A or R and to B or R? It seems that they took much pains in explaining these questions, and they even devised some idea which traditional logicians had never hit upon. R-A (how R is related to A. The following formulae should be understood in the similar way.) by anuyogitā; R-B by pratiyogitā; R’-R by pratiyogitā (some say svarūpa); R’-A by svarūpasambandha; R”-R by pratiyogitā (some say svarūpa); R”-B by anuyogitā.

In connection with these definitions of Naiyāyikas, Śaṅkara attacks severely in his Bhāṣya, rejecting all kinds of relation except tādātmya, because they fall the prey of anavasthā doṣa or ad infinitum.

§ Avacchedaka-dharma (Limiting-property)

Avacchedakadharma discrimimates any avacchinna from vijātiya as well as from sajātiya, and, in this sense, it might well be termed ‘limitor’ and avacchinna (the limited) is always limited or determined by its avacchedaka. We can see a common usage of avacchedaka as below:

(1) ghaṭatva-avacchinna-gaṭaḥ/

Avacchedaka is here used as a property or essence, and it refers to all pots in general and not to a particular.

(2) ghaṭatva-avacchinna-pratiyogitāka-gaṭaḥ/

Avacchedaka is required here to refer to a specific pratiyogitā abiding in pots in general, as well as to exclude other pratiyogitā in paṭa etc.

(3) (rakta-) ghaṭa-niṣṭha-pratiyogitāka-gaṭaḥ/
Pratiyogitā here is excluded from those of the homogeneous (sa-jātiya) and of the heterogeneous (vijātiya e.g. blue-pot). Here the avacchedaka is either redness, potness or something else, as usually expressed by ‘etadvyaktitva’.

The ghata of (2) and (3) is related to its pratiyogitā contingently, in contradiction to the fact that the avacchedaka (ghaṭatva) of the case (1) is considered as a permanent property in relation to the pot, regardless of time, space and other conditions. Qualifications of avacchedaka are summed up as follows: a) It should be ‘anyūna-anatiprasakta-dharma’; the denotation indicated by such dharma must be neither larger nor smaller than that of the things in question, b) Even when it suffices the qualification of ‘anyūnānatiprasakta’, any dharma which is cumbrous (gurudharma) should not be taken as avacchedaka. For instance, though the term ‘kambugrīvādimat’ (thing possessed of conch-like neck etc.) is regarded synonymous with ‘pot’, ‘kambugrīvādimattva’ cannot be avacchedaka as such.

Such is the common usage of limiting-factors which we usually come across in the fundamental treatises of Navya-nyāya.

As a clue to the better understanding of the logical process, which caused the Naiyāyikas to invent such technics of expression, we want here to take up the definition of abhāva (non-existence) in relation to its counterpositive or pratiyogi. In avacchedaka resides avacchedakatā which is considered as a case of svarūpasambandha, and all instances of avacchedakatā may be brought under either viṣayatā or pratiyogitā. In such case, there might occur doubts whether the locus involves ghaṭābhāva only, or paṭābhāva etc. too, and whether the abhāva is the negation of a particular pot or of pots in general. It is impossible to think of either the collection of all pots at a place, or the complete sāmānya-ghaṭa-abhāva when even one particular pot exists there. Thus the presence of even one particular hampers the non-existence of pots in general. When such abhāva as excludes the existence and non-existence of any particular is taken into account, there comes an expression like ‘ghaṭatva-avacchinna-pratiyogitāka-
abhāva’. However, even with this expression, the locus has a possibility of implying another abhāva e.g. paṭābhāva etc. And furthermore there is another difficulty, that is, when one particular pot exists on the ground, its existence can be negated by means of joint property i.e. ghaṭatva (potness) plus paṭatva (clothness) together. In order to avoid such difficulties, pratiyogita residing in the pot should be determined neither by other avacchedakas than ghaṭatva e.g. paṭatva etc. nor by the joint dharma e.g. ghaṭapaṭobhayatva, henceforth we can define the ghaṭābhāva as ‘ghaṭatva-avacchinna-ubhayadharma-anavacchinna-partiyogitāka-abhāva’.

It is the same with the case of relational determination. In a proposition like ‘atra bhūtale ghaṭaḥ saṁyogena’ (a pot is on the ground by the contact relation), the pot is negated there by the joint relation of saṁyoga and samavāya as much as by the samavāya. Therefore pratiyogita of ghaṭābhāva should be ‘saṁyogasamavāyobhayasambandhānavačchinnā’ as well as ‘saṁyoga-avacchinna’. To sum up, the ghaṭābhāva in question should be determined as follows: ghaṭatvā-avacchinna-(ghaṭatvetara-anavacchinna)-saṁyogasambandha-avacchinna-(saṁyogetara-sambandha-anavacchinna)-pratiyogitāka-abhāva. Though the portions in the parentheses are usually omitted, they are understood as above by means of ‘laksana’ or implication.

The simplification of the technical terms of Navya-nyāya has been undertaken by some scholars like Dr. Ingalls by resorting to the idea of modern western logic especially symbolic logic, though the success is limited only to a few terms. It seems that there is some scope for interpretation of Navya-nyāya on that line, but still there is some limit which the criticism of one system by the other cannot transcend. One is a new trend buttressed by modern scientific investigation, reducing all the terms to pure relations, while the other, in its structure composed of property and relation, is based exclusively on the traditional metaphysics of Nyāya and Vaiśeṣika. Though it is utterly necessitated, in its final study, to trace the same method that was once employed by the Navya-naiyāyikas, yet it is none the less important to shed brighter light on this system by some scientific approach or other.