

The Problem of Major Premise in Buddhist Logic

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Abstract: This paper is a preliminary inquiry into the main difference between Buddhist logic and Western logic. The scope of comparison is limited in the theory of inference by Dignāga and Dharmakīrti on the Buddhist side, and in the classical syllogism on the Western side.

As begun with an analysis of one typical fallacy in Buddhist logic, the *prameyatva* (being cognized) reason for the *nitya* (eternal) thesis as one of the non-conclusive reasons (*anaikāntikahetu*), this paper points out that the inference as such is unsound merely because its major premise is false, when its form exactly the same as *Barbara* in Western syllogism. Likewise, all the non-conclusive reasons and contradictory reasons (*viruddhahetu*) can be reduced only to the falseness of major premise, or in paraphrase, to the failure of establishing the invariable concomitance (*avinābhāva*).

In fact, the three conditions of a right reason (*trairūpya*) are formulated in order to promise the premises of a three-part inference (*trayāvayava*) to be true, while the Western rules for a right syllogism are aimed at promising its form to be valid. This difference seems to be essential in illuminating the intensionalism in Buddhist logic and the extensionalism of the Western syllogism. However, to what extent the truth of premises can be guaranteed differs in respect of the different *trairūpāya* formulae as given by Dignāga and Dharmakīrti.

According to Dignāga, the object in dispute (*dharmin*), i.e. the minor term, shall be ruled out from both the last two conditions of a right reason. As a result, these two conditions can only promise the major premise to be true in those cases other than the minor term, and the inference according to him is therefore non-deductive. As the restriction of excluding the object in dispute is given up by Dharmakīrti, the last two conditions of a right reason become capable of promising the major premise to be universally true, and the inference according to him thus become deductive.

At last, the author indicates that the intensionalism in Buddhist logic plays a key role in the historical development of Buddhist logic (*hetuvidyā*) into Buddhist epistemology (*pramāṇavāda*).

Key words: Buddhist Logic; Syllogism; The Truth of Premise; Formal Validity

As we know, the special term ‘syllogism’ is often adopted when discussing the seemingly corresponding thought in Indian logic. But such a kind of adoption does not always go fitly when further observation is carried out, for which the main reasons are that, firstly, not all the Indian varieties of inference is deductive, while syllogism, on the Western sense, is typically deductive, and secondly, the Indian form of inference bears a peculiar consideration, which is quite different from her Western brother.

The argument for these two reasons will be set forth in this paper, while not referring to the Indian logic in general, but to the Buddhist logic in special, that is, in principle, the logic of Dignāga and Dharmakīrti.

I

Let’s begin with an example:

Conclusion (*pakṣa* or *pratijñā*): Sound is permanent.

Minor Premise (*hetu*): Because it is knowable.

Major Premise (*dṛṣṭānta*): Whatever is knowable is permanent.

The order of these three statements, which is arranged in accord with the Indian way, can also be turned into the Western form as first major premise, second minor premise and then conclusion. Indeed, the order is not very important. When we consider this inference in Aristotelian way, what we can find is that it is rightly the *Barbara*, and therefore it is a valid inference, likewise ‘all human beings are mortal, the Athenians are human beings, therefore the Athenians are mortal’.

However, it is this inference that is proclaimed to be invalid in Buddhist logic. The fallacy committed in it is called non-conclusive (*anaikāntika*), which means that the reason (*hetu*) ‘knowable’ abides not only in the similar instances (*sapakṣa*), e.g. ether (*ākāśa*), which is knowable and permanent, but also in the dissimilar instances (*vipakṣa*), e.g. pot, which is knowable but impermanent. Therefore, both the opponent conclusions, being permanent and being impermanent, can find its support in this reason, but neither could be justified conclusively through it.

This kind of fallacy is categorized by Dignāga as the fallacy of reason (*hetvābhāsa*). But in reality, the essential fault of this inference is that its major premise is not true, and if paraphrased in Buddhist way, it’s that the invariable concomitance (*avinābhāva*) between the reason ‘knowable’ and the major term ‘permanent’ fails to be established. That is to say, it’s not the case that whatever is knowable is permanent, just as pot, which is knowable but impermanent.

Likewise, all the fallacies of non-conclusive reason and contradictory reason (*viruddha*), being the basic and utmost fallacies in Buddhist logic, can be reduced to the major premise’s failing to be true, or in Buddhist term, the failure of invariable concomitance.

II

Thus, a question arises when we take into account both the Aristotelian and the Buddhist views on such kind of inference. From one point of view, it is valid, but from another, invalid. How can it be?

To relief our puzzle, we must consider at first the problem what underlies the validity of a *Barbarian* syllogism, and additionally, it seems to be appropriate to neglecting the other forms, since *Barbara* is the only form discussed by Buddhist logicians. From any textbook on Western logic, these five requirements for a valid syllogism can be found:

1. No conclusion can be deduced from two negative premises.
2. If one premise is negative, the conclusion must be negative.
3. If both premises are affirmative, the conclusion must be affirmative.
4. The middle term (reason, *hetu*) must be distributed at least once in the major or minor premise.
5. Any term distributed in the conclusion must also appear as distributed in the major or minor premise.¹

Those requirements shall be satisfied in any instance of *Barbarian* syllogism, and the validity of a *Barbarian* syllogistic reasoning can be thereby warranted. Here, we won't discuss those rules in detail, but will only suggest that the key conception underlying is the theory of four kinds of categorical proposition. The categorical proposition, i.e. the statement in subject-predicate structure, is of four types, and they are universal affirmative, universal negative, particular affirmative and particular negative. The term 'distribution' or 'distributed' as used above betrays but the extent to which the subject or predicate is asserted in those propositions, and to what extent those terms are asserted is independent of the special contents or meanings as denoted by those terms. In paraphrase, the conception of distribution merely purports to the extensional relation between two concepts in question, while does no business with whether the subject is in reality included in the predicate or not. It is also the case that the distinction among those four types of propositions is independent of the concrete meanings of those terms in them.

Therefore, the terms, the subject and predicate, in propositions are just like blanks to fill, and the form of such a type of proposition is irrelevant to the various meanings of the terms in them. In this respect, what could be understood is the procedure of abstraction in which the concrete meaning of a word is removed and only the structure of sentence left.

Thus, it is on the basis of this procedure of abstraction that the requirements for a valid syllogism are constituted, and it is the very conception of abstraction that underlies the validity of a *Barbarian* syllogism in Aristotelian logic. The validity of a syllogistic inference, in terms of Western logic is formal validity, and the formal validity runs regardless of the special meaning of a term in inference, as far as being regardless of whether the premise here adduced is in fact true

¹ Norman L. THOMAS, *Modern Logic: An Introduction*, New York: Barnes & Noble, Inc. 1966, p. 44. The last two requirements haven't been quoted, because they can be deduced from the former five. The Indian correspondence in the parentheses is added by the present author when necessary.

or not true.

III

However, the truth of premises, esp. of the major premise, is so emphasized in Buddhist logic that if only one of them is untrue, then the whole inference will be spoilt without any surrendering. When contrasted with the Western idea of validity, the validity in Buddhist logic could be regarded as material validity.

If both the material and formal validity are permitted without any contradiction, just as in the law of sufficient reason by Leibniz-Wolff school, our puzzle about why an inference could be valid on the Aristotelian sense, while invalid on the Buddhist sense, then could be removed.

It is asserted in the law of sufficient reason that an inference is valid, when its premises are true and its form is right. From this point of view, what interestingly can be found is that the Buddhist logic focuses on the truth of premises, while the Aristotelian on the formal righteousness. However, I'm not ready to declare the law of sufficient reason as a necessary component of any kind of formal logic, or of the theory of logic in general. Because when we embrace this law in logic, the interest of logic will soon give way to the interest of epistemology or metaphysics.

Leibniz, who was the first to suggest this law, labeled the material truth as occasional and the formal truth as necessary. For him, the material truth corresponded to the truth of premises and the formal truth to the righteousness of a logical form. Then, Kant developed his transcendental philosophy to argue that some material truth, or in Kant's terminology, some synthetic statements, was also necessarily true. Likewise, when the inferential truth was claimed in Buddhist philosophy as non-ultimately true especially in the school of *Madhyamaka*, Dharmakīrti then developed his theory of three types of reason (*trividha liṅgam*) to justify the necessary truth of those major premises which ran in correspondence (*sārūpya*) with the essential relations in the external world.

Indeed, Dharmakīrti's three types of reason opened an epistemological approach to logic. As defined by him, the result of knowing (*pramāṅaphala*) is no more than the valid means of knowing (*pramāṅa*), and the latter betrays a correspondence with the essential relation in reality, therefore the result of knowing, the clear and distinct knowledge (*pratīti*), is justified through this principle of correspondence.

Further, the essential relation in the external world is either identity (*tādātmya*) or causality (*tadutpatti*) and no more. When the relation between the subject and predicate in the major premise runs in correspondence with one of those two essential relations in the external world, then the major premise shall be necessarily true. And the reason, out of which this true premise is constructed, is either identical reason (*svabhāvaḥetu*) or causal reason (*kāryaḥetu*) in accord with the essential relation as either identity or causality. As to the third type of reason, the non-perceptual reason (*anupalabdhiḥetu*), it was no more than the former two, no more than the identical reason and the causal reason.

However, as soon as we consider the relationship between the subject and predicate in a major premise, the special meanings of those terms should be taken into account inevitably. Again, it is through Dharmakīrti's observation of the concrete meanings of those terms that the truth of major premise finds its ultimate root in the external world.

Therefore, Dharmakīrti's theory of three types of reason brings into light the epistemological approach to the validity of inference. Through the correspondence with the external world, the truth of the major premise is defined, and through the truth of major premise, the validity of inference thus guaranteed.

IV

Furthermore, the Buddhist rule of three characteristics of a valid reason (*trairūpya*) is also aimed at explaining the truth of major premise and through this kind of explanation, the validity of inference is defined. Historically, the theory of three characteristics of a valid reason benefited a lot from Dignāga's circle of nine reasons (*hetucakra*), and then was endowed with a transformation on the basis of Dharmakīrti's innovation of three types of reason (*trividha liṅgam*).

As all the premises in the Buddhist form of inference are categorical proposition, therefore a true premise shall betray the invariable concomitance (*avinābhāva*) between the subject and the predicate in it. That is to say, the subject shall be pervaded (*vyāpta*) by the predicate.

Let's take for instance the inference that 'sound is impermanent (*pakṣa* or *pratijñā*), because it is produced (*hetu*), whatever is produced is impermanent (*dṛṣṭānta*)'. In the case of the minor premise, the subject 'sound' shall be pervaded by the predicate 'being produced', that is, all sound shall be produced. This kind of pervading (*vyāpti*) is required in the first characteristic of a valid reason, that is, the reason shall be a property of the subject of conclusion (*pakṣadharmatva*). On the first characteristic of a valid reason, Dignāga and Dharmakīrti agreed in principle.

In the case of the major premise, the reason's being pervaded by the major term is warranted through the last two characteristics of a valid reason, but to what extent it is warranted varies with the different expositions of the last two characteristics by Dignāga and Dharmakīrti respectively.

In the last two characteristics of a valid reason, the concepts of the 'similar instance' (*sapakṣa*) and the 'dissimilar instance' (*vipakṣa*) are used. However, according to the system of Dignāga, the minor term, the subject of the conclusion (*dharmin*), shall be ruled out from both the extensions of these two concepts. The reason for that abides in Dignāga's circle of nine reasons. Especially in the fifth reason, we have the inference that 'sound is permanent (*pakṣa*), because it is audible (*hetu*)'. It is the very form of inference that betrays Dignāga's special understanding of the 'similar instance' and the 'dissimilar instance'. For him, the fifth reason is non-conclusive, because the reason 'audible' abides exclusively in the minor term (*dharmin*) 'sound', and therefore is too narrow to proof any of the opponent conclusions, as being

permanent or being impermanent. This means that the minor term resides neither in the similar instances, nor in the dissimilar instances, otherwise the reason ‘audible’ wouldn’t be too narrow, and must reside either in the similar or in the dissimilar instances. Thus, the ‘similar instance’ is understood by Dignāga as the instances other than the minor term, which bear the same property as the predicate of the conclusion (*sādhyā*), and the ‘dissimilar instance’ understood as the instances other than the minor term, which do not bear the same property as the predicate of the conclusion. In both definitions, the minor term (*dharmin*) is ruled out according to Dignāga.

Moreover, since the concept of similar instance is also used in the major premise, the minor term’s being ruled out is also applicable to it, so that the major premise is no longer considered as a universal proposition. Therefore, the conclusion about the situation of the minor term is not necessarily implied in the major premise, and the whole inference fails to be deductive. The logical system of Dignāga, in reality, is non-deductive, but analogy, although the inference in that system begins with a seemingly universal major premise.

As the circle of nine reasons is no longer advocated by Dharmakīrti, the minor term’s being ruled out is thereon cast off. The last two characteristics of a valid reason are also reformed by Dharmakīrti, in that he adds the particle *eva* (only) in both Dignāga’s expositions of the last two characteristics. The slight but significant differences therein can then be illustrated as follow:

| | Dignāga | Dharmakīrti |
|---------------------|---|--|
| Characteristic II. | <p><i>sapakāe sattvam</i> Read literally: the reason’s existence in similar instance. Read logically: <i>some</i> similar instances are what bear the property of reason.</p> | <p><i>sapakāa eva sattvam</i> Read literally: the reason’s existence <i>only</i> in similar instance Read logically: <i>all</i> what bear the property of reason are the similar instances.</p> |
| Characteristic III. | <p><i>vipakāe ’sattvam</i> Read literally: the reason’s non-existence in dissimilar instance. Read logically: <i>none</i> dissimilar instance is what bears the property of reason.</p> | <p><i>asapakāe ’sattvam eva</i> Read literally: the reason’s only non-existence in dissimilar instance Read logically: <i>none</i> dissimilar instance is what bears the property of reason.</p> |

In the illustration above, Dignāga’s restriction of the minor term’s being ruled out has been neglected for the convenience of comparison. It becomes clear that the main divergence between Dignāga and Dharmakīrti here is that the second characteristic of a valid reason for Dignāga is a particular affirmative statement, in which the reason is the predicate and the major term the subject, while for Dharmakīrti, it is a universal affirmative statement, in which the reason is the subject and the major term the predicate.

Obviously, Dharmakīrti's exposition of the second characteristic is perfectly the same form of the major premise, so that the truth of the major premise can fully and conclusively be warranted by the satisfaction of the second characteristic of a valid reason. However, Dignāga's exposition seems to be stated in a more weakened manner somehow than the major premise, so that the second characteristic of a valid reason, according to him, is just somehow an illustration of the truth of the major premise, and can not support the truth of it as fully and conclusively as that of Dharmakīrti.

In conclusion, it seems to be worthy of celebration that the Buddhist theory of three characteristics of a valid reason bears some resemblance with the formal law of inference on the Western sense, but what I'd like to argue for is that even the theory of three characteristics of a valid reason is not so formalistic on the Western sense, in that the aim of this theory is but to guarantee the truth of the major premise. The truth of the major premise is not a logical problem, but an epistemological problem. When the discussions concerning on this problem goes further, the Buddhist logic is bound to give way to the interest of epistemology (*pramāṇavāda*).