

The Nyāya on Double Negation

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The aim of this paper is to discuss the Nyāya theory of double negation in the light of the four types of negation mentioned in the classical theory of the Nyāya system. Since the Nyāya has discussed negation at the linguistic, epistemic, and ontological levels, the proper understanding of the Nyāya view would presuppose the Nyāya conception of cognition, relation, and meaning. Moreover, the Nyāya concept of negation is not identical with either the term-negation or the proposition-negation discussed in contemporary philosophy. The first section of this paper will deal with some of the basic concepts of the Nyāya, and the second section will deal with the sixteen types of double negation.

I It is claimed by contemporary logicians that what is negated is a proposition or a proposition-like expression. Arthur Prior in his article on negation said:

By the use of open sentences all the varieties of negation are reduced to the placing of "not" or "it is not the case that" before some proposition or proposition-like expression, the whole being either contained or not contained within some wider propositional context. This reduction assumes that with the basic singular form "x is an A" or "x ϕ 's" there is no real distinction between the internal negation "x is not an A" (or "x is non-A") or "x does not ϕ " and the external negation "Not (x is an A)" or "Not (x ϕ 's)". ([7], pp. 458-459)

From the above remarks it follows that all types of negation are reducible to the negation of a proposition or a propositional function. The distinction between an external and an internal negation is relevant in the context of a complex proposition. The negation of 'If p , then q ' is not 'If p , then not- q ', but 'Not (If p , then q)'. Similarly, if we apply Russell's theory of definite description, then in contexts like 'The present King of France is bald', the negation (i.e., the external negation) is not 'The present King of France is not bald', but 'It is not the

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case that the present King of France is bald'. But this distinction between an external and an internal negation does not suggest that the negation has been applied to different types of entities. The negation is applied to either a proposition or a proposition-like expression as Arthur Prior suggested. In this respect the Nyāya concept of negation is different from the contemporary concept of negation.

According to the Nyāya what is negated is the second term of a dyadic relation *as the second member of this relation*. The explanation of this concept would lead us to the Nyāya concept of cognition and relation.

The Nyāya has drawn a distinction between a qualificative cognition and a nonqualificative cognition.¹ A qualificative cognition can be expressed by a complex expression of the form '*aRb*', where '*a*' stands for the qualificand, '*b*' for the qualifier, and '*R*' for the qualification relation. Hence a qualificative cognition necessarily involves at least three elements at the epistemic level.² In a qualificative cognition an object is cognized under some mode of presentation, but in a nonqualificative cognition the ultimate elements of a qualificative cognition are cognized without any mode of presentation.

Let us consider the cognition of a table expressed by the expression 'a table'. In this cognition a particular table is the qualificand, the universal table-ness is the qualifier, and the relation of table-ness to a particular table is the qualification relation, which in this context is inherence. Since a table is the qualificand, it has the property of being the qualificand. This property of being the qualificand simply specifies the role of this object at the epistemic level. Similarly, the universal table-ness which is the qualifier has the property of being the qualifier. The relation of inherence is neither a part of the qualificand, nor is it a part of the qualifier. It is a mode of presentation of the qualifier. That is to say, the universal table-ness is cognized as the second member of the relation of inherence. In the technical language of the Nyāya it is described as "the limiting relation of the property of being the qualifier". In a more complex cognition expressed by the expression, say, 'a table is brown' or 'a brown table', the qualificand is a table and the qualifier is a particular brown color. The property of being the qualificand residing in a table which is the qualificand is limited by the universal table-ness, and the property of being the qualifier residing in a brown color which is the qualifier is limited by the universal brownness. The relation of inherence which relates a brown color to a table is also a mode of presentation of the brown color. Hence this relation becomes the limiting relation of the property of being the qualifier. The property of being the qualificand is limited by a property alone, while the property of being the qualifier is limited by both a property and a relation.

This feature of the Nyāya can be compared to some extent with Frege's distinction between saturated and unsaturated parts of a thought. Frege claimed ([3], p. 54), ". . . not all parts of a thought can be complete; at least one must be 'unsaturated', or predicative; otherwise they would not hold together". The Nyāya also considers the qualifier as unsaturated in the sense that the relation is also a mode of presentation of the qualifier. Moreover, the Nyāya has given specific reasons for the inclusion of a relation within the mode of presentation of the qualifier.³ However, from this comparison I do not intend to conclude that the Nyāya use of the term 'qualifier' is the same as Frege's use of the term

'concept'. What I am emphasizing is the unsaturatedness of a qualifier in the sense that it necessarily depends upon a relation.

From the above discussion it follows that any qualificative cognition can be described by the form ' aRb ', where ' a ' stands for the qualificand, ' b ' for the qualifier, and ' R ' for the qualification relation. When this description is expanded in the technical language of the Nyāya, it takes the following form:

The cognition in which the property of being the qualificand residing in a is limited by a -ness and determined by the property of being the qualifier residing in b , which is limited by both b -ness and R .⁴

The distinction between the relation *limited by* and the relation *determined by* can be explained in the following way:

- (A) x is limited by y iff
- (i) both x and y are properties,
 - (ii) x is a relational property, and
 - (iii) the property y is a mode of presentation of the object where relation property x resides.

In this context it is to be noted that the expression 'mode of presentation' is used in such a way that it determines the referent(s) of a term. Moreover, the Nyāya use of the term 'property' is much broader than the ordinary use of it. A property, according to the Nyāya, has been defined in the following way:

x is a property iff $(\exists y)$ (y is a locus of x)

- (B) x is determined by y iff both x and y are relational properties of cor-relatives.

In this context it is to be noted that the *determined by* relation is symmetrical. That is to say, if x is determined by y , then y is also determined by x . But the *limited by* relation is not symmetrical.

Now let us discuss the Nyāya conception of relation and the classification of relations which is the basis for drawing a distinction between the two types of negation. According to the Nyāya R is a relation if the following conditions are satisfied:

- (i) It is due to R that x appears as the qualificand and y appears as the qualifier of a cognition which is expressed by ' xRy '.
- (ii) It is due to R that the referents of ' x ' and ' y ' are unified in such a way that ' xRy ' represents a fact in the world.

The former feature of a relation is epistemic and the latter one is ontological. At the level of fact, x is called 'the first term' ('*anuyogin*') and y is called 'the second term' ('*pratiyogin*') of R . At the epistemic level x is the qualificand and y is the qualifier of R .

According to the Nyāya all relations are dyadic, and all higher-order relations are reduced to a set of dyadic relations. All relations can be divided into two types depending upon whether the second term occurs in the first term or not. The relation in which the second term occurs in the first term is called 'occurrence-exacting relation'. The linguistic form ' y is in x ' or ' y occurs in x '

represents this type of relation. If the second term does not occur in the first term, then the relation is called 'not occurrence-exacting'. Relations like conjunction and inherence are occurrence-exacting.⁵ But relations like identity, pervasion, the property of being the content, the converse of the property of being the content are not occurrence-exacting. In this context another important aspect of the Nyāya concept of relation should be mentioned. In some context a term itself plays the role of a relation. This type of relation is a self-linking relation (*svarūpa-sambandha*). Relations like the relation of the property of being Socrates to its possessor, relation of the property of being the present President of the United States to its possessor are self-linking relations. Most of the relational abstracts, such as the property of being the substratum, are considered as self-linking relations. In addition to these types of self-linking relations there are spatial and temporal self-linking relations. The self-linking relation plays an important role in the context of a negation. When we say 'x has the absence of y', what we mean or understand is that the absence of y, which is a negative entity, is related to its locus x by an absential self-linking relation which is a special type of self-linking relation. That is to say, the relation of the absence of y to x is not a separate ontological entity. It is to be identified with at least one of the terms of a relation. According to most of the Nyāya philosophers it is to be identified with the first term of a relation (*anuyogin*).

Now let us formulate the criteria for forming a significant negative expression. If the following conditions are satisfied, expressions of the form 'not-t', or 'absence of t', or 'non-t' would be considered significant:

- (i) If 't' is a meaningful expression or refers to an entity, then 'not-t' would be significant provided 't' does not refer to an absolutely universal property such that nothing lacks this property. According to the Nyāya properties like *nameability*, *knowability*, and *existence*, are considered universal properties in this sense.⁶ Hence, expressions like 'nonexistence', 'nonnameability' and 'nonknowability' are not considered significant negative expressions.
- (ii) If 'not-t' is significant, then 't' is not an empty term. Since terms like 'a hare's horn', 'Pegasus', and 'unicorn' are considered as empty, their negations would not be significant negative expressions. From this condition one should not conclude that any expression which contains an empty term is nonsignificant.⁷ Instead of the sentence 'A hare's horn does not exist', the Nyāya prefers the sentence, 'There is an absence of a horn in a hare'.
- (iii) The expression 'not-t' or 'negation of t' will be meaningful if we know what it is for t to be present somewhere. If we know what it is for t to be present somewhere, then we know the manner of presentation of t. Since t is the counterpositive (negatum) of the negation of t, t has the property of being the counterpositive. This property simply specifies the role of t in the context of a negation. The manner of presentation of t in the cognition *negation of t* is the limiter of the property of being the counterpositive residing in t. If the manner of presentation of t is a property, then the limiter is called a 'property-limiter', and if the manner of presentation is a relation in which t is cognized,

then the relation is called a 'relation-limitor'. The relation in which t is present somewhere is called 'The limiting relation of the property of being the counterpositive residing in t '. The property of being the counterpositive is limited by a property (simple or complex) and a relation (simple or complex).⁸

At the epistemic level the cognition of not- t presupposes or depends upon the cognition of t . If a person has not cognized t , then he cannot cognize not- t . The cognition of t such that t is presented under some mode of presentation is considered as one of the causal conditions for the cognition of not- t . But the relation between the cognition of not- t in the locus I and the cognition of t in the same locus I is preventer-prevented, which is the analogue of the contradictory relation between two contradictory propositions.

When we discuss the validity and the invalidity of a cognition, or the truth and falsity of a proposition which expresses a cognition, we move from the epistemic level to the ontological level. If a cognition is valid, then all the elements of it are real, and the relation relates the second term with the first term. In the case of the valid cognition of aRb , the cognition as a mental entity is related to a , b , R , and the complex aRb . But in the case of an invalid cognition, the cognition is related to a , b , and R , but not to the complex aRb . Hence the content of an invalid cognition does not have the property of being the content of qualificand-qualifier complex (*viśiṣṭa-viṣayatā*), and the cognition does not have the converse of this relation. In other words, in a valid cognition the relation not only makes one of the terms a qualifier of another term which is the qualificand, but also relates the former to the latter at the level of fact. Since the second function of a relation is absent in an invalid cognition, it is said that the qualification relation is unreal. In this context it is to be noted that my use of the term 'unreal' in this context does not mean 'nonentity'. The qualification relation is an entity, but in the case of an invalid cognition it does not perform the second function of a relation. However, some Nyāya philosophers, for example, Vācaspati Mīśra, have claimed this relation to be a nonentity (*asat*; cf. [13], p. 271). Now the question of the validity or invalidity of a cognition introduces the problem whether the negation of t (i.e., not- t) or t is present in a locus. According to the Nyāya if t occurs pervasively in its locus, then the negation of t cannot be present in the same locus, and conversely. But both t and the negation of t are real entities in the world. Hence the expressions ' t ' and 'not- t ' are nonempty terms. If t does not occur pervasively in its locus, then the negation of t is also present in the same locus, and conversely. But this does not lead to a contradiction because t and not- t do not characterize the same portion of the locus at the same time. Here also both ' t ' and 'not- t ' are nonempty terms.

Above we discussed the problem of negation at three different levels and how these levels are related to one another; now let us introduce the Nyāya classification of different types of negation.

Broadly speaking, there are two types of negation, viz., relational absence, and mutual absence or difference. The distinction between them can be drawn in terms of the limiting relation of the property of being the counterpositive which resides in the negatum. At the linguistic level these negations can be represented by the following forms:

- (1) x is not in y or x does not occur in y , or not- x is in y .
- (2) x is not y , or x is different from y .

(1) represents relational absence and (2) represents mutual absence. In (1) not- x occurs in the locus y , and x is the counterpositive of not- x . The property of being the counterpositive residing in x (i.e., the role of x) is limited by both x -ness and an occurrence-exacting relation. In other words, both x -ness and an occurrence-exacting relation are modes of presentation of x . Here x -ness is the property-limitor and an occurrence-exacting relation is the relation-limitor. In (2) y is the counterpositive, i.e. the negatum, and the property of being the counterpositive residing in y is limited by both y -ness and the relation of identity. So the relation of identity is the limiting relation of the property of being the counterpositive.

Most of the Nyāya philosophers have accepted three types of relational absence:

- (1) The relational absence of an object before its production is the not-yet type of absence (*Prāgabhāva*). The absence of a jar before its production is present in its parts.⁹ The cognition of this absence can be expressed by the sentence 'A jar will be produced in these parts'. When the jar is produced, the not-yet type of absence does not exist in its part. Since it cannot exist anywhere else, it ceases to exist. This type of absence has no beginning, but has an end. Since we are not asserting the absence of all jars, but the absence of the jar which will be produced, the property of being the counterpositive is limited not by a generic property like jarness, but by a specific property like a particular blue color *and* jarness.¹⁰ As regards the limiting relation of the property of being the counterpositive, there is some difference of opinion among the Nyāya philosophers. It is claimed that since the jar has not yet been produced, the property of being the counterpositive is not limited by any relation. But the old Nyāya has accepted a temporal relation as the limiting relation of the property of being the counterpositive. If the absence of the jar is in its parts at t_n and the jar is produced in the parts at t_{n+1} , then obviously the jar is related to its parts by the relation of posterior existence. This temporal relation of posterior existence is considered as the limiting relation of the property of being the counterpositive. But the followers of the Navya-Nyāya do not subscribe to this view.
- (2) The relational absence of an object after its destruction is the no-more type of absence (*dhvaṃsa*). The absence of a particular jar when it is destroyed is present in its parts. Since the destruction of a particular jar does not imply the destruction of all jars, the property of being the counterpositive is limited, not by a generic property, but by a specific property of the jar which has been destroyed. As regards the limiting relation, here also there is difference of opinion among the Nyāya philosophers. The followers of the Navya-Nyāya do not accept any limiting relation, while the followers of the old Nyāya have accepted a temporal relation as the limiting relation. If the destruction of a particular jar is the separation of its parts, then the whole jar ceases to

exist at time, say, t_n , when it is destroyed. If 'ceases to exist at time t_n ' is explained as 'existent at time t_{n-1} ', then the parts are related to the jar by the relation of previous existence.¹¹ For this reason it is claimed that the property of being the counterpositive is limited by the temporal relation of previous existence. Apart from this temporal relation the property of being the counterpositive is not limited by any other relation. A no-more type of absence has a beginning, but no end.

- (3) The third type of relational absence is the never type of absence (*atyantābhāva*), for example, the absence of color in air, or the absence of a jar on the ground. Some of the followers of the old Nyāya do not consider the absence of a jar on the ground as a case of never type of absence. Since a never type of absence has neither a beginning nor an end, and since the absence of a jar on the ground has both a beginning and an end, these philosophers think that there is a need to accept a fourth type of relational absence. But the followers of the Navya-Nyāya as well as some of the followers of the old Nyāya think that the acceptance of the fourth type of relational absence would lead to the postulation of innumerable absences of a jar on the same ground. Each time the jar is removed, a new absence is created, and each time the jar is brought back, the previous absence is destroyed. In order to avoid this consequence, it is claimed that what ceases to exist when the jar is brought back is not the absence of it, but the relation of this absence to the ground. An absence is related to its locus by a self-linking relation which is to be identified ontologically with its locus. Now the followers of the Navya-Nyāya are of the opinion that this self-linking relation in the case of the absence of a jar on the ground is to be identified not with the ground as such, but with the ground when a jar is not present. Since this self-linking relation ceases to exist when a jar is brought on the ground which had an absence of a jar, we cannot perceive this absence when a jar is present on the same ground. So on the ground of parsimony these philosophers have included such examples under the third type of relational absence.

The property of being the counterpositive of a never type of absence is limited by both a property-limitor and a relation-limitor. But the limiting relation is an occurrence-exacting one.¹²

2 Now let us discuss whether the law of double negation holds good for the Nyāya philosophy. Since there are four types of negation according to the classical view of the Nyāya, there would be sixteen types of double negation. The aim of this paper is to discuss: (i) whether each of the sixteen double negations is identical with something or not, (ii) if it is identical with something, whether it is a positive or a negative entity, and (iii) if it is identical with a positive entity, whether it is the same as the negatum of the first negation. Let us use the symbol ' \sim ' for a never type of absence, the symbol ' \neg ' for a not-yet type of absence, the symbol ' \dashv ' for a no-more type of absence, and the symbol ' $\bar{\sim}$ ' for a mutual absence.

- (1) $\sim\sim x$.

It is claimed by Gaṅgeśa and many other Nyāya philosophers that a never type of absence of a never type of absence of x is identical with x . The arguments in favor of this view are mainly epistemological. It is claimed that whenever we perceive the presence of an object, say a pot, we do not perceive the absence of it in the same locus and vice versa. The perceptual cognition of one will be prevented by the perceptual cognition of the other. Hence a never type of absence of a never type of absence of x is identical with x , i.e., with the counterpositive.

Raghunātha, a follower of the Navya-Nyāya school, does not subscribe to this view. He claimed that as we accept a negative entity in order to establish the truth of the proposition 'There is an absence of a pot on the ground', so we accept a negative entity in order to establish the truth of the proposition 'There is an absence of an absence of a pot on the ground'. Moreover, he claimed that all absences have something in common and this common property distinguishes absences from all other positive entities. The property of being an absence (*abhāvatva*), which is a common character of all absences, is an unanalyzable imposed property and it is to be distinguished from other class-characters such as horseness or cowness. In this context it is to be noted that any property other than a class-character (*jāti*) such as horseness is called 'an imposed property' (*upādhi*). Hence, a never type of absence of a never type of absence of x is not identical with x . Now the question is whether a third or a fourth never type of absence is also a separate absence or not. On this point Raghunātha claimed that a third never type of absence is identical with the first never type of absence and the fourth never type of absence is identical with the second never type of absence. So the law of double negation is valid in the following cases:

- (a) $\sim\sim\sim x = \sim x$
 (b) $\sim\sim\sim\sim x = \sim\sim x$.

The general rule may be stated in the following way:

If n never types of absence precede x , then $\sim x$ is identical with it provided n is an odd number of never types of absence; and if n is an even number of never types of absence, then it is identical with $\sim\sim x$.

Paṅśadhara Miśra, a follower of the Nyāya school, considers a never type of absence of a never type of absence of x as identical with the limiting relation of the property of being the counterpositive.

Let us consider the proposition 'There is a pot on the ground by the relation of conjunction'. If this proposition is true, then there is a pot on the ground by the relation of conjunction. The never type of absence of a never type of absence of this pot by the relation of conjunction is identical with the conjunction relation which is a particular quality of both the pot and the ground according to the ontology of the Nyāya school. But Raghunātha has raised an objection against this view on the ground that if an absence of an absence of a pot by the relation of conjunction is identical with the conjunction relation, then the cognition of an absence of a pot and the cognition of an absence of an absence of a pot cannot be related by preventer-prevented relation. If we accept the view of Paṅśadhara Miśra, then the cognition of an absence of an absence of a pot being identical with the cognition of conjunction relation cannot be pre-

vented by the cognition of an absence of a pot. Since the view of Pakṣadhara Mīśra violates the law of contradiction at the epistemic level, it is to be rejected on this ground. Hence $\sim\sim x$ cannot be identical with any relation.

There is another view which might be considered as a mean between the first and the second view. The first one identifies $\sim\sim x$ with x . The second one does not identify $\sim\sim x$ with x ; rather it considers $\sim\sim x$ as a separate entity. The fourth view claims that the referent of 'x' is identical with the referent of ' $\sim\sim x$ ', but they are different with respect to sense or the mode of presentation. In the former case, the x is presented under the mode of x -ness, while in the latter case the same x is presented under the mode of the property of being $\sim\sim x$. Let us consider the absence of a pot on the ground. The counterpositive of this absence is the pot which is presented under the mode of potness. That is to say, the property of being the counterpositive resident in a pot is limited by the property *potness*. Now the question is what would be the counterpositive of $\sim\sim\sim x$. If $\sim\sim x$ is identical with x , then the counterpositive of it ($\sim\sim\sim x$) is x . If it were so, then what would be the difference between $\sim x$ and $\sim\sim\sim x$? This view claims that the counterpositive of $\sim\sim\sim x$ is x , but it is presented under the mode of the property of being $\sim\sim x$. So both 'x' and ' $\sim\sim x$ ' refer to the same object but under different modes of presentation. If the limiting relation of the property of being the counterpositive residing in the counterpositive of $\sim x$ is different from the limiting relation of the property of being the counterpositive residing in the counterpositive of $\sim\sim\sim x$, then also both 'x' and ' $\sim\sim x$ ' refer to the same thing, but under the mode of different relation-limitors.

(2) $\neg\sim x$.

Now let us discuss whether a not-yet type of absence of a never type of absence of x is identical with any entity. Since the negatum of a not-yet type of absence is a future object and since a never type of absence is not a future object, but an eternal entity, this type of double negation does not represent any entity, positive or negative. Let us consider the absence of color in air by the relation of inherence. Since air has no color, this type of absence is an example of a never type of absence. A not-yet type of absence of a never type of absence of color would not represent any entity. Hence $\neg\sim x$ would not be identical with anything.

(3) $\neg\sim x$.

Similarly, a no-more type of absence of a never type of absence of x would not be identical with anything. Since the negatum of a no-more type of absence is a past object which no longer exists, and since a never type of absence cannot be destroyed, a no-more type of absence of a never type of absence cannot represent either a positive or a negative entity. Hence ' $\neg\sim x$ ' does not represent anything.

(4) $-\sim x$.

A mutual absence of a never type of absence of x is not identical with x . Consider the never type of absence of color in air. This absence qualifies the air, or in other words, it is a property of the air. The mutual absence of the never type of absence of color is in all objects other than the never type of absence

of a color. This absence qualifies the air, and the color along with many other objects except the never type of absence of color. Hence $\sim x$ is never identical with x .

(5) $--x$.

Now let us discuss whether a mutual absence of a mutual absence of x is identical with x . According to the old Nyāya it is not identical with x or with any other entity. Consider the proposition 'A is different from B'. In this case the property called 'difference from B' becomes a property of A. The property *difference from B* is itself different from everything else. So the property *difference from difference from B* is a property of everything other than *difference from B*. If it were so, then $--B$ is not identical with B . As a matter of fact $--B$ becomes a property of B also. The same type of argument is applicable to all higher-order mutual absences. A higher-order mutual absence cannot be identical with a lower-order mutual absence.

In order to avoid this regress of mutual absences, Raghunātha claimed that a mutual absence of a generic mutual absence should be identified with the property of being a positive entity (*bhāvatva*) and the property of being a relational absence. In this context the difference between a generic mutual absence and a specific mutual absence is to be noted. If ' α ' ranges over all objects other than mutual absences, then ' $-\alpha$ ' represents a generic mutual absence. But expressions like 'the mutual absence of a pot' or 'the mutual absence of a cloth' represent specific mutual absences. According to the Nyāya all positive entities have something in common which is called 'the property of being a positive entity' (*bhāvatva*). Similarly, all relational absences have something in common which is called 'the property of being a relational absence' (*samsargābhāvatva*). In the Nyāya ontology the objects which are different from mutual absences are of two types, viz., positive entities and relational absences. Hence, the property represented by the expression 'a mutual absence of a generic mutual absence', i.e., ' $--\alpha$ ', is present in all positive objects and relation absences. For this reason Raghunātha identified this property with the property of being a positive entity (i.e., positivity) and the property of being a relational absence. But the mutual absence of a specific mutual absence is to be identified with the property of being positive entity, the property of being a relational absence and the property of being a mutual absence of other specific objects. Consider a universe of discourse where ' a ' represents a positive object, ' b ' represents a relational absence, but ' c ' and ' d ' represent two different mutual absences. Now the mutual absence of c , i.e., difference from c , is a property which is to be identified with the property of being a , the property of being b , and the property of being d . On the ground of simplicity, Raghunātha wants to justify this thesis as opposed to the thesis that there are innumerable mutual absences.

(6) $\sim x$.

Now the question is whether a never type of absence of a mutual absence of x is identical with x or with something else. Some followers of the old Nyāya have identified $\sim x$ with x . That is to say, just as a never type of absence of a never type of absence of x is identical with x , so a never type of absence of a mutual absence of x is identical with x .

Two objections have been raised against this view:

- (i) If we identify $\sim-x$ with x , then we cannot apprehend x as the locus of $\sim-x$ when we say " x has a never type of absence of a mutual absence of x ". Since we do apprehend x as the locus of $\sim-x$, they cannot be identical with each other.
- (ii) Secondly, this view goes against the law of parsimony in the following way. Consider a never type of absence of a mutual absence of a pot. If this absence is identical with a pot, then we have to admit innumerable never type of mutual absences of a pot as there are innumerable pots. For these reasons Gaṅgeśa and many other Nyāya philosophers have identified $\sim-x$ with x -ness. Let us explain this identification with an example. Consider the property of *difference from a pot*. This property is present in all things other than a pot, but the property of *the never type of absence of difference from a pot* is present in all pots only. According to the Nyāya, since potness occurs in all and only pot-individuals the property $\sim-pot$ is to be identified with potness. On the ground of simplicity also this identification can be justified.

But if we claim that a never type of absence of a never type of absence of x is identical with x , then $\sim-x = x$ -ness ceases to be a universally valid law. This can be proved in the following way (cf. [4]):

- (a) $\sim\sim x = x$
- (b) $\sim\sim\sim x = \sim x$ [(b) follows from (a) by the rule of substitution]
- (c) The counterpositive of $\sim\sim\sim x =$ the counterpositive of $\sim x$
[(c) follows from (b)]
- (d) The counterpositive of $\sim\sim\sim x = \sim\sim x$, and the
counterpositive of $\sim x = x$ [from the Nyāya view of negation]
- (e) Therefore $\sim\sim x = x$ [from (c) and (d)]

Some Nyāya philosophers including Mathurānātha are of the opinion that $\sim-x$ has a dual nature. In some context $\sim-x$ is identical with x , and in some other context $\sim-x$ is identical with x -ness. Now if we accept this view of some Nyāya philosophers, then we cannot accept Leibniz' principle of the identity of indiscernibles as a universally valid law of identity.

On this point the view of Raghunātha seems to be superior to the views of other Nyāya philosophers. According to him, just as a never type of absence of a never type of absence of x is not identical with any positive entity, similarly a never type of absence of a mutual absence of x is not identical with any positive entity. Since all absences have something in common, a never type of absence of a mutual absence of x is a separate negative entity. A higher-order absence might be identified with a lower-order absence, but an absence cannot be identified with a positive entity. Hence, a never type of absence of difference from x cannot be identified either with x or with x -ness.

Moreover, the Nyāya conclusion that the property $\sim-x$ is identical with x -ness does not follow from the premise that $\sim-x$ and x -ness have the same locus. In some other contexts the Nyāya philosophers have not identified two properties of this type. Cowness belongs to all and only cows. The property of

being an animal with a dewlap also belongs to all and only cows. But the latter has not been identified with the former. The latter is considered as an analyzable imposed property, while the former is considered as a class-character which is an unanalyzable property. If we follow the view of Raghunātha, then we can consider the property *the never type of absence of difference from a cow* as an analyzable imposed property of all and only cows. This property is analogous to the property of being an animal with a dewlap. The latter is a positive entity, while the former is a negative entity, but both of them are complex properties.

(7) $\neg\neg x$.

Now the question is whether anything corresponds to a no-more type of absence of a mutual absence of x . Since a mutual absence is considered as eternal, i.e. having no beginning and end, a no-more type of absence of a mutual absence is not an entity. Hence the linguistic expression 'a no-more type of absence of a mutual absence of x ' is an empty-term.

(8) $\neg\neg\neg x$.

Similarly, a not-yet type of absence of a mutual absence of x does not correspond to an entity. Since a mutual absence is eternal, there cannot be a not-yet type of absence of it.

In this context, it is to be noted that some of the Nyāya philosophers such as Śivāditya Miśra do not accept the eternality of a mutual absence. They think that a mutual absence of a pot is also destroyed when a pot is destroyed. Similarly, they would admit a not-yet type of absence of a mutual absence of a pot when a pot is not yet produced. But most of the Nyāya philosophers do not subscribe to this view. If we admit this view, then the destruction of a pot would also lead to the destruction of the mutual absence of the same pot. But we can truly say that a piece of cloth is different from that pot. If the *difference from a pot* is also destroyed due to the destruction of the pot, then we cannot find a fact which will correspond to the proposition 'this piece of cloth is different from that pot'. Similarly, before the production of a pot it can be said truly that a piece of cloth is different from a pot which will be produced. Since the past, present, and future objects are real, according to the Nyāya view, their differences are also real. Hence the propositions about these differences have truth values. For this reason the followers of the Navya-Nyāya do not subscribe to the view of Śivāditya Miśra. According to them both a never type of absence and a mutual absence of x are eternal entities.

(9) $\neg\neg\neg\neg x$.

Now let us discuss whether a not-yet type of absence of a not-yet type of absence of x is possible. According to the Nyāya a not-yet type of absence of a pot resides in the material cause of a pot. If we admit a not-yet type of absence of a not-yet type of absence of a pot, then it must be locatable either in the material cause of the pot or in the pot, or anywhere else. If it is locatable in the material cause of a pot, then it will have a contradictory property. Since there is no contradiction in reality, it is not possible. It cannot be identified with a pot, as there is no such pot when there is a not-yet type of absence of a pot. A not-yet type of absence has no beginning. If it were so, then its not-yet type of absence

would not be possible. So the acceptance of $\neg\neg x$ will destroy the very nature of a not-yet type of absence.

(10) $\sim\neg x$.

A never type of absence of a not-yet type of absence of x , according to the Nyāya, is not identical with x . It is considered as a separate entity. Let us explain with an example. A not-yet type of absence of a pot is present in the material cause of it. A never type of absence of this absence characterizes all other objects. When a pot is produced this never type absence, being an eternal entity, is not destroyed. It still characterizes those objects. If it is identified with a pot, then it ceases to be a never type of absence because a pot is not eternal. Hence, $\sim\neg x$ is not identical with x .

(11) $-\neg x$.

Similarly, a mutual absence of a not-yet absence of x is not identical with x . It is a separate ontological entity, and characterizes all objects which are different from the not-yet type of absence of x . The not-yet type of absence of a pot is present in its parts which are material causes of a pot. The mutual absence of it, viz., the property *difference from this absence*, is a character of all other objects including the pot which will be produced and its parts. Hence, $-\neg x$ is not identical with x .

(12) $\neg\neg x$.

Now let us discuss whether a no-more type of absence of a not-yet type of absence of x is identical with x . According to the classical view, it is identical with x . Let us consider the not-yet type of absence of a pot before the production of a pot. When the pot is produced this not-yet type of absence is destroyed. Hence, it is identical with the pot. Before the production of a pot, the not-yet type of absence of a pot was the character of the parts of a pot. When a pot is produced, the pot becomes a property of its parts. So a pot is nothing but a destruction of the not-yet type of absence of a pot.

But Raghunātha, a follower of the Navya-Nyāya, does not subscribe to this view. According to him it is a separate negative entity. When a pot is present in its parts we can apprehend the destruction of the not-yet type of absence in the same locus. If a pot is identical with the destruction of the not-yet type of absence of it, then it is not possible. Hence, it is claimed that $\neg\neg x$ is a separate negative entity and not identical with x .

(13) $\neg\neg x$.

A no-more type of absence of a no-more type of absence of x does not correspond to an entity. This follows from the very nature of a no-more type of absence. Since a no-more type of absence is endless or never ceases to exist, its destruction is not possible. Hence, the expression for it would not represent any real object. Hence, ' $\neg\neg x$ ' does not represent an entity.

(14) $\neg\neg x$.

With respect to a not-yet type of absence of the no-more type of absence of x , there is some difference of opinion between the old Nyāya and Raghunātha. According to the old Nyāya it is identical with x . Let us consider the destruction or the no-more type of absence of a pot. Before the destruction of a pot there is the not-yet type of absence of it (destruction of a pot). This not-yet type of absence is the pot itself. Hence $\neg\neg x$ is identical with x . Here also Raghunātha claimed that we can apprehend the not-yet type of absence of the destruction of a pot when a pot is present in its parts. If it is identical with a positive entity, then this type of apprehension of a negative entity is not possible. Hence a not-yet type of absence of a no-more type of absence of x is a separate negative entity.

(15) $\sim\neg x$.

A never type of absence of a no-more type of absence of x is not identical with x . A never type of absence is an eternal entity, but things like a pot or a cloth are non-eternal entities. Hence, it cannot be identified with a non-eternal entity. The no-more type of absence of a pot is present in the parts of a pot when it is destroyed. The never type of absence of this absence characterizes all other objects including the parts of a pot. Hence, $\sim\neg x$ is not identical with x .

(16) $\neg\neg x$.

Similarly, a mutual absence of a no-more type of absence of x is not identical with x . Since a mutual absence is an eternal entity and things like a pot or a piece of cloth are noneternal entities, a mutual absence cannot be identified with a noneternal object. When a pot is destroyed, a new object comes into being which has no end. The property *destruction of a pot* characterizes the parts of a pot, but the property *difference from this destruction* is present in all other objects including the parts of the pot. Hence, it is to be accepted as a separate negative entity which characterizes the things which are different from the destruction of a pot. For this reason $\neg\neg x$ is not identical with x .¹³

From the above discussion of double negation it follows that some of the Nyāya philosophers, especially the followers of the old Nyāya, are trying to identify double negation of a positive entity with the positive entity itself or with a property which is a positive entity, but most of the followers of the Navya-Nyāya want to identify it with a negative entity. Following the suggestions of some Nyāya philosophers, it may be said that in most cases the double negation of x is not a separate ontological entity. It is another mode of presentation of x . As in the case of the never type of absence of a never type of absence of x , both the expressions ' $\sim\neg x$ ' and ' x ' refer to the same entity under different modes of presentation, so in cases like the not-yet type of absence of the no-more type of absence of x , and the no-more type of absence of the not-yet type of absence of x , the same entity is referred to under different modes of presentation. This technique may be utilized wherever double negation can be explained without postulating a separate negative entity. This view will cut across the two other extreme theses found in the Nyāya literature. However, from this remark one should not conclude that all cases of double negation can be explained in this way.

NOTES

1. In this context the term 'cognition' is used to talk about the content of cognition, not the act of cognizing.
2. At the ontological level these elements need not be separate or distinct elements.
3. A discussion of this point requires a separate paper.
4. In this context I have not introduced the Nyāya distinction between a sentence which gives rise to a cognition and a sentence which describes this cognition. The latter is essentially richer than the former. This distinction has been discussed in [12].
5. There are a few conjunctions which are not occurrence-exacting relations.
6. For a discussion on this topic, see [10].
7. For a discussion on empty terms, see [9], [11].
8. According to some Nyāya philosophers, the property of being the counterpositive of a not-yet or no-more type of negation is not limited by a relation-limiter.
9. This law does not hold good with respect to the not-yet type of absence of a no-more type of absence.
10. According to the old Nyāya the property of being the counterpositive is limited by a generic property.
11. Jagadīśa says "*Prāgabhāva-dhvaṃsayorapi uttarapūrvakālāveva*," quoted in Madhusūdana Nyāyācārya (1976).
12. But a section of the Nyāya philosophers do not subscribe to the thesis that a not occurrence-exacting relation other than identity cannot be the limiting relation of the property of being the counterpositive. Gadāhara in his *Vyutpattivāda* says, *Vṛtti-anīyāmaka-sambandhasya-abhāva-pratīyogitā-avacchedakatve-ko-doṣaḥ*, quoted in Kalipada Tarkāchārya (1973). For a discussion see [11].
13. In this section I have included some of the discussion from *The Padārthatattva Nirūpaṇam*, translated and elaborated by Pandit Madhusūdana Nyāyācārya, and *Navya-Nyāya-Bhāṣāpradīpaḥ*, edited with commentary by Pandit Kalipada Tarkāchārya. I am also indebted to Pandit Visvabandhu Bhattacharya. However, the faults are mine.

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