

Buddhist Syllogistic Theory

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INTRODUCTION

This paper aims at giving elements of an exposition, with critical observations, of an integral part of Buddhist logic - that which corresponds to what in Western philosophy is referred to as 'syllogism' - as presented by Stcherbatsky in Part III of his book *Buddhist Logic* (1930) which is entitled 'The Constructed World'.¹ In his book, Stcherbatsky deals with elements of Buddhist literature which show some sort of parallelism with the main stream of European logic of his time. Such elements include "a doctrine of the forms of syllogism, ... a theory on the essence of judgement, on the import of names and on inference."² Also, he deals with other aspects which are included by the Buddhists in their system of 'logic' but are not included under logic in the West. These include "a theory on the part of pure sensation in the whole context of our knowledge, a theory on the reliability of our knowledge and on the reality of the external world as cognised by us in sensations and images."³ Buddhists did not achieve a clear separation of logic from ontology and epistemology. This is further emphasized by the ultimate aim of Buddhist logic, namely, explaining "the relation between a moving reality and the static constructions of thought."⁴

1.0 INFERENCE

1.1 The Nature of Judgement

Buddhist logicians define judgement as the interpretation of sensations into

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1. Th. Stcherbatsky, *Buddhist Logic*, Vol. 1, (Dover Publications; New York 1962) 231-319.
2. Stcherbatsky, *Buddhist Logic*, 1.
3. Ibid.
4. Ibid., 2.

concepts, and distinguish between two types of judgement. These are direct, or perceptual judgement, and indirect, or inferential judgement. The former is a synthesis of a sensation and a concept, while the latter is a synthesis of a sensation and two concepts, that is, three terms in all. The following examples help illustrating the difference:

- | | |
|------------------------------------|-----------------------------|
| J1: This is smoke | - <i>Direct Judgement</i> |
| J2: This is smoke produced by fire | - <i>Indirect Judgement</i> |

J1 and J2 are perceptual and inferential judgement respectively. The latter expresses the cognition of a non-perceived (fire) through a perceived (smoke) related as reason and consequence; either expressed or understood the element 'this' or 'here' has to be present. In a perceptual judgement, the cognition "of the object *X* is through its symbol which is the conception *A*" while in an inferential judgement, the cognition of object *X* is present "through its double symbol *A* and *B*."⁵

1.2 Parts of an Inference

In Buddhist logic each inference contains three terms namely the logical subject, the logical predicate and finally the reason (or mark) which unites them. In 'Here there are trees because there are simsapas' the logical subject is 'here' while the logical predicate and reason are 'trees' and 'simsapas' respectively.

The logical subject may be either of two types - real or metaphorical. The former represents the point-instant of pure reality usually characterised by 'thisness' (example: This [place] contains trees because it has simsapas). The latter with respect to the ultimate real, is itself an inferred quality (example: The mountain possesses fire because it possesses smoke - The former real subject 'This' is here partly inferred). The quality of the logical subject cognised through the inference is represented by the logical predicate. Together with the subject, the predicate forms the 'object' cognised through the inference. No particular can ever make a logical predicate. The logical reason (or mark) is both "a quality of the subject and is itself marked off by the predicate."⁶ Its role is similar to that played by the middle term in Aristotelian logic. This term is the distinguishing feature between perceptual (direct) and inferential (indirect) judgement. The logical reason has a threefold aspect. These are

5. Ibid., 231.

6. Ibid., 235.

- A1: its presence in the Subject's totality,
 A2: its presence only in cases which are Similar to the subject in so far as the predicate may be asserted of them, and
 A3: its absence from Dissimilar cases in their totality.

With respect to A1, the reference to the subject's totality is intended to cover cases where the subject is not an individual. Thus, in 'Greeks are mortal beings because they are men', men refers to the totality of the Greeks. A2 and A3, referred to as the method of agreement and difference respectively, imply one another, that is, they are equivalent.

1.3 Types of Inference

Inference moves from the particular to the particular. It brings in the general rule only on reaching a further step of cognition. Where necessary, the general rule is stated twice - in its positive and in its negative forms. Inference consists in the necessary interrelation between two concepts and in the necessary relation of these concepts to a point-instant of objective reality - the logical subject. A relation signifies the necessary presence of a dependent part and another part upon which it depends.

There are only two possible ways in which one part may be dependent upon another. It may either be a part of it or its effect. Hence there are two types of inferences each corresponding to the type of dependency, namely, that founded on Identity and that founded on Causation respectively. The classical examples given to illustrate these inferences are:

- C1: *Inference founded on Identity,*
 This (S) is a tree (P),
 Because it is a simsapa (R),
 All simsapas are trees.
- C2: *Inference founded on Causality,*
 There is here some fire,
 Because there is smoke.
 There is no smoke without fire.

In C1, the related terms 'trees' and 'simsapas' both refer to the same real thing, that is, their objective reference (x) is identical. This is clearly seen if say 'All

simsapas are trees' is read as 'If x is a simsapa then x is a tree'. The concepts to which 'trees' and 'simsapas' refer are not identical. In C2, 'fire' and 'smoke' are not related by identity since their objective references (x and y) are different. In 'There is no smoke without fire' this is seen more clearly if read as 'If x is smoke then it has been caused by fire y '. These two terms though necessarily interdependent, refer to two different points of objective reality. A dependent existence is present and hence the relation is one based on causation.

In 'All simsapas are trees' the predicate forms part of the subject and is obtained from it by analysis. "Identity is a reason for deducing a predicate when the subject alone is by itself sufficient for that deduction."⁷ Therefore an inferential judgement founded on identity is an analytical judgement. Correspondingly, in inferential judgements founded on causality the predicate is not part of the subject. As shown in C2 above, the predicate must be added to it and only be found out in practice. Such inferential judgements which are founded on experience, or causality, are synthetic. Hence such judgements are empirical and "consist in establishing causal relations by observation and experiment."⁸

1.4 Categories of Relation

There are only three categories of relation between any two concepts which are Identity and Causality - which belong to affirmations of necessary dependence - and Negation of an assumed presence of the predicate in the subject. All this is summed up in Dharmakirti's words thus "Inferential cognition is either Affirmation or Negation, and Affirmation is double, it either is founded on Identity or on Causality."⁹ The following examples illustrate these relations:

- G1: *Inference founded on Identity,*
 The sounds of speech are impermanent entities.
 Because they are produced at will just as jars etc.
- G2: *Inference founded on Causality,*
 There is fire on the hill.
 Because there is smoke, just as in the kitchen etc.

7. Th. Stcherbatsky, *Buddhist Logic*, Vol.2, (Dover Publications; New York 1962) 65.

8. Stcherbatsky, *Buddhist Logic*, 1, 251.

9. *Ibid.*, 1, 255. Identity, Causality and Negation are claimed to be mutually exclusive (Stcherbatsky, *Buddhist Logic*, 1, 254 - 256) and to exhaust all relations (*ibid.*, 256 - 259).

- G3: *Inference founded on Negation,*
 There is no jar on this place.
 What is not perceived is not present,
 just as we perceive no flower growing in the sky.

II.0. SYLLOGISM

II.1 Definition

The preoccupation of Buddhist logic is to explore the roots ('sources') of our knowledge in order to find out in the cognised world its elements of ultimate reality and hence separating them from those of imagination which were added to the former in the process of cognition. Inference is the natural run of our thought. It takes place in the head. Hence it is an inference 'in oneself'. The communication of such an inference in such a way to produce an inference in the head of the hearer is the inference 'for others'. Hence the former is a process of cognition while the latter is a process of communicating a ready cognition. Stcherbatsky uses the word syllogism for such an inference 'for others'.

Syllogism is not a source of knowledge. It "consists in communicating the three aspects of the logical mark."¹⁰ Its propositions are restored to for communicating ready knowledge to others. The distinguishing feature between inference ('in oneself') and syllogism, is a difference in their form. While an inference is basically a process where a particular case is inferred through its similarity with another particular case and the general rule intervening as a uniting member between the two particular cases, a syllogism starts off by proclaiming the universal case and than moves on to deduce the particular instances from such a case. Consequently the order of the premises in communicating the three aspects of the logical mark is different from that present in an inference. The following illustration demonstrates how in practice the Buddhist logician distinguishes between the two inferences:

Inference:

There is fire on the hill.
 Because there is smoke, just as in the kitchen etc.

Syllogism:

Wheresoever there is smoke, there must be some fire, as in the kitchen etc.
 And there is such a smoke on the hill.

¹⁰Stcherbatsky, *Buddhist Logic*, 2, 109.

II.2 Parts of a Syllogism

The traditional Buddhist form of stating the syllogism contains three steps - the first being the proponent part while the last two are considered by the opponent. These are

Proponent:

Stating the three terms, the subject, the predicate and the reason, without caring to put them in the form of propositions

Opponent:

See whether the reason is present in the subject in its totality, and
See whether the predicate is present in the reason in its totality.

It seems one is concerned at such a stage with the first figure of the Western Syllogistic Theory. Furthermore, the Buddhist syllogism deals just with universal propositions. Hence, from the four moods of the first figure, namely: *Barbara*, *Celarent*, *Darii* and *Ferio*, only the moods which contains universal propositions are considered, that is, *Barbara* and *Celarent*. Also, since for the time being negative universal propositions are put aside, *Barbara* remains the only mood of the first figure under consideration.

II.3 Members of a Syllogism

The earliest known theory of the syllogism contained five members and belonged to the Naiyayiks. The five members of such a syllogism are the thesis, the reason, the example, the application and the conclusion, in this order. A syllogism of the Naiyayiks will be the following:

<i>Thesis:</i>	There is fire on the hill.
<i>Reason:</i>	Because there is smoke.
<i>Example:</i>	As in the kitchen etc., wherever smoke, there is fire.
<i>Application:</i>	And there is such smoke on the hill.
<i>Conclusion:</i>	There is fire on the hill.

On reviewing this theory, Dignaga retained only two members. His new version consisted of the general rule and its application to a particular case. The general rule establishes the necessary interrelation between the two terms and is hence referred to as 'Inseparable Connection' while its application to the particular case

is known as the 'Qualification of the Subject'. Since each syllogism consists of just these two members, it contains two propositions only. The first proposition corresponds in Western Aristotelian logic to the major premise while the latter is made up of both the minor premise and the conclusion. These two real members "are the same as the Three Aspects of the Logical Reason which have been established in the inference 'for oneself', but their order in the inference 'for others' is changed."¹¹ The Inseparable Connection corresponds to the presence of the reason in similar instances only and its absence in non-similar ones (A2 and A3), while the Qualification of the Subject refers to the reason's presence in the subject's totality (A1).¹² A2 and A3 represent only a difference in formulation for the one necessarily implies the other.

In the syllogism, the example is not to be set apart from the major premise. It is inherent in the general rule and not a separate member. This shows that the Buddhist syllogism is more than just deduction. The general rule is established by generalising from the individual examples. The Buddhist logicians insisted on including in the syllogism the examples to support the general rule. The general rule is obtained by induction from the individual facts ('examples'). But the general rule is itself one of the propositions of the 'deductive' Buddhist syllogism. Hence preceding the deduction present in such a syllogism is an induction by which the general rule (the major premise) is obtained.

To assure that complete induction is present the Method of Agreement and Difference has to be employed and so examples have to be both positive and negative.¹³ When either no positive or no negative examples are present, no conclusion can be drawn. Such is an illustration of the above:

Positive example: Wheresoever there is smoke there is fire as in the kitchen.
Negative example: Wheresoever there is no fire there is no smoke as in the pond.

11. Stcherbatsky, *Buddhist Logic*, 1, 281.

12. See, II.2 above.

13. In mediaeval philosophical terms, the method of Agreement corresponds to the principle *nota notae est nota rei ipsius* while the method of Difference corresponds to *repugnans notae repugnat rei ipsi*.

II.4 Kinds of Syllogism

Syllogism is the expression of an inference in propositions. Now, inference is the cognition of an object through its Three-Aspected Logical Reason where reason is the term whose necessary presence interrelate the logical subject and predicate. There are only three possible ways in which the subject and predicate can be related in order to allow us to cognise one object through its necessary relation with the other. One can come to a knowledge of a thing either “through its Effect or through its being an inherent Property or through its Negative Counterpart.”¹⁴ Accordingly, three kinds of syllogism are possible, which are the Causal, the Analytic and the Negative. The differences between these three syllogisms stem from its content.

As in inference, the same cognition of an object may be expressed in two ways - by similarity with all-like objects and dissimilarity with all-unlike ones. This difference is referred to as a difference in figure. Hence, since every logical reason may be expressed in two ways, for every syllogism we have two figures. “Figure ... does not mean a twisted, unnatural and perverse verbal arrangement of the terms of an inference, where the real core of every inference, the universal and necessary interdependence of two terms, becomes quite obliterated; but it means two universal and equipollent methods of cognising truth on the basis of a necessary interdependence between two terms.”¹⁵ The pattern of these figures are as follows:

- a) *for syllogism based on Agreement,*

All R is P

This is R

Hence,

This is P

where R : Reason

and P : Predicate

- b) *for syllogism based on Difference,*

All (not P) is not R

This is R

Hence,

This is P

While (a) expresses that R is present in similars only, (b) expresses that it is never present in dissimilars. The syllogism based on Difference is simply the

14. Stcherbatsky, *Buddhist Logic*, 1, 283.

15. *Ibid.*, 1, 284. This statement is directed to Aristotelean syllogistic theory.

contraposition of the syllogism based on Agreement.¹⁶

The following helps illustrating the various figures of the syllogism based on Causal and Analytic deduction and finally on Negation.

For Causal deduction,

based on the method of Agreement,

Wherever there is smoke, there is fire, as in the kitchen.

Here there is smoke,

There must be some fire.

based on the method of Difference,

Wherever there is no fire, there neither is smoke, as in water.

But here there is smoke,

There must be fire.

For Analytic deduction,

based on the method of Agreement,

Whatsoever is variable is non-eternal, like jars etc.

The sounds of speech are variable,

They are non-eternal.

based on the method of Difference,

Whatsoever is eternal is never variable, like, e.g., Space.

But the sounds of speech are variable,

They are not eternal.

For Negation,

based on the method of Agreement,

Whatsoever is not perceived, is absent.

On this place no jar is perceived.

It is absent.

based on the method of Difference,

Whatsoever is present is necessarily perceived.

But on this place no such jar is perceived.

It is absent.

16. One needs not express both figures for "from a formula of Agreement the corresponding formula of Difference follows by implication" (Stcherbatsky, *Buddhist Logic*, 2, 142).

Although for the Buddhist logician every syllogism may be expressed in either its positive or in its negative form since both forms are equipollent, for the realistic schools they are totally unrelated. For such schools one can have "purely positive" and "purely negative" syllogism.

Since the Buddhist syllogism is based on the necessary and universal relation between the two terms, particular judgements and thus syllogisms containing such judgements, are excluded.

II.5 Formulation of a Syllogism

Inference ‘in oneself’ is a process in the mind of the subject which brings ‘new’ knowledge. Such an inferential judgement is made by comparing the case in point with situations previously expressed. Thus, for example, the presence of smoke is associated with smoke produced, say, in the kitchen (by fire) and the absence of smoke, say, in the pond, (where there is no fire). In inference there is no deduction from a general rule. Contrastingly, the purpose of the syllogism is to communicate ‘knowledge’ to others. Its formulation is necessarily such as to cause knowledge to be produced in the head of the hearer. From various positive or negative examples obtained from experience, the general rule, the major premise, is obtained by induction. One then states the minor premise and the conclusion which make up the second proposition of the syllogism. This further emphasis that, as far as content is concerned, there is no large difference between syllogism and inference. A syllogism is a correct formulation of the content of an inference in two propositions in such a way as to produce an inference in the head of the hearer. It adds nothing to our cognition.

The necessary relations upon which all knowledge is based are Identity and Causality.¹⁷ The value of the syllogism founded on Causality is self-evident. What is communicated by a syllogism is the fact of a necessary dependence of the effect upon its causes. “We can assert that the effect represents the logical reason for deducing its cause”, says Dharmakirti, “only when the fact of their causal relation is already known.”¹⁸ The syllogism of Identity is more subtle. As in inference, the logical reason, which is the part linking the logical subject to the logical predicate, “produces knowledge by logical necessity, as an ascertained case of invariable concomitance ... [that is] ... produces a cognition of an unobserved fact.”¹⁹ By

17. The Buddhists treat negative relations separately. Thus, negative relations are not treated here.

18. Stcherbatsky, *Buddhist Logic*, 2, 137.

19. Stcherbatsky, *Buddhist Logic*, 1, 288.

employing the law of contradiction one makes certain that the reason is dependent on the predicate. This is the first step before moving to formulate the syllogism. The next step holds for both analytically and causally founded syllogisms. It consists in connecting the general rule ('All simsapas are trees') with the particular case ('There is a simsapa in the garden').²⁰

III.0 THE WESTERN CONTRAST

III.1 Stcherbatsky's Position

Despite the various differences existing between the Buddhist and the Aristotelian inferential and syllogistic logic, a vague parallelism may be identified between these two schools of thought. Stcherbatsky tries to bring out an inherent distinction in European logic similar to the Buddhist distinction between inference 'for oneself' and inference 'for others'. The correspondence which he tries to draw between the Buddhist and European logic crops up, according to him, from the way of stating the contents of the Aristotelian syllogism. Stcherbatsky identifies two such ways. The first is marked by the principles *Nota notae est nota rei ipsius* and its correlative *Repugnas notae repugnat rei ipsi*.²¹ These also correspond to the principle of the Buddhist inference 'for oneself'. The contents of the syllogism were also stated in terms of the principle *Dictum de omni et nullo*. According to this rule "Whatever can be asserted (or denied) of every member of a class can also be asserted (or denied) of every member of any class contained in the first class."²² When the syllogism is stated in terms of the *Dictum*, it 'corresponds' to the Buddhist syllogism ('for others').

In addition to the various similarities between the two trends of thought, there

20. For Dharmattara's question "Why should we have recourse to logical reasoning for deducing from the reason what is already given in the reason?" (Stcherbatsky, *Buddhist Logic*, 2, 131). Stcherbatsky replies that although the consequence is contained in reason, it is not really always present in the mind (Stcherbatsky, *Buddhist Logic*, 1, 290).

21. The term is being considered from the point of view of its comprehension.

22. Flew, A., (Ed.), *A Dictionary of Philosophy*, (Macmillan 1979) 95. The principle was first formulated by Aristotle thus:

"That one term should be included in another as in a whole is the same as for the other to be predicated of all the first (*Prior Analytics*, 26B 26-7).

Here the term is being considered from the point of view of its extension.

are points of disagreement. The Aristotelian syllogism, both when stated in terms of *Nota notae* and the *Dictum*, is a speech.²³ It consists of at least three propositions where one of them, the conclusion, follows from the other propositions, the major and minor premises. Unlike the syllogism stated in terms of *Nota notae*, the Buddhist inference 'for oneself' is not a speech. Instead of being made up of propositions, it consists of three terms - the subject, the predicate and the mark. Similar to its European counterpart, the Buddhist inference 'for others' is a speech. Yet, instead of three propositions, it consists of two - the general rule and the application. The former corresponds to the major premise while the latter contains together the minor premise and the conclusion.

III.2 Induction and Deduction

Both Aristotle and the Buddhists maintained that the major premise must be established by induction from individual cases. The latter is discussed in III.3 below, while the former is characterised by Aristotle's assertion that universal propositions can only result through induction. "The particular facts remembered and compared constitute Experience with its universal notions and conjunctions."²⁴

In Buddhist logic, induction and deduction are complementary to one another. They cannot be separated from one another although the emphasis on each aspect can vary: In the inference for oneself the emphasis is on induction while in the syllogism the emphasis is on deduction. In Aristotle, induction and deduction can be separated from one another. He distinguishes between two types of syllogism - The genuine (deductive) syllogism (*notius natura*) and the syllogism from induction (*pro nobis*). Both these syllogisms have independently maximum degree of certainty and necessity.²⁵ The deductive syllogism presupposes and rests upon the process of induction because the major premise, the universal proposition (*notius natura*) is

23. For Aristotle, a syllogism is "a speech in which, some positions having been laid down, something different from these positions follows as a necessary consequence from their having been laid down" (G. Grote, *Aristotle*, Vol.1, [John Murray; London 1872] 205).

24. Stcherbatsky, *Buddhist Logic*, 1, 193.

25. Grote, *Aristotle*, 282-285.

“generated in the mind by a process of induction out of particulars which are *notiora nobis*.”²⁶

III.3 Obversion, Conversion, and Contraposition

By inferring from a given proposition new propositions having as terms the subject and predicate (and their contradictories) of the given proposition, Aristotle found out the various possibilities of obversion, conversion, and contraposition. He introduces these operations on propositions and then applies them to the propositions contained in syllogisms obtaining from valid syllogisms other valid ones. On the contrary, the Buddhists define conversion and contraposition exclusively in the context of syllogisms. They can only be carried out on the general propositions. The general rule expresses the fact that the mark is present in similar instances only (corresponding to the propositions ‘All *M* are *P*’) or, the equivalent form, in dissimilars never (‘No *non-P*s are *M*’). The presence in similar instances is the Position while its absence in dissimilar instances is the Contraposition.²⁷ The contraposition of the *o*-type into the *i*-type proposition is excluded as it concerns particular propositions. Universal affirmative statements cannot be converted. If one were to convert such a proposition, the result will be a fallacy of Uncertain Reason. Only the universal negative can be converted. Finally, Stcherbatsky criticises Aristotle’s way of dealing with such transformations of propositions (and then syllogisms) as being formal and grammatical.²⁸ Elsewhere he cites in his support Kant’s comparison of Aristotle’s work on the theory of the syllogism to a game of chess.²⁹ For the author, Aristotle’s study of the syllogism simply involves irrelevant playing about with the terms. Only the Buddhist syllogism contains “a good sense and a [logically] valuable sense.”³⁰

26. Stcherbatsky, *Buddhist Logic*, 1, 300. With respect to the Aristotelian syllogistic theory, the criticism that one should draw a sharper, clear-cut distinction between induction and deduction was put forward. Such critics argue that while induction is essentially a ‘risky’ step where one ‘jumps’ from the particular instances to the universal, in deduction there is strict necessity. The Buddhists deny that such a distinction can be made between induction and deduction. These two processes are one integral whole. They are absolutely inseparable. In the syllogism the induction is contained in the general rule and deduction in the application and therefore the syllogism suffers as a whole from any flaw in that part of it which is induction.

27. Examples of the contraposition of Causal, Analytic and Negative general statements have been given in II.4.

28. Stcherbatsky, *Buddhist Logic*, 1, 303.

29. *Ibid.*, 1, 308.

30. *Ibid.*, 1, 303.

III.4 Figures of Syllogism

Aristotle divided the categorical syllogism in four figures and nineteen moods. This division into figures is one based on the grammatical principle of the position of the middle term in both premises. The figures can be represented as follows, where *S* is subject and *P* predicate of the conclusion and *M* the middle term.

Figure 1:	<i>M P</i> <u><i>S M</i></u> <i>S P</i>	Figure 2:	<i>P M</i> <u><i>S M</i></u> <i>S P</i>	Figure 3:	<i>M P</i> <u><i>M S</i></u> <i>S P</i>	Figure 4:	<i>P M</i> <u><i>M S</i></u> <i>S P</i>
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The 19 different moods are the valid possibilities from a total of 256 syllogisms since each figure consists of 64 arrangements. From these 19 moods only *Barbara*, the first mood of the first figure, was regarded by Aristotle as genuine. The rest may be obtained by reduction to it.

The Buddhist logicians admit only two figures. The correspondence between these two figures and the Aristotelian figures is obtained by taking into consideration some restrictions which the Buddhist syllogistic theory makes. In Buddhist logic, of the three terms only one is the real subject. Such a subject cannot be converted into a predicate, that is, the subject of the conclusion is to be the subject of the minor premise. This restriction excludes Aristotle's third and fourth figures from the domain of the Buddhist syllogism. Also, the middle term is always the subject of the major premise. An exchange is admissible only in contraposition³¹ where an *e*-type proposition is obtained from an *a*-type one. Accordingly, the second figure is excluded except for the mood *Cesare*, the contraposition of *Barbara*. Furthermore, in Indian reasoning, particular conclusions are excluded. Such conclusions violate the first rule of the Three-Aspected Logical Mark, that is, that the reason should be present in the subject in its totality. This implies that only universal conclusions are allowed and therefore from the remaining first figure all moods except *Barbara* and *Celarent* are excluded. Furthermore, *Celarent* is considered redundant since the major premise and the conclusions of *Barbara* and *Celarent* are equipollent³² (and the minor premises are the same). The following helps to illustrate equipollence.

31. See III.3.

32. Equipollence exists between two different but logically equivalent propositions such that the *S* (respectively *P*) of one is the same as, or the negation of, the *S* (respectively *P*) of the other. Hence, 'All *S* are *P*' is equipollent to 'All *S* are not *non-P*'.

<p>(Barbara)</p> <p> </p> <p>equipollence</p> <p> </p> <p>(Celarent)</p>	<p>All men are mortal,</p> <p>All Greeks are men,</p> <p>hence</p> <p>All Greeks are mortal³³</p> <p>All men are not immortal,</p> <p>All Greeks are men,</p> <p>hence</p> <p>All Greeks are not immortal</p>	
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Hence the only two moods of the Buddhist inference ‘for others’ are those corresponding to the first figure *Barbara* and the second figure *Cesare*.

Stcherbatsky agrees with defenders of the ‘simple’ Buddhist syllogistic theory who criticise the ‘complicated’ Aristotelian theory as being merely false subtlety. The difference between the two theories - and the superiority of Aristotle’s theory - can however be explained by the difference between what the authors aimed to achieve. The Buddhists were concerned with reproducing the ‘natural run of our thinking’ and thus admitted only the forms of the valid syllogisms which are simple enough to be self-evident. Aristotle was interested in working out all the possible valid forms of syllogisms and these include those whose validity is not self-evident, but are nonetheless useful in drawing conclusions out of available true premises.

III.5 The Real and the ‘Logical’

Stcherbatsky distinguishes between laws of reality and ‘logical’ laws. Laws of

33. Lukasiewicz argues that this syllogism is not Aristotelian. He states that it is an inference whereby from two premises, a conclusion is drawn. In his opinion, an example of an Aristotelian syllogism will be the following:

If all men are mortal
and all Greeks are men
then all Greeks are mortal.

(J. Lukasiewicz, *Aristotle’s Syllogistic from the standpoint of modern formal logic*, [The Clarendon Press; Oxford 1957] 2). Lukasiewicz holds that Aristotle’s syllogistic theory presupposes a theory of deduction of which Aristotle was unaware. Corcoran argues the contrary. In proposing his mathematical model of Aristotle’s syllogistic, he treated it as a theory of deduction. Such a theory, Corcoran states, is essentially fundamental in the sense that “it presupposes no other logic, not even propositional logic” (J. Corcoran, ‘A Mathematical Model of Aristotle’s Syllogistic’, *Archiv für Geschichte der Philosophie*, 55: 196).

reality apply to real objects while 'logical' laws apply to concepts. The Buddhist law of Contradiction is both a law of reality and a 'logical' law between concepts. The laws of Identity and Causality are subaltern to it. Correspondingly these have real and 'logical' aspects. The 'logical' law of Causality is usually referred to as "the law of the Effect."³⁴

An example of the Buddhist judgement based on Identity is 'A simsapa is a tree' which can be rendered as 'If x is a simsapa than x is a tree'.³⁵ The concepts 'simsapa' and 'trees' are said to be partially identical because the objective reference x is the same. Two concepts are partially identical "in so far they are not incompatible and belong to the same identical thing."³⁶ The Buddhist law of Contradiction states that "if the qualities (or concepts) are incompatible, the reality of which they are the qualities cannot be identical."³⁷

Stcherbatsky distinguishes between real and 'logical' causality. For him, real causality is the "necessary dependence of every point-instant of reality upon its immediate antecedent point-instants."³⁸ It is taken for granted that the cause preceded the effect as in fire which has produced smoke. On the other hand, the context where 'logical' causality occurs is when the reason is given for the assertion that a certain object is there though it is hidden from view. A case in point will be 'Since there is here smoke, there must be here some fire'. In developing one's knowledge one is proceeding from the perception of the effect to the inference of the cause. The 'logical' relation of the concepts, say 'smoke' and 'fire', is Effect-Cause. The 'logical' law of Causality is the law of the Effect.

Identity and Causality are used in analytical and synthetic 'inference for others' respectively. Both these principles are mere specifications of the universal law of all arguments, namely, the Buddhist law of Sufficient Reason.³⁹

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34. Stcherbatsky, *Buddhist Logic*, 1, 310.

35. See I.3 above.

36. Stcherbatsky, *Buddhist Logic*, 1, 309.

37. *Ibid.*, 1, 130. The Buddhist Law of Contradiction can be expressed thus:

If N_1 is p and N_2 is *not-p*
then N_1 is not N_2

38. Stcherbatsky, *Buddhist Logic*, 1, 130.

39. Apparently the law of Sufficient Reason is the same as the law of Contradiction or at least the logical aspect of it.