Dignāga and Dharmakīrti: Two Summits of Indian Buddhist Logic

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Abstract:
There is still a fashionable misunderstanding among scholars both in China and abroad. They think that the first deductive theory in the history of Indian logic should not be owed to Buddhism, but to the early Nyāya. In fact, Dignāga and Dharmakīrti are two summits of Buddhist logic as well as Indian logic, in that Dignāga lays the groundwork for the first deductive theory in Indian logic, and Dharmakīrti finally transforms the Indian logic from analogy to deduction, which is the first time that Indian logic reaches the level of western syllogism.

Key words: Indian Buddhist Logic; Hetuvidyā; Dignāga; Dharmakīrti

The main task of my research on Buddhist logic is to depict in an accurate manner Dignāga and Dharmakīrti’s respective systems of logic, and to discover the fundamental difference between these two summits of Indian Buddhist logic. This task is not only related to the correct discernment of different phases in the history of Buddhist logic according to their respective features, but also based on the careful examination of basic texts, e.g. based on the correct interpretation of Dignāga’s Nyāyamukha, which represents his early ideas of Buddhist logic. This task is also related to the appropriate application of a variety of perspectives, e.g. the holistic perspective, the historicist perspective and the perspective of comparative studies of Buddhist and western logic. In addition, I am also very concerned to draw on the results of comparative studies of Sanskrit, Chinese and Tibetan texts.

There are two main streams of Indian logic, the Nyāya logic and Buddhist logic. The first system of Indian logic was set forth in the Nyāyasūtra of the Nyāya School. However, the first deductive theory in the history of Indian logic should be owed to Buddhist logic. In fact, Dignāga laid the groundwork for the first deductive theory in Indian logic, and Dharmakīrti finally transformed Indian logic from analogy to deduction, which was the first time that Indian logic reached the level of western syllogism.

A fair amount of important works on the history of Indian Buddhist logic and the history of Indian logic abroad have made unfair remarks about Dignāga and Dharmakīrti’s contribution to the development of Indian logic. Their expositions of Dignāga and Dharmakīrti’s systems of logic are also inaccurate. However, they have a great influence on those typical works in China on Buddhist philosophy and Buddhist logic.

As a matter of fact, the Neo-Hetuvidyā system of logic as founded by Buddhist theoreticians is ignored in the context of Indian logic in general. The native scholars in India pay less attention to the contribution of Buddhist logic to Indian logic. In sum, the ignorance of Dignāga and
Dharmakīrti’s logic to the establishment of deductive theory in the history of Indian logic is due to the fact that most part of the scholars over the world can not provide a clear account of the origin and development of deductive theory in the history of Indian logic. They erroneously state that there has already been an all-inclusive premise in the five-membered argument (pañcāvayava, 五论式) of old Nyāya, and this five-membered argument is hence deductive. For instance, Dr. B. L. ATREYA says in his The Elements of Indian Logic that ‘they have acquired a very clear conception of the process of reasoning so that no doubt is left in the mind of those they talk with. All the Euclidean principles are included in this indicative type of reasoning.’ The statement of example (udāharaṇa) in the five-membered argument here is ‘whatever is smoky is fiery, as a kitchen’.

It is said in the Buddhist Logic of F. Th. STCHERBATSKY that in the canon of early Nyāya, ‘the school of Nyāya had already a developed logic’, and it was ‘a theory of the syllogism’.

Their five-membered argument is said to be ‘inductive-deductive’. In spite of the claim that ‘only in the reformed new brahmanical logic ... the theory of syllogism begins to play the central part’, the five-membered argument adopted there to illustrate the reasoning of early Nyāya has already betrayed the character of deduction:

1. Thesis. The mountain has fire.
2. Reason. Because, it has smoke.
3. Example. As in the kitchen; wheresoever smoke, there also fire [my italics].
4. Application. The mountain has smoke.
5. Conclusion. The mountain has fire.

However, what is actually implied in the example is no more than ‘there is both smoke and fire in the kitchen’, neither ‘whatever is smoky is fiery’ nor ‘where there is smoke, there is necessarily fire’. As claimed by STCHERBATSKY, ‘when Dignāga started on his logical reform he was faced by the theory of a five-membered syllogism established in the school of the Naiyāyiks [sic!]’. The example of the five-membered argument illustrated on that page is

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1 Dr. B. L. ATREYA, The Elements of Indian Logic (印度逻辑要), Chinese translation by YANG Guobin (Yang Guobin), Shanghai: The Commercial Press 1936, pp. 36-37. **Tranlator’s note:** I do not have the English original, so I have to re-translate this quotation from its Chinese translation as indicated by the present author.


4 F. Th. STCHERBATSKY, Buddhist Logic, Chinese translation, p. 34. **Tranlator’s note:** See F. Th. STCHERBATSKY, Buddhist Logic, Vol. I, p. 27.

‘wherever [sic!] smoke, there fire’\(^1\), which is equal to ‘whatever is smoky is fiery’.

In contemporary India, D. CHATTOPADHYAYA is a famous historian of Indian philosophy. However, in his *Indian Philosophy: A Popular Introduction* in 1964, the presentation of the form of argument according to old Nyāya does not go beyond the paradigm of STCHERBATSKY. In this book, he quotes the view of other scholar ‘that syllogistic reasoning formed the special theme of this philosophy and that *nyāya* meant illustration or example (*udāharaṇa*), conceived by this system as constituting the most important of the five members of the syllogistic expression.’\(^2\) Accordingly, he thinks that the old Nyāya has already developed the theory of deductive reasoning. In his opinion, the example of the five-membered argument of the Nyāya School before Dignāga has already had the form that ‘whatever has smoke has fire, e.g., an oven’, and ‘it was left for Dignāga, the Buddhist logician, to revolutionise the form of the demonstrative inference by reducing the number of its members to only two.’\(^3\) In addition to the misunderstanding that the example of old Nyāya has the form of universal proposition expressing certain kind of necessary relation, he also inappropriately claims on one hand that Dignāga’s transformation of the five-membered argument is a sheer reduction of its members from five to only two, and on the other hand, misleadingly ascribes to Dignāga the two-membered argument, which is in fact invented by Dharmakīrti. It is thus clear that even the native historians of Indian philosophy in contemporary India also have certain misunderstandings about the development of Indian logic. However, if the five-membered argument of old Nyāya were deductive reasoning, the contribution of Dignāga and Dharmakīrti would then be of trifling significance.

Moreover, *The New Encyclopædia Britannica: Macropædia*\(^4\) gives the same remark as that of STCHERBATSKY to the five-membered argument in the *Nyāyasūtra*. In China, there are also a variety of works on Indian philosophy in which the above misunderstandings are usually repeated. It is unnecessary here to quote from them respectively.

A rare exception is the remark of Mr. TANG Yongtong (湯用彤). In his *A Brief History of Indian Philosophy* (印度哲学史略), the presentation of the five-membered argument is slightly but significantly different from that of STCHERBATSKY. The example here does not adopt the form as universal proposition, but the form that ‘as a kitchen, where the smoke and fire are

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discerned, from which the whole reasoning is then not deduction but analogy. It is noted by Mr. TANG that ‘however, to place most of the emphasis on the reason and to pay the special attention to the relation of pervasion is probably the later doctrine after the emergence of Buddhist Neo-Hetuvidyā, while the early masters of the Nyāya School have not advanced a theory like this.’ This remark of Mr. TANG is based on historical fact.

The earliest record of the five-membered argument in the history of Indian logic appeared in the Carakasamhitā, a book on internal medicine compiled by the famous doctor Caraka in the early 2nd century A.D. on the basis of the materials from the 5th century B.C. In the Carakasamhitā, the definition of the example (dānta) in five-membered argument is ‘driśtiṇāta [sic!], verily, is that which effects an equality of apprehension among both the ignorant and the learned, and which illustrates the proposition to be established.’ Here, the example means illustration, and the five-membered argument as quoted does not have a judgment as the main body of example. The definition of example in the Nyāyasūtra is ‘the example is an illustration which, being similar to that which is to be proved, has its character. Or else, being opposite to it, is contrary.’ No instance of five-membered argument is given here. However, from this definition, we know that the main body of example is the illustration itself, but not certain kind of proposition summarizing the general principle from that illustration. In the Tarkaśāstra of Vasubandhu, which represents the highest achievement of the old Hetuvidyā, the example in an argument includes a general proposition as its main body and an illustration as the basis of that proposition. This new form of example then inspired Dignāga to the invention of three-membered argument. However, Vasubandhu himself does not have a theory to support the universal proposition as the regularized form of example. It seems that he only knew it occasionally but not the reason why it should be this form. Therefore, the establishment of a completely fresh form of argument, the three-membered argument, in the history of Indian logic can not be ascribed to Vasubandhu either.

It is noted by the Japanese scholar, Prof. KAIYAMA Yuichi (梶山雄一), that the relation of invariable concomitance (āvinābhāva) between proban and probandum is not reflected in the example of the five-membered argument of the old Nyāya. Because the old school of Nyāya

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1 TANG Yongtong (唐永通), A Brief History of Indian Philosophy (简明印度哲学史), Beijing: Zhonghua Book Company 1988, p. 131.
2 TANG Yongtong, A Brief History of Indian Philosophy, p. 131.
traditionally upholds the realist thesis. They recognize only the relation between individuals but not between properties in general. In this regard, the basis of reasoning is nothing but the concrete things as experienced. Therefore, ‘from the author of the Nyāyasūtra to Vātsyāyana, and finally to Uddyotakara, the traditional standpoint of the school of Nyāya is opposed to the theory of deduction throughout. This does not mean that the theory of deduction was completely unknown to Vātsyāyana and Uddyotakara. Especially Uddyotakara was quite familiar with it. However, it is evident that he intentionally disapproved of it.’

In the historical development of the school of Nyāya, the relation of invariable concomitance between proban and probandum as expressed in the example of Dignāga’s new system of Hetuvidyā was denied until the emergence of the new school of Nyāya, the Navya-nyāya. It is in the five-membered argument of the Navya-nyāya that the example began to have the form of universal proposition. When the logical achievement of the old Nyāya and the old Hetuvidyā is overrated, it would be impossible to give a fair and faithful remark to the contribution of Dignāga to the historical transformation of the form of argument into deductive reasoning.

In order to know to what extent the old Hetuvidyā was improved by Dignāga, we need to understand the disadvantage of the old Hetuvidyā and the advantage of the new Hetuvidyā in contrast. It was Dignāga who explicitly proclaimed the addition of two new propositions into a formula of argument. These two propositions then became the main bodies respectively of the similar and dissimilar examples in an argument according to Dignāga. They were fully expressive of the general principle, the invariable concomitance between the proban and the probandum, so that the two main disadvantages of the old Hetuvidyā were then surmounted. The reformation in this way by Dignāga was not only purposive, but also explicitly expressed, in that it was not only explicitly represented in the regular form of an argument, but also warranted by the main principle of a logical reason (hetu, 因), Dignāga’s new form of trairūpya. In fact, the three characteristics of a valid reason were established according to its relation to both the similar instance (sapakā, 同品) and the dissimilar instance (vipakā, 异品). Therefore, it is clear that the subject in dispute (dharmin, 有法) should be excepted from the extension of both kinds of instances.

As a matter of fact, in the regular procedure of old Hetuvidyā, when the thesis that ‘sound is non-eternal’ is to be justified, an analogy will be drawn between the jar and the sound that the jar is produced and non-eternal, therefore the sound, as produced, should also be non-eternal. If the argument is carried out in this manner, then we can also formulate an argument in the same way to justify that the sound is able to be burn and is visible, because the jar is also able to be burn

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1 KAIYAMA Yuichi, The Basic Character of Indian Logic (印度逻辑学的基本性质), Chinese translation by ZHANG Chunbo (张春波), Beijing: The Commercial Press 1980, p. 36. Translator’s note: I do not have the Japanese original, so I have to re-translate this quotation from its Chinese translation as indicated by the present author.
and is visible etc. However, the argument is totally absurd. Therefore, it is notable that the five-membered argument of old Hetuvidyā is not plausible, and its conclusion is not qualified to be sound enough. If the analogy is carried out between the subject in dispute and the similar instance in all their aspects, then it is inevitable for an argument to be lost in absurdity. Thus, it is principally impossible for the old Hetuvidyā to prevent itself from unreasonable analogy. This is the first disadvantage of the old Hetuvidyā. The second one is analogy of infinite regress. Since, if in the example of an argument, no proposition being expressive of the invariable concomitance between the proban and the probandum is added, but only several individual instances is given, then it is necessary to explain how those instances are available and reliable in this certain situation, that is to form another argument to justify again that the jar is produced and is non-eternal. But when the other argument is formulated, yet the instance therein is also subject to further rational inspection. As a result, it is inevitable for the analogical argument of the old Hetuvidyā to be lost in infinite regress.

In order to remove those two disadvantages of the old Hetuvidyā, a new form of argument, the three-membered argument, is formally suggested by Dignāga in his theory of new Hetuvidyā. In this form of argument, the example takes an additional proposition, e.g. ‘all those produced is observed as non-eternal’, as its main body (*dāntakāya, 喻体), while the ‘jar’, which is formerly the main body, now becomes its explanatory aid (*dāntāśraya, 喻依). On one hand, it is the present main body of the example that brings into light the invariable concomitance between the proban, e.g. ‘being produced’, and the probandum, ‘being non-eternal’, so that the analogy between the jar and the sound is rigorously limited to the properties ‘being produced’ and ‘being non-eternal’ as shared by both objects. In contrast, those irrelevant properties of an endless variety, as ‘being able to be burn’ and ‘being visible’ etc. other than ‘being non-eternal’, the probandum in question, are then excluded from the whole framework of comparison. On the other hand, when in the example, the phrase ‘all those produced’ is asserted, all those produced, e.g. the jar, lamp and lightning, are here included without any exception, so that the analogy of infinite regress is then stopped. As proclaimed by Dignāga in the Nyāyamukha, if a three-membered argument complies with the trairūpya formulae, ‘then the [notion] which results from this [process] is undoubtedly valid’¹, which means being able to win the debate. From the view of the logical theory of our time, it means that the soundness of the conclusion or thesis, which results from a well formed three-membered argument, is highly improved.

For the whole context of the three-membered argument of Dignāga’s new Hetuvidyā, the requirement of excluding the subject in dispute from both the similar and dissimilar instances, the theory of the circle of nine reasons and the new formulae of trairūpya as well are to be enumerated. All these insights match the whole framework of Dignāga’s new system of

¹ Translator’s note: English translation quoted from G. Tucci, The Nyāyamukha of Dignāga, Heidelberg: Materialien zur Kunde des Buddhismus 1930, p. 44.
Hetuvidyā. At first, the similar and dissimilar instances which correspond to each reason in the hetucakra have the subject in dispute as exception from both of their extension. The aim is to prevent circular reasoning. For example, in the thesis ‘sound is non-eternal’, yet the ‘sound’ is the subject in dispute at the starting point of disputation, therefore it can neither be categorized as the similar instance of what is non-eternal, nor the dissimilar instance of the same property. Otherwise, the dispute would be superfluous and both of the debaters should stop it. Therefore, to speak in its right order, the requirement of excluding the subject in dispute from both the similar and dissimilar instances can be said as the common base for the circle of nine reasons. Secondly, the circle of nine reasons is in turn summed up in Dignāga’s new formulae of trairūpya. Especially, the latter is based on the two valid reasons, the second and the eighth, of the circle of reasons. Thirdly, on the ground of Dignāga’s new trairūpya, the universal relation, the avinābhāva, between the proban and the probandum is much defined. Fourthly, the validity of a logical reason is embodied in both the similar example (sādharmyadānta, 同法喻) and the dissimilar example (vaidharmyadānta, 异法喻), in that the third characteristic of a valid reason, the vipakē sattvam (异品遍无性), is embodied in the dissimilar example, and both the second and the third characteristic, both the sapakē sattvam (同品定有性) and the vipakē sattvam, are embodied in the similar example. It is in this way that Dignāga’s new system of Buddhist logic is erected step by step. The soundness of the argument in compliance with this system then becomes much more improved than its forerunners.

As we have seen, Dignāga’s reformation of the old Hetuvidyā is mainly based on his reformation of the trairūpya formulae from the view of his innovation of the circle of nine reasons. Likewise, Dharmakīrti’s reformation of the three-membered argument of Dignāga is also based on his reformation of the trairūpya formulae of Dignāga. It is Dharmakīrti who finally brings the Indian form of argument from analogy to deductive reasoning.

However, the trairūpya formulae of Dignāga and those of Vasubandhu are regrettably misinterpreted by F. Th. STCHERBATSKY as principally the same of Dharmakīrti. He fails to draw a clear discrimination among the separate trairūpya formulae as founded by these three logicians respectively. As a matter of fact, the main concern of Dignāga’s theory of the circle of reasons and of his trairūpya formulae is how to define the extensional relation of the logical reason (hetu, 因) to the subject in dispute (dharmin, 有法), to the similar instance (sapakē, 同品) and to the dissimilar instance (vipakē, 异品) separately. In contrast, the main concern of Dharmakīrti is however to find an intensional definition of the logical reason as valid as being in compliance with the trairūpya formulae. In paraphrase, the main work of Dharmakīrti is to stand on the point of view of the logical reason and to test its intensional relation to the similar instance and to the dissimilar instance respectively. It is in this way that he finally finds the three types of reason (trividha liṅgam) as qualified as the sufficient reason in argumentation. In sum, this kind of deviation in the starting point of logical investigation is of the principal and utmost significance as far as a clear discrimination in respect of the separate systems of logic by Dignāga and
Dharmakīrti is concerned.

For the three types of valid reason, Dharmakīrti enumerates the reason of identity (svabhāvahetu, 自性因), the reason of causality (kāryahetu, 果性因) and the reason of non-apprehension (anupalabdhihetu, 不可得因). From the examples as presented, the reason of identity refers to the reason, the proban (sādhana, 能立), which has the relation of genus and its species with the probandum (sādhyā, 所立). Here, the probandum is the genus, and the proban its species. It is also permitted that the extension of the proban matches that of the probandum. The reason of causality refers to the reason, the proban, which has the relation of causality with the probandum. Here, the probandum is the cause, and the proban its result. It is notable that the similar example and the dissimilar example based on these two types of valid reason then become genuinely the all-inclusive and universal propositions. From these two types of valid reason, the conclusion (paka, 宗) can be inferred necessarily. The necessary implication of the conclusion in its premises is then solidly promised. It is for this reason that Dharmakīrti needs not to mention even in passing the previous requirement of the exclusion of the subject in dispute from both the similar and dissimilar instances. Therefore, the logical form of Dharmakīrti’s second characteristic of a valid reason, sapakṣa eva sattvam, is same with that of the similar example in his renewed form of argument. Furthermore, the form of the second characteristic in Dharmakīrti’s expression is the logical equivalence of the third characteristic, asapakṣa e 'sattvam eva. Likewise, the similar example and the dissimilar example are also logical equivalence in Dharmakīrti’s system.

In respect of the form of argument, it is proclaimed by Dignāga in the Nyāyamukha that at first, each member of the three-membered argument is indispensable. Secondly, an argument can not be erected when only the similar example or the dissimilar example is adduced. Moreover, the explanatory aid (*dāntāśraya, 喻依), the individual instance, of the similar example is indispensable, while that of the dissimilar example is not indispensable. In contrast, the form of argument according to Dharmakīrti’s system can be erected when only either of the similar example or the dissimilar example is adduced. In correspondence with only which type of example that is adduced in an argument, there are respectively the form based on similarity (sādharmyavatprayoga) and the form based on dissimilarity (vaidharmyavatprayoga). Furthermore, the thesis or conclusion (paka, 宗) of an argument can be omitted and is not indispensable.

In respect of the theory of fallacies, it is no longer mentioned by Dharmakīrti the fallacy which contradicts only the second characteristic of a valid reason, which tells the fact that Dharmakīrti does no longer admit the existence of such a kind of reason which is uncertain because of being too exclusive (asādhāraṇānaikāntikahetu, 不共不定因). This is undoubtedly

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one of the most important deviations of the logical system of Dharmakīrti from that of Dignāga in regard to the theory of fallacies. In addition, it is also evidenced by this fact although in an indirect way that for Dharmakīrti, the second characteristic of a valid reason is logically equivalent to the third characteristic, while for Dignāga, they are different.

As represented in the Pramāṇasamuccaya, Dignāga in his late phase then shifted to concentrate on the problems of epistemology (pramāṇavāda, 量论), and rearranged his system of new Hetuvidyā according to the concurrent topics of epistemology in his time. As Dharmakīrti arranges his thoughts of logic also in the epistemological style, it is indubitable that Dignāga lays the groundwork for Dharmakīrti’s new system of epistemology. However, when certain subjects of logic and epistemology are concerned, it is also indubitable that Dharmakīrti does deviate a lot from Dignāga. Firstly, Dignāga does not accept the reality of external objects and approves of the Yogācāra position that all of them are merely the various presentations of the consciousness. However, Dharmakīrti approves of the Sautrāntika position where the reality of the external objects is accepted. As Dharmakīrti does not admit the Yogācāra thesis of mere-consciousness, what Xuan Zang strives for in his famous argument for mere-consciousness (vijñāptimātrānumāna, 唯识比量) now becomes aimless for Dharmakīrti. Secondly, the validity of a three-membered argument is defined in Dignāga’s system of logic as the consensus (prasiddha, 极成) of both sides in debate, while the validity of an argument is defined by Dharmakīrti as a faithful reflection (sārūpya) of the essential relation (svabhāvapratibandha, 自性相属) between what is denoted by the proban and what is denoted by the probandum. Therefore, the theory of three types of reasoning (trīvidham anumānam, 三种比量), the main idea of which is based on Dignāga’s conception of consensus as the criterion for the validity of an argument, has lost its place and its raison d’être in Dharmakīrti’s system of logic. In this respect, it is not difficult to understand that the vijñāptimātrānumāna, the inference for mere-consciousness, which is one of the most famous arguments formulated according to the theory of three types of reasoning, is just ‘a matter of expediency’ (一时之用).

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