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SOME LOGICAL PROBLEMS CONCERNING EXISTENCE

by

Jaysankar Lal Shaw

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INTRODUCTION

Reflection on judgments suggests certain problems which are directly related to the philosophy of logic. The problems concerning existence touch the borderline of logic and ontology. The great systems of philosophy are based on certain notions of existential judgments. The traditional philosophy with its subject-predicate form of judgment gives rise to substance-adjective view of Reality. The idealistic philosophy with its view of judgment as an act which refers an ideal content to a Reality leads to a monistic view of Reality. The atomistic philosophy of Russell is based on a particular analysis of propositions, a particular view of existence and the theory of description.

The purpose of this dissertation is not to defend one of these views of existence, theory of description or a theory of Reality. Our aim is to analyze different forms of existential judgments like "John exists", "Pegasus exists", "unicorns exist", "the present king of France exists", "all the tame tigers in the zoo still exist", "God exists". Unless we have a clear picture of existential judgments and the notion of existence as it occurs in logic, we cannot have any support for a particular ontology. The different systems of philosophy did not notice the different ways our language or sentences work. In this dissertation we intend to find out some of the ways or uses of these judgments. These are dependent on a particular notion of existence or the descriptive terms occurring in those sentences.
The nature of propositions like "John exists", "Pegasus exists", "the unicorn exists", "the prime number between 5 and 11 exists", "God exists" is dependent on the meaning or definition of existence. On a particular definition of existence "tame tigers exist" would be meaningful, but "John exists" would be meaningless. Similarly, on another definition "the prime number between 5 and 11 exists" would be meaningless. The different views on existence fail to retain the meaningfulness of all existential propositions. The root cause of this consequence is that they treat a definition of existence as the definition of existence.

As the meaning of the propositions "the prime number between 5 and 11 exists", "the present king of France exists" is dependent on the meaning of existence, similarly, their meaningfulness is dependent on a particular theory of description. If the use of a description presupposes a descriptum, then the proposition "the present king of France exists" would be meaningless. Again, the meaningfulness or the truth-value of a descriptive proposition varies from context to context depending on the theory of description. The proposition "the present king of France is wise" uttered in the 17th century would be true if he is wise. But the same proposition uttered now would be either meaningless or true or false depending on a theory of description.

Since an existential proposition is a type of proposition and since a proposition admits of subject-predicate analysis, an existential proposition should be analyzed into subject and predicate. The problem whether existence is a
predicate or not depends on the meaning of existence. On this point also many philosophers have taken one use of "exists" as the use. As a result, we fail to notice the difference between different uses of existence. Moreover, the question whether a particular use is predicative or not is dependent on the definition of subject and predicate. Regarding the difference between the subject and the predicate various criteria have been proposed. Broadly speaking, we have two criteria, viz. the grammatical and the category criterion. The grammatical criterion is dependent on the style of term-introduction, while the category criterion is based on the nature of the terms introduced. The former is based on the nature of a language. Since all languages do not have the same syntax, this criterion is not applicable to certain languages. The latter criterion presupposes an ontology at the very outset and then analyzes a sentence into subject and predicate. According to each of these criteria one and only one analysis is applicable to a sentence. The subject of the same sentence cannot be a predicate and the predicate cannot be a subject. Both these criteria fail to notice the different uses of the same sentence depending on different contexts.

According to our positive thesis if we take into account the different uses of a term or a sentence depending on different contexts, then we can resolve various problems arising from the nature of existential propositions. The propositions like "John exists", "the prime number between 5 and 11 exists", "God exists" are meaningful or true uttered
under some contexts. The same proposition may be true in one context but false or meaningless in some other context. Hence we cannot give one definition of existence or a descriptive expression. Similarly, the presupposition of sentences varies from context to context. Moreover, the same sentence may have different presuppositions depending on contexts. In one context a sentence involving a description may presuppose the unique object satisfying that description, but in another context the same sentence may imply the existence of the unique object. Similarly, in one context the term "exist" may be used predicatively, while in another context the term "exist" occurring in the same proposition may be used non-predicatively.

The consideration of different uses of a term occurring in a sentence presupposes a hearer-speaker situation in addition to the syntax and the semantics of the language. This hearer-speaker situation cannot be formalized or logicized. In order to find out the exact use of a term or sentence, we have to take into account the context of its utterance.
CHAPTER 1

CONCEPTS OF EXISTENCE

Our main concern in this chapter is to deal with the concept of existence occurring in statements like "John exists", "some tame tigers exist", "Pegasus exists", "there are numbers", "the number 5 exists", "God exists". The statements involving definite descriptions will be discussed in the second chapter of this thesis. Our main concern in this chapter is to examine the prevalent definitions of existence and to suggest that no one definition is sufficient to explain the different uses of the term "existence". Our discussion will involve an examination of existence as found in different systems of logic. The semantics of the existential propositions will lead to the problem concerning the status of abstract entities. In this chapter one of the main problems will be whether the meaning of "exists", "there are", "some" depends on the nature of entities whose existence or being is asserted. Our positive thesis will be that the meaning of these expressions cannot be determined apart from the context of discourse. These expressions are not isolated units. Their meaning depends on the semantics of the statements in which they occur. Again the semantics of a particular existential statement depends on the context of discourse. In other words, the context of discourse determines the semantics of a statement. Moreover, the context of discourse has necessary reference to the pragmatics of a statement. Pragmatics in turn involves hearer-speaker situation. This hearer-speaker situation cannot be logicized or formalized. It is the presupposition of all languages.
PART A       FORMAL DEFINITIONS OF EXISTENCE

I   Explanation of certain terms:

For convenience of our discussion certain distinctions are introduced:
(a) General existence and singular existence.

When we speak of tigers, men, Europeans and assert their existence, we affirm general existence. The statements "there are tigers", "some are Europeans" etc. assert the general existence. In symbolic logic they are symbolized in the following manner:

$$(\exists x) (Tx), \quad (\exists x) (Ex)$$

But if we affirm the existence of John, or Jimmie Byrnes, or Santa Claus or Pegasus, we are affirming singular existence. They are to be symbolized by the expression of the form $E!x$.

In traditional logic general existence is a presupposition, while in modern logic it is not. This is evident from the square of opposition:

A: All S is P   \hspace{1cm} E: No S is P
  \hspace{1cm} (x) (Sx \supset Px) \hspace{1cm} (x) (Sx, \sim P)

I: Some S is P   \hspace{1cm} O: Some S is not P
  \hspace{1cm} (\exists x) (Sx . Px) \hspace{1cm} (\exists x) (Sx . \sim P)

From the truth of A, we can infer the falsity of E and O, and the truth of I. But according to the modern logic we

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cannot infer the truth of I and the falsity of E from the truth of A. We can infer I from A if we assume that there are S. "(∃x) (Sx . Px)" follows from "(x) (Sx ⊃ Px)" and "(∃x) (Sx)".

In traditional logic each term or proposition has existential import, while in modern logic A and E are independent of existential import. Both A and E would be true if there are no S. The traditional logic was set up with the tacit assumption that each of its terms, viz. S or P, has existent exemplars. There are no means of expressing a proposition which does not have existential import. This is what we mean by saying that in traditional logic general existence is a presupposition. Regarding singular existence traditional logic is completely silent. Since singular terms¹ or singular propositions do not play any role in Aristotelian logic, it is said that Aristotle has ignored singular existential propositions.

The modern logic does not make an analogous presupposition about general existence. The terms of a proposition may be empty. The A and E propositions do not have existential import. In traditional logic A and E have existential import. In traditional logic the subject term of each proposition is non-empty. This is not a presupposition of modern logic. Moreover, there is a distinct symbol in modern logic for

¹.Lukasiewicz, Aristotle's Syllogistic.
symbolizing general existential proposition. In the proposition "(x) (Sx ⊃ Px)" , "S" may be empty. The non-emptiness of S is symbolized by the expression (∃ x) (Sx). Since modern logic makes this presupposition of traditional logic explicit, it should be regarded as an improvement upon the traditional logic. It is always an improvement to make a presupposition explicit.

So far as singular existence is concerned, the modern logic makes a tacit presupposition. In the proposition "Fa", the term "a" is considered as non-empty. If we can substitute any term, empty or non-empty, in place of the "a" and if we can give a separate symbolism for the non-emptiness of "a", then we can claim that we have made the presupposition of modern logic explicit. We shall see whether the improved modern logic can satisfactorily deal with the existential propositions.

(b) Distinction between attributive expression and predicative expression.

Following Rescher¹ we shall use the notation "Ea" as an abbreviation of "a exists". Here "E" is not to be regarded as a predicate expression. Our discussion should not presuppose at the outset that existence is a predicate. It leaves open the question whether existence is a predicate.

¹ "On the logic of existence and denotation", The Philosophical Review, 1959.
"$\exists$" is considered as an attributive-expression. Predicate-expressions may be regarded as species of attributive-expressions. Predicate-expressions are property denoting terms. The terms like "red", "green", "hard" are considered as predicative expressions, because they denote properties. In order to keep the question, whether existence is a property, open we should not presuppose at the outset that it is a property. For the convenience of our discussion we accept the distinction between attributive - and predicative - expression. We shall use Greek capitals "$\Phi$", "$\Psi$", ..... as attributive-variables and Greek lower-case letters "$\phi$", "$\psi$", ..... as predicate-variables. All predicate-expressions are attributive-expressions, ie:

\[ (\phi) (\exists \Phi) (\phi = \Phi), \]

but all attributive-expressions are not predicative-expressions, ie:

\[ (\exists \Phi) (\phi) (\phi \not= \Phi). \]

So if a proposition of the form $\Phi x$ does not entail $(\exists \phi)$ $(\phi x)$, then "$\Phi$" is to be treated as an attributive-expression. If we want to establish that existence is a predicate, then we have to prove that "Ea" entails $(\exists \phi) (\phi a)$.

(c) A distinction between existent and non-existent in some sense or other is to be maintained. Even if this distinction is relative it is possible to maintain this distinction.

When we are talking about actual objects like Tom, John, Fido, we assert existence in some sense and deny existence to
Pegasus or unicorns. But when we are narrating a mythological story we can meaningfully assert the existence of Pegasus and deny the existence of mythological objects which do not occur in that story.

Now according to certain thinkers Pegasus and unicorns are possible objects. According to them if an object is non-existent and not self-contradictory, then it is a possible object. Then the question whether the possible object is subsistent or mental may legitimately be asked, and this will lead us to the metaphysical problems concerning possible objects. Our distinction between existent and non-existent does not treat a non-existent object as a possible object. We require an additional premise in order to prove that the non-existent objects are possible objects. Since our aim is to have the least metaphysical commitment, the non-existent is not to be considered as a possible object.

II Discussion concerning the proposition "everything exists" ie: (x) Ex:

Rescher\(^1\) has advanced two arguments against the view which asserts that everything exists, ie: (x) Ex. The considerations of modal logic and the theory of counterfactual statements lead to the rejection of (x) Ex. According to him the proposition (x) (◊ Ex ⊃ Ex) is not tenable, because there are possible objects. The unicorn or Pegasus is considered as a possible object. To Rescher if an object is

\(^1\) Ibid.
non-existent and free from self-contradiction, then it is a possible object. Instead of talking in terms of existent and non-existent, he talks in terms of existent (actual) and possible. In order to avoid the metaphysical commitments associated with the term "possible", we prefer to use the term "non-existent". In our view existent and non-existent objects are contradictories. When we say there is no elephant in this room, we are denying the existence of an elephant in this room. We are not asserting the possible elephant in this room, although possible elephant is a non-existent object.

We require a further premise in order to affirm that something is possible. In any case, whether we accept non-existent or possible object, we cannot accept \((\Box \exists x \supset \Box \Box \exists x)\). To deny \((\Box \exists x \supset \Box \Box \exists x)\) is to accept \(\neg(\exists x) (\Box \exists x \supset \exists x)\) which is equivalent to \((\exists x) (\Box \exists x \supset \exists x)\). The latter entails \((\exists x) \neg \exists x\) which contradicts \((\exists x) \exists x\).

Rescher's second objection to the assertion of \((\exists x) \exists x\) is based on the considerations of true counterfactual existential statements. Rescher's example "If Hamlet had actually existed, he could not have been a more complex personality than the protagonist of Shakespeare's plays" is an example of true existential counterfactual statement. Here the antecedent has an existential proposition of the form \(\exists x \supset \neg \exists x\). If the entire counterfactual is abbreviated by the expression \(S\), then it follows from the nature of counterfactual that \((i) S \supset \neg \exists x\). From \((i)\) we get \((ii) \exists x \supset \neg S\). If we admit \((\exists x) \exists x\), then \((iii) (\exists x) \exists x \supset \neg S\). Ea is valid in every non-empty domain. From \((iii)\) and \((ii)\) we get \((iv) (\exists x) \exists x \supset \neg S\). This
shows that the assertion of \((x) \text{Ex}\) excludes all true existential counterfactual statements.

The whole program of Rescher is based on a system of logic in which non-existent individuals like "Hamlet" come within the range of the individual variables "x", "y", etc. To presuppose this type of logic at the outset is to presuppose without any argument the existence of possible objects like Hamlet or Pegasus. If we restrict the range of the value of the variables \(x, y, \text{etc.}\) to existing objects, then \((x) \text{Ex}\) denies existence to Pegasus or Hamlet. The assertion of \((x) \text{Ex}\) is not to be considered as a defect provided we can substitute only the name of the actual objects in place of the variable "x". According to Russellian logic only logically proper names are to be substituted for the variable "x", "y" etc. By definition a logically proper name has denotation. The meaning of a logically proper name lies in denoting an object. According to Russell\(^1\) the expression "a exists", where "a" is a logically proper name, is meaningless. If "a exists" were meaningful, then "a" can be meaningful even if "a" does not have denotation. Since its meaning lies in denoting, it cannot be meaningful if "a" is vacuous. In "a exists", "a" is treated as vacuous and "exists" is predicated of it. Since "a" in this expression is meaningless, the whole expression "a exists" is meaningless.

Quine has also pleaded for the view that "everything

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exists", i.e. (x) Ex, is a theorem. He says, "To say that something does not exist, or that there is something which is not, is clearly a contradiction in terms; hence "(x) (x exists)" must be true". If the terms like "Pegasus", "God" are treated as primitive names, then we can deduce false conclusions like "Pegasus exists", "God exists" from the true premise "(x) (x exists)". Since "Pegasus" and "God" are not considered as primitive names or logically proper names, we cannot deduce "Pegasus exists" or "God exists" from "(x) (x exists)". For this reason we can put only the logical proper names in place of the variable "y" occurring in the rule of the universal instantiation, viz. (x) Fx ⊃ Fy. Similarly we can infer (∃x) Fx from Fy provided "y" is a logically proper name.

From the above discussion it follows that we have two systems of logic. In one system we can substitute any noun-expression for the variable "x" occurring in the formula (x) Ex, while in the other system, we can substitute only logically proper names for "x". The former system rejects the inference Fy from (x) Fx, while the latter accepts this inference as valid. The former system of logic is called free logic, because we can substitute any noun-expression for the variables, while the latter system of logic is called restricted logic, because only logically proper names or non-empty names are substituted for the variables. In course of our discussion we shall point out various logical implications of these two systems of logic.
The restricted logic is based on the existence of logically proper name, because the expansion of \( (x) Fx \) into \( Fa \) \( Fb \), and that of \( (\exists x) Fx \) into \( FaV Fb \), if there are only two objects in our domain, demand that "a" and "b" should be non-empty. The meaning of "a" and "b" would lie in denoting actual objects.

But it is questionable whether there are any logically proper names whose meaning lies in denoting objects. This view makes a confusion between the meaning of a name and its bearer. What corresponds to a name is its bearer, not its meaning. It is always meaningful to ask, does Mr. X exist? When Mr. X dies, the bearer of the name dies. It is absurd to say the meaning of the name dies. If the bearer of the name and the meaning of the name are identical, then the name has no meaning when the bearer goes out of existence. Since the expression "Mr. X no longer exists" is perfectly meaningful, we cannot identify the bearer of a name with its meaning.

Moreover, if we admit logically proper names as indispensable for the expansion of universal and existential quantifiers, then logic becomes dependent on empirical considerations. The application of the rule of universal instantiation and that of existential generalization would depend on factual or empirical considerations. But if we want to keep logic independent of any factual considerations and if by analytic truths we mean true in all domains including empty domains, then we have to reject restricted logic in favor of a free logic.
III Definitions of Existence:

Now let us discuss certain proposed definitions of existence. We shall first of all consider Rescher's ground for rejecting these definitions. Then we shall consider whether Rescher is justified in rejecting these definitions.

(i) Existence may be defined as the property of being identical with itself.

\[ E \overset{\text{Def.}}{=} (\forall x) \ (x = x) \]

Since in quantificational logic \((x) \ (x = x)\) is a theorem, we can assert \((x) \ Ex\).

According to Rescher this definition is not tenable, because it leads to the denial of possible objects and the true existential counterfactual statements.

In free logic also this definition leads to the assertion of everything exists, since \((x) \ (x = x)\) is also a theorem of free logic. If we substitute an empty term in place of "x", then we assert that it is non-empty. Thus either we have to assert that the substituted term is non-empty or we have to face a contradiction if we claim that the substituted term is empty.

(ii) Existence is the property of being identical with something or other.

\[ E \overset{\text{Def.}}{=} (\forall x) \ (\exists y) \ (y = x) \]

This definition is also open to the same criticism. In the quantificational logic for non-empty domain,
(x) (∃y) (x = y) is a theorem. It can be deduced from (x) (x = x) in the following manner:

1. (x) (x = x)
2. a = a  a spec^l
3. (∃y) (a = y)  2, E.g.
4. k = k  .C. (∃y) (k = y), 2 - 3 C.P. (arb.)
5. k = k  1, U.I. (arb.)
6. (∃y) (k = y)  4,5, M.P.
7. (x) (∃y) (x = y)  6, U.G.

Since (x) (∃y) (x = y) is a theorem, this definition leads to the consequence (x) Ex.

In free logic (x) (∃y) (x = y) is not a theorem, because the deduction of (x) (∃y) (x = y) from (x) (x = x) presupposes that the domain is non-empty. In free logic line (4) is not a theorem. Since free logic does not make this presupposition, we cannot get (x) Ex by applying this definition. Rescher's criticism that this definition leads to the assertion of (x) Ex is valid only in restricted logic.

(iii) Existence is defined as having some property.

E  df.  (∀x) (∃φ) (φx).

According to this definition "x exists" means (x has some property", i.e: (∃φ) (φx). Rescher did not discuss this definition separately because it comes under the first

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1. I follow the rules of J. L. Mackie, Analysis, 1959.
one. Since everything is identical with itself, it is obvious that everything has some property. Hence this definition implies that everything exists, ie: \((x) \text{Ex}\). In the free logic also this definition entails the consequence "everything exists".

Moreover, if we accept this definition, then we can deduce "x exists" from propositions of the form "x is material or not-material". Since "Ex" follows from Fx as well as from \(\sim\neg Fx\), it is obvious that it follows from \(Fx \lor \sim Fx\).

(iv) In order to avoid this consequence Leonard\(^1\) says that "existence is not implied by necessary, or analytic, predicate. It is, rather, a consequence of contingent truths".

According to his definition existence is the attribute of having a contingent property.

\[
E \overset{\text{def}}{=} (\forall x) (\exists \varphi)(\varphi x. \varphi \sim \varphi x). 
\]

In this context we should remember that Leonard is not giving here a definition of general existence. This definition is applicable to singular existence only. In order to avoid the consequence that everything exists, Leonard suggests certain modifications of modern logic. Let us see how this definition leads to the consequence that everything exists in modern logic.

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(1) $\emptyset \rightarrow x \cdot \emptyset \rightarrow x$
(2) $G \cdot \emptyset \rightarrow x \cdot \emptyset \rightarrow x$ (3) $\emptyset \rightarrow x$
(4) $\emptyset \rightarrow G \cdot x \cdot \emptyset \cdot (\exists \Phi)(\Phi \cdot \emptyset \rightarrow \Phi x)$
(5) $\emptyset \rightarrow G \cdot x \cdot (\exists \Phi)(\Phi \cdot \emptyset \rightarrow \Phi x)$
(6) $G \cdot x \cdot (\exists \Phi)(\Phi \cdot \emptyset \rightarrow \Phi x)$
(7) $G \cdot x \cdot \exists \cdot E \cdot x$
(8) $G' \cdot \emptyset \rightarrow G' \cdot \emptyset \cdot (\exists \Phi)(\Phi \cdot \emptyset \rightarrow \Phi x)$

[In 8 $G'$ is a complement of $G$. So $G' \cdot x$ is the same as $\sim G \cdot x$]

(9) $\sim G \cdot x \cdot \emptyset \cdot (\exists \Phi)(\Phi \cdot \emptyset \rightarrow \Phi x)$
(10) $\sim G \cdot x \cdot \emptyset \cdot E \cdot x$
(11) $\emptyset \cdot G \cdot x \cdot \sim \cdot G \cdot x \cdot \exists \cdot E \cdot x$
(12) $\emptyset \cdot G \cdot x \cdot \exists \cdot \sim \cdot G \cdot x \cdot \exists \cdot E \cdot x$
(13) $\emptyset \cdot G \cdot x$
(14) $\sim G \cdot x \cdot \exists \cdot E \cdot x$
(15) $G \cdot x \cdot V \sim \cdot G \cdot x \cdot \exists \cdot E \cdot x$
(16) $G \cdot x \cdot V \sim \cdot G x$
(17) $E \cdot x$

This deduction shows that even if we accept Leonard's definition, we can still deduce that anything whatever exists. In order to avoid this consequence Leonard proposes the following law:

$$E! \varphi = \sim E! \varphi'$$

"That is, of any predicate and its complement, one and only one designates a property". He claims that this view

1. Ibid., pp. 58-59.
cuts across both extreme realism and extreme nominalism, since it does not admit a property corresponding to any predicate and since it admits that of any predicate and its complement one and only one designates a property. Hence from the thesis $E! \varphi = \sim E! \varphi'$ it follows that either (2) or (8) in the previous proof is to be rejected. Thus he stops the deduction that everything exists.

Now let us consider some of the objections raised against the view of Leonard. Rescher\(^1\) has criticised Leonard's general as well as singular definition of existence.

So far as Leonard's singular existence is concerned, Rescher points out that the denial of it is applicable to mathematical entities. I.e. $\sim (\exists \varphi) (\varphi_x. \Diamond \sim \varphi x)$ or equivalently, $(\varphi) (\varphi x \Rightarrow \Box \varphi x)$ is applicable to any mathematical object. It asserts that all the properties of $x$ are necessary. For example, the number 5 has all its properties necessarily. Hence on Leonard's definition mathematical objects do not have existence. Since it is a debatable point whether mathematical objects do or do not exist and since Leonard's definition denies their existence without giving any argument, it is to be rejected on that basis.\(^2\)

\hline
1. Rescher, Definition of "existence", Philosophical Studies, 1957.

2. Leonard has defined general existence in the following way:

$$\land \varphi . \ (\exists x) \varphi x$$
According to this definition the \( \Phi \)'s exist if and only if there is an object \( x \) which has the property \( \Phi \). This definition of general existence is applicable to properties only. Rescher points out that "such properties as 'being wiser than Socrates', or 'being a unicorn', cannot be denied existence qua properties (i.e. general existence), even though no individual object does (or is known to) exhibit them". (Definition of "existence", Philosophical Studies, 1957, p. 66). According to Rescher a property has general existence if it is capable of being exemplified, not that it is actually exemplified. So his definition runs thus:

\[
(\forall \Phi). \quad \Box (\exists x) \Phi x.
\]

I.e. The property \( \Phi \) has general existence if it is possible that there is an object \( x \) which has the property \( \Phi \).

If we accept this definition of Rescher, then we have to admit that the property \( \Phi \) exists (or has general existence) even if there is no instance of \( \Phi \). This leads to Platonism. We are bound to admit the existence of any non-contradictory property. A logical theory should avoid this type of ontological commitment. Since Rescher's theory is committed to this type of ontology, it is not acceptable to us.

Moreover, Rescher has confused existence with possibility. To say that \( \Phi \) is a possible property is not the same thing as saying \( \Phi \) exists. If we assert that \( \Phi \) exists even if there is no instance of \( \Phi \), then we assign singular existence to it. Since Leonard is talking about the general existence of a property, the criticism of Rescher from the standpoint of singular existence of that property is wide of the mark.

Furthermore, Rescher's remark that his view is in "accord with Leonard's own principle not to permit questions of logic to 'wait on the systematic exploration of specific matters of fact'" (Ibid.) is misleading. Leonard has made this comment in the context whether logic should be independent of empirical consideration or not. He has criticized restricted logic on the ground that it presupposes logically proper names for formulas like \( \Phi y \supset (\exists x) \Phi x \). According to his thesis logic should not wait on the exploration of specific matters of fact.

From this view it does not follow that the existence of a property should not wait on specific matters of fact. The fact that a property exists or does not exist cannot be decided by logical considerations. It is an empirical fact that the property red exists and the property unicorn does not exist. From this observation it follows that Rescher's
criticism is completely beside the point and based on the misunderstanding of Leonard's comment about logic.

(v) In order to avoid this objection Rescher has proposed another definition of singular existence.

$$\text{Ex.}^\text{df} \quad (\exists \phi) (\sim \phi x. \ \Diamond (\exists y) \phi y)$$

I.e. "x exists" if and only if there is at least one property which does not characterize it, but it is possible that there is an object which is characterized by this property. This definition does not deny existence to abstract entities. For example, the property of non-being divisible by 8 is the property of number 6, but it is possible that some number is divisible by 8.

This definition has been criticized by Lambert\(^1\) as well as by Rescher\(^2\) himself in his subsequent paper. Both criticisms point out that this definition of singular existence leads to the assertion of (x) Ex.\(^3\)

(vi) In order to avoid the unwanted consequence (x) Ex, Rescher has suggested the following definition of singular existence:

$$\text{Ex}^\text{df} \quad (\exists p) (\exists x. (\exists y) \sim py).$$


3. This will hold good in free logic as well as in restricted logic.
I.e. "x exists" if and only if x has some qualitative property which is not possessed by everything. A qualitative property is "denoted by a predicate which either (1) is a primitive predicate of the language, or (2) is definable in terms of primitive predicates by means of alternation and conjunction (only)".\(^1\) In order to avoid \(\forall x \exists x\), Rescher has restricted his definition by introducing qualitative property. If "P" is a qualitative property, then " \(\sim P\)" is not a qualitative property. Lambert's objection to Rescher's former definition of existence is based on treating both \(\varphi\) and \(\sim \varphi\) as properties.

Now let us consider Rescher's revised definition of existence. For example, "6 exists". According to Rescher's definition this is permissible, because it has the property of being divisible by 3 and there is an object, say 5, which is not divisible by 3. If we admit that the property of being divisible by 3 is a primitive predicate or is definable in terms of conjunction or alternation alone, then it follows that 6 exists. In the same way we can point out that Pegasus exists. It only excludes self-contradictory objects and those objects to which non-qualitative property has been ascribed. This definition ascribes existence to John or Fido in the same sense in which it ascribes it to Pegasus or number 6. But there is a fundamental difference between a mythological or mathematical entity and concrete objects of this world.

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\(^1\) Ibid., Footnote 15.
This definition fails to make any difference between the two.

Moreover, the concept of qualitative property is relative to the rules of formation of any specific language. In our language "red" is a positive term like F and "not-red" is a negative term like \( \sim F \) definable in terms of negation. But in another language "not-red" may be treated as positive term and that which is other than not-red may be regarded as a negative term.\(^1\)

Now let us consider Rescher's criticism of some of the above-mentioned definitions.

In order to show that certain proposed definitions of existence entail the consequence (x) Ex or deny true existential counterfactual statements, Rescher has admitted a system of free logic in which non-existent individuals like "Hamlet" come within the range of the individual variables "x", "y" etc. Moreover, he has admitted Pegasus or unicorn as a possible object. If we restrict the range of the value of the variables to existing objects, then (x) Ex denies existence to Pegasus or Hamlet. The assertion of (x) Ex is not to be considered as a defect provided we can substitute only the name of the actual objects in place of the variable "x". So Rescher's objection to the first and the second definition is not tenable.

Against Leonard's definition his objection is that it

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1. For a detailed discussion see Ayer's article, "Negation", Philosophical Essays.
denies existence to abstract entities. This objection of Rescher is based on the assimilation of the existence of John or Fido with that of number 5. Since Leonard's definition is applicable to John or Fido and it is not applicable to the number 5, Rescher thinks that the existence of mathematical object is denied. Even the Platonists do not admit that mathematical objects exist in the same sense as concrete objects like Tom or John exists. From the fact that Leonard's definition of existence is not applicable to mathematical entities it simply follows that they do not exist in the same way as John and Fido do. But they might exist in some other way or some other definition of existence may be applicable to them. From Leonard's definition we cannot infer that the existence of mathematical object is denied in every sense.

Moreover, here also Rescher considers mathematical entities as values of the variables "x", "y" etc. As a result, John or Fido who is a value of the variable cannot be distinguished from the number 5.

From the criticisms of Rescher's objection one should not conclude that we are admitting those definitions. Our main objection to the first two definitions is that they define existence in terms of analytic propositions. One involves the proposition \( x = x \) and the other \( \exists y (x = y) \). Both of them are demonstrable as logical truths in restricted logic. If we define existence in terms of logical truths, then we deny the fundamental distinction between analytic and synthetic propositions. Moreover, we reduce the synthetic (i.e.: positive existential) propositions to analytic
propositions. A follower of Quine might argue that this distinction between analytic and synthetic is not tenable. Whether this distinction is tenable or not is a separate question. What the above definitions are doing is not denying this distinction, but reducing existential propositions, i.e., synthetic propositions to analytic propositions. The propositions of the form "a exists" are not analytic either in restricted or in free logic. If "a" is a logically proper name, then "a exists" is meaningless in restricted logic, because according to the presupposition of this system the meaning of "a" lies in denoting. If "a exists" is meaningful, then we admit that "a" is meaningful even if it does not denote. In free logic the propositions of the form "a exists" is synthetic. According to free logic all logical truths are valid in all domains including empty domain. Since "a exists" is not valid in empty domain, it cannot be treated as a logical truth. Hence all existential propositions are to be taken as synthetic. Since the first and the second definitions ignore this point, they are to be rejected on that ground.

So far as Leonard's definition is concerned, it is free from this objection. It restricts existence to having contingent property. The main drawback of his view is that it fails to make any distinction between "John exists" uttered in ordinary discourse and "Pegasus exists" uttered in the context of narrating a mythological story. From his definition we can equally get (\exists \phi) (\phi \text{ John} \land \neg \phi \text{ John}) as well as (\exists \phi) (\phi \text{ Pegasus} \land \neg \phi \text{ Pegasus}). If someone wants to deny the
the existence of Pegasus, he can point out that Pegasus cannot be substituted in place of the variable "x" occurring in the definition \( (\exists \varphi ) (\varphi \ x. \sigma \varphi x) \). But Leonard cannot argue in this way, because he has admitted that any name which purports to designate something can be used as substituent. Those who argue in this way will presuppose that only logically proper names can be used in such contexts. But the question, which one is a logically proper name and which one is not, is an empirical question. For this reason we have pleaded for a free logic. Moreover, Leonard's definition is based on a dubious assumption, viz. \( E!\varphi \equiv \sim E!\varphi' \) In our positive thesis we shall show the need for a multi-theory of existence.

IV Lesniewski's definition of existence:

So far we have confined our discussion to the examination of certain definitions of existence discussed by Rescher and Leonard. We have still one more definition to be discussed. Since this definition presupposes a separate system of logic, we intend to discuss it in a separate section. This definition is suggested by Lesniewski.

Lesniewski's system makes a difference between existential or particular quantifier and the concept of existence. The symbol "(∃...)" does not signify existence, but "particularity" or "some". The propositions like "some are uni-

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corns" are symbolized by the expressions of the form "(∃x) (Ux)". So by the sign "(∃...)") we cannot mean existence. It simply means "some". In the usual quantificational logic the sign "(∃...)") signifies existence. The expressions "some" and "exists" are symbolized in the same manner. But in his system they have different meanings. His system defines the concept of singular existence in terms of two other concepts. The definition of general existence involves the primitive sign of inclusion in addition to the framework of quantificational logic. Lejewski claims that the approach of Lesniewski overcomes certain difficulties involved in the quantificational logic. He says, "The meaning of 'exist(s)' can best be determined on the basis of the logic of noun expressions constructed as a deductive system by Lesniewski... and called by him 'Ontology'."¹ "The original system of Lesniewski's Ontology is based on singular inclusion (a is b or in symbols a ∈ b) as the only primitive function".² But Lejewski prefers to give an exposition of Lesniewski's system in terms of ordinary inclusion on the ground that it is more intuitively evident to English speaking readers. So the symbol "a ⊆ b" means "all a is b" or "all a's are b's". The functor of inclusion is a proposition-forming functor which takes two arguments. At least one of these arguments will be noun-expression. If in "a ⊆ b" we substitute constant noun-

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1. Ibid., p. 115.
2. Ibid., p. 115.
expression for the variables "a" and "b", then the result of the substitution will be true if and only if everything named, or designated, by the noun-expression substituted for "a" is also named by the noun-expression substituted for "b". From the nature of the inclusion it follows that the following statements are true:

\[
\begin{align*}
\text{man} & \subset \text{animal} \\
\text{man} & \subset \text{man} \\
\text{Socrates} & \subset \text{man} \\
\text{Pegasus} & \subset \text{animal} \\
\text{Pegasus} & \subset \text{Socrates} \\
\text{Pegasus} & \subset \text{Pegasus}
\end{align*}
\]

Since nothing is designated by Pegasus, the last three are vacuously true. So from the consideration of the last three we get the general rule

\[(a) \ (\text{Pegasus} \subset a) \quad (1)\]

Since Pegasus does not designate anything we can put the symbol for null class in place of Pegasus.

\[(a) \ (\Lambda \subset a) \quad (2)\]

In order to define "exist" Lejewski introduces three definitions which are stated in the form of equivalences.

\[(a) \ (\text{ex}(a) \equiv (\exists b) \ (\sim (a \subset b))) \quad (3)\]
\[(a) \ (\text{sol}(a) \equiv (b,c,d) \ (\sim (c \subset d). (b \subset a). (c \subset a). (b \subset c))) \quad (4)\]
\[(a) \ (\text{ob} \ (a) \equiv \text{ex}(a) \cdot \text{sol} \ (a)) \quad (5)\]

Now let us see certain consequences which follow from (2) and the three definitions.

From (3) we get
ex (∃ a) ≡ (∃ a) (¬ (L ⊆ a)) \tag{6}

(2) is equivalent to ¬(∃ a) (¬(L ⊆ a)) \tag{7}

From (6) and (7) we get ¬(ex(L)), \tag{8}

which implies (∃ a) (¬(ex(a))), \tag{9}

which is equivalent to ¬(a) (¬(ex(a))). \tag{10}

From (8) and (5) we get ¬(ob (L)), \tag{11}

which implies (∃ a) (¬(ob (a))), \tag{12}

which is equivalent to ¬(a) (¬(ob (a))). \tag{13}

From (1) we can deduce ¬(∃ a) (¬(Pegasus ⊆ a)). \tag{14}

(14) and (3) implies ¬(ex(Pegasus)). \tag{15}

From (5) and (15) we get ¬(ob (Pegasus)). \tag{16}

(15) and (16) show that the statements "Pegasus exists" and "Pegasus is an individual" are false if "ex (Pegasus)" and "ob (Pegasus)" are interpreted as "Pegasus exists" and "Pegasus is an individual" respectively. This interpretation retains the ordinary view about Pegasus. Moreover, the above deductions also reveal that everything does not exist and everything is not an individual. This is evident from (10) and (13). Again, from (9) and (12) it is also evident that we can get such propositions as "there is an object which does not exist" or "there is an object which is not an individual". By substituting "Pegasus" we can get "Pegasus does not exist" or "Pegasus is not an individual".

Now the question is, what is the difference between "ex" and "ob"? Lejewski explains this difference in terms of the meaning of (4) which defines "sol". The right-hand side of (4) is true in two cases: if there is no such thing as a or if there is only one a. So "sol(a)" means "there is at
most one a". In accordance with the definition (5) "ob(a)" means "a exists" and "there is at most one a". This is equivalent to saying that there is exactly one a or a is an individual. So it is claimed that Lesniewski's Ontology defines what we call singular existence (ie: individuality) in terms of "ex" (ie: general existence) and "sol" (ie: at most one). Lejewski claims the superiority of Lesniewski's theory over usual theories of quantification on the following grounds:

(a) It allows the rules of universal instantiation and existential generalization without any restriction. In the usual theories of quantification the inference from "(x) (x exists)" to "Pegasus exists" and from "Pegasus does not exist" to "(∃x) (x does not exist)" are objectionable. According to Quine they lead from truths "(x) (x exists)" and "Pegasus does not exist", to falsehoods, "Pegasus exists" and "(∃x) (x does not exist)". The rule of universal instantiation, ie. "(x) (Fx) ⊃ Fy and that of existential generalization ie:

Fy ⊃ (∃x) Fx do not hold for every interpretation of "F" and every substitution for the free variable. If "F" is interpreted as "exists" and "Pegasus" is substituted for "y", then "(x) (Fx) ⊃ Fy" turns out to be false. Similarly, if "F" is interpreted as "does not exist" and "Pegasus" is substituted for "y", then "Fy ⊃ (∃x) (Fx)" turns out to be false. Quine and others have overcome this difficulty by restricting the substitution to non-empty terms. As a result, in order to apply logical laws for instantiation and existential generalization we have to determine whether the terms are empty or not. In this way empirical considerations come into logic. This does not seem to be satisfactory to certain logicians including
Lejewski. In Quine and the usual theories of quantification 
\((x) (Fx)\) is expanded into \(Fa \cdot Fb\), if our universe contains 
only two individuals, and "a" and "b" are names of these indi-
viduals. If "c" does not designate any object it cannot be 
included in the expansion. Similarly, "\((\exists x) (Fx)\)" is ex-
panded into \(Fa \lor Fb\). From "Fa" or from "Fb" we can infer 
"\((\exists x) Fx\)". But we cannot infer "\((\exists x) (x \text{ does not exist})\)" 
from "c does not exist". From the Expansion of the universal 
quantifier we also learn that we cannot infer "c exists" from 
"\((x) (x \text{ exists})\)". So these rules are valid rules of infer-
ence if their use is restricted to non-empty terms.

Lesniewski's use of the quantifier deviates fundamen-
tally from the ordinary use. In his system "\((\exists x) Fx\) can 
be expanded into \(Fa \lor Fb \lor Fc\), where "a" and "b" are non-empty 
and "c" is empty. Similarly, "\((x) Fx\) is expanded into \(Fa \cdot Fb \cdot 
Fc\). So in Quine and allied systems we find restricted 
interpretation of quantifiers, while in the system of 
Lesniewski we find unrestricted interpretation. In the un-
restricted interpretation both the above-mentioned infer-
ences are valid. The inference,

\[(x) (x \text{ exists})\]

\[\therefore \text{Pegasus exists, is valid because the conclusion}\]

is false and the premise which implies any component of the ex-
pansion (in this case a false component) is also false. 
Similarly, the inference,

\[\exists x \text{ (x does not exist), is valid,}\]

because the premise is true and the conclusion which is
implied by any component of its expansion is also true. So in one case both premise and conclusion are false, while in the other case both of them are true. These inferences cannot be allowed as counterexamples to the rules of instantiation and existential generalization. Hence under the unrestricted interpretation the rules \((x) (Fx) \Vdash Fy\) and \(Fy \Vdash (\exists x) (Fx)\) turn out to be true under any substitution. It is free from any empirical consideration.

(b) Secondly, the propositions \((\exists x) (Fx V \sim Fx)\) and \((Fx) \Vdash (\exists x) (Fx)\) are valid under the restricted interpretation if the universe is not empty. So their truth is dependent on there being something in the universe. If they are purely formal, then they should not depend on any empirical consideration. In the unrestricted quantification they are valid even in empty domain. Since \((\exists x) (Fx V \sim Fx)\) is implied by any expansion of the form \(Fa V \sim Fa\), where "a" is empty or non-empty, the truth of \((\exists x) (Fx V \sim Fx)\) does not depend on any empirical consideration. Similarly \((x) Fx \Vdash (\exists x) Fx\) is true, because \((\exists x) Fx\) is implied by any expansion of the form \(Fa\), where "a" is empty or non-empty, and \((x) Fx\) includes \(Fa\) as one of its components in its expansion.

(c) Thirdly, all the results available in the restricted quantification are available in the unrestricted quantification. The laws \((x) (Fx) \Vdash Fy\) and \(Fy \Vdash (\exists x) (Fx)\) of restricted quantification can be formulated in the following manner in the unrestricted quantification.

\[(x) (x \text{ exists } \Vdash Fx) \Vdash Fy\]

\[Fy \Vdash (\exists x) (x \text{ exists } \& Fx).\]
The laws \((\exists x) (Fx \lor \sim Fx)\) and \((x) (Fx) \supset (\exists x) Fx\) take the form:

\[(\exists x) (x \text{ exists. } (Fx \lor \sim Fx))\]

\[(x) (x \text{ exists. } \supset Fx) \supset (\exists x) (x \text{ exists. } Fx).\]

This study shows that the presupposition of restricted quantification can be stated explicitly in the unrestricted quantification. By making a distinction between existential quantifier ie: \((\exists \ldots)\) and existential import of a proposition the logic of unrestricted quantification makes explicit what is implicit in the restricted quantification.

(d) Moreover, Lejewski says, "the unrestricted interpretation in comparison with the restricted one appears to me to be a nearer approximation to ordinary usage. Somehow we do not believe that everything exists and we do not see a contradiction in saying that something does not exist".¹

From the above discussion it follows that Lejewski claims that certain difficulties of quantificational logic can be solved by making a distinction between quantification and existence. According to him the source of the trouble lies in merging quantification with existence.

Now let us consider the view of Lesniewski. He retains the formal characteristic of quantification by using the element common to empty and non-empty terms. According to his view any noun-expression can be used in instantiation

¹ Ibid., p. 114.
and existential generalization. It retains the formal feature at the expense of different uses of existence. The use of the quantifier "(∃x)" is neutral to any discourse. By existential generalization we get (∃x)Fx from propositions like "John exists", "Pegasus exists", or "5 exists". The form "x exists" implies (∃x)Fx, where "x" stands for any noun-expression. If we want to find out the different uses of the term "exists" occurring in "John exists", "Pegasus exists" and "5 exists", this procedure of Lesniewski is of no help. It simply blurs the difference between them by retaining the purely formal feature of logic. His definition of general existence expressed in formula (a)

((ex(a) ≡ (∃b) (~ (a ⊂ b))) cannot account for the use of "exists" occurring in the propositions like "Tom exists", "Pegasus exists" or "5 exists". If "Pegasus" is considered as a null class, then it rules out the existence of Pegasus. Since number 5 is not a member of every class, this definition would assert its existence. But it cannot find out the difference between the propositions "Tom exists" and "5 exists". From the above formula we can get both ex(Tom) ≡ (∃b) (~ (Tom ⊂ b)) and ex(5) ≡ (∃b) (~ (5 ⊂ b)). This definition simply rules out the existence of null class which is treated as a member of every class.

Secondly, Lesniewski's solution is not the only solution to the problems it intends to solve. "During the last decade several quantification theories have been constructed which are free of existence assumptions so far as their
argument constants are concerned". Such theories are developed by Leonard, Hintikka and Hailperin. Leonard replaces the formula $\forall y.\exists x \phi x$ by the formula $\phi y$. $\exists y.\exists x \phi x$. Similarly, the formula $(x) \phi x .\Rightarrow \phi y$ is replaced by the formula $(x) \phi x .\Rightarrow \phi y$.

In his system of logic Leonard permits the use of any name as substituend of the variable. This is not going to do any harm, because the success of existential generalization and universal instantiation depends on the additional proposition that the object designated by the name exists. So he accepts the thesis "to purport to name an existent is to be a substituend of a variable".

Hintikka has developed a system of quantificational logic which uses the quantifier in the same sense as used by the usual theories of quantification and which is free from existential commitment, i.e. the substituends of the variable may be empty. Moreover, all the provable formulas of this system are valid in all domains including empty domains. If analytic means valid in all domains, then the formulas of his system are analytic.

Let us state briefly the system of Hintikka. The rules


of quantification may be stated as follows.¹

(1) Formulae which are tautologically equivalent by the propositional calculus are equivalent provided that they contain occurrences of exactly the same free variables, and so are expressions obtained from them by replacing one or more free individual variables by bound ones.

(2) (a) \( f (y/x) \rightarrow (\exists x)f \)
(2) (b) \( f (a/x) \rightarrow (\exists x)f \)

(3) If \( g \) does not contain \( x \), then \( (\exists x)f \& g \leftrightarrow ((\exists x)f \& g) \)

(4) (a) If \( X \) occurs in \( f \), \( f \rightarrow x = x \)
(4) (b) If \( a \) occurs in \( f \), \( f \rightarrow a = a \)

(5) (a) \( x = y \& f (y/x) \rightarrow f \)
(5) (b) \( x = a \& f (a/x) \rightarrow f \)
(5) (c) \( a = b \& f (b/a) \rightarrow f \)

Here the letters "a", "b" ... refer to individual variables; the letters "x", "y" .... refer to bound individual variables; "f (a/x)" refers to the result of replacing \( x \) everywhere by \( a \) in \( f \).

In the above list of rules, (2) (b) is the rule for existential generalization. If we admit (2) (b), then empty terms cannot be substituted for \( a \) in (2) (b). Herein lies the existential presupposition of the usual quantificational logic. In order to avoid existential commitment Hintikka omitted (2) (b) from his rules of quantification. As a result, we can substitute any name in place of the variable.

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Ibid., pp. 129-30.
The only restriction is that we cannot infer \((\exists x) Fx\) from \(Fa\), where "a" is a name. In the usual quantificational logic this inference is valid because of the presupposition "a exists". The logic of Hintikka avoids this presupposition. Moreover, Hintikka retains all that is provable in the usual quantificational logic. The inference from \(Fa\) to \((\exists x) Fx\) would be valid if we have \((\exists x) (x=a)\) which is Hintikka's symbolization of "a exists". The expression "\((\exists x) (x=a)\)" guarantees that "a" is a non-empty name. By proving the formula \((\exists x) (x=a) \& f (a/x) \rightarrow (\exists x)f\) Hintikka has proved that we can infer \((\exists x) Fx\) from \(Fa\) and \((\exists x) (x=a)\). This theorem has far reaching consequences. One important consequence is that it avoids Russell's theory of description which is necessary in the usual quantification for eliminating ordinary proper names. "In the new system one can rehabilitate each singular term a which one wants to restore to the status of a non-empty term by introducing the contingent premise \((\exists x) (x=a)\) as above. This new system can truly be said to be a logic without existential presuppositions".¹

From the above observation it follows that we have solved all the problems which Lesniewski's Ontology tries to solve without changing the conventional sense of the quantifier.

Moreover, this refutes the charge of Lejewski that the traditional quantificational logic faces difficulties because it has merged existence with quantification. "In Hintikka's

¹. Ibid., p. 135.
system they are willfully merged; yet the system solves the problems giving rise to Lejewski's analysis."\(^1\)

Now it may be asked, how to symbolize propositions of the form "there is something which does not exist" in the system of Hintikka. This type of proposition can be expressed in the system of Lesniewski, because in his system the quantifier "(∃x)" means "there is" and "a exists" is expressed in terms of the proposition "(∃b) (¬(a ⊆ b))". Since there is no special symbol for the non-existential "there is" in the system of Hintikka, it may be said that the proposition "there is something which does not exist" cannot be expressed in his system.

Against this objection it may be pointed out that we can introduce two types of quantifier - one for "there is" and the other for "exists". The quantifier "(∃_1 x)" will signify non-existential "there is" and the quantifier "(∃_2 x)" will signify "exists". The expression "there is something which does not exist" can be symbolized in the following way:

\[(∃_1 x)¬(∃_2 y) \ (x = y).\]

I.e. There is something which is not identical with any existing thing. This is the same as saying "there is something which does not exist". This completes our refutation of Lejewski's claim that the system of Lesniewski is superior to that of usual quantificational logic.

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V  Steps towards a multi-definition of existence.

From the above sections it follows that none of the definitions of existence is satisfactory. Those definitions lead either to analytic truths or blur the distinction between propositions like "Socrates exists", "Pegasus exists", "the number 5 exists". In our above discussion we did not discuss the application of the definition (ii) of Section III in free logic. According to this definition existence is the attribute of being identical with something or other. The symbolic counterpart of "a exists" would be "(∃x) (x = a)."¹ Since the proposition (x) (∃y) (x = y) does not hold good in empty domain, it is not a theorem of free logic. But this definition is applicable to all non-empty domains. If "Socrates", "Pegasus" and "the number 5" are in our domain, then we can assert "(∃x) (x = Socrates)", "(∃x) (x = Pegasus)", "(∃x) (x = 5)". So this definition captures that which is common to different non-empty discourses. If we have discourses about scientific objects, mythological objects and mathematical objects, then this definition is applicable to all of them.

But the main drawback of this definition is that it fails to find out the difference between different discourses. We cannot assert the existence of Socrates, Pegasus and the number 5 in the same sense. In order to make the different uses of existence explicit we require a multi-definition of

¹. Hintikka has used this symbolization.
existence. For each type of discourse we require a separate definition of existence.

(i) For the objects of this empirical world the following definition may be proposed.

$$E_1 \times \frac{\exists \mathcal{T} (\exists S) (\mathcal{T} \vee \mathcal{S})}{}, \text{where "T" and "S" stand for time and space respectively.}$$

This definition marks off the objects of this world from the mythological and mathematical objects. The unicorn or Pegasus or the number 5 does not exist in space or time. Moreover, this definition will assert the existence of mind also, if it is considered as purely temporal. This definition does not ascribe existence to objects which are not in space or time.

(ii) For mathematical objects we can give the following definition:

$$E_2 \times \frac{\exists \mathcal{F}}{\mathcal{F}} (\mathcal{F} \Rightarrow \Box \mathcal{F}).$$

I.e. "x exists" if and only if all the properties of x are necessary. This definition is applicable to any mathematical entity, because all the properties of mathematical objects are necessary. The fact that 6 is divisible by 3 and that it is less than 7 are necessary properties of 6. Whether we are Platonists or Anti-Platonists we have to accept this consequence. So our definition is neutral to any ontological commitment about mathematical objects.

(iii) For mythological objects, or objects in literature we can give the following definition of existence:

$$E_3 \times \frac{\exists \mathcal{M}}{\mathcal{M}} (x \text{ occurs in } \mathcal{M} \text{ and } \square \text{ that } x \text{ might not have occurred in } \mathcal{M}), \text{where "M" stands for mythological or literary discourse.}$$
"Pegasus exists" means there is a mythological discourse in which it occurs and it is possible that it might not have occurred in it. Similarly, "Hamlet exists" means there is a literary discourse in which it occurs and it is possible that it might not have occurred in this discourse. Since this definition does not assert that all the properties of mythological objects or objects in literature are necessary, it clearly demarcates mythological objects or objects in literature from mathematical objects.

(iv) For the theoretical constructs of science the following definition of existence may be proposed:

\[ \exists x \text{ such that } (\exists y) (y \text{ is a scientific discourse and } "x" \text{ has use in } y). \]

For example, "Electron exists" means there is a scientific discourse in which the term "Electron" has use. This definition does not ascribe any ontological status to the theoretical terms like "gravitational potential", "electric field", "\( \psi \) function". These terms have use because they help in the task of prediction and describing phenomena. If these terms cease to perform these functions, then the propositions asserting their existence are treated as false. The proposition "Electron exists" is treated as true, because it serves certain functions. If it fails to serve those functions, it is to be regarded as false in that scientific discourse.

In our discussion of this section we pointed out certain definitions of existence. There are many other definitions depending on the discourse. If there is change in discourse there is change in the nature of objects talked about and
hence there will be a change in the definition of existence also.

Part B     Analysis of the Concept of Existence:

By analysis we replace a vague concept by a more precise concept. An analysis is not a list of the accepted usages of a term. It aims at a rational reconstruction of the analysandum. It provides a conceptual framework in which we can use that term in a more precise and consistent manner. Since there are different uses of the concept of existence, we require an analysis of this concept. Russell's view on existence may be considered as an analysis of this concept. Since Russell's view about existence has laid the foundation of recent discussions on this topic, I intend to discuss it in a separate section. First of all, we shall give a short exposition of his view, and then we shall discuss certain objections to his thesis.

I     Russell's Analysis of the Concept of Existence:

Russell has analyzed the concept of existence in terms of propositional function and the concept of truth. He says, "when we say 'there are men', that means that the propositional function 'x is a man' is sometimes true. When we say 'some men are Greeks', that means that the propositional function 'x is a man and a Greek' is sometimes true."\(^1\)

The above quotation shows that the use of "there are" or

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"some" occurring in the propositions "there are men" and "some men are Greeks" makes no difference, because both the expressions are analyzed in the same way. Similarly, the proposition "Men exist" is analyzed in the form "'x is a man' is sometimes true". In another passage Russell says, "The notion of 'existence' has several forms, ....; but the fundamental form is that which is derived immediately from the notion of 'sometimes true'."1

Now the questions are, what is a propositional function? and what is the meaning of "sometimes true"?

According to Russell a propositional function is an expression which contains at least one undetermined constituent or variable and becomes a proposition when the name of the value is substituted for the variable. The values of the variable "x" occurring in the propositional function "x is a man" are individuals like Socrates, Plato etc. When a name of an individual person, say Socrates, is substituted for the variable we get the proposition "Socrates is a man". This definition of propositional function excludes functions like "the father of x", because when the name of the value of the variable is substituted for the "x", we do not get a proposition.

The expression "sometimes true" predicated of the propositional function asserts that we shall get at least one true proposition when the name of the value is substituted for the

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1. Ibid., p. 164.
variable occurring in the propositional function. When we put "Socrates" in place of "x" in the propositional function "x is a man" we get a true proposition. If we get only false propositions from a propositional function, then that propositional function cannot be treated as "sometimes true". The propositional function as such is neither true nor false. It is true of or false of something. The function "x is a man" is true of Socrates, Plato etc. and false of objects which are not men. This true of or false of is explained in terms of true or false propositions derivable from a propositional function.

The above quotations and many other similar passages in Russell reveal certain points:

(a) Russell is not analyzing all uses of "exist", but only one use which he considers to be fundamental.

(b) In his opinion "exist", "there are", "some" mean the same thing so far as this use of existence is concerned.

(c) In his analysis we require the concept of truth which will be predicated of propositions derivable from propositional functions. I.e. "'x is a man' is sometimes true" implies "Socrates is a man" is true or "Plato is a man" is true, etc.

Now let us consider certain objections to Russell's analysis of existence.

From Russell's equation of "something" with "exists" Shearn¹ tries to point out an absurdity in Russell's

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analysis. He points out that the function "x is feared" yields a true proposition when the name "Mumbo Jumbo" is substituted for the variable x. "The truth of this statement, 'Mumbo Jumbo is feared', entails the truth of 'something is feared' and of what, on Russell's theory, is equivalent: 'something feared exists'. This is paradoxical. For the truth of 'Mumbo Jumbo is feared' does not entail the truth of 'something feared exists'."¹

Shearn's objection amounts to saying that Russell has equated "something" with "exists". But the proposition "something is feared" which follows from "Mumbo Jumbo is feared" does not entail "something feared exists". He says "Russell, however, holds that the two assertions are equivalent."²

Shearn puts forward another similar objection. He says "On Russell's theory, if Allah does not exist, the noun 'Allah' is the abbreviation of a definite description, and a statement such as 'Mahometans are worshippers of Allah' asserts that something with certain properties exists, and hence is false if nothing with those properties exists; .... The statement asserts that Mahometans are worshippers of something they believe to be the author of our being; that there is something which they worship and believe to be the author of our being; it does not assert that there exists anything at all."³ From this he concludes that Russell has

¹. Ibid., p. 125.
². Ibid., p. 125.
confused "to be" and "to exist".

But these objections are wide of the mark. Russell has never confused "to be" and "to exist". He has made distinctions between "is" of predication, "is" of identity and "is" of existence in his numerous writings. Now it may be said that he has made a confusion in the sense that he has identified "something" with "exists" or "is". This charge cannot be levelled against Russell. In one of the above-mentioned passages he says that "the notion of 'existence' has several forms". He claims that he is analyzing only one of the notions of existence which he thinks to be the most fundamental. Now it may be asked why he should consider the notion of existence in the sense in which Socrates exists or Plato exists to be the most fundamental. The being of Pegasus, unicorn or Hamlet is not nothing. They are also something. Hence "something" cannot be equated with "exists".

In one of his famous passages Russell says, "Logic, I should maintain, must no more admit a unicorn than zoology can; for logic is concerned with the real world just as truly as zoology, though with its more abstract and general features. To say that unicorns have an existence in heraldry, or in literature, or in imagination, is a most pitiful and paltry evasion." ¹

This passage clearly shows that Russell is not denying that there are several uses of being. What he wants to assert is that logic is not concerned with the being of imaginary

or mythological objects. The existence he is concerned with is the existence of spatio-temporal objects. Shearn's objection that "something" cannot be equated with "exists" would be valid provided we accept the different uses of "being" or "is". Russell has accepted different senses of "being", but he has dealt with only one use of "being" which he considers to be the most fundamental. In this sense he has equated "exists" with "something". So Shearn's objection to Russell's analysis of existence is wide of the mark.

G. E. Moore\(^1\) has also raised certain objections against Russell's analysis of existence. In one of his objections he tries to show the absurdity of Russell's analysis. He says, "Even if it is true that 'some tame tigers exist' means the same as 'some values of "x is a tame tiger" are true' it does not follow, I think, that we can say that 'exist' means the same as 'is sometimes true', and 'some tame tigers' the same as 'x is a tame tiger': indeed, I think it is clear that we cannot say this: for certainly '"x is a tame tiger" exists' would not mean the same as 'some tame tigers exist'."\(^2\)

The root of this objection lies in interpreting the passages of Russell in its literal sense. It is true that Russell says that "some tame tigers exist" means the same as '"x is a tame tiger' is sometimes true" and "is sometimes true" gives us the fundamental meaning of existence. In one passage he says, "It will be out of this notion of sometimes, which is

\(^1\) Moore, "Is existence a predicate?", Philosophical Papers.

\(^2\) Ibid., p. 123.
the same as the notion of possible that we get the notion of existence."¹ This passage shows that he is not asserting identity between "existence" and "is sometimes true". He is analyzing the concept of existence with the help of "is sometimes true". Analysis is one thing and the assertion of identity is a different thing. Analysans and analysandum may be equivalent, but their meanings may not be identical. The talk about average man may be analyzed in terms of particular men, but they do not mean the same thing if we consider the intensional aspect. Similarly, from the fact that "some tame tigers exist" is equivalent to '"x is a tame tiger' is sometimes true" and from the fact that 'is sometimes true' gives us the meaning of 'existence', we cannot conclude that "some tame tigers exist" should mean the same as '"x is a tame tiger' exists". Moreover, we should try to understand what Russell means when he says that "some tame tigers exist" is equivalent to '"x is a tame tiger' is sometimes true". What he wants to say is that there is at least one value of the variable 'x' such that when its name is substituted for 'x' the propositional function 'x is a tame tiger' yields a true proposition. Understood thus, the objection of Moore loses its force and appears to be silly.

What Russell is doing is trying to explicate one of the uses of "existence" in terms of "some" or "particularity". "Some tame tigers exist" is the same as "somethings are tame tigers" i.e. (∃x) (Tx . Gx). Here "some things" which is the

¹ Russell, Logic and Knowledge, pp. 232-33.
same as "some" takes the place of "exist" occurring in the proposition "some tame tigers exist". Against this view it may be said that the word "are" occurring in "some things are tame tigers" signifies "existence". It is a blend of characterizing tie and assertive tie\(^1\), although in the symbolic representation, i.e. \((\exists x) (T_x . G_x)\), \(\text{existence}\) is signified by the expression "\((\exists x)\)' and characterizing tie by writing "T" and "x" side by side. In reply it may be said that Russell did not consider "are" to be a blend of characterizing tie and assertive tie. If it were so, "something" which is the same as "some" occurring in the statement "something are tame tigers" would be useless. This way of defending Russell's thesis may be counteracted by saying that "something" or "some" merely signifies that the denotation of the subject-term is not taken in its entirety. In fact this is the meaning of some in traditional logic. Against this objection a Russellian might point out that "some" which is the same as "at least one" signifies "particularity". To be particular means to be in space and time, and to be in space and time means to exist. Hence "some" signifies \(\text{existence}\).

Now it may be said that the term "some" may be used in the context of imaginary objects also. If "some" signifies existence, then we should assert the existence of those entities also.

Against this objection we have a two-fold reply. (a)
Russell at the outset excluded the objects like Pegasus, 

\(^1\) To use the terminology of W. E. Johnson.
unicorns, Hamlet from his discussion. He is not at all concerned with the being of these objects. (b) Secondly, we are trying to equate "some" with "particularity" which will derive its meaning from spatio-temporal individuation. Since spatio-temporal individuation is not applicable to entities like Pegasus or unicorns, we can say that the term "some" or "exists" cannot be applied to those entities in the sense in which it is applied to concrete objects.

Moreover, Russell's analysis should be understood in the context of the predicate "true" as it is used in the assertions like "Socrates is a philosopher" is true. From Russell's analysis of existential propositions like "philosophers exist" we get propositions like "Socrates is a philosopher" is true, because "philosophers exist" is equivalent to "x is a philosopher" is sometimes true. Here we find some close similarity between "true" and "exist".

From the above discussion it may be concluded that Russell is explicating one of the fundamental uses of existence and there is a close similarity between this use of existence and the use in the discourse of ordinary concrete things of the world. Most of the objections raised against Russell are either based on some other use of "existence" or follows from the misunderstanding of his view.

Now let us consider the question whether Russell's view explicates the general existence or the singular existence.

From many passages of Russell it is obvious that he is
considering only the general existence. The existential propositions like "there are tame tigers" are considered as general existential propositions. Moreover, on Russell's theory singular existential propositions like "a exists", where "a" is a logically proper name, are not considered as significant. This meaning of a logically proper name lies in denoting a concrete object. If "a exists" is to be treated as meaningful, then "a does not exist" is also to be treated as meaningful according to the significant criterion of negation. In that case we do not consider that the meaning of "a" lies in denoting objects. As a matter of fact, in Russell's view it ceases to be a name; it becomes a descriptive expression. From this observation it may be concluded that singular existence is the presupposition of Russellian logic in the sense that the use of a logically proper name presupposes that its denotatum exists.

II Analysis of the different uses of Existence:

From the discussion of the view of Russell we get some suggestions which can be developed into a theory about different uses of existence. These suggestions are the following:

(a) There are various uses of existence.
(b) There is some relation between existence and truth.

According to our positive thesis there are various uses of existence and each use presupposes a context or discourse. Its meaning depends on it. We are not confining logic to the world of concrete objects as Russell advocates. There is
logic even in narrating a mythological story or in describing the nature of a religion. The language-game of mythology and religion is different from that of scientific discourse. The apparent paradoxical expressions of religion will not be paradoxical if we have an insider's grasp of the form of life. There is logic in each piece of discourse. So logic is neutral to any subject or piece of discourse. We cannot do away with the existence of objects like Pegasus, Hamlet or unicorns by simply saying that they have paltry or evasive existence. They may not exist in space and time, but nonetheless the talk about these entities in certain context is meaningful and true in certain other contexts. According to our positive thesis the meaning or truth of a proposition presupposes a context. The same proposition may be true in one context, but false or meaningless in another context. The proposition "Pegasus exists" is perfectly meaningful and true in the context of narrating a mythological story. Similar is the case with Hamlet or a character in literature. Certain propositions about these entities are true and certain other propositions are false. Similarly, in talking about the gods and the goddesses of religion we claim that certain propositions about them are true and certain other propositions are false. So, instead of saying that there is only one use of existence or one type of object, we should say that there are different uses of existence depending on the different types of object. According to our thesis the type of object is dependent on the total discourse. We cannot simply say that "Pegasus exists" or "God exists", or "John exists". We should rather express
in the following manner:

(1) "John exists" in discourse 1
(2) "Pegasus exists" in discourse 2
(3) "God exists" in discourse 3

The same proposition may be true in one discourse and false or meaningless in another discourse. The distinction between different discourses is a category distinction. Most of the discussions or definitions of existence did not consider this point. As a result, each analysis of existential proposition comes with the analysis.

In discourse (1), (2) and (3) we can make a distinction between singular and general existence. The proposition "Pegasus exists" is a singular existential proposition, while the proposition "unicorns exist" is a general existential proposition. Similarly, "Allah exists" is a singular existential proposition, while "there are gods" is a general existential proposition.

Now let us discuss how truth is related to existence. In Russell "tame tigers exist" means "'x is a tame tiger' is sometimes true". From the latter proposition we get a true proposition of the form "a is a tame tiger", where "a" is a proper name. So ultimately from "tame tigers exist" we get a true proposition of the form "a is a tame tiger". Now the question is when we are allowed to assert a true proposition of the form "a is a tame tiger". By following Tarski's semantic conception of truth we can say that "a is a tame tiger" is true if and only if a is a tame tiger.
This view may be extended to other pieces of discourse. "There are unicorns" will mean "'x is a unicorn' is sometimes true in discourse 2". From the latter we get a proposition of the form "'b is a unicorn' is true in discourse 2", where "b" is a name. "b is a unicorn" is true in discourse 2 if and only if b is a unicorn in discourse 2.

So according to our thesis "φ exists or has general existence" means there are certain true propositions of the form "a is φ" or "b is φ" in some discourse. In this way we can restore the truth of propositions like "there are unicorns", "there are numbers", "there are gods".

Now let us consider singular existential propositions like "John exists", "Pegasus exists" or "Allah exists". "John exists" means "John" denotes something in discourse. 1. "Pegasus exists" mean "Pegasus" denotes something in discourse. 2. Similarly, "Allah exists" means "Allah" denotes something in discourse. 3. The role of specific discourse is very important. The proposition "Pegasus exists" is true in narrating a mythological story, but the same sentence is false in talking about the concrete things of the world. Similarly, "the number 5 exists" is true in mathematical discourse, but meaningless in talking about the things of the world. Difference in discourse implies difference in the nature of the denotata occurring in different discourses. The denotata of mathematical expressions cannot be assimilated with those of scientific discourse or religious discourse. The same thing can be expressed by saying that each discourse is a separate language-game. A particular move in the game derives its
meaning from the rules of that language-game. As in a chess-play the meaning of a dice depends on the rule of that game, similarly, the meaning of the term "the number 5" depends on the role it plays in mathematical game. Instead of a dice if we throw a card in a chess-play, then it becomes ill-formed game. Similarly, if we include the number 5 in describing the things of this room, we make the language-game ill-formed, because the rules of this game are simply inapplicable to the number 5. In discussing an existential proposition we should take into account the language game of which it is an integral part.
CHAPTER II

DESCRIPTION AND EXISTENCE

In the first chapter we discussed different definitions of existence and we concluded with the thesis that there is no one meaning of the term "existence". Now we shall discuss the nature of sentences involving descriptions. This discussion would lead to the question how existence is related to description. This latter question would lead to the question whether there are entities corresponding to the descriptions occurring in propositions like "the present king of France is bald", "the prime number between 5 and 11 exists", "the winged horse captured by Bellerophon is white". In this context we shall discuss whether the meaningfulness of descriptive expressions depends on the existence of the objects to which they refer. Moreover, we shall discuss whether all statements involving descriptions have a presupposition or not, and whether they have the same type of presupposition if all of them do have a presupposition.

Our discussion can be divided into two parts. In the first part we shall discuss the different prevalent theories of description. In this context we shall discuss the theories of Hilbert-Bernays, Frege, Russell, Quine and Hintikka. The theory of Hintikka arises from his criticism of Russell. Our positive thesis will emerge from certain suggestions of Russell, Strawson and Lambert. But in a sense it is independent of all those theories. According to our thesis there is no one analysis of description. Each state-
ment involving description presupposes a context. As a result, the same sentence uttered in two different contexts may have different truth-values: in one context it may be true and in another context it may be false. Moreover, within the same discourse the presupposition of such statements may not be the same. It will vary according to the hearer-speaker situation. This will be discussed in the last section of this chapter. Before developing our positive thesis let us examine some of the main theories of description:

I Criteria for rejecting a theory of description:

If a theory is found to entail any of the following consequences, it is to be rejected on that ground:

(a) The use of a descriptive term must not presuppose that there is an object satisfying that description. That is to say, a theory should not entail \((\exists y) (y = (\forall x) \varphi x)\).

If a theory entails this consequence, then all negative existential propositions involving definite descriptions would be self-contradictory and all positive existential propositions involving definite descriptions would be trivially true. The proposition "the present king of France exists" would be true, because the use of the expression "the present king of France" presupposes that there is a king of France. And the proposition "the present king of France is bald" would entail that there is a king of France. Since the proposition "the present king of France exists" is false, the above consequence is not desirable.

(b) Moreover, we do not want a theory which would entail
\[(\forall x) \varphi x = (\exists x) \varphi x]. \equiv. (\exists y) [\ldots \forall y = (\forall x) (\varphi x)].\]

If we have the definition \( F[(\forall x) \varphi x] \equiv (\exists y) [\ldots \forall y F y] \),
then we can deduce
\([(\forall x) (\varphi x) = (\exists x) (\varphi x)] \equiv (\exists y) [\ldots \forall y = (\forall x) (\varphi x)]\]
if "F" is interpreted as \( (\forall z) (z = (\forall x) (\varphi x)) \). The assertion "the present king of France is the present king of France" does not entail that "there is a king of France". Similarly, "the round-square is the round-square" does not entail that there is a round-square. If the above consequence is deducible from a theory, it is to be rejected on that ground.

(c) Thirdly, we should reject a theory of description which entails the truth of \([[(\forall x) \varphi x] F [(\forall x) \varphi x]] \) given the falsity of \( (\exists y) (y = (\forall x) \varphi x) \). If we do not reject the theory which entails this consequence, then propositions like "the present king of France is bald", "the man in the sun is white" would be true. Since there is no object satisfying the description "the present king of France" or "the man in the sun", the proposition "the present king of France is bald" or "the man in the sun is white" would be true.

(d) Moreover, we should reject a theory of description which entails the consequence \( (\Phi) [\Phi(\forall x) (\Phi x)]. \) If a

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1. The scope notation on the left-hand side of "F" is necessary to indicate that the substitution of "\( \sim F \)" for "F" occurring in \( F[(\forall x) \varphi x] \) would mean \( (\exists x) (\varphi x, (y)) \). \( \sim F x \) instead of \( \sim (\exists x) (\varphi x, (y)) (\varphi y, \sim x = y) \). \( F x \). The latter is equivalent to \( \sim [((\forall x) [\varphi x] F [(\forall x) \varphi x]] \).
theory entails this consequence, then we can deduce \( E(\exists x) \) which asserts that there is only one object. We cannot commit ourselves to this type of ontology on an \textit{a priori} ground. If a metaphysician accepts Substance as the only object, then this type of consequence would be welcome to him.

(e) If a theory of description cannot explicate the ordinary use of the term "the so and so", then it is to be rejected on that ground. The main purpose of different theories is to capture or explicate the meaning of "the so and so" as it occurs in our ordinary usage. The different theories are different proposals for explicating the meaning of "the so and so".

II Different Theories of Description:

Now let us see how far different theories of description satisfy the above requirements.

(A) Hilbert and Bernays.\(^1\)

In the system of Hilbert-Bernays we are allowed to use a description only if it satisfies the uniqueness condition. The system in which they developed the theory of description is a syntactical and not a semantical system. As a result, a formula containing a description cannot be said to be true. The appropriate word for this type of formula would be provable. "The method is quite convenient for practical work with a logico-mathematical system; one uses a description

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\(^1\) Hilbert & Bernays, \textit{Grundlagen der Mathematik}, Vol. 1. A concise English exposition is given in Carnap's \textit{Meaning and Necessity}. 
only after he has proved the uniqueness."¹ So in their
tury we get the proposition \( \exists y (y = (\forall x) \varphi x) \). This
goes against the requirement (a).

Carnap has noticed certain other disadvantages of this
method. He says, "the rules of formation become indefinite,
ie. there is no general procedure for determining whether
any given expression of the form \( \exists x \) \((\ldots x \ldots)\ldots\) is a sentence of the system".² "For systems
also containing factual sentences, the disadvantages would be
still greater, because here the question of whether a given
expression is a sentence or not would, in general, depend
upon the contingency of facts".³

From the above it is evident that this theory does not
explicate our ordinary use of "the so and so". The ordinary
use of "the so and so" does not presuppose that the unique-
ness condition is satisfied. In ordinary use certain sen-
tences involving descriptions are false, while certain other
sentences are true. If we accept the program of Hilbert-
Bernays, then there cannot be any false existential statement
involving description. The proposition of the form "the so
and so exists" would always be true. But this is not the
case with ordinary language.

2. Ibid., p. 34.
3. Ibid., p. 34.
(b) Frege.\textsuperscript{1}

Frege accepted a descriptum for each description. So far as the treatment of uniqueness is concerned his view is the same as that of other logicians. That is to say, "the so and so exists" means there is only one object satisfying the description.

\[ E! (\exists x)\varphi x \equiv (\exists y) (\varphi y \cdot x) (\varphi x \cdot \supset x=y) \].

The crucial problem arises when there is no object satisfying the description. For example, "the present king of France exists". For Frege the rules of language system should be such that every description should have a descriptum. As a matter of fact, he treats descriptions as proper names. Not only so, even the sentences or class-expressions are treated as proper names. According to him each proper name has both sense and nominatum. The term "Socrates" denotes the individual and the thought about Socrates is the sense. The sense is not to be identified with the image of Socrates. It is objective in the sense that it does not depend on our subjective feelings and attitudes. It is something communicable. The nominatum of the class-term is the objective class and the sense is the attribute determining the extension of the class. In the case of a sentence, the sense is the proposition and nominatum is the truth-value. Now the question is, what is the nominatum of a description.

\textsuperscript{1} Ibid., pp. 35-37 & Frege, "On Sense and Nominatum" in Contemporary Readings in Logical Theory, (eds.) Copi & Gould.
when there is no object satisfying the description? Frege considers the empty-class determined by the sense of the description to be the nominatum. That is to say, the nominatum of the unsatisfiable description \((\forall x)\varphi x\) is the empty class \(\hat{x} \varphi x\).

This method has been followed by certain other logicians. Instead of selecting the class of the unsatisfiable description, certain logicians consider certain other entities as the descriptum.

(i) If the individuals of the system are numbers, the number 0 may be considered as the description of every unsatisfiable description.

(ii) Some other logicians have chosen the null class to be the descriptum if \(\wedge\) comes under the values of the variable.

(iii) Carnap discusses the applicability of this method to a language system whose individuals are physical objects or events. He says, "Every individual in such a system, that is, every thing or event, corresponds to a class of space-time points in a system with space-time points as individuals. Therefore, it is possible, although not customary in the ordinary language, to count among the things also the null thing, which corresponds to the null class of space-time points".\(^1\) This null thing can be considered as a part of every thing and this may be taken as the descriptum for all unsatisfiable descriptions of that language.

\(^1\) Carnap, \textit{Meaning and Necessity}, p. 36.
The general definition of Fregean theory has been formulated in the following manner:

\[ F[(\forall x)\phi x] \overset{df}{=} (\exists x) [(\forall x)(\phi y)(\phi y \supset .x = y). \quad Fx]V \]

\[ [\sim(\exists x)(\forall x)(\phi y)(\phi y \supset .x = y). \quad Fx]V, \quad \text{where "a*" is the descriptum for all unsatisfiable descriptions.} \]

This method of Frege has certain advantages. It permits universal specification and existential generalization on any description. The rules \((x) Fx \supset .Fy \quad \text{and} \quad Fy \supset .(\exists x) Fx\) are applicable where "y" is a description because each description has a descriptum. From \((x) (x = x)\), we can infer both \(a = a\) and \((\forall x)(\phi x) = (\forall x)(\phi x)\).

Again, from \(F (\forall x)(\phi x)\), we can infer \((\exists x)(\forall x). Fx)\), whatever \((\forall x)(\phi x)\) may be.

But this method has certain disadvantages. It entails the proposition \((\exists y)(y = (\forall x)(\phi x))\). From \((\forall x)(\phi x) = (\forall x)(\phi x)\) we can infer \((\exists y)(y = (\forall x)(\phi x))\).

If we admit this type of assertion, then we are populating our ontology with very many types of entities. Both possible and impossible objects are included in this type of ontology. A theory of description should not commit us to a particular type of ontology at the outset. The aim of a logical theory of description should be to have the least possible ontological commitment.

Moreover, this definition allows \((\phi) [\phi (\forall x)(\phi x)]\).

Since there is no restriction on the values of the variable
φ, we can deduce $E[(\forall x)E x]$ which asserts that there is exactly one object. This goes against the requirement (d).

Furthermore, this definition of description fails to explicate the ordinary usage of the definite description. In our ordinary language we do not presuppose a descriptum for each unsatisfiable description. The meaning of a description does not depend on having a descriptum. Moreover, the sentences like "the round-square exists" is considered as false, because there is no round-square. We do not even admit the empty-class round-square as a denotatum of the round-square. In Frege we can assert "there is something which is identical with the round-square" from "the round-square is the round-square", while in ordinary language we do not claim this type of assertion from "the round-square is the round-square". So far as artificial language is concerned, Frege's method might have some utility, but it fails miserably in ordinary language.

(c) Russell:

Russell's theory of description has had phenomenal influence. Logical atomism and linguistic philosophy to a great extent are based on it. It is considered as the paradigm of analysis. Since his theory has raised many objections and counter-objections, it requires special consideration.

In order to get rid of Meinongian and Fregean ontology, Russell has propounded his theory of description. According
to Meinong the meaning of a descriptive expression depends on the nominatum. Like Frege, Meinong also assimilates descriptive expressions to proper names. As a proper name is meaningless if there is no object denoted by it, so a descriptive expression is meaningless if there is no object described by it. Let us consider the following pairs of sentences in order to make his argument evident.

1  (a) John is black-haired.
1  (b) John is not black-haired.
2  (a) The author of Waverley exists.
2  (b) The winged horse of Bellerophon does not exist.

1(a) and 1(b) would be meaningless if there is no object denoted by the name "John". Even the negative sentence "John is not black-haired" says something about John. Similarly, it is claimed that 2(a) says something about the author of Waverley. In 2(b) we deny the existence of the winged horse of Bellerophon. If we say that the subject-term asserts the existence and the predicate-term denies the existence, then we are involved in a contradiction. In order to avoid the contradiction it is said that the winged horse of Bellerophon subsists. It subsists as the bearer of the property of non-existence. Similarly, the proposition "the round-square does not exist" presupposes the being of the round-square. The being of an object is affected neither by its existence or non-existence. The pure object is beyond existence or non-existence.

In order to avoid this type of ontology Russell has given the meaning of a descriptive expression in use. He did
not define a descriptive expression in isolation. He has defined the proposition in which a descriptive expression occurs. The phrase "a so and so" is an indefinite description, while the phrase "the so and so" is a definite description. A definite description is to be distinguished from a name. A name is a simple symbol. Its meaning lies in denoting a particular object. "A 'simple' symbol is one which has no parts that are symbols. Thus 'Scott' is a simple symbol, because, though it has parts (namely, separate letters), these parts are not symbols." ¹ "The author of Waverley" is not a simple symbol, because the parts of it are symbols. Names are unanalysable, while a definite description is analysable. In the proposition "Scott is a man", the term "Scott" is unanalysable, while the expression "the author of Waverley" occurring in the proposition "the author of Waverley is a man" is analysable. The proposition "the author of Waverley is a man" is analysed out into the following propositions:

(a) At least one person wrote Waverley.
(b) At most one person wrote Waverley.
(c) Whoever wrote Waverley is a man.

In symbol, the above propositions stand thus:

(a₁) \((\exists x) (A x \cdot w).\)
(b₁) \((x) (y) (Axw. Ayw \cdot \implies x = y).\)
(c₁) \((x) (A xw \cdot \implies Mx).\)

¹ Russell, _Introduction to Mathematical Philosophy_, p. 173.
The above analysis reveals the following points:

(i) The expression "the author of Waverley" in the proposition "the author of Waverley is a man" is not a genuine subject-term, because it is analyzed out in the analysans. In any of the above sentences we do not find "the author of Waverley".

(ii) What appears in the analysans is "author of Waverley" as a predicate expression. This shows that the logical form of the analysandum is deceptive. In an ideal language the subject-term cannot be analyzed or treated as a predicate-term.

(iii) Moreover, the above analysis reveals that the proposition "the author of Waverley is a man" is not a simple proposition; it is a complex proposition. From the doctrine of Russell's logical atomism it follows that a simple proposition contains at least one constituent-term and a component-term. A constituent-term designates a particular referred to by a logically proper name. A component-term refers to a relation or a quality. Since there is no constituent-term in the proposition "the author of Waverley is a man", it cannot be regarded as a simple proposition.

According to Russell a symbol is incomplete if it can be analyzed out. A logically proper name is a complete symbol, because it cannot be analyzed out. That which is denoted by an incomplete symbol is a logical construction. Since incomplete symbols are eliminable, they do not denote any object. Russell sometimes uses the term "logical fiction" for the denotatum of an incomplete symbol. According to him a class is a logical fiction, because a class-term is eliminable. This doctrine has been elaborated in his Logical
Atomism.

The general form or definition of description in context has been formulated in the following manner:
F [(\exists x)\varphi(x)] \equiv (\exists y) [(x)(\varphi(x) \equiv (x = y))]. Fy].

If we compare the formulation of Russell with those of Hilbert-Bernays and Frege, then we notice the following points:
(a) In Russell we can use a definite description without proving its uniqueness. If there is no unique object satisfying the description, the proposition in which the definite description occurs becomes false. If there is no author of Waverley or more than one person wrote Waverley, the proposition "the author of Waverley is a man" becomes false. In Hilbert-Bernays we cannot use a definite description unless we prove the uniqueness condition. In this respect Russell's definition is superior to Hilbert-Bernays'.
(b) In Frege the rules of universal instantiation and existential generalization are applicable to descriptions, but in Russell these rules are applicable to names only. In order to apply these rules we have to be sure that there are objects corresponding to terms on which these rules are applied. Since we cannot get this type of guarantee from a definite description, we cannot apply these rules in the context of definite description.

The fact that names and definite descriptions are so different has been emphasized by Russell in various passages. "A proposition containing a description is not identical with what that proposition becomes when a name is substituted,
even if the name names the same object as the description describes.\(^1\) By substituting "Scott" for "the author of Waverley" occurring in the proposition "Scott is the author of Waverley" we get "Scott is Scott". The proposition "Scott is Scott" is a tautology, while the proposition "Scott is the author of Waverley" is a fact of history. The former is analytic and the latter is synthetic.

Again, the proposition "Scott is Sir Walter" is different from that of "Scott is the author of Waverley." If the proposition "Scott is Sir Walter" means the person named "Scott" is the person named "Sir Walter", then these two names are used descriptively and as a result, this proposition becomes a synthetic assertion. Its truth will depend on the fact of there being a person called by these two names. But if the names "Scott" and "Sir Walter" are used as logically proper names, then it is not different from the trivial proposition "Scott is Scott". This shows that names are totally different from a description.

Now let us see how far Russell's definition satisfies our requirements.

Russell's definition does not entail the consequence \((\exists y) (y = (\forall x) \varphi x)\). The use of a description does not depend on the existence of an object satisfying the description. Only the truth of it depends on the existence of an object satisfying the description.

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Russell's definition does not fulfill our second requirement. In Russell $[(\forall x)\phi x = (\exists x)\phi x]$ is equivalent to $[(\exists y) (\phi y \cdot (x) (\phi x \supset x = y)) \cdot y = (\forall x)\phi x]$. Intuitively, the former seems to be trivial, while the latter has existential import.

As far as the third condition is concerned Russell's theory fulfills this requirement. The existence of a unique object satisfying the description is the only condition for the truth of an existential sentence involving description. "The author of Waverley exists" is true if and only if there is exactly one object satisfying the description. The proposition "the author of Waverley is a man" is true if and only if there is exactly one object which satisfies the description and which has the property humanity. If there is no object satisfying the description "the author of Waverley", then we cannot assert truly either "the author of Waverley exists" or "the author of Waverley is scotch".

It may be said that Russell's theory does not satisfy the fourth requirement. That is to say, it asserts $\phi$ $[(\forall x)\phi x]$, because in Principia $E! (\forall x)\phi x \equiv \phi (\forall x)\phi x$ is a theorem. If the universe is non-empty, we can have at least one proposition of the form $E! (\forall x)\phi x$. From $E! (\forall x)\phi x \equiv \phi (\forall x)\phi x$ and $E! (\exists x)\phi x$ we can deduce $\phi (\forall x)\phi x$. From $\phi (\forall x)\phi x$ we can get $E(\exists x)Ex$. Thus it can be claimed that Russell's theory leads to the absurd result that there is exactly one object.

But this objection is invalid. In Russell the variable
"ϕ" cannot be instantiated by existence. Since existence is not a property or attribute, we cannot deduce the proposition of the form E(∀x)(Ex). So in our terminology we should write \([E! (\forall x) (\varphi x) \equiv (\forall x) \varphi x]\) instead of \([E! (\forall x) \varphi x \equiv (\forall x) \varphi x]\), where "ϕ" is a property-denoting term which excludes existence and "ϕ" is an attribute-denoting term. In the sequel we shall discuss whether \([E! (\forall x) \varphi x \equiv (\forall x) \varphi x]\) is acceptable or not.

Still we have to discuss three problems which are suggested by Russell's theory of description.

(1) How far Russell's theory explicates the ordinary notion of description. We shall take up this problem after introducing Quine's view of description which is an adaptation of Russell's theory of description. In this context we shall examine the criticisms of Strawson raised against Russell and Quine.

(2) What would be the nature of a theory of description which asserts \((\forall x) \varphi x \equiv (\forall x) \varphi x\) without implying \(E! (\forall x) \varphi x)\)?

(3) How to maintain that the assertion of \(\varphi(\forall x) \varphi x\) does not involve any empirical or factual proposition.

The latter two problems will be discussed in connection with the theories of Hintikka and Lambert.

Now let us discuss Quine's theory of description. According to Russell there is a fundamental distinction between logically proper names and descriptions. A logically proper name is not reducible to a description and a description
is not reducible to a proper name. According to Quine all proper names can be transformed into descriptions. So far as proper names like "Socrates" or "Pegasus" are concerned there is general agreement between Russell and Quine that they are reducible to a set of descriptions. The term "Socrates" is nothing but an abbreviated description of the form "the teacher of Plato" or "the Greek philosopher who drank hemlock".

But how to eliminate proper names like "John", "this" or "that"? Quine suggests a general method of reducing logically proper names to descriptions. The sentence "this is a man" can be transformed into the sentence "the thing which is this is a man". In order to make it evident that the "this" is a part of predicate, we can write "The thing which is - this is a man". Similarly, "John is a man" can be transformed into "the thing that is - John or Johnises is a man". Quine claims that his method of treating all singular terms as descriptions has certain advantages. "The advantage of treating all singular terms as descriptions is of a more theoretical kind: that of sparing us having to admit into the framework of our technical theory a distinction between a category of descriptions and a category of non-descriptive singular terms". ¹ Since non-descriptive singular terms lead to the problems in the theory of knowledge and meaning, Quine prefers to translate all of them into descriptive expressions. All descriptive expressions are eliminable in

¹. Quine, Methods of Logic, p. 219.
terms of quantifiers and variables. In eliminating a
descriptive expression Quine follows the technique of Russell.
Any sentence containing singular terms can be transformed into
a sentence which does not contain any singular term. Quine
has translated the sentence "The broker who hired John hired
only honors graduates" into the following sentence
(w) [(∃y) (Gyw. (x) ( Fx. (∃w) [Gyw. (z) (Jz ≡ z=w)]
.∀ x=y ))⇒Hw].

By eliminating singular terms Quine claims a number of
advantages. 1
(a) A simplification of question about existence:

The problems arising from negative existential proposi-
tions have been resolved. When we say "The so and so does
not exist", we do not have to assert the existence of the so
and so. The proposition "the present king of France does
not exist" does not imply that there is an object which is
such and such and does not exist. Similarly, the negative
existential propositions involving proper names do not create
any problem. The proposition "Pegasus does not exist" does
not claim that there is an object denoted by the term
"Pegasus". In Quine's language, "We dispense altogether, in
theory, with the perplexing form of notation "a exists", for
we know how to translate singular existence statements into
more basic logical terms when the singular term involved is
a description". 2

1. A good summary is to be found in Strawson's
2. Quine, From a Logical Point of View, p. 167.
(b) The elimination of singular term simplifies the rules of inference. "The rules of inference by existential generalization and universal instantiation, in the anomalous form in which they have to do with singular terms, are reduced to the status of derivable rules and thus eliminated from the theoretical foundation of logic".¹

(c) The elimination of truth-gaps:

In making a descriptive statement, it is usually claimed that the object referred to by the description has or does not have such and such property. If the object does not exist, the statement seems to be neither true nor false. The theory of description provides a method of eliminating such a possibility. If the object does not exist, the positive propositions are false. "The present king of France is bald" is false, because there is no king of France.

(d) The freeing of reference from contextual dependence:
The meaning of terms like "I", "this", depends on the context and the circumstances of their use. We can eliminate contextual dependence and thereby ambiguity, due to context by translating these singular terms into variables and quantifiers.

Strawson has raised an objection to Quine's program. According to him there cannot be a language without singular terms if it wants to make identifying reference to particulars. In Quine's program the language contains expressions like "there is something which has such and such an attribute"

¹. Ibid., p. 167.
or "there is something which has such and such an attribute and anything which has such and such an attribute is identical with that something" instead of singular terms. Strawson points out that we cannot say there is something which has such and such an attribute unless there is a form of expression like "this thing has such and such an attribute". "Unless some universal terms acquire meaning as predicates of particulars, there can be no sort of reference to particulars at all and hence none of that sort of indefinite reference which is carried by the variables of quantification in Quine's ideal language."¹

According to Strawson a language in which identifying references to particulars could not be made would be a language in which no reference to particulars at all could be made. If we intend to introduce an attribute, then it is to be introduced either by a name or by a predicate. For example, red can be introduced by saying "red is here" or "this is red". In the former sentence red is introduced by a noun and in the latter sentence by a predicate. If we do not admit particular and expressions like "here" are not treated as demonstratives, then we have to admit a Platonic language in which all reference is made to universals. To a nominalist this move will not be acceptable. Since Quine is a nominalist, he would introduce "red" by saying "this is red". If a language does not contain demonstratives like "this", then it cannot introduce an attribute which is predicated of a par-

¹. Strawson, Ibid., p. 446.
ticular. Hence we cannot assert "there is something which has such and such attribute". So Strawson's criticism amounts to saying that there cannot be identifying reference unless there are proper names.

Now let us consider how far this criticism is correct. In what sense does Quine reject proper names? Quine rejects "proper names" if by "proper name" is meant an expression which has no other function than to denote something. The mere reference to something cannot be considered as a part of language which we speak. It may be part of gesture language but not of spoken language. Even the word "this" as it is used in our language means "the thing to which I am referring". If proper name means a sign which is necessary for ostensive learning, then Quine did not reject such signs. In order to understand the meaning of terms like "red", "blue", "hard", we require ostensive definition. To Quine these terms do not connote some abstract entities which are considered as their meanings. Quine analyzes such names "in terms of what people do in the presence of the linguistic utterance in question and other utterances similar to it."¹ This shows that Quine did not reject ostensive learning of the predicates. The meaning of the term "red" consists in what a person does in presence of a red object. We can learn the use of the word "red" without using the sentence "this is red". Identifying reference need not be carried by a linguistic entity. It can be carried by gesture or pointing to

an object. Thus Quine solves the problem of learning the basic predicates of our language.

Hochberg\(^1\) raises certain objections to Quine's program. He points out that since there is no proper name in Quine's language, the function of individuating objects has been taken by the predicates. These individuating predicates should not be treated as ordinary descriptive predicates. "They reintroduce the medieval properties of individuation."\(^2\)

The object Truman is distinguished from the rest in terms of the property Trumanizes, if Truman is the basic unanalyzable term. Hochberg claims that "Trumanizes" is the same as "Trumanness". From this observation he concludes that Quine introduces "proper names" at the predicate level.

Against this objection we can point out that Quine did not admit an entity called meaning corresponding to the term "Truman". Moreover, so far as ordinary names are concerned they are not basic. The term "Socrates" is resolvable to a set of descriptions like "the philosopher who drank hemlock". In order to understand the meaning of this phrase we have to know the meaning of "philosopher", "drinking", and "hemlock". If these terms are basic, we can learn their meaning ostensibly and in terms of what people do when they use such terms. We do not have to admit entities like "Socrates-ness" or "Truman-ness". So our reply to Hochberg's criticism is two-fold. (a) Quine did not admit "Socratesness" or "Truman-ness" as an individuating predicate. Hochberg's predicate


\(^2\) Ibid., p. 553.
"Socratesness" is resolvable to a description like "the philosopher who drank hemlock". (b) Secondly, Quine did not admit entities corresponding to terms like "philosopher", "drinking" or "hemlock". The meaning of these terms are explained by what people do when they utter such terms.

If a term, say Pegasus, is so basic that it cannot be resolved into a set of descriptions, then, according to Quine, it can be treated as "the thing that Pegasizes". The noun "Pegasus" is treated as derivative and it can be identified with the description, "the thing that Pegasizes". Here the predicate "Pegasizes" does not introduce a "proper name" at the predicate level. The reference to a unique object is taken by the article "the" occurring in the expression "the thing that Pegasizes". The proposition "Pegasus is a horse" would be "the thing that Pegasizes is a horse". In symbol the latter expression would be ($\exists x) (P(x) \land y ) (Py \Rightarrow x = y).

Thus far we have discussed certain objections to Quine's program of eliminating singular terms. Let us now discuss certain objections raised against the Russell-Quine manner of eliminating definite description. In this context we shall examine the criticism of Strawson$^1$ raised against Russell's theory of description. On Russell's theory the sentence "the

present king of France is wise" is analyzed out into a conjunctive sentence, viz. "there is at least one king of France and at most one king of France and whoever is a king of France is wise". This sentence is false because one of the conjuncts is false.

Strawson proposes the way for his objection to Russell's procedure by introducing a distinction between a sentence, a use of a sentence and an utterance of a sentence, or correspondingly, between an expression, a use of an expression and an utterance of an expression.

The sentence "the king of France is wise" was uttered at various times. There is a difference between different occasions of the use of this sentence. It is the same sentence that is uttered at various times, but its use is different on different occasions. When it is uttered during the reign of Louis XIV, it refers to him, but when it is uttered during the reign of Louis XV, it refers to him. It might be the case that one use is true and another use is false. Truth and falsity, according to Strawson are not related to the sentence, but to its use. Moreover, a sentence is not about a particular person, because the same sentence is used to refer to different persons. It is only a particular use of a sentence that refers to a particular person. Strawson's main objection to Russell is that he has confused meaning with referring or mentioning. This is due to a confusion between a sentence or expression and its use. "Meaning is a function of the sentence or expression; mentioning and
referring and truth or falsity, are functions of the use of the sentence or expression. To give the meaning of an expression is to give general direction for its use to refer to or mention particular objects or persons; to give the meaning of a sentence is to give general direction for its use in making true or false assertions."¹

According to Strawson the source of Russell's doctrine of logically proper names lies in the confusion between meaning and mentioning or referring. Russell thought that if there were any expression having a uniquely referring use, then its meaning must be the particular object referred to by the expression. The meaning of the word "this" even, according to Strawson, does not lie in referring to a particular object. Its meaning lies in the conventions governing the use of the expression. When someone asks us the meaning of the word "this", we do not give him the object referred to by "this", but the convention of its use on different occasions.

Now Strawson applies this distinction between meaning and use to Russell's example. According to him meaning or significance of a sentence is independent of any particular use of it. Since truth and falsity are related to the use of a sentence, we cannot say that if a sentence is significant, then it is true or false. We can say simply this much. If a sentence is used, then it is used truly or falsely, or to make a true assertion or a false assertion. If the sentence "the king of France is wise" is uttered now, we

¹. Ibid., p. 112.
cannot say that it is true or false. Since there is no king of France, we fail to use the sentence "the king of France is wise". Hence the question of truth or falsity about the sentence "the king of France is wise" does not occur. The sentence "the king of France is wise" presupposes that there is a king of France. The former does not entail the latter, it rather presupposes the latter. The sentence "there is no king of France" does not contradict the sentence "the king of France is wise". The problem of truth and falsity about the sentence "the king of France is wise" does not arise because of reference-failure. So the truth of the presupposing statement is the condition of the truth and falsity of the presupposed statement. "If a statement S presupposes a statement S' in the sense that the truth of S' is a precondition of the truth-or-falsity of S, then of course there will be a kind of logical absurdity in conjoining S with the denial of S'."¹ So the denial of S' does not contradict S, because S' is a condition for the truth-or-falsity of S. "It is self-contradictory to conjoin S with the denial of S' if S' is a necessary condition of the truth, simply, of S."² The latter relation between S and S' is called entailment and the former is called presupposition.

Geach³ has raised a similar objection to Russell's theory of description. The question "Is the present king of France

¹. Strawson, Introduction to Logical Theory, p. 175.
². Ibid., p. 175.
wise?" involves two other questions.

1. Is anybody at the moment a King of France?
2. Are there at the moment different people each of whom is a king of France?

The question "Is the present king of France wise?" does not arise unless the answer to (1) is affirmative and the answer to (2) is negative. If either of these answers is false, we cannot say that the positive answer to the question "Is the present king of France wise?" is false, but simply out of place. Geach says, "It is important to distinguish my view that the existence of the present king of France is presupposed by the assertion "The king of France is bald" from Russell's view that his existence is implied by this assertion. If \( p \) implies \( q \), and \( q \) is false, \( p \) is of course false. But to say \( p \) presupposes \( q \) is to say that \( p \) is an answer to a question that does not arise unless \( q \) is true. If \( q \) is false, or if \( q \) in turn is an answer to a question that does not arise, the assertion of \( p \) is not false but simply out of place."¹

Let us now consider the objection of Strawson and Geach. Both the objections are based on an appeal to ordinary language. They claim that the ordinary usage of statements involving descriptive phrases is such that the question whether the object specified as the so-and-so has such and such properties does not arise unless there is the so-and-so.

¹. Ibid., p. 34.
The thesis of Strawson and Geach would be valid if all such uses come under their proposed theory. Their thesis has some appeal because they have chosen an example where the reference-failure is known to all of us. Vorsteg\(^1\) has given certain examples which establish the opposite thesis. Let us consider his examples:

(1) The skull of Piltdown man was dug up near Sussex, England.
(2) The first manned space-vehicle to the moon was launched this morning by the Russians.
(3) The only person known to have lived over 110 years was J. C. Mulroney.

So far as the first example is concerned many people once believed it to be true. Now it is proved to be false. If the statement occurs somewhere, we can legitimately say that it is false.

Regarding (2) we can say that it is false if it is learned from newspaper or TV that no such space-vehicle was launched. We cannot say that reference-failure implies that there is no question of truth or falsity.

Similarly, we can say that (3) is false if no such person was to be found or more than one lived more than 110 years. If such news occurs in some book or newspaper, we can certainly write the editor pointing out that (3) is false. These examples clearly show that reference-failure does not imply that the question of truth or falsity does not arise.

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Now the question is, how to determine which sentence is false because of reference-failure and which sentence is neither true nor false because of reference-failure?

The answer to this question depends on the context in which the hearer-speaker situation is involved. The view of Strawson and Geach that "the present king of France is wise" is neither true nor false, seems to be plausible because both the hearer and the speaker know that there is no king of France. If we utter the same sentence to a child and if he believes our statement to be true, then it will be false to him when he is grown up or comes to know that there is no king of France. What is presupposed by a sentence and what is not presupposed by a sentence depend on the context of utterance and the hearer-speaker situation. In the above case the child does not know that the existence of the king of France is the presupposition of this utterance. The fact that there is a king of France and that he is wise are both new to him. The same sentence uttered in the same context may be true to one and neither true-nor-false to another. If Strawson utters this sentence to a child, the latter will take it to be true and afterwards would discover that his former belief was wrong. But to Strawson it would be neither true nor false.

Moreover, Strawson's view is not applicable to sentences like "the so and so exists" where the so-and-so is a case of reference-failure. The sentences "the king of France exists" cannot be said to be neither true nor false. It is a false
statement because there is no king of France. This sentence does not presuppose that there is a king of France. This sentence asserts that there is a king of France and that no more than one person is a king of France. Since there is no king of France, the statement is false. In this case Russell's analysis is perfectly useful.

From the above discussion it follows that Russell's analysis is very close to the ordinary usage of the expressions "the so and so exists" and "the so and so is such and such", where the reference-failure is not known to the speaker and the hearer.

Lejewski¹ has raised an objection to Russell's analysis of "the so and so". He points out that sometimes "the so and so" is used as an ambiguous noun-expression. Let us consider the following examples of Lejewski:

(1) A collector of stamps and a collector of books went to an auction. The collector of stamps was anxious to bid for some philatelic rarities while the collector of books was hoping to get some first editions.

(2) A Mancunian was boasting in the presence of a Londoner that Manchester was the greatest city in England. Naturally, the inhabitant of London objected.

These examples show that their truth does not depend on there being only one collector of stamps or books or only one inhabitant of London. From this fact Lejewski concludes

that the descriptions "the collector of stamps", "the collector of books" and "the inhabitant of London" as used in (1) and (2) are to be interpreted on somewhat different lines.

Against this it may be pointed out that there is no need of interpreting these expressions on a different line if we consider the context. From the context it is clear that there is only one collector of stamps or collector of books or inhabitant of London. Each statement has a context and the context determines the universe of discourse. In these cases reference is made to one individual only. From this we cannot assert unconditionally that there is only one individual satisfying the description. "The inhabitant of London objected" entails that there is only one Londoner in that context. It does not entail or assert that there is only one Londoner.

Such objections should not be considered either as revealing a defect of ordinary language or as revealing a defect of Russell's theory. The statements of ordinary language presupposes a context and Russell's theory of description when applied to ordinary language should also presuppose a context. In applying Russell's theory to ordinary language we should consider its context.

Let us now consider another objection of Lejewski to Russell's theory of description. According to Russell a definite description cannot be replaced by a name, for the resulting statement cannot be equivalent to the original
statement. In order to establish this point Russell gave the following examples:
(1) George IV wished to know if Scott was the author of Waverley.
(2) George IV wished to know if Scott was Scott.

The latter is derived from the former by replacing the definite description by the name of the same individual. The former is true, because George IV wished to know whether Scott was the author of Waverley, while the latter is false, because no one wants to know whether Scott is Scott. Against these examples of Russell, Lejewski points out that the difference in the truth value of (1) and (2) has nothing to do with the differences between definite descriptions and names. He says, "the fact that this replacement involves the change of truth value indicates that the function "George IV wished to know if p" is an intensional function which calls for de-intensionalization."¹

This objection of Lejewski is not based on the context of Russell's discussion. What Russell wants to say is that if we replace a definite description by a name, then we get a tautologous proposition and George IV did not want to know whether a trivially true proposition is true. Russell's intention is not to emphasize the function "x wished to know if p". His intention is to emphasize the difference between "Scott is the author of Waverley" and "Scott is Scott". This has been explained in his Introduction to Mathematical Philosophy without using the example, "George IV wished to

¹. Ibid., p. 27.
know whether Scott was the author of Waverley."

From the above discussion of Russell's theory it follows that it fails to fulfil two requirements.
(1) It cannot show that \((\forall x) \phi x = (\forall x) \phi x\) is analytic or free from existential commitment, because according to Russell "\(\forall x (\phi x) \equiv (\forall x) \phi x = (\forall x) \phi x\)" is a theorem.
(2) Secondly, it cannot show that \(\phi (\forall x) \phi x\) is analytic, because "\(\forall x (\phi x) \equiv \phi (\forall x) \phi x\)" is a theorem of \textit{Principia}.
In order to avoid this type of existential commitment various theories have been proposed.
(a) Rescher\(^1\) has proposed a theory of description which is free from existential commitment. His definition is the following:
\[
[(\forall x) \phi x] F \equiv [(\forall x) \phi x] \overset{\text{df}}{\Rightarrow} (y) \left( y \in \forall x \phi x, \exists F y \right)
\]

From his definition the following consequences follow:
(i) If there is exactly one individual which has the property \(\phi\), then \((\forall x) \phi x\) is identical with that individual.
(ii) If there is no individual which has the property \(\phi\), then \(F[(\forall x) \phi x]\) is always true.
(iii) If there are several individuals having the property \(\phi\), then \(F[(\forall x) \phi x]\) is true or false according as \(F\) does or does not obtain for all members.

The consequence (ii) leads to an absurdity. In ordinary language when there is no object satisfying a description, \(F[(\forall x) \phi x]\) becomes either false or beside the point. In

\(^1\) Rescher, "On the logic of existence and denotation", \textit{Philosophical Review}, 1959.
Rescher's view "the present king of France is bald" would be a true proposition, because there is no object satisfying the description "the present king of France". Moreover, the propositions like "the present king of France exists", "the round-square exists" would be true, because the antecedents of the symbolic counterparts of such sentences would be false. On these grounds Rescher's theory is to be rejected, although his theory is free from existential commitment.

(b) Another way of retaining \((\forall x)\varphi x = (\forall x)\varphi x\) as analytic is to reject the Russellian rule of universal instantiation. In Russell "\((\forall x)\varphi x \supset \varphi y\)" is a theorem. We can infer \(\varphi y\) from \((\forall x)\varphi x\), if "y" is a name of an object. Since a description may be empty, we cannot infer \(\varphi y\) from \((\forall x)\varphi x\), if "y" is a description. If we reject the Russellian restricted quantificational logic and adopt free quantificational logic, then we can infer both \(a = a\) and \((\forall x)\varphi x = (\forall x)\varphi x\) from the logical truth \((x)(x = x)\). This leads to the denial of the Russellian rule of existential generalization and the distinction between logically proper name and description. We cannot accept \(\varphi y \supset (\exists y)\varphi y\), because both names and descriptions can be substituted for the free variable "y" in free logic. "\(\varphi y \supset (\exists y)\varphi y\)" is to be replaced by \(\varphi y \supset (\exists y)\varphi y\), where "y" stands for any singular term, empty or non-empty. This leads to the denial of the Russellian distinction between logically proper name and description. This move has been adopted by logicians like Hintikka and Leonard.

On Russell's theory ordinary proper names are abbreviated descriptions. The only words that should be treated as
logically proper names are "this" and "that". Against this doctrine Hintikka remarks, "not only is it strange to call 'this' and 'that' names; it seems positively perverse to allege that they are our only proper names properly so called."¹ It is also claimed that Russell identified the meaning of a name with the bearer of a name. But it is a mistake to identify the meaning of a proper name with the bearer of that name. It always makes sense to say, "Does John exist?", where "John" is a name. Moreover, "this" and "that" cannot be considered as names in any sense. They are pointers, while a name is a label. For this reason names have identifying reference and they are meaningful even when there is no object designated by the name. If "this" is to be regarded as a name, then its meaning changes from moment to moment. In our ordinary language there is no such name. For this reason "this" and "that" are not treated as names.

Hintikka has pointed out another mistake of Russell's theory. Russell has committed the descriptive fallacy. He thought that the sole function of our sentences is to describe objects, "the failure of an object to exist seems to rob the sentence of its content; for it leaves nothing to be described."² But "a prediction, a guess, or an assumption may serve our purpose even when one of its singular terms fails to refer to anything."³ If we recognize the other uses of lan-

² Ibid., p. 127.
³ Ibid., p. 127.
guage besides the descriptive one, the temptation to resort to Russell's theory is reduced.

Once we do away with the distinction between logically proper name and description, we cannot infer \( (\exists x) \phi x \) from \( \phi y \), where "y" is a name. The Russellian rule of existential generalization is based on the fundamental distinction between a name and a description. In free logic we cannot infer \( (\exists x) (x = x) \) from \( a = a \) which is derived from \( (x) (x = x) \). In order to derive \( (\exists x) (x = x) \) from \( a = a \), we require the contingent premise "a exists". This procedure is superior to usual quantification rules which are not applicable to empty domains. If by analytic we mean valid or true in all domains, then logical theorems are analytic in free logic.

If we accept the view that a name or a description can be substituted for the variable, then not only do we have to revise the rule \( \phi y \supset (\exists x) \phi x \), but also Russell's theory of description. From Russell's theory we can deduce \( \psi (\lambda x) \phi x \supset (\exists x) \phi x \). In order to stop this deduction it has been said that \( (\exists x) \phi x \) can be deduced from \( \psi (\lambda x) \phi x \). E! \( (\lambda x) \phi x \) instead of \( \psi (\lambda x) \phi x \) alone. If it were so, then \( \psi (\lambda x) \phi x \) does not imply E! \( (\lambda x) \phi x \). Thus this leads to the rejection of Russell's theory of description. So we fail to retain both Russell's theory of description and the analyticity of \( (\lambda x) \phi x = (\exists x) \phi x \). The retention of the latter leads to the denial of the former.

On similar ground we can say that if we want to make \( \phi (\lambda x) \phi x \) analytic, then we have to reject Russell's theory
of description. On Russell's theory \( \varphi(\lambda x) \varphi x \) implies \((\exists x) \varphi x\). Since an analytic proposition does not entail an existential proposition, \( \varphi(\lambda x) \varphi x \) ceases to be analytic if we accept Russell's theory of description. If we want to retain it as analytic, then we can infer \((\exists x) \varphi x\) from \( \varphi(\lambda x) \varphi x \) and \( \forall \lambda y \| (\lambda x) \varphi x \). In that case, we reject Russell's theory that \( \varphi(\lambda x) \varphi x \) implies \( \forall \lambda y \| (\lambda x) \varphi x \).

Now we have two possible moves. We can either put some condition on the assertability of \( \varphi(\lambda x) \varphi x \) or we can reject Russell's definition \( \forall \lambda y \| (\lambda x) \varphi y \)(\exists x)(\lambda x) \varphi x \equiv x = y).

Hintikka\(^1\) has followed the latter move. According to his theory \( \psi(\lambda x) \varphi x \) itself does not imply \((\exists x) \varphi x\). In order to derive \((\exists x) \varphi x\) from \( \psi(\lambda x) \varphi x \) we require the additional premise \((\exists y)(y \equiv (\lambda x) \varphi x)\). This is necessary because he has denied the existential presupposition of quantification logic. We cannot infer \((\exists x) \varphi x\) from \( \varphi y \). Since we can substitute both name and definite description for the free individual variable, the Russellian law

\[ \psi(\lambda x) \varphi x \supset (\exists y) \varphi y \]

is to replaced by the law

\[ \psi(\lambda x) \varphi x \supset (\exists y)(y \equiv (\lambda x) \varphi x) \supset (\exists y) \varphi y \]

His theory retains \( \varphi(\lambda x) \varphi x \) as analytic in the sense that it does not imply that there is an object having such and such a property and changes the Russellian theory of description. In fact \( \varphi(\lambda x) \varphi x \) can be deduced from the theorem:

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(1) \( y = (\lambda x) \phi x \cdot \Xi \cdot (x) (\phi x \cdot \supset \cdot x = y). \phi y \) in the following manner.

(2) \( y = (\lambda x) \phi x \cdot \Xi \cdot (x) (\phi x \cdot \supset \cdot x = y). \phi y \) [From 1]

(3) \( y = (\lambda x) \phi x \cdot \supset \cdot \phi y \) [From 2]

(4) \( (\lambda x) \phi x = (\lambda x) \phi x \cdot \supset \cdot \phi (\lambda x) \phi x \) [From 3]

(5) \( (\lambda x) (\phi x) = (\lambda x) (\phi x) \) [Identity in free logic]

(6) \( \phi (\lambda x) \phi x. \) [From 4, 5]

Now Lambert raises a criticism against Hintikka. He points out that \( \phi (\lambda x) \phi x \) cannot be asserted unconditionally. If it is asserted unconditionally, then we get a contradiction by replacing "\( \phi \)" in "\( \phi (\lambda x) \phi x \)" by the predicate "\( \lambda x (\phi x \cdot \sim \phi x) \)". So we get \( \phi (\lambda x) (\phi x \cdot \sim \phi x). \sim \phi (\lambda x) (\phi x. \sim \phi x) \). On this ground he rejected Hintikka's theory which claims that \( \phi (\lambda x) \phi x \) can be asserted unconditionally.

Against Lambert we can point out that the formula

"\( \phi (\lambda x) (\phi x. \sim \phi x). \sim \phi (\lambda x) (\phi x. \sim \phi x) \)" is not a contradiction. It would be a case of contradiction if we assert \( \phi (\lambda x) (\phi x. \sim \phi x) \cdot \sim [\phi (\lambda x) (\phi x. \sim \phi x)]. \) By introducing scope notation we can see the difference between the two.

The first one stands thus:

\[
[(\lambda x) (\phi x. \sim \phi x)] \phi [(\lambda x) (\phi x. \sim \phi x)].[(\lambda x) (\phi x. \sim \phi x) \sim \phi [(\lambda x) (\phi x. \sim \phi x)].
\]

The second one stands thus:

\[
[(\lambda x) (\phi x. \sim \phi x)] \phi [(\lambda x) (\phi x. \sim \phi x)]. \sim [(\lambda x) (\phi x. \sim \phi x)] \phi [(\lambda x) (\phi x. \sim \phi x)].
\]

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To say that "the round and not-round is round and the round and not-round is not-round" is not to assert a contradictory proposition. In both the conjuncts the predicate is part of the subject term. The true contradictory proposition would be "the round and not-round is round and it is false that the round and not-round is round". Since this is not the case, Lambert's objection is wide of the mark.

From this we are not concluding that Hintikka's theory is the correct formulation of the ordinary usage of "the so and so". Hintikka's theory is applicable to those cases where we do not know whether the term satisfying so and so exists. For this reason we cannot get, on Hintikka's theory, \((\exists x)\varphi x\) from \(\forall (\exists x)\varphi x\). In order to deduce \((\exists x)\varphi x\), we require an additional contingent premise \((\exists y)(y = (\exists x)\varphi x)\). But his theory cannot explain the cases where descriptive sentences become beside the point. So his theory fails to explain the descriptive sentences where the falsity of the existential claim leads to the absurdity of the whole sentence. In his theory "the present king of France is wise" would not be beside the point, but false.

III Steps towards a multi-theory of description.

From the above discussion it follows that no theory of description can correctly formalize or capture the various uses of "the so and so". Russell's theory cannot represent the cases where the existence of the so and so is a presupposition. Hintikka's theory requires that "the so and so exists" should be added as a premise in all cases. As a
result, it cannot explain the cases where the descriptive sentences are beside the point. We have also seen that some of the theories fail to retain the analytic character of $\phi(x)$ and $(\exists x) \phi(x) = (\forall x) \phi(x)$. An adequate theory of description should retain the analytic character of $(\exists x) \phi(x) = (\forall x) \phi(x)$ and $\phi(\exists x) \phi(x)$ and should explain or explicate the various uses of the so and so. Since this type of theory is not available, we reject the program of having one theory of description. According to our thesis there should be various theories of description depending on the various uses of "the so and so". Our description operator, $(\exists x) \ldots x\ldots$, is neutral to the uses of description where uniqueness condition is implied or presupposed. We can enumerate at least the following different uses of "the so and so".

(1) The man in the mars exists.

This sentence does not presuppose that there is a man in the mars. So it implies that there is a man in the mars and there is exactly one man in the mars. This sentence would be false if there is no man in the mars. This use of "the so and so exists" can be formalized or symbolized in the following manner:

$$(\exists x) (y) (x = (\exists x) \phi(x) . \equiv . x = y)$$

(2) The author of Principia exists.\(^1\)

If this is interpreted according to (1), then it is false.

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because it does not satisfy the uniqueness condition. It fulfills that there is an author of *Principia*, but it fails to fulfill that there is only one author of *Principia*. If (2) is analyzed in the manner of (1), then we confuse what is presupposed in utterances such as (2) with what is logically implied by them. If it is asked whether the author of *Principia* exists, our answer would not be "no". The question would be beside the point or odd because more than one person wrote *Principia*. If we assimilate (1) and (2), then both of them are to be regarded as false, since (1) is false because of reference-failure and since this is not the case with (2), one cannot be assimilated to the other. The uniqueness condition is the presupposition of (2). So the failure of the uniqueness condition should not be regarded as implying the falsity of sentences like (2). Lambert says, "Russell's proposal construes a 'yes' answer to the question 'Does the so and so exist?' as logically implying a 'yes' answer to the question 'Is the so and so unique?' But the above illustration indicates the incorrectness of this view. Rather it is the case that a 'yes' answer to the first question presupposes a 'yes' answer to the second."¹ If the answer to the second question is negative, then the first question is not worth asking. This shows that we require a formulation of "the so and so exists" in such a way that if the uniqueness condition fails, then "the so and so exists" cannot be said to be true or false. The following may be considered as the formalized version of this type of sentences:

¹. Ibid., p. 3.
\((\exists y)(x)(\phi x . \supset x = y) . \supset . [\psi(\exists x)\phi x]\)

Since the uniqueness condition occurs in the antecedent we cannot say anything about the truth or falsity of \(\psi(\exists x)\phi x\) if the antecedent is false.

(3) The present king of France is wise.

In such cases the existence of a unique object is a presupposition. Since there is no king of France such propositions are to be regarded as beside the point, or in other words, neither true nor false. In this case the proposition "the king of France exists" is the presupposition. Since both the hearer and the speaker know that there is no king of France, the presupposition of (3) is false. If the presupposition is false, we cannot assign definite truth-value to the presupposing sentence. In Russell's analysis (3) is false, because it does not fulfil the claim \((\exists x)(x \text{ is a king of France})\). The sentence "the author of Principia exists" is false not because it does not fulfil the claim \((\exists x)(x \text{ wrote Principia})\), but because it does not fulfil that \((x)(y)(x \text{ wrote Principia and } y \text{ wrote Principia} . \supset . x = y)\). In our analysis in both cases the existence of a unique object is the presupposition. So (3) can be formulated in the following manner:

\[ (\exists y)(x)(\phi x . \supset x = y) . \supset . [\psi(\exists x)\phi x . \supset . (\exists x)\phi x . \supset . \psi x)] \]

In this context it should be noted that \(\psi(\exists x)\phi x\) should be considered as a synthetic proposition. Since from (\(\psi\)) \([\psi(\exists x)\phi x]\) we can get both analytic and synthetic proposi-
tion, the formalized form of (3) should not be allowed to represent the analytic propositions like 
\((\forall x) \varphi x = (\forall x) \varphi x\) or \(\varphi(\forall x)\varphi x\).

From the general form \(\psi(\forall x)\varphi x\) we can get three types of proposition, two of them are synthetic. We can derive propositions of the form "the author of Waverley is the author of Waverley", "the present king of France is wise", and "the only person known to have lived over 110 years was J. C. Mulroney". The latter two are synthetic.

(3) Represents only one type of synthetic proposition. It represents those synthetic propositions where the uniqueness condition is the presupposition. So we require two more formalizations for the two other types of \(\psi(\forall x)\varphi x\).

(4) The only person known to have lived over 110 years was J. C. Mulroney.

(4) Does not presuppose uniqueness condition, because in ordinary language such propositions would be false if there is no such person or more than one person is known to have lived over 110 years. If we came across (4) in a newspaper and if we know that more than one person has lived over 110 years, then we are perfectly justified in saying that (4) is false. So the (4) should be formulated in the following manner:

\((\exists x)(y)\ (x = (\forall x)\varphi x \iff x = y) \cdot \psi x\)

This formulation shows that (4) would be false if one of the conjuncts implied by it is false.

(5) (a) The author of Waverley is the author of Waverley.

(b) The king of France is the king of France.
On Russell's theory (5) (a) is synthetically true, and (5) (b) is false. Both of them are synthetic propositions. The form \((\exists x)\phi x = (\exists x)\phi x\) is equivalent to \(\forall (\exists x)\phi x\).

Intuitively, \((\exists x)\phi x = (\exists x)\phi x\) seems to be analytic and it should be treated as a substitution instance of the law of identity \((x) (x = x)\). If we accept Russell's view, then we have to say that we can substitute only logically proper name for "x" in \((x) (x = x)\). This view is based on the distinction between logical proper name and description. In our above discussion we point out the untenability of the distinction between logical proper name and ordinary name. Moreover, intuitively \((\exists x)\phi x = (\exists x)\phi x\) seems to be analytic and substitution instance of the logical law \((x) (x = x)\). So the (5) (a) and (5) (b) should be formulated in such a manner that they do not imply or presuppose existence. In order to achieve this result we should treat them as substitution instances of \((x) (x = x)\).

The expressions of the form \(\phi(\exists x)\phi x\) are also analytic, although they are not substitution instances of \((x) (x = x)\). Such expressions can be represented in the following manner:

\[\phi(\exists x)\phi x \equiv (\exists x) (y) (\phi y \supset x = y)\]
\[\supset (\exists x)\phi x.\]

"The present king of France is (a) present king of France" means if there is a unique present king of France, then there is a present king of France. Such formulations would be true, when there is no king of France or more than one person is a king of France. Since analytic means true in all domains, our formulation satisfies this requirement.
From the above discussion it follows that there are various uses of "the so and so". Some uses of descriptive sentences are analytic, while other uses are synthetic. Again, some uses presuppose uniqueness condition, while other uses imply uniqueness condition. But this is not all. Since there are different uses of existence depending on different contexts, the synthetic descriptive sentences would also differ depending on the context. The sentence "the winged horse captured by Bellerophon exists" would be true in the context of narrating a mythological story. But it would be false in the context of scientific or ordinary discourse. Similarly, the sentence "the prime number between 5 and 11 exists" is true in arithmetical discourse. But if this sentence is uttered in the context of enumerating the objects of this room, then it seems to be meaningless, because we fail to understand what it means for a number to be or not to be in this room. There is a category-difference between "the book on the table exists" and "the prime number between 5 and 11 exists". So the truth-value or significance of a synthetic descriptive sentence depends on the context of a particular discourse. If there is a change in discourse, the same sentence may have different truth-value or it may be meaningless. Similarly, the same sentence within the same discourse may be beside the point in one context and false in another context. This is due to the fact that what is a presupposition of a sentence depends on the hearer-speaker situation. That which is a presupposition to me today was not a presupposition to me 10 years ago. Similarly, the sentence "the present king of France is wise" uttered in the 17th
From the above discussion it follows that there are various uses of "the so and so". Some uses of descriptive sentences are analytic, while other uses are synthetic. Again, some uses presuppose uniqueness condition, while other uses imply uniqueness condition. But this is not all. Since there are different uses of existence depending on different contexts, the synthetic descriptive sentences would also differ depending on the context. The sentence "the winged horse captured by Bellerophon exists" would be true in the context of narrating a mythological story. But it would be false in the context of scientific or ordinary discourse. Similarly, the sentence "the prime number between 5 and 11 exists" is true in arithmetical discourse. But if this sentence is uttered in the context of enumerating the objects of this room, then it seems to be meaningless, because we fail to understand what it means for a number to be or not to be in this room. There is a category-difference between "the book on the table exists" and "the prime number between 5 and 11 exists". So the truth-value or significance of a synthetic descriptive sentence depends on the context of a particular discourse. If there is a change in discourse, the same sentence may have different truth-value or it may be meaningless. Similarly, the same sentence within the same discourse may be beside the point in one context and false in another context. This is due to the fact that what is a presupposition of a sentence depends on the hearer-speaker situation. That which is a presupposition to me today was not a presupposition to me 10 years ago. Similarly, the sentence "the present king of France is wise" uttered in the 17th
century will not be beside the point. It will be true or false depending on whether he is wise or not wise. Our positive thesis emphasizes all these different uses of a description. Moreover, our theory retains the analytic character of the sentence of the form $(\forall x)\varphi x = (\exists x)\varphi x$ or $\varphi (\forall x)\varphi x$. They are true in all discourses and in all contexts and in all domains. That is to say, they are always true.

Our thesis is consistent with free logic, because we allow the substitution of any noun-expression for the variables occurring in any logical theorem. Moreover, we claim that the propositions derived from any logical theorem by substitution are also logically true. The proposition $(\forall x)\varphi x = (\exists x)\varphi x$ is derived from the logical truth $(x) (x = x)$ by substituting "(\exists x)\varphi x" for the variable "x". Since our description operator is neutral to existential presupposition or implication, we can substitute it freely for "x" occurring in $(x) (x = x)$. In the restricted logic the substitution of a description for the variable "x" occurring in a logical theorem does not yield a logically true proposition. Moreover, in free logic we can infer $F (\forall x)\varphi x$ from $(x)Fx$. In the restricted logic we can substitute only non-empty noun-expressions for the variable "x" occurring in $(x)Fx$. This leads to the empirical consideration that our terms are non-empty. Moreover, it involves the dubious assumption that there are logically proper names whose meaning lies in denoting objects. Since a free logic does not involve any empirical consideration and its theorems are true in all domains including empty-domain, it is considered to be superior to restricted logic. Our positive thesis also presupposes a free logic in which $(\forall x)\varphi x = (\exists x)\varphi x$ or $\varphi (\forall x)\varphi x$ would be analytic.
CHAPTER III

SUBJECT AND PREDICATE

In the first and the second chapter we discussed the nature of existential propositions like "John exists", "tame tigers exist", "the author of Waverley exists". The first chapter has been devoted to the definition and explication of the concept of existence. In the second chapter we discussed the nature of descriptive sentences and how existence is related to description. In the next chapter we shall discuss the logical status of "exists" occurring in existential propositions like "tame tigers exist", "all the stamps still exist", "God exists". Since a proposition is divided into a subject and a predicate, our main intention is to find out whether "existence" is a predicate or not. Before taking up that task we should discuss the nature of subject and predicate and the different criteria for making this distinction. Unless we have a definite criterion for determining subject and predicate, we cannot determine the logical status of "exists" in a proposition. In this chapter we shall devote ourselves to this task.

A proposition or a sentence can be divided into a subject and a predicate. A subject is that about which something is stated and a predicate is that which is stated about the subject. The subject and the predicate of a proposition are related in such a way that one cannot be defined without the help of the other. They are correlatives. To say that "x" is a subject is to presuppose that something is a predicate in relation to which it is a subject. Similar is the case
with a predicate. A predicate always says something about something.

In this chapter we shall discuss the prevalent criteria for making the distinction between subject and predicate. In this context we shall discuss the grammatical, the category and the mediating criteria for distinguishing subject from predicate. Secondly, certain objections to this whole program will be discussed. Thirdly, we shall develop a positive thesis for making this distinction. According to our thesis there is no one way of analyzing a sentence or a proposition into subject and predicate. It will vary depending on the hearer-speaker situation. The main defect of the grammatical, the category and the mediating criteria is that they take a sentence in abstraction from its context of utterance. Since the context of a proposition is an integral part of its meaning, the division of proposition into subject and predicate depends on it.

First of all, we shall discuss the grammatical and the category criteria, and then we shall discuss the mediating criterion. The grammatical criterion distinguishes subject from predicate by means of the mode of introduction of terms which occur in a proposition. The mode of introduction signifies whether a term is introduced referringly or ascriptively. It is a function done in introducing a term in a proposition. The category criterion distinguishes subject from predicate by reference to the nature of the object or objects referred to by the terms occurring in a proposition. According to this doctrine particulars can appear as subjects
only, whereas universals or universals-cum-particulars appear as subjects or predicates. The grammatical and the category criteria taken together exhaust the syntactical and the semantical criteria. Since the syntactical criterion deals with the linguistic parts, it comes under the grammatical criterion. The semantical criterion deals either with the proposition or with the extra-linguistic fact. Hence it is exhausted by the grammatical or category criterion. Now let us begin with the grammatical criterion.

I Grammatical Criterion:

Strawson¹ has formulated the grammatical criterion in four ways.

(a) In asserting a proposition two complementary activities or functions are involved. These two activities may be expressed by pairs of expressions like "referring to something and describing it", "naming something and characterizing it", "indicating something and ascribing something to it".

(b) When these functions are expressed in language, we can have another way of distinguishing subject from predicate. These two linguistic elements of a proposition are expressed by pairs of expressions like "singular term and predicate expression", "referring-expression and predicate-expression", "subject and predicate", "proper name and ascriptive expression".

(c) We can make a distinction between the two elements of a proposition in terms of the objects towards which two differ-

¹ Strawson, Individuals, Part II.
ent activities are directed. Each activity-expression represents the activities as directed to some object. Corresponding to two activities we have two non-linguistic items or terms which are combined to yield a proposition. These two items are "that which we ascribe and that to which we ascribe it, that which we predicate and that of which we predicate it". These two non-linguistic items may be called "subject and predicate" or "subject-term and predicate-term". Strawson points out that this type of distinction is relative to a particular proposition. By this criterion we can distinguish two terms in a given proposition. According to this criterion a term which appears as a subject in one proposition may appear as a predicate in another proposition and vice versa. This criterion simply distinguishes terms but not their roles. This suggests another criterion which divides terms and their roles together.

(d) According to Strawson this fourth way of distinguishing two terms corresponds to Frege's distinction between object and concept. The distinction made by this criterion is the non-linguistic counterpart of the distinction made by the second criterion.

Now let us elucidate and critically discuss these different modes of distinguishing two elements of a proposition. Let us begin with the second distinction which is a linguistic counterpart of the fourth one. The third distinction cannot be discussed in general because it is relative to a particular

1. Ibid., p. 140.
proposition. Again, since the second distinction is the linguistic expression of the first, the latter distinction may not be discussed separately. So let us confine ourselves to the second distinction.

According to this second distinction a singular term or referring expression cannot be a predicative expression. According to Frege\textsuperscript{1} a proper nam can never be a predicative expression. If a proper name is used as a predicative expression the sentence becomes meaningless, for the predicative expression refers to a concept whereas a proper name refers to an object. Even in sentences like "The morning star is Venus" what is predicted of "The morning star" is not "Venus" for it is a proper name. The content of "is" occurring in the expression "The morning star is Venus" is part of the predicate. Here the content of "is" means "no other than". Hence what is predicted of "The morning star" is the concept "no other than Venus".

"The distinction between concept and object should not be effaced even if it were true that there are concepts that can also be objects", as Frege said. When we talk about a concept it cannot be used in its predicative nature. It must be converted into an object. This is done by putting the expression "the concept" before the concept talked about. For example, "the concept dragon is empty". Here what is subject is the expression "the concept dragon". Now this expression cannot be used predicatively. Hence according to

\textsuperscript{1} Translations from the Philosophical Writings of Frege, pp. 42-55.
Freges a subject-expression cannot be a predicate expression and vice versa.

Similarly, Geach\(^1\) makes a distinction between subject and predicate. He defines subject and predicate as follows:

A predicate is an expression that gives us an assertion about something if we attach it to another expression that stands for what we are making the assertion about.

A subject (of an assertion) is an expression to which there is attached a predicate, so that the two together form an assertion about what the subject stands for.

According to Geach a predicate is attached to a subject, but predicated of what the subject stands for. Both subject and predicate are linguistic terms. There is another important feature in his conception. He has admitted more than one analysis of the subject-predicate in a sentence. As he says, "'Peter struck Malchus' asserts something about Peter and something different about Malchus, and we may take either 'Peter' or 'Malchus' as subject of the sentence."\(^2\) Thus a sentence can have more than one subject-predicate analysis. But from this it does not follow that a subject-expression can be a predicate or a predicate-expression can be a subject in a different analysis. As he says, "not only that a name can be a logical subject, but also that it cannot, without a radical

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2. Ibid., p. 462.
change of sense, be a logical predicate".  

Strawson has criticized this claim of Geach. In the example "Raleigh smokes", "Raleigh" would be the subject and "smokes" the predicate. Here "Raleigh" is a subject because we are talking about Raleigh and "smokes" is a predicate, because what is asserted about Raleigh is that he smokes (smoked). Now Strawson says, "it is also plain that there might be circumstances in which it would be correct to say of someone using the sentence that he was talking about smoking, and that one of the things he asserted about it was that Raleigh smoked or was a smoker". Again, "smokes" stands for the habit of smoking. The view that predicate stands for some property is admitted by Geach himself. From this Strawson concludes that Geach cannot say that a subject cannot be a predicate or a predicate cannot be a subject.

Now let us examine this criticism of Strawson. In fact, this criticism is wide of the mark, because it overlooks various passages where Geach repeatedly says why a subject cannot be a predicate and vice versa. Strawson's remark is based on the words "about" and "stands for" occurring in Geach's definition of subject and predicate. It overlooks that towards which these words are directed. According to Geach a subject must be a name which can stand by itself;

1. Ibid., p. 463.
2. Individuals, p. 144.
"a predicate is what is left of a sentence when the subject is removed, and thus essentially contains an empty place to be filled by a subject". ¹ In the sentence "Raleigh smokes", the predicate is "--- smokes". Further, a subject must be a name of an object, not of a property. As he says, "If a noun or noun-phrase is used by itself to name some object in the environment, then its use must be regarded as material, whether it is a proper noun or not". ² "A noun or noun-phrase is used materially if it stands for an object". ³ A noun or noun-phrase is used formally if it is a predicate expressing a property. Again, in another passage he says, "In sentences, genuine proper nouns can never be logical predicates; a proper noun stands for a definite object, and its use is thus material, not formal". ⁴

From these passages it becomes evident that a subject must be a noun or noun-phrase and it must be used materially so that it may stand for an object. Hence in the sentence "Raleigh smokes", "smokes" can never be regarded as a subject even if "smokes" stands for the property of smoking or the habit of smoking and "Raleigh" cannot be treated as a predicate expression.

3. Ibid., p. 465.
4. Ibid., p. 465.
Now it seems that it is possible to define or characterize subject-expression and predicate-expression.

(1) If one expression of either sort is attached to a suitable expression of the other sort, then we get an assertion. (2) Subject-expression cannot be a predicate-expression, though it might be part of such an expression. If we attach the expression "Socrates" to the expression "is wise", we get an assertion. Again, the subject-expression "Socrates" cannot be a predicate-expression, though it might be a part of it. Both of them serve to introduce term into the remark. The expression "Socrates" introduces the object, while the expression "is wise" introduces the quality wisdom. They are alike in introducing terms, though differ in the mode of introduction. A subject-expression introduces its term in the substantival or noun-like style and a predicate expression introduces its term in the verbal or verb-like style. A subject-expression is a singular grammatically substantival expression, while a predicate expression contains at least one finite form of a verb in the indicative mood.

But these conditions cannot be regarded as sufficient for an expression's being a subject-or-predicate expression. For "nothing" is a singular substantive, yet we do not want to classify it as a subject-expression. Again, "Socrates is" seems to satisfy predicate-expression, yet we do not want to classify it as a predicate-expression.

So this way of distinguishing "substantival-expression"
from the expression containing a verb in the indicative mood seems to be both parochial and unexplained. This criterion is parochial, because it may be applicable to one group of language, but not to some other languages which may be equally rich. Again, it remains unexplained because it fails to give its rationale. "That is to say, we have to inquire into the significance of the distinction between the grammatically substantival and the grammatically verb-like modes of introducing terms."¹

As a rationale of this criterion it may be pointed out that the subject-expression merely introduces its term, whereas the predicate-expression introduces its term in an assertive or propositional style.

But this cannot be regarded as a distinctive characteristic of a predicate. The predicate-expression "is wise" occurring in a remark does not guarantee that the remark is an assertion. The term "is wise" may occur in a question like "who is wise?". In such cases we are not asserting that Socrates is wise. Strawson has admitted this point. But he has also pointed out that "we must remember that questions demand answers; that questions such as "Socrates is wise?" invite us to pronounce on the truth-value of propositions which the questions themselves supply; that questions such as "who is wise?" invite us to complete and assert propositions of which the questions themselves supply the proposi-

¹. Strawson, Individuals, p. 148.
tional form or half the content."¹

But this contrast of styles cannot be regarded as a sound criterion for distinguishing subject-expression from predicate-expression. As the question "who is wise?" invites us to complete and assert proposition, similarly, the question "what about Socrates?" invites us to complete and assert proposition. In fact, either both of them are introduced assertively or none of them.

Apparentely we have two criteria or two modes of one criterion. One of them is overtly grammatical and the other is in terms of type of term-introduction. According to the overtly grammatical criterion the subject-expression is a substantival, noun-like expression and the predicate-expression is a non-substantival, verb-like expression. According to the other criterion the subject-expression merely introduces its term and the predicate-expression introduces its term in an assertive or propositional style. But there is no incompatibility between these two criteria, rather one strengthens the other. The style of introduction gives the rationale of the grammatical criterion. It points out why one term is to be substantival and the other non-substantival and verb-like. The incompleteness or unsaturatedness of the non-substantive, verb-like expressions is signified by saying that the predicate-expression is introduced in an assertive or propositional style.

Now let us discuss Quine's view which resembles Frege's and

¹. Ibid., p. 150.
Geach's view. Quine's distinction between singular term (expression) and general term (expression) roughly corresponds to Frege-Geach distinction between subject and predicate-expression. But a striking difference appears when Quine says, "singular terms are accessible to positions appropriate to quantifiable variables, while general terms are not."¹ According to Quine singular terms are not only the names of the particular individual objects like "Socrates", "John", "London", but also terms like "piety", "wisdom" etc. He says, "Singular terms do not, after all, stand to objects quite as statements and predicates stand to truth values and extensions; for whereas every statement has its truth value and every predicate its extension, empty or otherwise, a singular term may or may not name an object. A singular term always purports to name an object."² General terms do not purport to name at all; they may be "true of" each of many things.

According to Strawson this is an unsatisfactory way of explaining the difference between singular term and general term. On Quine's view the term "the philosopher" is a singular term since it refers to one and only one object, but the word "philosopher" is a general term since it is true of each of many things. Strawson points out that what is true of each of many things, say Socrates, is not "philosopher" but that he is a philosopher. What Strawson wants to say is that the proposition that he is a philosopher is true of

¹. Quine, Methods of Logic, p. 208.
². Ibid., p. 197.
Socrates.

It seems to us that this criticism is fruitless. We cannot understand what we gain by saying that what is true of Socrates is that he is a philosopher. As a matter of fact what is applicable to Socrates is the property "being a philosopher". When Quine says that "philosopher" is true of each of many things what he wants to say is that the property of being a philosopher is applicable to each of many particulars.

Quine himself clarifies this point by bringing in the concept of predicate which is an indispensable unit of a sentence. Thus he says, "The positions occupied by general terms have indeed no status at all in logical grammar, for we have found that for logical purposes the predicate recommends itself as the unit of analysis; thus 'Socrates is a man' comes to be viewed as compounded of 'Socratés' and 'ι is a man', the latter being an indissoluble unit in which 'man' merely stands as a constituent syllable comparable to the 'rat' in 'Socrates'." This amounts to the same thing as saying that predicate-expression is incomplete and demands completion into a proposition. So it is introduced in a propositional style. The singular terms, according to Quine, are accessible to positions appropriate to quantified variable.

This way of characterizing subject-expressions rests upon grammatical criterion discussed above. Quantifiers and bound

1. Ibid., p. 207.
variables like "everything", "something", "nothing" or "there is something which ...", "there is nothing which ...not..." are either grammatically singular substantive or terminate in a singular relative pronoun. Hence they are like subject-expressions as discussed above.

Now Strawson points out that the expressions like "something", "everything" do not introduce any term, because they have no identifying reference. Having an identifying reference is an essential condition of term introduction.

From the above discussion it follows that the criterion of Frege, Geach and Quine rests upon the mode of term introduction. A subject expression merely introduces its term, while a predicate expression introduces the term in an assertive or propositional style. Now the question is whether such a distinction should be regarded as fundamental for logic and philosophy. Since on the basis of this distinction we cannot say anything about the extra-linguistic fact, it is claimed that it has no relevance in philosophy or philosophy of logic, although certain philosophers have erected their ontology on the basis of such a distinction. Since this type of term introduction is relative to a particular language, it does not have any ontological bearing. Ramsey is of the opinion that this distinction is not at all fundamental for logic and philosophy. He says, "Now it seems to me as clear as anything can be in philosophy that the two sentences "Socrates is wise", "Wisdom is a characteristic of Socrates" assert the same fact and express the same
proposition.¹ In one sentence "Socrates" is subject, while in the other "wisdom". Similarly, in one "is wise" is predicate, while in the other "is characteristic of Socrates" is predicate. Hence the grammatical subject or predicate has nothing to do with the logical nature of Socrates or wisdom. The subject or predicate is not only relative to a language, but also relative to a proposition. Ramsey's criticism makes this point evident. "Socrates is wise" and "wisdom is characteristic of Socrates" contain the same proposition and refer to the same fact, but they differ in respect of subject and predicate. If by logic or philosophy we intend to get new knowledge of the same fact, then also this grammatical criterion fails miserably. By uttering the sentence "Socrates is wise" and "wisdom is characteristic of Socrates" we do not get any new knowledge about the same fact, neither do we increase our knowledge thereby.

Moreover, the style of term-introduction may be allotted to linguistic devices other than term-introducing expressions. The sentence "Socrates is wise" can be written as "(Socrates Wisdom)". In the latter expression we introduce two terms, namely, "Socrates" and "Wisdom". The assertive or propositional symbolism is expressed by a bracket round the two substantives (terms). Similarly, time-indication can be expressed by some symbolism which is extraneous to the term-introduction. For example, "Socrates was wise" may be expressed by "(Socrates Wisdom)", and "Socrates will be wise"

by the expression "(Socrates Wisdom)".

All these criticisms show that the grammatical criterion or the style of term-introduction is not important for logical or philosophical purpose. But Strawson tries to keep the significance of the grammatical criterion by introducing mediating criterion which serves as a bridge between the grammatical and the category criterion or between grammar (language) and ontology (reality). Before taking up this criterion let us discuss the category criterion.

II Category Criterion:

The category criterion is based on the difference of type or category of terms introduced in a proposition. In discussing category criterion Strawson introduces certain kinds of tie by means of which universal can be tied to particulars, or particulars to universal, or particular(s) to particular(s).

(a) Sortal or instantial tie: - A particular is sortally or instantially tied to a number of sortal or instantial universals. For example, Socrates is a man, an animal. Again, a sortal or instantial universal is tied to a number of particulars by the instantial or sortal tie. For example, Plato and Aristotle are all men.

(b) Characterizing tie: - A particular may be related to a number of characterizing universals by a characterizing tie. For example, Socrates is wise, honest, virtuous. Again, a characterizing universal may be tied to a number of particulars. For example, Socrates, Plato, Aristotle are all wise, all honest.
(c) Attributive tie:—By attributive tie a particular collects many other particulars: thus Socrates collects particular smile, talk. But by characterizing tie Socrates collects characterizing universals like smiling, talking. The terms of the attributive tie are particulars alone. These particulars are of two types—dependent and independent. In the above example "Socrates" is an independent member, but the particular smile and talk are dependent members.

Now let us discuss how the universal-particular distinction is related to the subject-predicate distinction.

According to the category criterion a particular is always a subject and a universal or universal-cum-particular is a predicate. From this it does not follow that a universal cannot be a subject. In the proposition "redness is a color", redness, a universal, is the subject. In the proposition "John is married to Joan", "being married to Joan" is a universal-cum-particular. Hence a particular is always a subject, while a universal or universal-cum-particular is a predicate or a subject.

The grammatical criterion rests on the mode of term-introduction, but the category criterion rests upon the nature of the term introduced. At the outset these two criteria appear to be independent of each other. Strawson points out that there are some affinities between them. In the propositions like "Socrates is wise", "Socrates is a philosopher", "is wise" and "is a philosopher" are predicates according to the grammatical criterion. According to the category criterion
also "being wise" and "being a philosopher" are predicates. Now the question is how to explain those propositions where names of particulars are used as predicates. In the propositions "John is a Hitler" and "Tom is a Socrates", "is a Hitler" and "is a Socrates" are predicate-expressions according to the grammatical criterion. At the outset it seems to us that it cannot satisfy the category criterion, since the name of particular objects are used as predicates. This difficulty can be easily avoided. Here particulars are used not as particulars but as adjectives. In the above examples "Hitler" or "Socrates" means "has the characteristic of Hitler" or "has the characteristic of Socrates".

Now let us consider those cases where this affinity between the two criteria has not been manifested.

(1) Socrates is wise.

(2) Wisdom is a characteristic of Socrates.

According to both grammatical and category criteria "Socrates" is subject and "wisdom" is predicated of Socrates in (1). But in (2) "wisdom" is the subject and "is a characteristic of Socrates" is the predicate according to the grammatical criterion, whereas the category criterion requires us to say that "wisdom" is a predicate, since it is a universal and "Socrates" is a subject, since it is a particular. Hence from this example it follows that "Socrates" which is a particular is predicated of "wisdom".

One way of avoiding this difficulty is by construing faking universal. "Being a characteristic (of)" is a dummy universal. Hence "being a characteristic of Socrates" is
to be regarded as a universal-cum-particular. But this way of avoiding the objection is not satisfactory, because the tie between "wisdom" and "Socrates" has been promoted to the status of dummy universal. If we are allowed to do so in this case, then we can do so in each step and thus we are involved in an infinite regress.

There is another way of avoiding this objection. The grammatical criterion can be strengthened by the category criterion. No analysis of (2) should be allowed which makes "wisdom" a subject-expression. This is done by Strawson by introducing the mediating criterion.

Before discussing the mediating criterion, let us discuss another important case which sets a problem to us. In such cases particulars are tied to particulars by the attributive tie. For example,

The blow which blinded John was struck by Peter.¹
The catch which got Compton out was made by Carr.

In one case the particular blow and Peter are tied, and in the other case the particular catch and Carr. This goes against the category criterion, because a particular has become a predicate. If we say that there is no predicate, then it goes against the grammatical criterion. An attempt has been made to solve this problem by introducing quasi-relational universal.

¹. Strawson, *Individuals*, p. 177 ff.
The general scheme for such sentences would be this:
The particular action - is performed | executed | done by the
particular agent.

This move is not satisfactory, because here a distinc-
tion has been made between the action of the agent and his
doing of this action. The action and the doing of the action
are not two different things.

Moreover, this way of avoiding objection promotes tie to
the status of the term. If we are allowed to do this in one
case, we can do so in each step and thus we are involved in
an infinite regress.

III Mediating Criterion:-

Strawson tries to resolve this difficulty by introducing
the mediating criterion. According to this criterion the
subject-term carries certain empirical presupposition, while
the predicate-term does not carry such presupposition. This
criterion serves as a bridge between the grammatical and the
category criterion.

Before discussing the mediating criterion let us enumerate
the conditions for introducing particulars and universals into
a proposition.

The conditions for introducing particulars into proposi-
tion are the following:
(a) The first condition is that there should be a particular
which the speaker is referring to.
(b) The second condition is that there should be a particular
to the hearer.

(c) Thirdly, the particular of the speaker should be identical with that of the hearer.

The requisite condition for making identifying reference to a particular is that there must be some true empirical proposition known to the speaker as well as to the hearer.

The conditions for introducing universals into a proposition are different from those of the particular introduction. A sufficient condition for introducing a universal, say \( \varphi \), would be the truth of the empirical proposition, known to the speaker, that something or other is \( \varphi \). Another sufficient condition for introducing some universal would be the truth of the empirical proposition that nothing is \( \varphi \). The disjunction of these two sufficient conditions, viz. either something is \( \varphi \) or nothing is \( \varphi \), forms the necessary condition for universal introduction into a proposition. Now this necessary condition no longer remains an empirical proposition. It is a tautology.

So the necessary condition for particular introduction is that an empirical proposition should be known to be true to the speaker, but the necessary condition of universal introduction does not involve any empirical presupposition. The fact which it asserts is a fact of language.

According to this new criterion the subject-expression presents an empirical fact in its own right, while the predicate-expression presents no such fact. The former is complete to the extent it presents a fact, whereas the latter
is incomplete to the extent it does not present a fact. But none of them is complete in itself, because none of them can form a proposition taken separately.

This new criterion harmonizes with the grammatical as well as with the category criterion. Like the grammatical criterion the predicate-expression gets completion into an explicit assertion when it is coupled with the subject-expression. Again the subject-expression of this new criterion is complete like that of the grammatical criterion so far as it carries the weight of fact with it. Like the category criterion the particular-denoting expressions can never be a predicate-expression according to this criterion. So the main thesis of the category criterion that a particular can never be a predicate and a predicate is either a universal or universal-cum-particular is admitted by this new criterion.

In this way Strawson bridges the gap between the grammatical and the category criterion by introducing the mediating criterion. Thus he substantiates the thesis that the subject-predicate distinction in grammar parallels the particular-universal distinction in logic. In our above example, namely, "Socrates is wise" and "Wisdom is the characteristic of Socrates", the term "Socrates" carries the burden of fact, while the term "Wisdom" does not imply any empirical presupposition. In order to have identifying reference to Socrates we should know some fact about Socrates. Herein lies the empirical presupposition for introducing the term "Socrates".
For introducing the term "Wisdom" we do not have to presuppose any empirical fact. It simply presupposes that something or other is wise. According to the grammatical criterion the term "Socrates" is complete, while the term "is wise" is incomplete. Since a particular is independent and a universal is adjectival to a particular, it can be said that a term which refers to a particular is complete, while a term which refers to a universal is incomplete. The mediating criterion emphasizes this fact by bringing in the empirical presupposition of the particular-denoting terms. Thus if we admit the mediating criterion, then we can give the rationale for treating subject-expression as complete and particular-denoting term, and the predicate-expression as incomplete and adjectival or universal. In this way grammatical criterion parallels the category criterion.

Against this doctrine several objections have been raised. Let us consider the criticism raised by Mei in his paper "Subject and Predicate: A Grammatical Preliminary".¹ His main objection is that the parallelism between subject-predicate distinction in grammar and the particular-universal distinction in logic is valid for Indo-European languages only. Chinese language does not admit a similar distinction between subject and predicate. Strawson's view would be tenable if the grammatical features of English are present in all languages.

Strawson's main point in connection with the grammatical

criterion is that the subject-expressions introduce terms in a substantival style which would be appropriate to any kind of remark, whereas predicate-expression introduce terms in an assertive or propositional style. The predicate-expressions "is wise" and "smokes" in the statements "Socrates is wise" and "John smokes" are incomplete and demand a completion into a proposition or statement.

Now the question is whether the corresponding predicates in Chinese would demand a similar completion or not. Mei points out that there is no corresponding incomplete predicate-expression in Chinese language. The grammatical features of English exploited by Strawson are these:

"(A) Congruence requires the inflection of the verb in the predicate-expression. (B) This particular kind of inflection ("is wise", "smokes") ...... differs from all other types of modification appropriate to the use of the "morpheme" ("wis-", "smok-") in other parts of speech."¹

In Chinese language both (A) and (B) are absent. Chinese predicate-expressions do not demand completion into propositions. Again, they cannot be regarded as unsaturated or incomplete in the sense of Strawson. "Strawson does exploit two well-known features of English grammar to make his criterion work, namely, the requirement of congruence and uniqueness of TSP [third person singular present tense] endings."² These features are not present in Chinese grammar.

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1. Ibid., p. 156.
2. Ibid., p. 159.
From this fact we should not conclude that no syntactical criterion for the subject-predicate distinction is applicable to Chinese. The word-order criterion which is a type of syntactical criterion is applicable to Chinese. One way of formulating this criterion is that the subject-expression is the anterior component of a sentence and the predicate-expression is the posterior component of a sentence.

Both in English and in Chinese the predicate follows the subject in an assertive sentence. In "Socrates is wise", "is wise" follows "Socrates". In Kungdz tsungming, "Confucius is wise", tsungming, "is wise" follows Kungdz, "Confucius".

Now the question is, how do we find out the first component of a sentence? Why should we not treat "Socrates is" as the first component in the sentence "Socrates is wise"?

It may be urged that the divisions of "Socrates is wise" into "Socrates is" and "wise" violates the meaning of the sentence. To argue in this way is to put forward a semantical criterion. A purely formal or syntactical criterion does not take into account the meaning of a sentence.

By the linguistic notion of immediate constituents (ICs) we can determine that "Socrates" is the first component in the above sentence. In order to find out the immediate constituents of the sentence "Socrates is wise" we follow the following steps. First of all, we write down all mechanically possible analyses of the sentence into word or words. Here we get two pairs, namely, "Socrates" and "is wise" on the one
hand, and "Socrates is" and "wise" on the other. Next we make a list of all types of constructions into which "Socrates" can enter. For example, Socrates has three sons, Plato liked Socrates, the father of Socrates, etc. We do the same thing for "is wise", "Socrates is" and "wise". If the types of constructions into which "Socrates" and "is wise" can enter exceed that of "Socrates is" and "wise", then the former are the immediate constituents. The subject of a sentence is the prior Immediate Constituent and the predicate is the posterior Immediate Constituent. This shows that the word-order criterion is purely formal.

This criterion can be satisfactorily applied to the Chinese. In Kungdz tsungming, "Confucius is wise", the subject Kungdz precedes the predicate tsungming. The reversal of this word order will not constitute a sentence.

This word-order criterion shows that the purely syntactical criterion for the subject-predicate distinction is independent of any semantical criterion. It has nothing to do with the particular-universal distinction in logic or ontology.

From the fact that the word-order criterion is applicable to both the Chinese and the English we should not conclude that the grammatical criterion is identical with the word-order criterion. Strawson's grammatical criterion is based on the requirement of congruence and the uniqueness of TSP endings. The Chinese verbs lack these characteristics. They are not inflected for tense, person or number. These predi-
cates are as complete and saturated as the subject. The Chinese predicate, say Chouyan, "smokes" can enter into any kind of remark equally. For example, Chouyan?, "smokes?" (an invitation to smoke), Chouyan!, "smoke!", (a command). In all these cases the same morpheme-sequence is used. This shows that the Chinese predicate-expressions introduce their terms in the same style as the Chinese subject-expressions. On the basis of style of introduction we cannot distinguish subject-expressions from predicate-expressions.

So the critique of Mei aims at establishing the following points:

(1) There is no parallel between the grammatical and the category criterion. (2) Word-order criterion which is a type of syntactical criterion has no ontological or philosophical bearing. It is just a device for making a distinction between the two types of terms. We cannot say, on this criterion, that the subject-expression is that about which something is stated and the predicate-expression says something about the subject. According to the word-order criterion in the sentence "Raleigh smokes", if "Raleigh" is regarded as a subject-expression, then "smokes" or "smoking" cannot be regarded as a subject. We shall see in the sequel that the distinction between the subject and the predicate is relative and dependent on hearer-speaker situation. In one context "Raleigh" may be subject and in another context "smoking" may be subject.
An objection similar to Mei has been raised by B. L. Whorf.¹ But this objection cuts deeper than that of Mei and we agree with one of the theses of Whorf. According to him the distinction between substantives and verbs, or complete and incomplete, peculiar to certain languages is not drawn from nature. "It is just a result of the fact that every tongue must have some kind of structure, and those tongues have made a go of exploiting this kind. The Greeks, especially Aristotle, built up this contrast and made it a law of reason. Since then, the contrast has been stated in logic in many different ways: subject and predicate, actor and action, things and relations between things, objects and their attributes, quantities and operations. And, pursuant again to grammar, the notion became ingrained that one of these classes of entities can exist in its own right but that the verb class cannot exist without an entity of the other class, the "thing" class, as a peg to hang on".² Whorf further points out that "the whole trend of modern physics, with its emphasis on 'the field', is an implicit questioning of the ideology".³

American Indian languages show that there are sentences which cannot be broken into subject-predicate form. There is no subject and predicate in Nootka language. The simplest

¹ B. L. Whorf, Language, Thought and Reality, p. 241 ff.
² Ibid., p. 241.
³ Ibid., p. 241.
utterance is a sentence. Long sentences are complex sentences. They are not built up of words. Let us consider the Nootka equivalent of the sentence "He invites people to a feast". "It begins with the event of 'boiling or cooking', tl'imsh; then comes -va (result) = "cooked"; then -is "eating" = "eating cooked food"; then -ita ("those who do") = "eaters of cooked food"; then -'itl ("going for"); then -ma, sign of third-person indicative, giving tl'imshya' isita' itlima, which answers to the crude paraphrase, 'he, or somebody, goes for (invites) eaters of cooked food'.'¹

According to Whorf the reading of nature into language leads us to the assertion of sentences like "It flashed" or "A light flashed". Here "it" or "light" is used as substantive to perform the action of flashing. In Hopi language no such distinction is present. This language reports the flash with a simple verb, rehpi: "flash (occurred)". There is no division into subject and predicate. Since scientific language is based on Indo-European languages, it sees actions and forces where there may be only states. "A change in language can transform our appreciation of the cosmos."²

The criticism of Mei and that of Whorf point out that the subject-predicate distinction based on the grammar of a language mirrors its semantics. But we cannot defend any ontology from the grammatical distinction between subject and

¹. Ibid., p. 242.

². Ibid., p. 263.
predicate. The grammar of a language does not throw any light on the ontology, what it reveals is the semantics or ontology of that language.

Prof. Robert Price in his paper "Descriptive metaphysics, Chinese and Oxford common room"⁴ tries to answer the objection of Prof. Mei. He points out that the rejection of the Aristotelian distinction between particular and universal or the usage of ordinary language does not follow from the fact that the Chinese grammar does not make the subject-predicate distinction as the English makes. He claims that the uses of English expressions serve as the paradigm of all languages. "If there is imperialism involved it is conceptual and not linguistic; Aristotelianism is being imposed upon us, not English".² This becomes evident when we consider the distinction between expressions and the uses of expressions or between types and the uses of types. Let us consider the referring use of the expression. It is claimed that the subject-expression has the referring use. Referring to something i.e. introducing a term in a substantial style, is done not by the expression, but by the use of an expression. "Thus the expression 'the man' can be used to refer, as in 'the man is Sam', and can be used to predicate as in 'Sam is the man'"³ Mei's main mistake lies in making a confusion between types and uses of types, or expressions and the uses of expressions. Grammarians are mainly concerned with the types and the

2. Ibid., p. 107.
3. Ibid., p. 107.
philosophers with the uses of types. The philosopher classi-
ifies the uses of expressions which are different from the
classification of expressions. The same expression may have
different uses or the different uses may be of the same expres-
sion. In the above examples, "the man is Sam" and "Sam is the
man", the expression "the man" has different uses. An ordin-
ary language philosopher classifies these different uses.
Broadly speaking, the uses are classified as referring or
ascriptive. From these uses Strawson discovers that which is
presupposed by these uses. In the case of referring use some
empirical fact is presupposed, while the ascriptive use does
not carry the burden of fact. This empirical fact identified
as particular, while the object presupposed by ascriptive use
is universal. "It is in this connection that English is re-
garded as paradigm; it is only because English expressions
can be put to such uses that we can discern (intuit?) these
conceptual categories."¹ It is not English grammar or syntax
that reveals the presuppositions, rather the uses of the ex-
pressions. It is just an accident that in some cases English
expressions reveal the objects presupposed by the uses of
expressions. From this Prof. Price concludes that "Mei's
observation .... that we cannot distinguish subject-express-
sions and predicate-expressions in Chinese is quite irrelevant
to Strawson's defence of Aristotelianism because Chinese types
are themselves quite irrelevant. What would be relevant would
be to point out that Chinese types cannot be used in a re-
ferring or ascriptive way. But he does not do this."²

¹. Ibid., p. 108.
². Ibid., p. 109.
In this controversy two points may be noted.

(1) The critics of Strawson are of the opinion that Aristotelianism cannot be defended from the study of linguistic expressions. Mei refers to the Chinese language and Whorf refers to the Nootka and Hopi language where one word constitutes a sentence. In Nootka and Hopi language we cannot make the distinction between subject and predicate. These languages imply the event ontology.

(11) The defenders of Strawson are of the opinion that Aristotelianism can be defended by noting the uses of expressions. In this respect the English serves as a paradigm.

The former argues that nothing can be said about the semantics (ontology) in general from the study of the syntax of language in general. Different languages have different syntax. Hence they presuppose different ontologies. The syntax of Indo-European languages has a tendency towards Aristotelianism, while the syntax of Chinese goes against the Aristotelianism and that of Nootka and Hopi support the event ontology. Hence it is misleading to classify the things of the world on the basis of a particular language.

The latter claims that we can classify the things if we study the uses of the expressions. Now the question is whether the classification of uses is based on any criterion. It cannot be classified by grammatical criterion, because grammar deals with the expressions, not with the uses of expressions. Since the category criterion deals with the nature of the terms introduced, it cannot classify the use of the expression. According to Prof. Price the nature of the terms
introduced is revealed by the uses of the expression.

IV Pragmatic Criterion:

According to our positive thesis the uses of an expression cannot be classified in terms of the grammatical or the category criterion. It presupposes pragmatics in addition to the syntax and the semantics of our language. The role of the hearer-speaker situation is very important in understanding the use of an expression. The hearer-speaker situation is present in all languages and it presupposes the context of the utterance. Let us consider certain examples. In a particular piece of discourse when we are talking about "glass", the expression "glass is elastic" requires a particular type of analysis. In this context "glass" is a referring expression and "being elastic" is ascribed to glass. Here we get a new information about glass. But when the matter of inquiry is about elasticity and the question is what substances possess this property, "glass" would not be regarded as a referring expression but as a predicative expression. Here we give a new information about elasticity. In one case we are talking about glass, while in another case about elasticity. If we take out the context of the utterance, we cannot find any distinction between the two utterances of the expression "glass is elastic". It is the consideration of pragmatics which reveals the difference between the two uses of the same expression. Difference in the hearer-speaker situation would imply a difference in the semantics. One type of use presupposes Aristotelianism, while the other type of use presupposes Anti-Aristotelianism. The pragmatics presupposes the
the concept determinate-indeterminate. In a statement something is made more determinate. This determination presupposes something determinable. In the above example in one case glass is determinable, while in another case elasticity is determinable. By giving a new information about elasticity we make it more determinate. Both the hearer and the speaker agree on the determinable. If there is no agreement on the determinable, the hearer cannot understand what the speaker says. This is what happens when the language is unknown to us. We do not know what is to be determined by what. This determinable may be regarded as the semantics presupposed by the use of the expression. The same fact can be illustrated by the familiar examples, namely, "Scott is the author of Waverley" and "The author of Waverley is Scott". In one case the fact that someone is Scott is known to the hearer, whereas in the other case the fact that someone is the author of Waverley is known to the hearer. In the former case the hearer determines Scott by the characteristic of being the author of Waverley, while in the latter case he comes to know that the person who wrote Waverley is called Scott. In the latter case "Scott" is not used in the referring way. It is used as an ascriptive expression. As a result, when we abstract these two statements from the hearer-speaker situation, we do not find any difference between them. We think as if the same thing is said by these two utterances. Similarly, the sentence "John is a good student" can be analyzed in different ways depending on the hearer-speaker situation. In one of its uses "John" is a referring expression and being a good student is ascribed to John. In some other use John is a determinant which deter-
mines being a good student. This use occurs when we are asked, who is a good student? In another use "good" may be considered as a predicative expression. If the question is, what sort of a student is John?, the same sentence treats the fact that John is a student as determinable and good as determinant. In this respect Strawson's criticism of Geach is revealing, although his criticism is wide of the mark and he himself did not accept the view that the distinction between subject and predicate varies depending on the context. In the example "Raleigh smokes", in one case "Raleigh" is determinable, because we are talking about him and in another case "smoking" is determinable because we are talking about it. So the distinction between a referring use and an ascriptive use in a sentence is dependent on the context of utterance. The use gets its life in the stream of context.

In this connection two points may be noted.

(1) Our analysis of sentence or statement is very close to Cook Wilson's in certain respects. Cook Wilson also argues that the subject-predicate distinction depends on the stress of the speaker. We are not denying Cook Wilson's view totally. We are rather modifying it in certain respects and stressing the role of the hearer. Our discussion differs from that of Cook Wilson in at least two respects.

(a) According to Cook Wilson in the example "glass is elastic", in one case that it is elastic is predicated of glass, while in the other case that the glass is elastic is predicated of elasticity. In both cases it is the proposition that so and so is so and so is predicated of something. This
involves circularity, because the fact that so and so is so and so requires the same analysis which is applicable to the statement. So either it will lead to an infinite regress or it will involve circularity. In our analysis it is not a proposition that is predicated of some substantive. Instead of the substantive-adjective category we introduce the determinable and determinant category. This is relative to a particular statement. The determinant is not a proposition of the form that so and so is so and so. It is expressed by any qualifying expression.

(b) Secondly, in Cook Wilson the role of the hearer is of secondary importance. He lays much emphasis on the stress of the speaker. According to our analysis the use is manifested in the question of the hearer. The hearer may not put the actual question, but it is involved in the context of the hearer-speaker situation.

(II) Another point is that all our examples are not of the same type. The statements involving descriptions or existential terms are more complicated than the simple statements like "John is a man" or "the table is brown". The statements involving descriptions are to be analyzed in a particular way if we adopt a particular analysis of description. If we admit that the very use of a description presupposes a descriptum, then we cannot use a description in an ascriptive way. It is always to be taken as a referring expression. Since we have rejected this view of description in our second chapter, our theory is free from this objection. Similarly, all
existential statements cannot be analyzed in the same way. The analysis of existential statements like "John exists", "God exists", "tame tigers exist", "all the tigers in the zoo still exist", would depend on the use of the term "exist". In the next chapter we shall discuss whether "exist" can be used as a predicate or not.
CHAPTER IV

WHETHER EXISTENCE IS A PREDICATE

In the first and the second chapter we have discussed the nature of existential propositions like "John exists", "tame tigers exists", "the prime number between 5 and 11 exists", "the author of Principia exists", "the man in the mars exists". In these chapters we have analyzed the concept of existence and description. But we have not yet analyzed these propositions into subject and predicate. In the third chapter we have analyzed the concept of subject and predicate, and we have found that the prevalent criteria are not adequate to give a satisfactory account of these concepts. We require the pragmatic criterion to determine the subject and the predicate. This criterion has necessary reference to the context of discourse and the hearer-speaker attitude. The same proposition can be analyzed differently depending on the different hearer-speaker attitudes or context of discourse. In this chapter our positive thesis is that there is no one way of analyzing existential proposition into subject and predicate. The word "exist" has more than one use in propositions. Sometimes it is used predicatively and sometimes non-predicatively. From the syntax or semantics of an existential judgment we cannot determine which use is predicative and which use is non-predicative. We have to look into the context or the hearer-speaker situation.

Before developing our positive thesis I would like to discuss the prevalent views of existential judgments. These
views can be divided into two types. According to one view existence is not a predicate, while according to the other view existence is a predicate. The latter view takes two different forms. According to one of them existence is like an ordinary predicate, say red. According to the other view it is a universal predicate, i.e. a predicate of everything. The latter view has been proposed by Nakhnikian and Salmon.

I. Arguments against Existence being a predicate:

The following considerations are advanced in order to establish the view that existence is not a predicate.

(a) Kant: According to Kant existence is not a predicate because a concept gains nothing if existence is added to it. Neither does it lose anything if existence is subtracted from it. This is based on a particular view of predicate. According to him a genuine predicate in a synthetic proposition adds something to the subject concept. The predicates of existential judgments differ from other predicates in certain respects.¹

(1) According to Kant a logical predicate puts some restriction on the things denoted by the subject concept. The judgment "The table is brown" puts some restriction on the things denoted by the concept table. According to Kant such predicates are determining predicates, because the use of such predicates puts some restriction on the things referred to by the subject concept. The predicate of an existential judg-

ment is not a determining predicate. The judgment "Men
exist" does not determine the individuals denoted by the con-
cept "man".
(2) The concept table gains nothing when we say "Table
exists"; again it loses nothing when we say "Table does not
exist". This is not the case with other predicates. The
concept man will lose something if animality is taken out of
it. Similarly, when we say "man is honest", we add honesty
to the concept of man. If we say the melting point of iron
is 200°F, the concept iron is enriched thereby. But this
is not the case with existential judgments. In Kant's
language:

"Nothing can have been added to the concept, which ex-
presses merely what is possible, by my thinking its object
... as given absolutely. Otherwise stated, the real con-
tains no more than the merely possible. A hundred real
Thalers do not contain the least coin more than a hundred
possible Thalers."¹

"By whatever and by however many predicates we may think
a thing - even if we completely determine it - we do not make
the least addition to the thing when we further declare that
the thing is."²

Against this view of Kant it is said that it does not
refute the view that existence is a predicate. Murray

¹ Kant, *Critique of Pure Reason*, translated by Kemp
Smith, p. 505.

² Ibid., p. 505.
Kiteley\textsuperscript{1} points out that Kant's thesis rests on selecting a particular type of example. It has some intuitive appeal. In order to reveal this intuitive feature of Kant's view he gives a few more examples.

"Consider a candy manufacturer. Does he make two kinds of chocolates, packaged and unpackaged? "Packagedness", Kant-Malcolm might say, is not a real predicate. Only size, filling and topping make a difference among chocolates; packages are coverings, not characteristics."\textsuperscript{2}

If existence is compared with packagedness, then it seems to us that it is not a predicate. This example supports the Kantian Thesis that existence is not a predicate. As packagedness cannot be regarded as one of the characteristics of a chocolate, similarly, existence cannot be regarded as one of the characteristics of a thing. But if we look at the examples from other points of view, then we are rather inclined to establish the opposite thesis. We have cases where we want to know whether something exists or not. If we are making a survey about the existent animals, then the question of existence is the most important one. We classify animals in general into extinct and extant. In this context extant may be considered as a characteristic of certain animals. It is a principle of division of animals in general.

(b) There is another way of putting the thesis that existence

\begin{enumerate}
  \item "Is Existence a Predicate?", Mind, 1964.
  \item Ibid., pp. 364-65.
\end{enumerate}
is not a predicate. It can be stated in terms of that and what. In the idealistic philosophy that and what refer to substantive, and adjective respectively. The that i.e. substantive is independent, while the what, i.e. adjective, is dependent on some substantive. Height, length, solidity, etc. are what aspects or characters of a table. But its existence is not a character, it is a condition of characterization. It is the that of the table. Characters are conditioned by the existence of a thing. Hence existence cannot be a character.

Against this view also it is said that the view that existence is not a predicate depends on selecting a particular example. It is true that in describing the characteristics of an orange we cannot say "It is delicious and it exists". But we can imagine a situation where it is perfectly alright. Suppose we are told about a fabulous orange. If we come across an orange of this type, we can say "the fabulous orange we heard so much about exists". After tasting this orange we can say "it exists and it is delicious". In saying that "it exists" we are trying to rule out the possibility of its being fictitious. From this it does not follow that we are denying that existence is a condition of a thing's other characteristics. The fact that a thing is red or hard presupposes that it exists, but existence can also be a character when we rule out certain possibilities like mythical.

1. Ebersole, "Whether existence is a predicate", The Journal of Philosophy, 1963
legendary. By saying that "it exists" we do not ascribe a character like red to that thing. We simply rule out that it is mythical or legendary.

(c) Ayer, Wisdom and Broad have argued that if existence is a predicate, then all positive existential judgments are analytic and all negative ones are self-contradictory. Since all positive existential judgments are not tautologies and all negatives ones are not self-contradictory, existence cannot be regarded as a predicate.

Ayer says:

When we ascribe an attribute to a thing, we covertly assert that it exists: so that if existence were itself an attribute, it would follow that all positive existential propositions were tautologies, and all negative existential propositions self-contradictory; and this is not the case. So that those who raise questions about Being which are based on the assumption that existence is an attribute are guilty of following grammar beyond the boundaries of sense.¹

Wisdom says:

Suppose the proposition expressed by the instantial sentence, "Horses exist", is related to this sentence in the same way that the proposition expressed by the sentence, "Horses are herbivorous" is related to that sentence. Then (1) affirmative instantials are tautologous, and (2) negative instantials are self-contradictory. For "Horses are herbivorous" equals "If there exists anything which is a horse it is

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herbivorous". And "Horses exist" treated on these lines becomes "If there exists anything which is a horse, it exists". And "Horses are not herbivorous" equals "If there exists anything which is a horse, it does not exist." Now instanial propositions are not silly in this way. Therefore they are not related to instanial sentences in the same way that subject-predicate propositions are related to subject-predicate sentences.¹

Broad says:

Let us begin with the two negative propositions Cats do not bark and Dragons do not exist. It is obvious that the first is about cats. But if the second be true, it is certain that it cannot be about dragons; for there will be no such things as dragons for it to be about. The first might be expressed, on the conditional interpretation, by the sentence "If there were any cats, none of them would bark." On the instanial interpretation it might be expressed by the sentence "There are cats, and none of them bark." Suppose you try to express the negative existential proposition in the same way. On the first alternative it would be expressed by the sentence "If there were any dragons, none of them would exist." On the second alternative it would be expressed by the sentence "There are dragons, and none of them exist." Both these sentences are self-contradictory and meaningless. So, if you try to analyze negative existential propositions in the same way as negative characterizing propositions, you

¹. Wisdom, Interpretation and Analysis, pp. 62-63.
will find that they are all self-contradictory. But it is plain that Dragons do not exist is not self-contradictory. It is not only logically possible but is almost certainly true.1

From this observation Broad concludes that Dragons do not exist is not self-contradictory. Similarly, Cats scratch and Cats exist are not of the same logical form. "If you try to analyze affirmative existential propositions in the same way as affirmative characterizing propositions, you will find that they are all platitudes. But it is plain that Cats exist is not a mere platitude. It is a substantial proposition which might very well be doubted by a person who had never seen a cat. So it is certain that existential propositions need a different kind of analysis."2

Ayer, Broad and Wisdom's argument can be represented in the form of Modus Tollens.

\[
\begin{align*}
&\quad p \implies q \\
&\sim q \\
&\therefore \sim p
\end{align*}
\]

I.e. (1) If existence is a predicate, affirmative existential propositions are tautologous and negative existential propositions are self-contradictory.

(2) Affirmative existential propositions are not tautologous

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1. Broad, Religion, Philosophy & Psychological Research, p. 182.
2. Ibid., pp. 182-3.
and negative existential propositions are not self-contradictory.

3. Existence is not a predicate.

In favor of (2) we have examples from fiction, legend and myth. If we claim that predication entails existence, then we have to restrict predication to successful and correct ones. Since we have unsuccessful and incorrect predications, we cannot say that all existential propositions are tautologous or self-contradictory. A predication may fail because of subject failure. The proposition "The present king of France exists" is false because of subject failure. So we cannot say that whenever we want to talk about anything, the thing talked about must exist. The major premise of our argument makes the assumption that the thing talked about must exist. Since the thing talked about may not exist, the major premise of our argument is false. That is to say, even if existence is regarded as a predicate, we cannot say that affirmative existential propositions are tautologous and negative existential propositions are self-contradictory. The proposition "The present king of France exists" is not tautologous, even if we consider "exists" to be a predicate.

Ayer, Wisdom and Broad have accepted the major premise and denied the consequent of the major premise. But Kiteley has denied the major premise itself. Nakhnikian and Salmon have also rejected the major premise. According to them existence is a predicate and existential assertions are not tautologous or self-contradictory. The tautologous or self-contradictory character of existential propositions arises because we wrongly
assimilate "Horses are herbivorous" with "Horses exist" and "Horses are not herbivorous" with "Horses do not exist".

"Horses exist" may mean either "All horses exist" or "Some horses exist". The proposition "All horses exist" is a truism. It simply means that there are no nonexistent horses.

"When we say 'horses exist', we do not generally mean to say that there are no non-existent horses but rather that there are some existent ones".¹ If "horses exist" means "If there is anything which is a horse, then it exists", then it can be symbolized as follows:

(1)  \( (x) \) (Hx. \( \exists \). Ex), where "Ex" means "x exists".

This is a tautology. But no one wants to assert this when he says "Horses exist". So the second form is the intended assertion of "Horses exist" which is the same as "Some horses exist". This can be symbolized by the expression:

(2)  \( \neg(x) \) (Hx. \( \exists \). \neg Ex).

(2) is equivalent to (3) (\( \exists x \) (Hx. Ex).

Now (3) is not a tautology.

The negative existential, say, "Horses do not exist", means "If there is anything which is a horse, it does not exist". It can be symbolized by the expression:

(4)  \( (x) \) (Hx. Ex. \( \exists \). \neg Ex).

(4) is equivalent to (5) \( (x) \) (Hx. \( \exists \). Ex \( \exists \). \neg Ex).

Since (6) Ex \( \exists \). Ex \( \exists \). \neg Ex is a theorem,

(5) is equivalent to (7) \( (x) \) (Hx \( \exists \). \neg Ex).

Now (7) is not a contradiction and it is the contradictory

of (2) which is not a tautology.

The above symbolization shows that the affirmative existential i.e. (2) is not a tautology and the negative existential i.e. (7) is not a contradiction.
(d) Another argument says that if existence is a predicate, then we can assert universal affirmative existential judgments and particular negative existential judgments. Since judgments like "All tame tigers exist" and "Some tame tigers do not exist" appear to be silly, existence is not a predicate.

The propositions like "All tame tigers growl", "Most tame tigers growl" and "Some tame tigers growl" are perfectly meaningful and each of them is different from the rest. "All tame tigers growl" and "Most tame tigers growl" cannot be true unless "Some tame tigers growl" is true. If "existence" is a predicate like "growl", then we can construe "All tame tigers exist", "Most tame tigers exist" and "Some tame tigers exist". Now it is claimed that "All tame tigers exist" and "Most tame tigers exist" do not have a clear meaning as "All tame tigers growl" and "Most tame tigers growl" do have. This point has been made clear by comparing the expressions "Some tame tigers don't growl" and "Some tame tigers don't exist". The latter is the same as "There are some tame tigers, which don't exist". Moore says that this expression as a whole has no meaning at all, if "exist" is used in the same sense as it is used in "Some tame tigers exist". If "Some

1. G. E. Moore, "Is Existence a Predicate?", Philosophical Papers.
tame tigers do not exist" has no meaning, then "All tame
tigers exist" and "Most tame tigers exist" do not have any
meaning. For "All tame tigers exist" is equivalent to the
conjunction "Some tame tigers exist and there is no tame
tiger which does not exist". Since "there is a tame tiger
which does not exist" has no meaning, its denial "there is no
tame tiger which does not exist" has no meaning. Since the
latter expression is one of the conjuncts of the expanded
"All tame tigers exist", the conjunctive sentence as a whole
has no meaning. Hence its equivalent "All tame tigers exist"
has no meaning. Similarly, "Most tame tigers exist" is equiva-
 lent to the conjunction "Some tame tigers exist and the
number of those which do not exist is smaller than that of
those which do". Since "there are some tame tigers which do
not exist" has no meaning, the expression "The number of
tame tigers which do not exist is smaller than that of those
which do" has no meaning. Hence the whole conjunctive sen-
tence has no meaning. From this observation it is concluded
that "exist" or "do not exist" does not behave in the same
manner as the predicates "growl" or "do not growl" does. So
existence cannot be treated as a predicate.

Moore, Kiteley and Ebersole have pointed out certain uses
of "exist", which permit sentences like "Some tame tigers do
not exist", "All tame tigers exist". According to Moore the
meaning of "Some tame tigers do not exist" is the same as
"Some tame tigers are imaginary" or "Some tame tigers are not
real tigers". The tame tiger which occurs in fiction is an
imaginary tiger. The statement "Some tame tigers do not
exist" is perfectly meaningful when it refers to this imaginary tiger. Moore says, "What it means is that either some real people have written stories about imaginary tigers, or are having or have recently had hallucinations of tame tigers, or, perhaps, are dreaming or have dreamed of particular tame tigers". But this use of "exists" is not the same as the use of "exist" occurring in "Some tame tigers exist".

Kiteley has pointed out certain uses of "exist", which are perfectly meaningful when we construe sentences of the form "All ..... exist", "Some ..... do not exist", "Most ..... exist". The sentence "All the stamps in this issue still exist but some in this one do not" is perfectly meaningful. Even the sentence "All tame tigers exist" can be meaningful when uttered under some context. If a zoological survey team is appointed to file a report on the tame tigers, then after a survey one may say "All the tame tigers exist". This use of "exists" signifies that the tame tigers did not die or escape. This use of "exists" has been called "excluder" use by Hall and non-exiguous use by Kiteley. According to Hall "excluder" use serves to rule out something without adding anything and ambiguously rule out different things according to the context. It solely depends on the context what features have been ruled out. Because of this contextual dependence "excluders are not amenable to definition in the

1. Ibid., p. 120.
strict sense. Excluders are different from ambiguous predicates. An ambiguous predicate may add something instead of merely ruling out certain features. Excluders merely rule out certain possibilities. When we say "All the A's exist" in this sense, we deny that the A's are extinct, out of production, destroyed, hallucinatory, mythical, fabulous or fictional. This excluder use or non-exiguous use should be distinguished from exiguous use. "'exists', when used exiguously, tells you something about tame tigers but nothing about each and every tame tiger; it tells you something about membership, but nothing about the members. Existence, here, is something like full strength of a regiment: the regiment can be at full strength, but none of the members can be". 1

In order to distinguish two senses of existence syntactically it is suggested that exiguous use can be represented in the form of "there is (are) ..." and non-exiguous use in the form of "... exists (exist)". This move is not satisfactory. We can use "there are" idiom to express non-exiguous use of existence. For example, "there are still tame tigers in the zoo". This sentence clearly signifies that they are alive, they did not escape. The fact that existence is used predicatively or non-predicatively cannot be determined by the form of the sentence.

From the above discussion it follows that we cannot say that all sentences of the form "All ..... exist" or "Most ..... exist" are nonsense or puzzling. If "exists" is used as

excluder, then these sentences are as meaningful as any other sentence.

(e) According to another argument if existence is a predicate, then there are certain types of inferences which would be valid. The inferences like "Men exist, and Socrates is a man, therefore Socrates exists" would be valid. Since such inferences are not valid, existence is not a predicate. Russell says:

If you say that "Men exist, and Socrates is a man, therefore Socrates exists", that is exactly the same sort of fallacy as it would be if you said "Men are numerous, Socrates is a man, therefore Socrates is numerous", because existence is a predicate of a propositional function, or derivatively of a class.¹

What Russell is asserting is that existence cannot be treated as a predicate in the sense in which red, green, hard are predicates. To Russell "Men exist" means "x is a man" is sometimes true. Here "is sometimes true" which is the same as "exists" is predicated of a propositional function.

This view of Russell would be true if "exists" is used exiguously. So the proposition "Men exist" or "All men exist" may or may not be nonsensical depending on whether "exist" is used exiguously or non-exiguously. If this use is non-exiguous, then the proposition "All men exist" is the false claim that all men are alive and no man occurs in

fiction. Interpreted thus, the above inference which is considered as nonsensical contains a false premise. The fact that an inference contains a false premise does not make it nonsensical.

II Arguments for Existence being a Predicate:

From our discussion of the above five arguments for the view that existence is not a predicate, it does not follow that all uses of "exists" are predicative. We simply point out that all uses of "exists" are not non-predicative. There are certain uses of "exists" which are predicative. The use of "exists", which is predicative is non-exiguous or excluder use. Now the question is whether exiguous use of "exists" is predicative or not. In this context we find two views. According to one of them which is associated with the ontological argument for the existence of God, the word "exists" gives us a new information about the thing whose existence is asserted, while according to the other view existence is a universal or redundant predicate. Let us discuss these views:

(1) The view that existence is a predicate is associated with the supporters of ontological argument. According to Anselm the being greater than which cannot be conceived must include the existence of it within its concept. According to Descartes the proposition that God exists can be proved in the same way as we prove the theorems of mathematics. He says, "I clearly see that existence can no more be separated from the essence of God than can its having its three angles equal to two right angles be separated from the essence of a rectilinear triangle, or the idea of a mountain from the idea of a
"For it is not within my power to think of God without existence ... though it is in my power to imagine a horse either with wings or without wings." The argument of Descartes is based on the view that the proposition "God exists" and "three angles of a triangle are equal to two right angles" are of the same form. Both of them are of the subject-predicate form. Gassendi, for the first time, pointed out that existence is not a property of God or of anything else. The supporters of the ontological argument consider existence as a perfection. Against this view Gassendi points out that "existence is a perfection neither in God nor in anything else; it is rather that in the absence of which there is no perfection". "That which does not exist has neither perfection nor imperfection, and that which exists and has various perfections, does not have its existence as a particular perfection".

Against this objection Descartes points out that existence may be regarded as a property in the broad sense, in the sense in which it is "equivalent to any attribute or anything which may be predicated of a thing". Here Descartes' intention is to make a distinction between the property existence on the one hand and other properties like red on the other. We shall

2. Ibid., p. 33.
3. Ibid., p. 46.
4. Ibid., p. 46.
discuss this issue at the end of this chapter. In that context we shall discuss whether a distinction between existence as an attribute and other properties is tenable or not.

Descartes' view that existence is a predicate in the sense that it says something entails certain consequences. (i) It entails that some subjects about which existence is predicated are conceivable apart from existence. For example, Unicorns exist. If it is true, then we can conceive of unicorns without existence. Similarly, the table exists. Before these objects exist, they are possible entities. So there is some sense of "being" which is prior to existence. (ii) The subjects of these types of propositions are not particulars, because they do not have existence. If they are treated as concepts, they are universals. Since particularity is associated with existence, that which is devoid of existence is a universal. (iii) If these subjects can be conceived as not having existence and if existence and temporality are associated, then they become timeless. (iv) In the case of the existence of God it is said that He does not exist in time. So we have to admit two types of existence, viz. (a) existence associated with time and (b) existence not associated with time. (v) This view entails the consequence that the subject of a proposition has a certain fixed nature. "From the notion of a subject of predicates as a certain nature we should find ourselves led to the very strange conclusion that all propositions other than existential propositions must be analytic.
For the nature of a thing is taken to include all its qualities".  

From the above consequences it is evident that this view about existence is riddled with certain ontological commitments. One fundamental thesis of this view is that there is a sense of "being" logically prior to existence. This "being" is applicable to the possible and the actual. According to this view actual entails the possible, although possible does not entail the actual. The "being" of the possible is present in the actual also. In order to make an existential judgment if we admit this type of "being", then we are involved in an infinite regress. "P is possible" would imply that "P" has a being different from the possible. Ie. P minus possible is something. As we admit "P is possible" to account for "P exists", so we have to admit "P is possibly possible" to account for "P is possible". This process will go on a\* infinitum.

Against this objection it may be said that we can stop this regress at the stage of "P is possible". Since "possibility" is not an attribute of "P", we do not require "P is possibly possible" to account for "P is possible".

This answer to our objection treats "existence" as an attribute, but not "possible". If we intend to stop infinite regress by treating "possible" not as an attribute, then it

1. Ibid., p. 31.
may be asked why we should not treat existence not as an
attribute and thus stop the regress at the level of "P exists".
The argument which leads us to "P is possible" from "P exists"
equally leads us to "P is possibly possible" from "P is
possible". So either we are involved in an infinite regress
or we do not treat existence as an attribute and stop with
"P exists".

(2) One way of avoiding the above objection is to consider
existence as a universal predicate. This move has been
followed by Nakhnikian and Salmon. In their view affirmative
existential propositions are not tautologous and negative
existential propositions are not self-contradictory even if
existence is a predicate.

They have accepted the view that the ascription of any
attribute to a thing covertly implies that the thing exists.
If we admit this view, then the following would be the conse-
quences:

(1) (x) (Fx ⊃ Ex), where "F" refers to any attribute.

(2) (x) (∃F) Fx

∴ (3) (x) Ex

The formula (3) asserts that "existence" is an attribute
of everything. They are of the opinion that the formula (3)
"may be taken as a semantic rule or a meaning postulate for
exists".1

Now they have shown that the propositions like "Horses
exist" and "Horses do not exist" are neither tautologous nor

1. Ibid., p. 538.
self-contradictory and the usual symbolization of these propositions is perfectly alright provided we accept \((x) \text{Ex}\). Let us follow their arguments.

"Horses exist", when means "Some horses exist", can be symbolized by the expression \((4) (\exists x) (Hx \cdot \text{Ex})\). The usual meaning of "Horses exist" is not "All horses exist", but "There are horses". "All horses exist" simply asserts that "there are no non-existent horses" which is a tautology. So, the intended meaning of "horses exist" is "there are horses". (4) implies (5) \((\exists x) (Hx)\). The symbolic counterpart of "Horses do not exist" would be (6) \((x) (Hx \cdot \text{Ex})\), if it means "If there is anything which is a horse, it does not exist". (6) would be equivalent to (7) \((x) (Hx \cdot \sim \text{Ex})\), because of the theorem (8) \(\text{Ex} \supset \sim \text{Ex} \equiv \sim \text{Ex}\).

Now (3) and (7) together imply (9) \((x) \sim Hx\). And (9) implies (7). Hence (7) and (9) are logically equivalent if we accept (3) as a postulate. Similarly, (5) implies (4) in presence of (3) as a postulate. Hence (4) and (5) are equivalent. The acceptance of (3) as a postulate shows that our usual symbolization of affirmative and negative propositions is equivalent to the propositions which consider "existence" as a predicate. This shows that affirmative and negative existential propositions are neither tautologous nor self-contradictory when "exists" is taken as a predicate. This also shows that existence can be regarded as a predicate without committing ourselves to an ontology of possible objects. Since \((x) \text{Ex}\) is a postulate, there is no question of admitting any possible object.
This discussion shows that certain difficulties regarding existential propositions can be resolved by taking "existence" as a universal predicate. Now the question is, why should we accept (x) Ex as a postulate? In answer to this question Nakhnikian and Salmon point out that if existence is defined as being self-identical, i.e. Ex \( \equiv (\lambda x) (x = x) \), then there is no difficulty in accepting (x) Ex. With this definition of existence (x) Ex will become (x) (x = x). Since (x) (x = x) is a theorem of logic, (x) Ex also becomes a theorem.

An objection has been raised against accepting (x) Ex and hence against defining existence in terms of being self-identical. It is obvious that we cannot say that everything exists. There are lots of things in the legend, literature, which do not exist. We cannot even say that "All horses exist". Pegasus, for example, is a horse which does not exist. Against this objection Nakhnikian and Salmon say, "Our answer to this kind of objection is basically that such considerations do not tend to show that there are things which do not exist because there are no such things as unicorns and Pegasus. Put in another way, our answer is that our postulate does not say either that every intension has a non-null extension, or that every idea corresponds to an existent entity, or that every conception in literature has a counterpart in reality."¹

But this answer is of no help. Since everything, even the characters occurring in literature or mythology, is self-identical, we can say that it exists. Pegasus is self-

¹. Ibid., p. 539.
identical in Greek mythology. So on their view we are justified in asserting that it exists. Now it may be said that we cannot get Pegasus = Pegasus from (x) (x = x), because only names of the actual objects are to be substituted for the variable "x" occurring in (x) (x = x). Against this it may be pointed out that if Pegasus cannot be asserted to be identical with itself, then we cannot talk about it. Since we do talk about objects like Pegasus, it follows that they are self-identical. If they are self-identical, then on their definition of existence these objects exist. If we can assert that objects in literature and mythology exist, then we fail to make a distinction between an object which is in space and time and an object which is not in space and time. Since it is obvious that certain things are asserted to exist and certain things are asserted not to exist, it follows that (x) Ex is not tenable.¹

III Non-predicative Views of Existence:

From the first section it follows that there are predicative and non-predicative uses of "exists". The predicative use of "exists" is negative in character. I.e. it rules out certain possibilities. Since both F and not-F are considered as properties, the predicative use resembles not-F. The non-predicative use is applicable to a class of objects. It does not say anything about any particular member of the class.

¹. For a detailed discussion see Chapter 1, Section II.
In the second section we discussed the arguments in favor of the view that existence is a predicate. According to one view existence is a predicate of certain objects, while according to the other it is a universal predicate. We have also pointed out the ontological commitment of the first view and the absurdity of the second. The second view ultimately denies the possible objects.

If existence is not a predicate, then these alternatives may be suggested. (1) Existence is a subject. (2) Existence is neither a subject nor a predicate, but a quantifier. (3) Existence is an attribute as opposed to a property which is denoted by a predicate-term in the narrower sense. (1) Idealistic philosophers treat existence as a subject. According to them in judgment we ascribe a quality to the reality which is the ultimate subject of a judgment. In the language of Bradley "Judgment is an act which refers an ideal content to a reality beyond the act". The judgment "the table is brown" ascribes the ideal content."the table being brown" to the Reality. The ideal content is a universal or meaning, it is what devoid of that. As an adjective has a necessary reference to a substantive, similarly, the ideal content which is adjectival in nature has necessary reference to a substantive. According to the idealists Reality alone is the true substance. Since by substance they mean independent object, Reality alone has existence. It is the only individual in the true sense of the term.

Two main criticisms have been put forward against the
idealistic view of judgment.

(a) This view is based on the ontology of one all-inclusive substance which is the genuine subject of all judgments. This type of ontology ultimately denies the pluralistic universe which we experience in our daily life. Moore, Russell, Wittgenstein and a host of realists and pluralists have criticized this type of ontological system.

(b) Secondly, this view treats all judgments as having subject-predicate form. And by subject-predicate form idealists mean substantive-adjective form. Moore, Russell, Wittgenstein, Carnap and host of logicians have vehemently opposed the view that all propositions are predicative in form. Relational propositions like "a is greater than b" does not come under the predicative form. Here something is said about both "a" and "b". Carnap says, "To be sure, one can interpret the sentence "a is greater than b" in such a way that the predicate "greater than b" is attributed to the subject a. But the predicate then becomes a unity; one cannot extract b by any rule of inference. Consequently, the sentence "b is smaller than a" cannot be inferred from this sentence."¹ Since the relational propositions are distinct from predicative form of propositions, the idealistic view of existence based on the predicative form of judgment is not tenable.

(2) The modern logicians have considered existence neither as a subject nor as a predicate. The proposition "red exists"

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means "something is red" ie. (∃x) (Rx). This is equivalent to a disjunctive sentence of the form "a is red or b is red or c is red, etc.", where "a", "b" and "c" are names of objects. So "red exists" is about the range of propositions derived from the propositional function "x is red". Since the proposition "red exists" is not about any specific proposition, say a is red, it is called general proposition. Moreover, if there are infinite number of names like "a", "b", then the proposition "red exists" cannot be expanded into a complex proposition without using the expression "etcetera". This shows that an existential proposition cannot be reduced to a complex disjunctive proposition. For this reason Kneale says, "What distinguishes general propositions from other truth-functions of the same types is the fact that by means of them, or rather, by means of the sentences which express them, we are able to talk about propositions which we are unable to entertain ...... general propositions are complex but not completely exponible".¹ The word "exists" which is the same as "some" or "there are" is neither a subject or part of it nor a predicate or part of it. In Aristotelian logic also the quantifiers "all" and "some" are neither part of a subject nor of a predicate. If we take them to be part of a subject or predicate, the syllogism would involve the fallacy of four terms. In the argument:

¹ Kneale, "Is Existence a Predicate?", Reprinted in Readings in Philosophical Analysis, (eds), Peigl & Sellars, p. 34.
All men are mortal
All kings are men
\[\therefore\] All kings are mortal

"All men" would be one term and "men" another. This shows that "all" and "some" are neither subject or part of it nor predicate or part of it. In modern logic also "all" and "some" are different from subject or predicate. But the main difference between Aristotelian logic and modern logic remains. In modern logic "exists" is represented by the quantifier "some".

From the view that "exists" is a quantifier it follows that wherever "exists" occurs it can be represented by the quantifier "some" and the symbol "some" can be eliminated by expanding the sentence in which it occurs into a disjunctive sentence. For example, "red exists" is represented by the sentence "something is red". The latter is transformed into "a is red or b is red, etc.". In this expanded sentence the word "exists" or its equivalent does not occur.

Against this it may be pointed out that this view can eliminate general existence, but not singular existential propositions like "Socrates exists", "Fido exists".

In reply Russell and other logicians point out that "Socrates" and "Fido" are to be treated as abbreviations for definite descriptions. If a sentence of the form "a exists" is meaningful, then "a" must be treated as a definite description and "exists" ceases to be a predicate expression. If
"a" is a logically proper name, then the expression "a exists" is meaningless. By definition a logically proper name must denote something which exists. Its meaning lies in denoting something. In order to retain the view that "exists" is a quantifier, the sentence "a exists" is translated into the expression "for some x, x is identical with a" i.e. \((\exists x) (x = a)\). In this sentence "exists" does not occur as a predicate expression.

Now the acceptance of this view of existence ultimately depends on the acceptance of logically proper names. Since the existential propositions like "red exists" is expanded into a disjunction of simple propositions like "a is red" or "b is red", where "a" and "b" are logically proper names, we are bound to accept a set of expressions which have only denotation. In our second chapter we have discussed the impossibility of such proper names. It always makes sense to say "Does Mr. X exist", where "x" is a name.

Moreover, propositions like "This exists", "I exist" are perfectly meaningful, although "This" and "I" do not look like descriptions. Regarding "This", Moore says, "I cannot help thinking that in the case of anything to point at which and say "This is a tame tiger" is significant, it is also significant to point at it and say "This exists", in some sense or other. My reason for thinking this is that it seems to me that you can clearly say with truth of any such object "This might not have existed", "It is logically possible that this should not have existed"; and I do not see how it is possible that "This might not have existed" should be true, unless "This does
in fact exist" is also true, and therefore the words "this exists" significant."

Regarding "I exist" philosophers are divided in their opinion. A follower of Russellian logic will point out that if "I" is a logically proper name, then "I exist" is not significant.

In reply it is said that the situation to which the term "I" occurring in "I exist" refers might not have existed. Since it rules out the possibility "I do not exist" and asserts that my existence is not a necessary truth, "I exist" should be considered as a statement.

So the view that existence is always a quantifier can be rejected on two grounds:
(a) It fails to explain away the occurrence of "exists" in propositions like "this exists" or "I exist". Since in ordinary language these sentences are perfectly meaningful, we cannot regard them as meaningless.
(b) Secondly, this view is based on the notion of logical proper names. The expansion of general existential proposition presupposes the logical proper names. Since there is no such proper name in ordinary language, the proposed expansion is impossible.
(3) According to another view "existence" is an attribute as opposed to a property. Rescher has proposed this thesis in

his paper "On the logic of existence and denotation."\(^1\) His view\(^2\) is based on the distinction between attribute and property, on the one hand, and the acceptance of possible objects on the other.

According to Rescher the term \textit{attribute} is a genus and the term \textit{predicate} is a species of it. A predicate denotes a property, while an attributive term denotes an attribute. Every predicate is an attribute, but every attribute is not a predicate. He claims that unless we accept this distinction, the problem whether existence is a predicate cannot be raised, let alone be solved. In order to keep the problem whether existence is a predicate open, we require this type of distinction between attribute and property.

If by predicate-term or property denoting term we mean "red", "green", "hard" etc. and by "existence" we do not refer to a property which stands on the same footing with red, green, etc., then the distinction between them is intelligible. Something is red, provided that "something" exists. So having existence is a precondition for having red, green, etc. But if by "property" we mean anything which is said about something, then the distinction between them is not tenable.

Since Rescher has rejected the view that everything exists, he has accepted possible objects. Quine has rejected

\begin{enumerate}
\item Rescher, \textit{Philosophical Review}, 1959.
\item For a detailed discussion see Chapter 1, Section 1 (b).
\end{enumerate}
the possible objects on the ground that the law of identity, contradiction etc. are not applicable to possible objects. Quine says, "Take, for instance, the possible fat man in that doorway; and again, the possible bald man in that doorway. Are they the same possible man, or two possible men? How do we decide? How many possible men are there in that doorway? .... Is the concept of identity simply inapplicable to unactualized possibles? But what sense can be found in talking of entities which cannot meaningfully be said to be identical with themselves and distinct from one another?"\(^1\)

According to Quine the main motive for the acceptance of possible entities is the "old notion that Pegasus, for example, must be because otherwise it would be nonsense to say even that he is not."\(^2\)

Rescher points out that Quine's objection can be overcome. "How many possible objects are there? As many as can be described. When are two possible objects alike? When their descriptions entail a similarity. When are two possible objects identical? When their defining descriptions are logically identical."\(^3\)

The logical system which accepts the non-existent possible will admit the following formula.

\( (1) \quad \sim (\exists x) (x = n) \lor \circ (\exists x) (x = n). \)

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1. Quine, *From a logical point of view*, p. 4.
2. Ibid., p. 4.
Ie. There is nothing identical with n, although there might be something identical with it. From (1) we cannot infer
(2) (\exists y) [\neg (\exists x) (x = y) \& \forall (\exists x) (x = y)],
because (2) entails \neg (x) (\exists y) (x = y) which is incompatible with the logical law (x) (x = x). This simply shows that existential generalization is not applicable with respect to non-existent possible.

In order to make room for non-existent possible we require the two-sorted logic - one for the existent objects and the other for the non-existent possible. The criterion of identity for the non-existent possible is intensional. For example, if (\forall x) \phi x = (\forall x) \psi x, then \phi = \psi , although \exists \phi x = \exists \psi x = \lambda

If logical laws are valid in all domains including empty domain, then there is no harm in applying logical laws to possible objects. As a matter of fact, Leibniz conceived logical laws as valid both in actual and possible world. But one difficulty remains in Rescher's approach. We are committed to an ontology of abstract entity, even if we succeed in avoiding the Meinongian ontology. To say that "Unicorns exist" is false is to admit unicorn as a possible object. Moreover, if we admit possible objects in order to hold the view that existence is an attribute, then by the same process of reasoning, we have to admit that the unicorn is a possibly-possible object in order to make the proposition "The Unicorn is possible" significant. The proposition "The Unicorn is possible" says something about the Unicorn, although the attribute "possible" does not stand on the same footing with properties
red, green or hard. If the Unicorn is a subsistent (possible) object, then in order to make the judgment "The Unicorn is possible" we have to admit a sub-subsistent (possibly-possible) Unicorn. This process will lead to an infinite regress. If we do not want to treat possible as an attribute, then why should we treat existence as an attribute? If we want to stop the regress at the stage "The Unicorn is possible", then why should we not stop regress at the stage "The Unicorn exists"? The proposition "The Unicorn exists" is simply a false proposition as the proposition "The sun is smaller than earth" is a false proposition. Either both existence and possible should be treated as attributes or none of them is to be regarded as an attribute.

IV Steps towards a multi-theory of existence:

According to our positive thesis there are more than one use of existence. A particular use will depend on the context of discourse. There are predicative and non-predicative use of existence. We shall also see how our positive thesis solves the Quine – Rescher controversy.

(a) In the first section we pointed out two uses of existence, viz. predicative and non-predicative. Predicative use has been called reactionary or non-exiguous or excluder use. It excludes certain possibilities. When we say "All the A's exist", we mean that they are not extinct or out of production or destroyed or hallucinatory or fictional. If a negative term like non-red is to be treated as a predicate or if the distinction between positive and negative term is to be considered
as relative, then this use of existence ascribes certain properties to the objects which are claimed to exist. This use of existence is applicable to both general and singular existence. For example, "All the tigers still exist", "Fido still exists". Moreover, the general existential proposition of this type can always be expanded into a finite set of conjunctive or disjunctive proposition. "All tigers still exist" will be equivalent to "x still exists and y still exists", if there are only two tigers. Similarly, "Some tigers still exist" will be equivalent to "x still exists or y still exists". Since we have to examine each object, our list cannot end with "etcetera". This list will always be finite. The assertion of such propositions depends on counting each object in the case of a universal proposition.

But this is not the case with the exiguous use of existence. The proposition "tame tigers exist" says something about tame tigers but not about each and every tame tiger. In the language of Kiteley "Existence, here, is something like full strength of a regiment."¹ This existence is symbolized in symbolic logic in terms of the existential quantifier. "Tame tigers exist" or "Some are tame tigers" will be equivalent to \( \exists x \) \( (Tx) \). This can be expanded into the form "a is T or b is T or c is T etc." If the universe contains infinite number of objects, then this expansion is bound to end with "etcetera".

Moreover, in the case of non-exiguous use the expansion of general existence is resolved into a set of singular existential proposition used non-exiguously. For example, "Some tame tigers still exist" will be equivalent to "x still exists or y still exists" if there are only x and y. In the case of exiguous use the expansion of "Some tame tigers exist" has been treated as "x is a tame tiger or y is a tame tiger". Since this view is based on the acceptance of logically proper names and since there is no adequate justification for such names, we cannot accept this type of expansion. This will be acceptable to us under certain modifications. Instead of "x is a tame tiger or y is a tame tiger" we should say "'x is a tame tiger' and 'x' is a non-empty' or 'y is a tame tiger' and 'y' is non-empty'". This expansion does not presuppose that "x" and "y" are to be treated as logically proper names.

According to our positive thesis the difference between the predicative and non-predicative use cannot be determined by the form of the existential proposition. The expression "There are tame tigers" can be used predicatively as well as non-predicatively. The context of discourse or the hearer-speaker situation will determine which use is predicative and which use is non-predicative. If the hearer wants to know whether tame tigers are alive or not, the answer "There are tame tigers" will be used predicatively. As we have pointed out in the third chapter that the subject-predicate distinction depends on the hearer-speaker attitude, here also we hold the
same thesis regarding predicative and non-predicative use of existence.

(b) In addition to exiguous and non-exiguous use there is a third use which is also non-predicative. This use is applicable to singular existence. This non-predicative use may be used as an attribute without committing oneself to the ontology of abstract entity. In the context of narrating a mythological story if we say "Unicorns exists", we claim that the concept Unicorn is not a possible object in that story. It acts, breathes, kills or fights. Certain definite activities are ascribed to it. Here "exists" says something, although it does not stand on the same footing with predicates like "red", "green" or "hard". Rescher-Quine controversy flared up on this point. Quine wants to rule out all possible objects on the ground that it leads to a disorderly world. Rescher wants to rehabilitate this world by bringing in intensional logic. We have also noticed the defect of Rescher's approach. This controversy can be solved if we admit the context in which "existence" is ascribed to the unicorn. In our first chapter we have pointed out that we cannot say simply "..... exists". We should say "..... exists" in such and such discourse. "Hamlet exists" is perfectly meaningful and true in the drama of Shakespeare. But in the context of enumerating the things of this world "Hamlet exists" is false. Similarly, "the prime number between 5 and 11 exists" is perfectly meaningful and true in ordinary arithmetic, but in the context of enumerating the spatio-temporal objects, this proposition will be meaningless, because we fail to understand what it means for a number to be or not to be in space-time. So a particu-
lar use of existence is dependent on the context in two ways:
(1) Whether it is exiguous or non-exiguous,
(2) Whether that use is significant or not. In one context
the same sentence may be true, while in another context it may
be false or meaningless.

When we say "Unicorn exists", we take unicorn to be a
possible object from the point of view of scientific discourse,
but it is actual in narrating a mythological story. Accord-
ing to our thesis a possible object is always relative to a
context. As a result, we are not ontologically committed to
a realm of possible objects. When we talk about the unicorn
in narrating a mythological story, we ascribe logical laws of
identity and contradiction in the same way as we ascribe these
laws to spatio-temporal objects, because in that context it
is as real as any other object in scientific discourse.
"Pegasus exists" is not actual in scientific discourse, but
meaningful in it. So Pegasus is a possible object in scienti-
fic discourse. The criticism of Quine presupposes a realm of
possible objects and the defence of Rescher also presupposes
the same realm. Our thesis does not presuppose such a realm,
because we do not assert simply "Unicorn exists". It is
asserted in a particular discourse.

In the attributive sense existence can be ascribed to a
concept or to a particular object. For example, "Unicorn
exists" is a general existential proposition, while "Pegasus
exists" is a singular existential proposition. Both of them
are equally meaningful and may be true in a particular context,
So we get two non-predicative uses of existence, if predicate denotes properties like red, green, hard, etc. (a) One use is identified with the quantifier "some". This use is applicable to the general existence only. In the usual symbolic logic we find this use. But we have accepted this use with slight modification. Instead of the expansion "x is a tiger or y is a tiger" of the proposition "some are tigers" we have accepted "'x is a tiger and 'x' is non-empty' or 'y' is a tiger and 'y' is non-empty." The latter formulation does not presuppose "x" and "y" to be logically proper names. In our second chapter we have pleaded for a logic with free quantification theory. This justifies our expansion of "some are tigers".

(b) The second type of non-predicative use is identical with the attributive use. The attributive use is committed to a possible object, but not to an ontology of abstract object. Our ontology is relative to a particular context. The existence of a unicorn or Pegasus is dependent on the context of a mythological story, although from the standpoint of ordinary discourse they are possible objects. This view does not lead to the possibly-possible objects, because in the context of a mythological story they are actual.

Now let us see how our theory solves the puzzles or the problems concerning ontological argument. There are two versions of ontological argument. According to one version if the concept of greatest possible being does not include the predicate "exists", then it is not the concept of a greatest
possible being. We can always imagine a being which is identical with the first except that it includes existence. The doctrine that a thing will be greater if it exists than if it does not exist is called the doctrine that existence is a perfection.

Now the critics of the ontological argument point out that we do not add any new predicate to a concept when we say that it exists or it is exemplified. The critics have assumed existence as a property which stands on the same footing with other properties like red or hard. Since existence is not a property of this sort, they claim that existence is not a predicate. The upholders of the ontological argument take existence as something which says something about something. It is taken as one of the perfections of God. But both the critics and the upholders of the argument did not notice two things:

(a) The distinction between attribute and property, and
(b) the different uses of the term existence.

If we make the distinction between attribute and the properties like red, hard, then we can say that existence is not a property. But we can say that existence is an attribute in the sense that it says something about something. We have noticed that the propositions of the form "x exists" are always meaningful and they are not tautologies in the sense in which \(2 + 2 = 4\) is a tautology. The proposition "x exists" will be true if "x" denotes something in some discourse. If we admit that existence can be used in different senses, then
"God exists" is true in one sense and false or nonsense in a different sense. The proposition "Allah exists in Mohammedan religion" is perfectly true and meaningful. Similarly, any proposition of the form "God exists in such and such religion" is perfectly meaningful. But if we take away the expression "God exists" from its context and include in the context of scientific discourse, then it becomes either false or meaningless. Since we do not find such an object in this spatio-temporal world, it may be considered as false, or since we do not understand what it is to be or not to be in this spatio-temporal world, it may be considered as meaningless. But if we make a distinction between attribute and property and accept various uses of existence, then we can solve the problem connected with the ontological argument.

The second version of the ontological proof also rests on the same mistakes. This proof asserts that a being whose non-existence is logically impossible is "greater" than a being whose nonexistence is logically possible and God is a being than which a greater cannot be conceived. From these two premises it is concluded that since necessary existence is a perfection, God necessarily exists.

Here necessary existence is considered as something which says something about something. This necessary existence has been treated as a property by the critics of the ontological argument. Since it is not like red, green or hard, it is said that it is not a property. But the motive of the upholders of the ontological argument was not to treat it as a property. Since they could not make the difference between
different senses of existence or could not notice the contextual use of the term "existence", and could not make the distinction between attribute and property, they fail to answer some of the criticisms raised by Kant and modern logicians.

Our whole discussion from the first chapter emphasizes the contextual nature of our discourse. In the first chapter we have emphasized the different senses of the term "existence" depending on the context of discourse. Our criterion for the meaningfulness of existential proposition is a relative one. The same proposition may be true in one context and false or meaningless in another context. In the second chapter we have emphasized the different uses of the sentences involving descriptions. We have noticed that no one theory is sufficient to give a correct account of sentences involving description. The moral derived from the third chapter is that the distinction between subject and predicate is dependent on the hearer-speaker situation. In the last chapter we pointed out that there are various uses of the term "exist" in a sentence depending on the context. If we take into account the context of its use, then we can resolve certain traditional problems connected with the possible objects and the ontological argument.
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