The Buddhist logic application of the nature of the Tathāgata in the Mahāyāna Mahāparinirvāna Sūtra from Dharmakshemā's translated of Chinese version used square of opposition

Dr. Netnapa Sutthirat. Instructor at Department of Buddhist studies and Philosophy, Mahamakut Buddhist University, Thailand.
Email: netnapalot322@gmail.com
https://orcid.org/0000-0002-9381-8009
Arisa Saisrikosol. Instructor at Department of Philosophy Religion and Cultural, Mahamakut Buddhist University, Thailand.
Email: arisa.saisrikosol@gmail.com
https://orcid.org/0000-0001-6048-7162
Dr.Phrasutthisanmethi. Assistant Professor and the Dean of the Faculty of Religion and Philosophy, Mahamakut Buddhist University, Thailand.
Email: chaiyan1971@gmail.com
https://orcid.org/0000-0002-5436-5051
Dr. Phramaha Chakrapol Acharashubho Thepa. Instructor at Department of Buddhist studies and Philosophy, Mahamakut Buddhist University, Thailand. Corresponding Author.
Email: chakrapol.the@mbu.ac.th
https://orcid.org/0000-0001-9184-4273

Abstract

The current article names "The Buddhist Logic Application of "The Nature of The Tathāgata" in The Mahāyāna Mahāparinirvāna Sūtra from Dharmakshemā's Translated of Chinese Version Used Square of Opposition". It is aimed an application of Buddhist logic discussion base on the technique square of opposition that is a motivation for this conference to imply the science with Buddhism can engaged. The Mahāyāna Mahāparinirvāna Sūtra is content the essential of the Nature of Buddha that has main theme discussion. The finding has seen the significant of (1) *contradiction* has the correlation between A → O similarity E → I, (2) *contraries* has the correlation between A and E can interpretative as true and false under four condition i.e., (A=T) → (E=F), (A=F) → (E=Ø), (E=T) → (A=F), (E=F) → (A=Ø), (3) s*ubcontraries* has the correlation of I → O under the condition of both propositions are the same subject (S) and the same proliferate (P) that can justify in two terms of T and F, (4) subalternates has the correlation between A → O and E → I under the scenario of four significant from i.e., (A=T) → (I=T), (A=F) → (I=Ø), (E=T) → (O=T), (E=F) → (O=Ø).

In the further study, I suggests to develop and exchange Buddhist logic with several method and technique for contribution and engagement of Buddhology as the universal with various sciences. And for the scholars and academicians hope you will get an inspiration to convince Buddhism with your major.

Keywords: Buddhist, Logic, Tathagata, Mahaparinirvana, Square of Opposition
DOINumber: 10.14704/NQ.2022.20.12.NQ77146 **NeuroQuantology2022;20(12): 1656-1667**

Introduction

Back to the original of Buddha's sentences in the Mahāyāna Mahāparinirvāna Sūtra (MMS) (Chen, 2020) had mostly appeared as Buddhist logic. The Buddhist logic was seen in the main characteristics of the sutra the study will scope on chapter twelve "On the Nature of the Tathagata". That was interested the authors and then it many quite passionate to know what's the true messages of Buddha. The Buddhist logic has the sentences appearing convinces in many Mahayana sources (Lusthaus, 1998).

According to MMS is the greatest sutra narrated Buddha's statements and his logical sentences. But in the term of modern logic, it will crystal clear if the Buddha's sentences of logic are opening and interpreting. It is useful for Buddhists and non-Buddhists to get his message easily and right. It is the aim of the study.

This current study will be conjoining and applying Buddhist logic with the interpretation by using the technique Square of Opposition (SQ). And it is integrated various sciences consist of Buddhology, Philosophy, Psychologists, Logic, Statistic, Mathematic, and English linguistic. The modern method especially scientific is approached as the tool of interpretation the logic sentences. The development of the modern doctrine is intertwined with that of modern logic (Cassan, 2021; Blank, 2018). So it is usual to implement the doctrine by giving schemes for symbolizing categorical into symbolic languages for modern logic e.g., elementary languages. The current study will promote Buddhism and present in terms of a modern scientific method, then it engages Buddhism and science as well (Saima, 2020; Sayer, 2021; Coseru, 2021).

Buddhist logic And the Nature of the Tathāgata

Buddhist logic has arisen and prosperous originated in the late second century after the awoken of Madhyāmika school established from Acharya Nagarjuna in south India (Susuki, 2021). Buddhist logic had been found evident involved in the sixth century, and modern Buddhist logic text knew as "New Nyāya. According to the ancient Buddhist logic text was seen as Nyāyapravesa (Introduction to Logical Methods), had an influence upon Indian and Chinese Buddhism besides the Jains in India and Toi in China (The Nyāyapravesa has attracted critical attention from religious historians, philologists, philosophers, and logicians as a famous document. There is debate about interpretation in all developments in research, but in the case of Buddhist logic, the debate goes to the heart of the question of whether Buddhist logic is a "logic" in any recognizable contemporary sense (Wen-liang, 2009).

The taxonomy of fallacies in Buddhist logic does not aim to limit how premises can be irrelevant; rather, it provides standards for judging the strength or weakness of explanatory hypotheses. This is exactly what retroductive accuracy necessitates. Weak hypotheses develop in three situations: (1) the hetu is unknown to the proponent or opponent, (2) the hetu is inconclusive, or (3) the hetu is refuted. Hetus that are inconclusive are not supported by additional evidence from the similarity and dissimilarity cases. Contradicted hetus are those that prove the *pakşa* is false (Yen, 2020). The opposite property-locus assertion is deduced to establish the contradiction. That is, a hetu can be misidentified. It can fail as a teaching tool if the auditor (or speaker) is unaware of the link between the assertion statement and the hetu that supports it.

In this article, I have attempted to enlarge the dialogue about the nature of Buddhist logic by arguing that it is essentially retroductive. As philosophers and

eISSN 1303-5150

psychologists continue to investigate the conceptual and factual aspects of hypothesis formation, the study of Buddhist logic will increase in importance because, unlike other logical treatises (Tanaka, 2021). MMS is a historically significant document the last collection to present Buddha words and his teaching at Buddha time (Takasaki, (1971). There were as many as 80 billion hundred thousand magnificent bhiksus [monks] with the Blessed One at the time. They encircled him from all sides. As the Buddha was about to attain Nirvana on the 15th of the second month, he spoke in a tremendous voice that filled the entire universe and reached the highest of the heavens, using his divine might be (Bongard, 1981) "The Tathagata [i.e. Buddha], the Alms-deserving and Perfectly Awakened One, pities, protects, and views creatures with an undivided mind as he sees his [son] Rahula". It said in a way that all beings could understand. As a result, he is the world's sanctuary and home. The Blessed One who has been greatly awakened is going to attain Nirvana." (Kosho, 1973)

This Sūtra is particularly noteworthy in our present context for two reasons. First, buddhadhātu is particularly fully developed in the forty volume versions of the Mahāyānan Mahāparinirvāṇa Sūtra and the Sūtra contains the well-known phrase, "All sentient beings have Buddha-Nature." (Kosho, 1973). This means that everyone has the potential to achieve the Buddha-Nature (buddhadhātu) or full enlightenment. The buddhadhātu idea is an affirmation that the goal of Buddhism is open to all, there is no one inherently incapable of achieving perfect wisdom and freedom.

Second, it is affirmed in a particularly direct way that the buddhadhātu (buddha essence or Buddha-Nature) is present in every sentient being, and it is nothing other than the Self. This is in contrast with some other Sūtras which are very careful to avoid the use of such a term as "Self" in connection with the Tathāgatagarbha (Rawat & Hameed, 2021; Thepa, P. C. A., 2022). According to the MMS, Buddha stated that tathāgatagarbha is Self, it is the embryo of the Buddha. Buddha nature is the Self, but sentient beings cannot see it because it is covered by delusion. The statement found self's meaning in MMS as follows;

> "Self means Tathāgatagarbha [Buddha-Womb, Buddha-Embryo, Buddha-Nature]. Every being had Buddha Nature. This is the Self. Such Self has, from the very beginning, been under cover of innumerable defilements. That is why man cannot see it." (Kosho, 1973)

From this statement, it can be stated that the buddhadhātu is recognized with tathāgatagarbha (Yu, 2020). Tathāgatagarbha way both a womb of the buddha or embryonic buddha. In different words, it can be visible both because of the capacity to recognize enlightenment which all beings possess and as appropriate enlightenment itself. Moreover, it's far stated that tathāgatagarbha anyone possesses is blanketed up through defilements. The defilements cover the truth of tathāgatagarbha and cover it (Worssam, 2020). Thus, most effective as soon as we recognize ourselves because the greedy, angry, ignorant, human beings we're, are we able to be liberated. However, those defilements, in contrast to the tathāgatagarbha, aren't truly real; ultimately, it's far stated, they do now no longer exist. Buddha-Nature is identified with the

eISSN 1303-5150

tathāgatagarbha and for this reason represents our initially given, flawlessly enlightened nature (Jones, 2020). In different words, the truth is that everyone people are already enlightened, however, they're below the phantasm that they're unwise or ignorant. This fable itself is what makes them ignorant. However, there may be not anything crucial approximately it. If they can simply unfasten themselves out of this fable, they'll recognize that we're and constantly have been, in truth, enlightened. This is the fundamental concept of Buddha-Nature (Hoi, 2017).

Logic Theoretical

1. The Principles of Contraposition and Obversion

According to the study of the western logic era, Aristotle had been presented a development of the logic system in a concept of treatises known as the "Organon" instant for De Interpretation (DI) and Prior Analytics (Apr.). (Aarsleff, 1982) Until the introduction of new systems of logic in the 19th century by Boole 1847, 1848, 1854, De Morgan 1847, and Frege 1879, among others, the contrast system was the template for Western logic studies. To distinguish Aristotle's logic systems from the new systems that emerged to replace them in current logic studies, the former is referred to as traditional logic (or traditional 'Aristotelian' logic) (Petrescu, 2018), while the latter is referred to as modern logic (or modern symbolic logic). The idea of logical links between categorical statements remains at the center of conventional logic: "Every horse is white," "Some horse is white," "No horse is white," "Some horse is not white," (Trentman, 1976). In the examination of categorical statements, most current logic systems diverge from conventional logic (in short, categorical). They include a notion concerning categorical (the modern doctrine) that is incompatible with traditional logic's main doctrine (the traditional doctrine) (Georgescu, 2010).

Square of Opposition (SO) is a technical interpretation of logic sentences. The usual system converts universal affirmatives e.g., "Every chimera (*C*) is white (*W*)" to universal conditionals (∀) in symbolic languages e.g., "$\forall x(Cx \rightarrow Wx)$", which do not entail the symbolizations of the matching specific affirmatives e.g., "$\exists x(Cx \rightarrow Wx)$" or existential (∃) e.g., "$\exists xCx$". Both the ∀ - import and sub-alternation states are rejected as a result of this statement. (11) The new predicates required, together with postulates on them, constitute the system call "Counterpart Theory". The primitive predicates of counterpart theory are these four instances i.e., ∀*x* (*x* is actual), *I* x*y* (*x* is in possible state *y*), Wx (*x* is a possible state), and Cxy (*x* is a counterpart of *y*) (Slote, 1966; Geach, 1964). Every possible state of sentences and everything in each state is contained inside the quantification domain. The primitives should be interpreted in light of their English readings and the following assumptions.

Table 1 The Primitives of Statement Assumptions Abbreviate in English Reading. (Lewis, 1968)

Domain	Assumptions	
P1:	∀*x*∀*y* (*I* x*y* → W*x*)	(1)
	(Nothing is in anything except a statement)	
P2:	∀*x*∀*y*∀*z* (*I* x*y* & *I* x*z* → *y* = *z*)	(2)
	(Nothing is in two statements)	
P3:	∀*x*∀*y* (*C*x*y* → ∃*zIxz*)	(3)
	(Whatever is a counterpart is in a statement)	
P4:	∀*x*∀*y* (*C*x*y* → ∃*zIyz*)	(4)

eISSN 1303-5150

(Whatever has a counterpart is in a statement)

P5: $\forall x \forall y \forall z$ (I xy & I zy & $Cxz \rightarrow x = z$) (5)

(Nothing is a counterpart of anything else in it's a statement)

P6: $\forall x \forall y$ ($Ixy \rightarrow Cxx$) (6)

(Anything in a statement is a counterpart of itself)

P7: $\exists x(Wx \ \& \ \forall y \ (Iyx \equiv \forall y))$ (7)

(Some statements contain all and only actual things)

P8: $\exists x \forall x$ (8)

(Something is actual)

The world mentioned in P7 is unique, by P2 and P8. Let us abbreviate its description:

Account = df'$x \forall y$ (Iyx $\equiv \forall y$) (the actual statement) (9)

Unactualized possibles, or things in statements that aren't the actual statement, have frequently been labeled "entia non grata" (Quine, 1960) since it's difficult to tell when they're the same. The study, on the other hand, has no issues with identification in the literal sense. Objects of every category are individuated just as they are in the real statement within any one statement, and things in distinct statements are never similar, according to P2. Our substitute for identity between things in different statements is the counterpart relation. ().

With the widespread acceptance of modern logic, the modern theory as embodied in logic supplanted the ancient doctrine as the dominant treatment of categorical. On the other hand, the modern logic can be distinguished from categorical theory based on conventional symbolization methods. Moreover, several linguists and logicians disagree with the notion. They argue that denying the existence of universal affirmatives and implying matching particular affirmatives is clearly incorrect (12). For instance, Parsons claims that "Aristotle's position" on sub-alternation is the "default position" (Parsons 2008) because most English speakers tend to understand "Every S is P" as implying that there must be some "S" for it to be true". (Parsons 2012). (13)

A similar phenomenon happened with the obversion concept. This is the principle that argues that changing the predicate term from finite to infinite can alter a proposition from affirmative to negative or vice versa (or infinite to finite) (De Rijk, 1967) for examples (Table 2).

Table 2 The Principle and Obversion of Proposition in the Predicate Term

Principle	Obversion
Every S is P	No S is non P
No S is P	Every S is non P
Some S is P	Some S is not non P
Some S is not P	Some S is non P

In "De Interpretatione (DI)", Aristotle described some examples of obversion. Given the truth criteria for the forms, it is clear that these inferences are true while traveling from affirmative to negative, but not when the terms are empty, as Buridan demonstrates (Before Buridan, some medieval writers accepted the false accounts, while others did not.

2. Four Kinds of Categorical Propositions: AEIO Formal

eISSN 1303-5150

The theory of the square of opposition was first proposed by Aristotle in the fourth century BC and has since been found in logic books. Despite being heavily criticized in recent decades, it is still frequently mentioned. The purpose of this entry is to track its history, as well as closely related ideas bearing on empty terms, from the early twenty-first century.

The sentence has been universal of statement in the unit or part and it can be expressed in any terms of tense. The sentence doesn't explain quantity or quality, but it could be interrogative, simple or declarative, directive or imperative, even exclamatory, indicative, affirmative, negative, and skeptical, among other things. However, only indicative sentences are proposed in this study. That is referred to as a proposition, and they will decide or evaluate whether it is true or not. We refer to the proposition as the basis of our reasoning, and we also refer to "proposition and statements" as the same thing. And the condition was under the unit of logic, always proposition comes in the present tense and it can explain quantity and quality. Especially the study mention the meaning of the sentence is called proposition and it is unlimited features of the sentence perhaps expressed different proposition in different contexts. The Proposition must be either true or false and language-neutral when a sentence both terms like subject and predicate are regarded as a noun, it is called proposition.

The SO is a graphic that represents a group of the current study statements. The diagram isn't required for the current study; it's only a helpful tool for keeping them straight. The statement is on the logical relationships between four logical forms (Table 3).

Table 3 The Logical Relationships Form

Proposition	Form	Title
A	Every S is P	Universal Affirmative
E	No S is P	Universal Negative
I	Some S is P	Particular Affirmative
O	Some S is not P	Particular Negative

This argument is given simple one (Kneale & Kneale 1962) as followed;

> "Suppose that 'S' is an empty term, it's true of nothing. Then the I form equals 'Some S is P is false'. But then its contradictory E form equals 'No S is P' must be true. But then the subaltern O form equals 'Some S is not P' must be true. But that is wrong since there aren't any Ss".

One alternative is that before the twentieth century, logicians believed that no propositions are empty or unknown. That can be seen through is frequently referred to as one that others held (Kneale & Kneale, 1962). Many logicians have never heard of empty or unknown, but those who have usually take them for granted. Even in the nineteenth century, explicitly rejecting empty terms or unknown was never a common choice.

3. Square of Opposition (SO)

eISSN 1303-5150

According to Aristotle theory in the origin of SO, it begins in the concept of DI 6-7, which contains three claims consist of A and O are contradictories, E and I are contrandictories, and A and E are contraries as followed;

> "I call an affirmation and a negation contradictory opposites when what one signifies universally the other signifies not universally, e.g. every man is white—not every man is white, no man is white—some man is white. But I call the universal affirmation and the universal negation contrary opposites, e.g. every man is just—no man is just. So these cannot be true together, but their opposites may both be true concerning the same thing, e.g. not every man is white—some man is white." (Kneale & Kneale, 1962:17b.17-26)

The traditional diagram of SO is as follows:

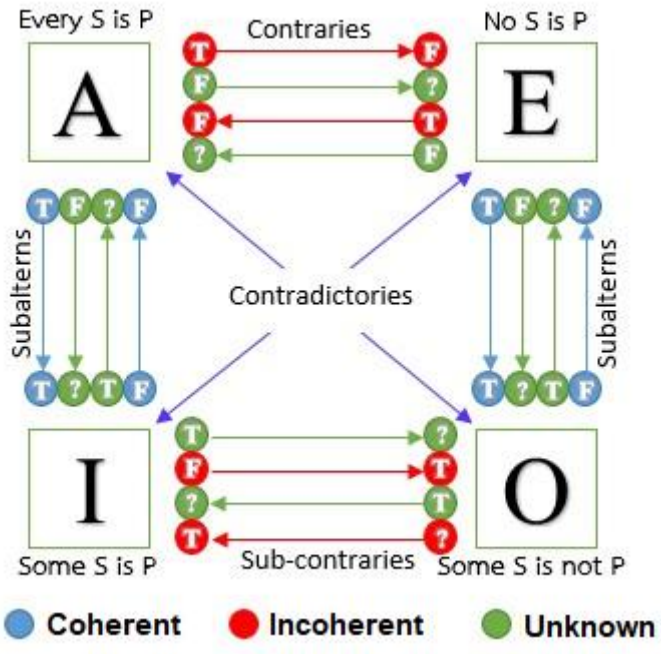

Figure 1 The Square of Opposition Diagram (SOD)

The rest is there by implication, there is enough to show that I and O are subcontraries, they cannot both be false. For suppose that I is false. Then its contradictory, E, is true. So E is contrary, A is false. So A is contradictory, O, is true. This refutes the possibility that I and O are both false, and thus fills in the bottom relation of subcontraries. Subalternation also follows. Suppose that the A form is true. Then its contrary E form must be false. But then the E form is contradictory, I must be true. Thus if the A form is true, so must be the I form. A parallel argument establishes subalternation from E to O as well (Lopez-Astorga, 2020). The result is SO. In fact, the traditional doctrine of SO is completely coherent in the presence of empty terms. This is because, in the traditional interpretation, the O form lacks existential import. The O form is (vacuously) true if its subject term is empty or unknown, not false, and thus the logical interrelations of SO are unobjectionable. Late classical and medieval authors favored diagrams of this type, which they employed for a variety of purposes (Seuren, 2021). (For modal propositions, such diagrams were especially popular.)

eISSN 1303-5150

In the twentieth century diversify creative uses of logical tools and techniques in reassessing part doctrines (Geach, 1970). The troublesome cases involving empty terms or unknown turn out to be instances in which one or both forms lack truth value, and these are irrelevant so far as entailment is concerned. According to the revised account of entailment, there are 'traditional' logical relations result (Demey, 2021) if they are worded as follows;

1) Contradictories: The A and O forms entail each other as negations, as do the E and I forms. The negation of the A form entails the (unnegated) O form, and vice versa, likewise for the E and I forms.
2) Contraries: The A and E forms entail each other is negations
3) Subcontraries: The negation of the I form entails the (unnegated) O form, and vice versa.
4) Subalternation: The A form entails the I form, and the E form entails the O form.
5) Converses: The E and I form each entail their converses.
6) Contraposition: The A and O forms each entail their contrapositives.
7) Obverses: Each form entails its obverse.

These doctrines of SO are worded entirely in terms of truth values possibilities, rather than entailment. So, the "entailment" is irrelevant to SO. It turns out that Strawson's revision of truth conditions does preserve the principles of SO these can easily be checked by cases (Cf. Spade's summary in Kretzmann, Kenny, and Pinborg 1982, 245–6.). However, neither the new conversion rules of SO, nor the traditional principles of contraposition or obversion (Seuren, 2021).

The Logic Interpretation of the Nature of Tathāgata in MMS Use SO

According to MMS in chapter twelve names "On the Nature of Tathagata", the Buddha declares to Bodhisattva-Mahāsattva Kāśyapa, that narrated existences of self, the conversation between themselves had full of logic propositions base on the nature of tathāgata. That rich of logic in terms of study will find out the interpretation of the Nature of Tathāgata using the technique of SO.

1. Contradictory

A and O propositions are contradictory, as are E and I propositions. When the truth of one implies the falsity of the other, and conversely, propositions are contradictory. The truth of a proposition of the form All S are P implies the falsity of the corresponding proposition of the form Some S are not P, as shown here "S = P" is a relationship inconsistent between two sentences that have the same (S) and the same proliferate (P). The proposition A is true O must be false, similarly, if E is false I is the some must be true.

Then following this law the study found under the condition of if A is true O must be false or if O is true A must be false that illustrated as if the proposition "Every being has Buddha Nature" (A) is true, then the proposition "some beings has Buddha Nature" (O) must be false. And by the condition of if E is true I must be false or if I is true O must be false. Similarly, if "This is the Self. Such Self has, from the very beginning, been under cover of innumerable defilements. That is why man cannot see it." (Kosho, 1973;101) (E) is true, then the proposition "This is the Self. Such Self has, from the very beginning, been under cover of innumerable defilements. That is why some man cannot see it." must be false.

2. Contrary

eISSN 1303-5150

A and E propositions are contrary. Propositions are contrary when they cannot both be true. A associate between A and E is a relationship between two sentences that have the same subject (S) and the same proliferate (P), which cannot be true simultaneously but can be false in both sentences. Then if a sentence is true another sentence must be false (incoherent), but if some sentences are false, cannot justify other sentences are true or false because perhaps both sentences are false.

In the case of true (incoherent) is under the condition if A is true, E must be false, if E is true A must be false. In the term of this law found Buddha Nature proposition in MMS e.g., "If it were true that all beings eternally possessed Buddha Nature, there could be no breaking away." (Kosho, 1973; 102) (A), and a different sentence is "If it were true that no beings eternally possessed Buddha Nature, there could be no breaking away." (E). That assuming is all beings eternally possessed Buddha Nature, there could be no breaking away, it will make the proposition A is true and the proposition E must be false. Differently, if no beings eternally possessed Buddha Nature, there could be no breaking away by individual reasonable, it will change to E is true and A is false.

The term of false (unknown) is under the condition if A is false cannot justify E is true or false and if E is false cannot justify A is true or false, e.g. "If it were true that all beings eternally possessed Buddha Nature, there could be no breaking away." (Kosho, 1973; 102) (A), and a different sentence is "If it were true that no beings eternally possessed Buddha Nature, there could be no breaking away." (E). Assuming is suppose as if all being (creatures) eternally possessed Buddha Nature (A) will be false if (1) all being eternally possessed Buddha Nature or (2) no anyone doesn't eternally possess Buddha Nature. Thus, it is the case (1) "If it were true that all beings eternally possessed Buddha Nature, there could be no breaking away" is true, but if defers the second case (2) "If it were true that all beings eternally possessed Buddha Nature, there could be no breaking away" is must be false. Although, in case A is false can justify as E will be true or false and also if E is false cannot justify A proposition.

In the summation contrary is the justify as follows;

1) (A=T) → (E=F), If A is true, E is false then both propositions are incoherent.
2) (A=F) → (E=Ø), If A is false, E cannot justify or unknown.
3) (E=T) → (A=F), If E is true, A is false, then both propositions are incoherent.
4) (E=F) → (A=Ø), If E is false, A cannot justify or unknown.

3. Subcontrary

I and O propositions are subcontrary. That is the relation between I proposition and O proposition. Propositions are subcontrary when it is impossible for both to be false. It is the relationship between two sentences that have the same subject (S) and the same proliferate (P). That they cannot be false at the same time, but they can be true only. Both sentences can be used at the same time, so if either of the sentences is false. Another sentence will be true (incoherent) but if a different sentence is true they cannot justify or unknown that the other sentence will be true or false, because it might be true either proposition.

The term of the true (unknown) is under the condition of if I is true, then O is not

eISSN 1303-5150

true or false and if O is true (I=T) → (O=T), then I is not true or false illustration e.g., "In the case of the flowers on the tusks of the elephant. One may hear all about the samadhis of the sutras. But if someone does not hear this sutra, someone cannot get to the wonderful form of the Tathagata." (Kosho, 1973;109) (I) and "In the case of the flowers on the tusks of the elephant. One may hear all about the samadhis of the sutras. But if someone does not hear this sutra, someone cannot get to the wonderful form of the Tathagata" (O). Then the interpretation is if someone cannot get to the wonderful form of the Tathagata that will means the first proposition I is true and the second proposition O defers to be true. But if one cannot get to the wonderful form of Tathagata, the first proposition I can interpretive as true but the second proposition O is false because anyone cannot get to the wonderful form of Tathagata. Although, if the I proposition is true, then it cannot justify the O proposition and at the same time if O proposition is true, also it cannot justify the I proposition.

The term of the false (incoherent) is followed the condition of If I is false, then O is true or if O is false, then I is true accordingly the same proposition "In the case of the flowers on the tusks of the elephant. One may hear all about the samadhis of the sutras. But if someone does not hear this sutra, someone cannot get to the wonderful form of the Tathagata." (I) and "In the case of the flowers on the tusks of the elephant. One may hear all about the samadhis of the sutras. But if someone does not hear this sutra, someone cannot get to the wonderful form of the Tathagata" (O). The interpretation will be changed to the different scenarios of sentences supposed to if anyone cannot get to the wonderful form of the Tathagata, then the first proposition I will be false immediately and conflicting the second O proposition is true, thus both propositions are contrary or contradictory. At the same time if the O proposition is false, then the proposition I will be true.

4. Subalternate

At last is the relation between A and O propositions are stand in the relation of subalternation when the truth of the first "the superaltern" implies the truth of the second "the subaltern", but not conversely. A propositions stand in the subalternation relation with the corresponding I propositions. The truth of the A proposition "all being have Buddha Nature," implies the truth of the proposition "some being has Buddha Nature." However, the truth of the O proposition "someone cannot see the Buddha Nature" does not imply the truth of the E proposition "no one cannot see the Buddha Nature." In traditional logic, the truth of A or E propositions implies the truth of the corresponding I or O propositions respectively. Consequently, the falsity of I or O propositions implies the falsity of the corresponding A or E propositions respectively. However, the truth of a particular proposition does not imply the truth of the corresponding universal proposition, nor does the falsity of a universal proposition carry downwards to the respective particular propositions.

In summary of subalternates are correlation between $A \rightarrow O$ and $E \rightarrow I$ have justifications as follows;

1) (A=T) → (I=T), If A is true, I is true, both statements are coherent or congruent,
2) (A=F) → (I=Ø), If A is false, cannot be justified or unknown about I,
3) (E=T) → (O=T), If E is true, O is true, both statements are coherent or congruent,

eISSN 1303-5150

4) (E=F) → (O=Ø), If E is false, O cannot be justified or unknown.

Conclusion

The logic is not a tool to justify the statement of the Nature of Tathāgata but it diversifies way discussion base on the Buddhist logic as cultivated of Buddha nature in every sentient being (creatures). In the MMS is mention wieldy of the Tathāgatagabhā covered all creatures in this world. Most sentences had been justifying the scenario of the Nature of Tathāgata but mostly mentioning it is cannot see as material (form), non-self, hide nothing, could be no breaking away, and eternal Dharma. True or false is been an argument in propositional of the Nature of Tathāgata with is several ideals. It will not justification in this study but the demonstration to find out a great reason was the main key of Buddhist logic.

Acknowledgement

The first author who wrote the manuscript was Dr. Netnapa Sutthirat. Members of the Faculty of Religion and Philosophy at Mahamakut Buddhist University helped write the article. The authors are incredibly grateful to P. C. A. Thepa, who is listed as the corresponding author, for giving his approval to the final draft of the manuscript.

Conflict of interest

The authors declare no conflict of interest.

Funding Source

None.

Reference

1. Aarsleff, Hans. (1982). From Locke to Saussure. Essays on the Study of Language and Intellectual History. Minneapolis: University of Minnesota Press.
2. Blank, Andreas. (2018). Cartesian Logic and Locke's Critique of Maxims. 186–204 in Locke and Cartesian Philosophy. Edited by P. Hamou and M. Pécharman. Oxford: Oxford University Press. DOI: https://doi.org/10.1093/oso/9780198815037.003.0012
3. Bongard-Levin, G. M. (1981). New Buddhist Sanskrit Texts from Central Asia: An Unknown fragment of the Mahāyāna Mahāparinirvāṇasūtra. Journal of the International Association of Buddhist Studies, 7-16.
4. Cassan, E. (2021). Introduction: Logic and Methodology in the Early Modern Period.
5. Chen, K. K. S. (2020). XIII. The Chinese Tripitaka. In Buddhism in China (pp. 365-386). Princeton University Press.
6. Coseru, C. (2021). On Pursuing the Dialogue Between Buddhism and Science in Ways That Distort Neither. APA Newsletter on Asian and Asian American Philosophers and Philosophies, 20(2).
7. Demey, L. (2021). Aristotelian diagrams for semantic and syntactic consequence. Synthese, 198(1), 187-207.
8. De Rijk, L. M., 1967. Logica Modernorum (Volume II Part 2), Assen: Koninklijke Van Gorcum & Company N.V.
9. Dharmakshema. The Mahāyāna Mahāparinirvāna Sūtra. Kosho Y. (1976). tran. Taisho Tripitaka. (12)374. Page T. (2007) ed. The Nirvana Sutra. PDF e-book. Accessed: 28/07/2021. http://www.nirvanasutra.org.uk/
10. Georgescu, L. (2010). Francis Bacon: the theological foundations of natural philosophy. Studii de ştiinţă şi cultură, 23(4).
11. Hoi, N. T. (2017). Various Interpetations of The Tathāgata in The Mahāyāna Mahāparinirvāna Sūtra. Journal of International Buddhist Studies College (JIBSC), 3(1), 1-18.

12. Jones, C. V. (2020). The Mahābherīhārakasūtra and Liberation of the Self. In The Buddhist Self 4(97-116). University of Hawaii Press. Doi:10.1163/9789004437913_006
13. Kosho, Y. (1973) tran. The Mahayana Mahaparinirvana Sutra from Dharmakshema's Chinese Version. Taisho Tripitaka Vol. 12, No. 374. Accessed: 28/07/2021. http://lirs.ru/do/Mahaparinirvana_Sutra, Yamamoto,Page,2007.pdf
14. Lewis, D. K. (1968). Counterpart Theory and Quantified Model Logic. The Journal of Philosophy, 65(5). 113-126. Affirmat http://www.jstor.org/stable/2024555 .
15. Lopez-Astorga, M. (2020). The Modal Square of Opposition and the Mental Models Theory. Epistemology & Philosophy of Science, 57(3), 75-86.
16. Lusthaus, D. (1998). Buddhist philosophy, Chinese. In The Routledge Encyclopedia of Philosophy. Taylor and Francis. Retrieved 28 Jul. 2021, from https://www.rep.routledge.com/articles/overview/buddhist-philosophy-chinese/v-1. doi:10.4324/9780415249126-G002-1
17. Makeham, J. (2021). Chinese philosophy's hybrid identity. Routledge Studies in Asian Religion and Philosophy. London. 22(20)147-166.
18. Petrescu, L. (2018). Scholastic logic and Cartesian logic. Perspectives on Science, 26(5), 533-547.
19. Saima, Y. (2020). Buddhism: Its Connections with Modern Science. Editorial Board, 9(11), 92.
20. Sayer, R. (2021). The origin and development of the Emptiness of Dharmas in Mahāyāna Buddhism.
21. Seuren, P. A. (2021). Essentials of semantic syntax: An appetiser. Cadernos de Linguística, 2(1).
22. Seuren, P. A. (2021). Saving the Square of Opposition. History and Philosophy of Logic, 42(1), 72-96.
23. Tanaka, K. (2021). Buddhist logic from a global perspective. Global Epistemologies and Philosophies of Science, 274-285.
24. Takasaki, J. (1971). The Tathagatagarbha Theory in the Mahaparinirvana-sutra. Journal of Indian and Buddhist Studies (Indogaku Bukkyogaku Kenkyu), 19(2), 1024-1015.
25. Thepa, P. C. A. (2022). Mindfulness: A Buddhism Dialogue of Sustainability Wellbeing. In *2022 International Webinar Conference on the World Chinese Religions. Nanhua University. Taiwan. https://urlcc. cc/sysek*.
26. Trentman, J. A. (1976). The study of logic and language in England in the early 17th century. Historiographia linguistica, 3(2), 179-201.
27. Wen-liang, Z. H. A. N. G. (2009). The origin of the Mahayana Buddhism. Journal of Nanchang Hangkong University (Social Science), 01.
28. Worssam, N. A. (2020). " Have This Mind in You": A Study of the Relationship between Pauline Christology and the Tathāgatagarbha Tradition of Mahayana Buddhism. Buddhist-Christian Studies, 40(1), 217-232.
29. W.V. Quine. (1960). Word and Object. Cambridge, Mass.: MIT Press, 1960. Suzuki, D. T. (2021). 9. The Buddha in Mahāyāna Buddhism, 1921. In Selected Works of DT Suzuki, Volume IV (pp. 79-87). University of California Press.
30. Yen, L. C. (2020). The Similarity between Buddhist Logic and Assertion Theory: Exclude Pakṣa and Context. 學, 171.
31. Yü, C. F. (2020). 1. Major Buddhist Sutras and Treatises of Chinese Buddhism. In Chinese Buddhism (pp. 29-69). University of Hawaii Press.