

## Unraveling the philosophy of existential Quantifier

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In the vast landscape of philosophy, one of its paramount issues, which has captivated the minds of philosophers since its inception, revolves around the exploration and scrutiny of a fundamental question: What things truly exist, and how can we assert their existence? This inquiry transcends the tangible and ventures into the realm of abstract concepts, challenging our understanding of reality.

The foundational debate unfolds with a consideration of whether the world is confined solely to objects perceptible through our senses and derived from our experiences, or if there exist entities with a distinct existence beyond the realm of sensory perception. A poignant query arises concerning the existence of numbers, entities frequently referenced by humans but residing in the abstract.

These profound questions find their contemporary home under the expansive umbrella of ontology—a theoretical framework dedicated to exploring the nature of being and existence. Within the realm of ontology, discussions spark philosophical arguments, with the pivotal phrase "there exists" assuming a crucial role when placed in the subject position of a sentence.

Illustrating the depth of these philosophical inquiries is the renowned ontological argument for the existence of God—an argument that has spurred various interpretations by prominent philosophers throughout history. At its core, this argument posits that existence is inseparable from the essence of a perfect and absolute God, drawing an analogy to how triangularity cannot be detached from a triangle. However, philosophical discourse is inherently dialectical, and the ontological argument has faced its fair share of criticisms. Immanuel Kant, a

luminary in the history of philosophy, articulated a profound critique. From a logical-philosophical perspective, Kant argued that existence differs fundamentally from other attributes. Existence, according to Kant, is not a genuine predicate; it does not contribute informative content when asserting that "x exists." This critique challenges the very nature of how existence is treated within philosophical discourse (Kant, 1956 (A602/B630)).

Aristotle, in his foundational work "Organon," echoes a similar sentiment, recognizing a fundamental difference between 'existence' or 'being' and other attributes. He asserts, "That something exists is not like what nature it has... Existence is not a genus" (*Analytica Posteriora* II 7,92b13).

Navigating the intricate paths of philosophical inquiry, these discussions not only shape our understanding of existence but also reveal the complex interplay between abstract concepts and concrete reality, prompting us to reconsider the very fabric of our claims about reality. Implicit in the above statement is Aristotle's departure from endorsing the placement of existence as a logical predicate. According to the Aristotelian system of logic, individuals and species are what can be predicated, with existence not categorized as a genus. Similarly, Frege, considered the pioneer of modern logic, deems the predication of "exists" as devoid of meaning and incorrect for objects, underscoring the distinction between first-level and second-level concepts. While only first-level concepts are predicable for objects, Frege does not find fault with the placement of "existence" as a second-level concept—a predicate of concepts (Hashemi, 2013, p. 135).

Sentences utilizing the predicate "exists," such as "The moon exists" and "Dragons do not exist," may initially seem meaningful and true. In these instances, the predication of "existence" appears unproblematic and is part of everyday language. However, Bertrand Russell's legacy includes the crucial distinction he made between grammatical form and logical form. While grammatically, sentences with the predication of existence do not exhibit errors, the question arises about their logical validity. Consider the following two sentences:

This book is interesting.

This book exists.

Grammatically, the two sentences are equivalent. However, in terms of logical form, the second sentence, asserting that "This book exists," makes reference to something in the external world and affirms the existence of a book. The precise logical form of the second sentence is: "This book, which exists, exists," constituting a self-referential and uninformative statement. Such sentences, as termed by Peirce, are "referentially tautologous." Similarly, the sentence "This book does not exist" is a contradiction, as its correct logical form is: "This book, which exists, does not exist." Peirce refers to these sentences as "referentially contradictory" (GRAYLING, 1997, p. 90).

Based on the considerations above, Peirce concludes that under the following conditions, it is not logically and properly possible to use "exists" as a logical predicate:

1. The subject of the sentence must refer to something, i.e., it must have a name or be named. If fictional or mythical names are used as the subject, we do not encounter referential self-reference or contradiction. For example, the statement "Rostam does not exist in the real world" is not referentially contradictory.

2. Attention must be paid to the tense of the sentence. The act of reference and the tense of the verb must be simultaneous. For example, the statement “Socrates does not exist now” is not referentially contradictory because two different tenses are involved.
3. There can be exceptions in cases where someone suffers from delusion. For example, when we look at a mirage and say, “There is no water,” we are not experiencing referential contradiction. (Ibid, p. 91,)

Therefore, Peirce explicitly states that in cases where the personal limit is the subject of the sentence and the above conditions are met, “exists” as a predicate of the sentence leads to either self-reference or referential contradiction.

Before Peirce, Strawson had addressed this issue by introducing the concept of presupposition. According to Strawson, presupposition is a relationship between two sentences. Sentence q presupposes sentence p if and only if the truth or falsehood of q relies on the truth of p. For example, the sentence “Ali blows the whistle in the competition” is only meaningful (in terms of truth or falsehood) if we take the truth of the sentence “Ali is in the competition” as a presupposition. (Ibid, p. 92).

Moore, from another perspective, criticizes the logical status of “exists” as a predicate. Logical sentences are meaningful and clear, and various quantifiers can be applied to these sentences. However, Moore doubts the meaningfulness of quantified sentences in which “exists” is the predicate. Consider the following two sentences:

- A. Some tigers do not roar.
- B. Some tigers do not exist.

According to Moore, there is doubt regarding the meaningfulness of the second sentence. Alternatively, the term “exists” carries multiple meanings and ambiguity. However, Moore does not claim that “exists” leads to ambiguity or meaninglessness in all cases. The phrase “things that could have existed” is considered meaningful by Moore (Ibid, p. 93).

The problem that Moore raises is related to the theory of reference.<sup>1</sup> The philosophical attention is given to interpretations of propositions, especially existential propositions. There are two recognized interpretations of propositions. One more common and closer to the conventional understanding is the objectual interpretation. This interpretation appeals to the values of variables, meaning objects that are bound within the domain of variables. This interpretation, advocated notably by W. V. Quine, reads the existential proposition  $(\exists x)Fx$  as follows: “There exists an  $x$  that has the property  $F$ .” In this view, “exists” has been transferred to the logical scope limited to the domain of what exists.

“The most remarkable thing about the ontological problem is its simplicity. It can be put into a few words: ‘What is there?’ It can be answered, moreover, in a word—  
‘Everything.’ Indeed, everyone will answer, ‘Everything,’ and be confident that he has thereby said something profound.” (Quine, 1963, p. 1).

Stating that something does not exist or that something exists that does not is clearly a contradiction in terms. Therefore,  $(\forall x)(x \text{ exists})$  must be true” (p. 150, 1979, Quine). Quine explicitly accepts that whatever exists, exists. Everything has existence.

$(\forall x) (x \text{ exists})$

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<sup>1</sup> See: [Hashemi \(2022\)](#).

Assuming 'Sherlock Holmes = n', now by eliminating the universal quantifier from the above sentence, we can conclude that Sherlock Holmes exists. However, this conclusion is not acceptable to Quine. Furthermore, Quine's view regarding existence being equivalent to the values of variables implies that we are obliged to accept the ontological existence of anything that is bound by variable values. Therefore, introducing existential quantification over objects places them within the domain of our ontology. Now, with these explanations, are we allowed to include fictional beings such as Sherlock Holmes, and any name without a referent in our ontology?

It appears that the problem Quine faces is related to the presence of empty names in logic. Quine seeks a logical and semantic solution inspired by Russell. He introduces rules to restrict the logical commitments solely to variables, quantifiers, and predicates, thereby making logic void of specific names. His solution consists of two steps: first, singular terms are replaced with definite descriptions, and then definite descriptions are eliminated using quantifiers and variables. Alternatively, he employs fictional entities to avoid referring names. For example, "Socrates" can be defined as  $(\iota x)Sx$ , meaning the unique  $x$  that is Socrates.

The second step involves using Russell's theory of descriptions to eliminate specific descriptions. Quine concludes that due to the fact that anything expressed by names can be expressed in a language void of names, it is the bound variables, not names, that have ontological commitment. If we consider the world as limited to a set of objects  $a, b, \dots, h$ , we can extend existential quantifiers to conjunctions and universal quantifiers to disjunctions in an acceptable manner.  $(\exists x)Fx$  and  $(\forall x)Fx$  can be rewritten as follows:

$(\exists x)Fx$  becomes  $Fa \vee Fb \vee \dots \vee Fh$

$(\forall x) Fx$  becomes  $Fa \wedge Fb \wedge \dots \wedge Fh$

This extension allows us to express existential and universal statements in terms of conjunctions and disjunctions over the specific objects in the world. (Quine, 1952, p88). Quine's interpretation of quantifiers leads to the restriction of objects and the domain of logic to the existents of the world and material entities. The empty expression becomes a purely linguistic issue. Based on the discussions presented, it is observed that the substitutive interpretation of "exists" cannot be in the position of a predicate. However, what falls within the domain of quantifiers is considered to possess existence according to Quine. It should be noted that Quine's viewpoint regarding what can exist in the domain of quantifiers is answered in such a way that objects that exist—Quine's theory of relativized ontological commitment suggests a relativistic theory about the objects of a theory. He believes that the domain of objects can vary proportionally to the theory, and in fact, the variable is limited to the domain of the theory and accepts a kind of indeterminacy in the domain of reference.

However, objectual interpretation is not the only interpretation proposed for quantifiers. Another interpretation, known as the substitutional interpretation, has been put forward by prominent logicians such as Ruth Barcan Marcus, Saul Kripke, Hintikka, and others. This interpretation focuses on the substitution instances of variables.

$(\forall x)Fx$  is interpreted as "All substitution instances of 'F' are true."

$(\exists x)Fx$  is interpreted as "At least one substitution instance of 'F' is true."

In this interpretation, considering the unlimited domain of variables, even empty names can exist within the domain of quantifiers. However, the quantifier does not commit to the existence of objects within its domain, and "exists" can also be treated as a predicate. In the

unlimited interpretation, the concept of existence is not dependent on the domain of quantifiers, and it is not the logical task to determine the domain of ontological existence - it is not relevant to logic to determine what exists and what does not exist.

While in the objectual interpretation the placement of “exists” as a negated predicate is possible, in the substitutional interpretation or the unlimited interpretation of quantifiers, it is possible to argue for the position of “exists” as a predicate. In the interpretation where the domain of quantifiers is unlimited - an interpretation attributed to Leśniewski, a Polish logician - the following sentence is logically valid:

$$(\exists x) (x \text{ exists})$$

Therefore, contrary to Quine’s view, the statement  $(\forall x)(x \text{ exists})$  is false. Under the unlimited interpretation of quantifiers, any meaningful nominal compound, whether the referent of that noun exists in the external world or not, is logically formulable. Lejewski argues that those like Quine, who adhere to the objectual and limited interpretation theory, have blended logic with metaphysics and ontology, which has caused many philosophical issues. However, the unlimited interpretation resolves such problems because logic is fundamentally distinct from ontology, and logic should not impose existential commitments on us. (Lejewski, 2002, pp. 150-152).

### **A new approach:**

Peter Frederick Strawson, as one of the prominent philosophers of the Oxford school, considers the elimination of the predicate of existence through logical tools and semantic ascent, as an artificial construction of language that deviates from everyday usage. In his article titled “Is Existence Never a Predicate?”, he attempts to outline conditions under which the predicate



“exists” can be taken as a logical predicate. Strawson believes that if the grammatical subject of a sentence is introduced with quantifiers such as “all,” “some,” “most,” “few,” “none,” “at least one,” etc., then the subject of the sentence becomes a logical subject, and any predicate carried by that subject is also logical. He argues that in many cases, “exists” can be accepted as a genuine logical predicate, and provides an example to illustrate this situation. Consider a classical reference culture in which many names of historical figures like Socrates, Napoleon, Russell, etc., and mythical figures like Rostam, Sherlock Holmes, Hamlet, etc., are listed. Given this assumed set, the following sentence is meaningful and true: “Some of those listed in this culture are mythical, but most of them exist.” Or, in other words, “Napoleon existed,” “Rostam did not exist.” In the above sentences, “existence” appears as a first-order predicate, and the expressions are considered meaningful in ordinary language (Strawson, 2008, pp. 215-216).

Strawson’s attempt is to demonstrate that in certain cases, “existence” assumes the role of a genuine and logical predicate, without the need for rewriting. However, Strawson’s proposal is fraught with ambiguity and inconsistency with what he initially defends as a presupposition. In the above example, the presupposition is employed in a very broad sense. Generally, when a presupposition is raised, it does not limit the domain to mythical and fictional entities. Extending the presupposition to include fictional and mythical cases, based on what was explained earlier with reference to Strawson, is not easily accepted. Another criticism raised by Grice against Strawson is that what he presents is inconsistent with his previous perspective.<sup>2</sup>

## **Conclusion**

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<sup>2</sup> Strawson argued in his early works that the statement “x exists” is not a subject-predicate sentence because assuming the existence of x in the expression “x exists” is meaningless. In his initial perspective, Strawson agrees with Quine’s deal regarding expressions in which existence appears as a predicate. However, his viewpoint in the discussed article contradicts this stance (GRAYLING, 1997,p 102).

In this article, an attempt has been made to briefly examine the views of some contemporary logicians on the predicative nature of “existence”. As mentioned, according to Susan Haack, the domain of logic is distinct from metaphysics, and it is not expected that the domain of ontology be confined within the realm of logic or vice versa. Therefore, it seems that when encountering the logical issue of delivering existence to terms or interpreting objects, it leads to the intertwining of illogical and metaphysical elements, thereby compromising the independence of logic.

Strawson’s perspective in the article “Is Existence Never a Predicate?” as well as many of his other works highlights the fact that everyday language cannot be easily confined within the narrow boundaries of artificial limited logic. There are always meaningful expressions that do not lend themselves to logical formulation, and if we translate them into artificial language, we distance them from their common meanings.

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