UNIT 2: FREGE: THE SEMANTIC DISTINCTION BETWEEN SENSE AND REFERENCE

UNIT STRUCTURE

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2.1. LEARNING OBJECTIVES

After going through this unit, you will be able to:

- explain Frege's view regarding the concept of meaning.
- explain Frege's distinction between sense and reference.
- discuss Frege's view regarding proper names.
- discuss the concepts of Sense and reference of proper names.

2.2 INTRODUCTION

Whenever we go to discuss the problem of meaning in philosophy, the problem of referring seems to proceed hand in hand with it. The problem of reference has occupied a central place in philosophical discussion from the very beginning of the twentieth century. Frege's theory of sense and reference has a strong place in the entire philosophical thought of the twentieth century western world. It is based on the problem of reference. The philosophers have offered a number of toughly competing hypotheses about the nature of meaning. The

referential view is that words mean by standing for things and a sentence means what it does because its parts correspond referentially to the elements of an actual or possible state of affairs in the world. The truth conditional view is that a sentence's meaning is the distinctive condition under which it is true. The problem of meaning and reference is associated with these views.

Frege's important contribution to analytic philosophy is the distinction of sense (*Sinn*) and reference (*Bedeutung*) of a term. A term's reference is the *object* that the term refers to, while the term's sense is the *way* that the term refers to that object. Frege drew this distinction between sense and reference to solve certain puzzles pertaining to some identity statements such as 'The Evening Star is the Morning Star'. Though astronomical discovery says that both the expressions 'The Evening Star' and 'The Morning Star' refer to the same object Venus, yet the senses conveyed by these two expressions are different. The sense of a term gives a direction towards the reference, i.e. for Frege sense determines reference. Sense is independent of reference in the sense that a sentence can have sense without a reference in which case there is a reference failure. The reference of a sentence is a truth – value, i.e. 'the True' or 'the False' in formal language. In natural language there are some sentences which contain empty names which have no reference, but they have sense. Frege suggests that expressions which refer to no actual thing, e.g. 'the present king of France', can be said to designate the null class. If expressions like 'The present king of France' is taken as denoting the null class, the proposition 'The present king of France is bald' and 'The present king of France is not bald' both will turn out to be true as the null class is included in all classes.

2.3 FREGE'S VIEW ON MEANING

Language is a means of communication and it is the only meaningful signs through which communication is possible. The words are the smallest meaningful units of language. A word is a meaningful

combination of letters. All words which are capable of being used as components of language have meaning. Language as a means of communication contains words as its primary unit and sentences are formed out of the words. To understand meaning is to understand language. Language and meaning belong to the same logical space as logic and logical form. Therefore, investigation of one leads to the investigation of the other. While understanding language, we understand its structure, organisation and above all its meaning. Thus, the syntax of language goes hand to hand with its semantics.

GottlobFrege holds that language is the primary vehicle of thought and the logical form of language expresses the logical form of thought. He is the first to hold that meaning or sense is involved in the logical structure of language. According to him, sense is the thought that is expressed in the logical structure of language. Frege made logical syntax and semantics the study of sense. Syntax studies the logical structure of the vehicle of sense, i.e. language. Semantics studies the interpretation of language in the domain of external objects, i.e. the world. Thus, semantics brings the notion of reference as the method of interpretation of the syntactic structure. Frege's famous distinction between sense and reference, therefore, arises as the basis of logical semantics.

There is a close relation between words and meanings as we generally accept that words have meaning which gives meaning to the sentences. Frege points out that this relation is not only between word and meaning; rather a third entity arises which he calls the 'sense'. Frege introduces the concept of sense as different from meaning itself. For example, the meaning of 'morning star' is same with the meaning of 'evening star' as it is the same star meant. But the sense of 'morning star' is different from that of 'evening star'. One and the same sense has different expressions in different languages or even in the same language. Every expression has a corresponding sense; but natural languages often do not satisfy this condition. The condition does not mean that each sense has the corresponding thing meant.



CHECK YOUR PROGRESS

Q.1. State whether the following arguments are true or false?

a) Frege coined the term Bedeutung to describe the mapping of words, predicates and sentences on to a real word object.

b) Semantics is the branch of study, which is concerned with study of Ethics.

Q.2 Who says, "Words all have meaning in the simple sense that they are symbols that stand for something other than themselves"?

Q. 3 Whatis meaning according to Frege?

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2.4: SEMANTIC DISTINCTION BETWEEN SENSE AND REFERENCE

The distinction between sense and reference was an innovation of Frege in his 1892 paper, "On Sense and Reference". He initially introduced this distinction in order to be able to deal with a puzzle about equality. Frege has formulated the doctrine of 'sense' and 'reference' in which they have been explained as two different sorts of linguistic import. The distinction between 'sense' and 'reference' has been introduced in order to solve the problem of identity statement of being informative. An identity statement in ordinary form, takes the shape of a tautology; but sometimes it may add some information to our knowledge. Frege gives the example of an identity statement of the form, "The evening star is the evening star" which is a tautology. But sometimes the identity is expressed by using two different designations instead of one, e.g. "The morning star is the evening star". Frege has pointed out that the first statement here adds nothing new to our knowledge, while the second being a result of some new discovery gives new information.He begins

his “On Sense and Reference” with the following questions: Is it a relation? A relation between objects or between names or signs of objects? Frege says that if we regard equality as a relation between objects then the statement “a = b” should mean the same thing as “a =a”, if “a = b”, is true. If “a=b” is true then ‘a’ and ‘b’ are two names for the same object and “a=b” can tell us no more than “a=a”. Equality is a relation in which a thing can stand only to itself, not to another thing. But sometimes the statements of the form “a=b” are highly informative and “a =a” is never informative.

Again Frege is not able to accept the other of the two alternatives that identity is a relation between names or signs of objects. In that case ‘a =b’ would say that the name ‘a’ and the name ‘b’ were names for the same thing. Frege argues that this analysis is not correct because the fact that ‘a’ is a name for ‘a’ and that ‘b’ is also a name for ‘a’ results from a purely arbitrary agreement concerning the use of these marks or sounds.

Frege now proceeds to his distinction between the sense (sinn) and reference (bedeutung) of signs. According to Frege there is a difference between sense of an expression and what it refers to. Frege holds that reference of an expression is the object to which it refers, named or denoted by it. But the sense of the expression is the way or manner in which the object referred to is presented. An expression is meaningful if and only if it expresses something as its sense. The two expressions ‘the morning star’ and ‘the evening star’ both refer to the same object, the planet Venus. But they have different senses, because each refers in a different way and means something different. One means something like ‘the star seen in the morning’ and the other ‘the star seen in the evening’, but both refer to and point out the same object. According to Frege, the two words “Scott” and “The author of Waverley” in the classic example “Scott is the author of Waverley” have different senses (meanings), but the same reference (denotation) namely Scott.

Although sense and reference are distinct they are intimately related. Frege holds that sense determines reference, for the

sense of an expression illumines an aspect of the referent. Hence it follows that expressions with different senses may yet refer to the same object. From this point of viewa sense may be described as a "mode of presentation of the object" whereby the sign gives us its reference. To clarify the distinction between sense and reference we can point out here an example from Frege's "On Sense and Reference". Let a, b, c be the lines connecting the vertices of a triangle with the midpoints of the opposite sides. The point of intersection of a and b is then the same as the point of intersection of b and c. So we have different designations for the same point, and these names ("point of intersection of a and b", "point of intersection of b and c") likewise indicate the mode of presentation and hence the statement contains the actual knowledge. Hence we can say here that the two expressions "the point of intersection of 'b' and 'c' have the same reference, but differ in sense. Likewise the expressions, "the morning star" and "Venus" have the same reference but differ in sense. Because of this difference the statement "Venus is the morning star conveys actual knowledge and "Venus is Venus" does not.

Frege's distinction between the sense and reference of names and other expressions sometimes said to involve a mediated reference theory. The mediated reference theory is a semantic theory that posits that words refer to something in the external world, but insists that there is more to the meaning of a name than simply the objects to which it refers. It thus stands opposed to the theory of direct reference. Frege argued that the semantics of words and expressions should be divided into two elements: a sense which is a "mode of presentation" of the reference of the name and the reference itself which is the object to which the name refers. According to Frege, names that refer to the same object can have different senses.

The uniform relation between a sign, its sense and its reference is of such a kind that to the sign there corresponds a definite sense and to that in turn a definite reference, while to a given reference (an object) there does not belong only a single sign. The same sense has different expressions in the same language or even in different languages. To the

expressions that belong to a complete totality of signs, there should certainly correspond a definite sense. But natural languages often donot satisfy this condition. According to Frege, "It may perhaps be granted that every grammatically well-formed expression representing a proper name always has a sense. But this is not to say that to the sense there also corresponds a reference."

Frege's argument rests upon the principle that if two expressions have the same reference, then the one expression may replace the other in any statement in which it occurs without altering the truth of the statement. Frege quotes Leibnitz's famous definition in support of it: "Things are identical which can be substituted one for another without change in the truth." Frege draws a distinction between customary and indirect senses and references of expressions, for he firmly adheres to Leibnitz's law. Because without such distinction the law admits counter examples. Frege also maintains the distinction between sense and reference for the whole declarative sentence containing proper names and definite descriptions. A declarative sentence has both sense and reference. The sense of a sentence is the thought which it expresses. The customary reference of a declarative sentence is its truth value, the true or the false. Every declarative sentence concerned with the reference of its words is therefore to be regarded as a proper name and its reference, if it has one, is either the true or the false.



CHECK YOUR PROGRESS

Q.4 Frege's paper 'On Sense and Reference' published in the year—

a)1982 b) 1992

Q.5 The distinction between 'sense' and 'reference' has been introduced in order to solve the problem of identity statement of being informative. (T/F)

Q.6 Is there any distinction between sense and reference?

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2.5 FREGE ON PROPER NAMES

Frege applied his distinction between sense and reference first and foremost to proper names. Although Frege never troubled to give any precise characterisation of 'proper name', it appears from his writings that, according to him, a proper name is a name of an object. Frege divides entities in this world into functions and objects exhaustively. Likewise, he regards every linguistic expression to be either the name of a function or the name of an object. Names of objects are proper names; names of functions are function names. In Frege's parlance proper names include words which are ordinarily regarded as proper names, e.g., 'Socrates', 'Plato' etc., as well as descriptive phrases, like 'the morning star', 'the author of Macbeth' etc. Thus, in his article *On Sense and Reference,* Frege states: It is clear from the context that by "sign" and "name" I have here understood any description representing a proper name, whose referent is thus a definite object but no concept and no relation .... The designation of a simple object can also consist of several words or other signs. For brevity, let every such designation be called a proper name."

2.6 SENSE AND REFERENCE OF A PROPER NAME

What an expression names is the reference of that expression. The thing named is what the expression refers to. Since a proper name is the name of an object it is clear that the reference of a proper name is the object named by it. Thus, Frege says, "Proper names are meant to designate objects, and we call the object designated by a proper name its reference." Objects which constitute the reference of proper names may be of themost varied types - human beings, heavenly bodies, points in space, proofs of a theorem, directions and even numbers.

The sense of a proper name, on the other hand, is the mode of presentation of the object. It is the manner in which the object is designated, the way in which an expression presents its object. Sense is the cognitive significance of the reference. The sense of a proper name is different from its referent for it is possible for two expressions to have the same referent but different sense, for instance, 'the morning

star' and 'the evening star' both refer to the planet Venus, yet the two expressions do not mean the same. Moreover, if the sense of a name was merely comprised of its having a certain reference, then anyone who understood the name would also know the object it stood for. Thus, a statement of identity would not be informative for him. Therefore, the sense of a name is different from its reference. Thus, grasping the sense of a proper name not merely includes the awareness that the name is associated with a particular object as its referent, but it also involves connecting the name with a particular way of identifying the object as its referent.

We may also recall here that Frege also says that the sense *determines* thereference of an expression. Frege sometimes says that the sense of a proper name fixes. The *criterion of identity* for the object named. The notion of a criterion of identity plays a very important role in modem philosophy, but the notion was introduced by Frege who was perhaps the first to use the phrase 'criterion of identity'. According to Frege, to know what object a name is being used to refer to, it is necessary to know 'how to recognize the object as the same again.' He was the first to point out that we identify objects of different kinds by using different criteria of identity and he claims that this proves the necessity for sense of a proper name over and above the association of the name with the referent The sense of a proper name provides us with a criterion for identifying the object being referred to. It, thus, helps us to pick outthe referent of the proper name.



CHECK YOUR PROGRESS

Q. 7. For Fregea proper name is a name of an object.(T/F)

Q.8 Frege says that the sense determinesthe reference of an expression.(T/F)

Q. 9. What is meant by sense and reference of a proper name?

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2.7 EVALUATION

But Frege's view on the distinction between sense and reference cannot be fully accepted. Russell and Wittgenstein criticised and rejected Frege's doctrine of 'sense-reference distinction.' Russell rejected Frege's doctrine of the distinction between sense and reference. The fundamental distinction between Frege and Russell rests on the problem of identity statement. According to Frege an identity statement can be informative but Russell does not admit that an identity statement can ever be informative. Russell's main objection against the sense-reference distinction of Frege is that it would give rise to some ambiguities as it holds that the same expression is to be associated with things belonging to two extremely opposite realm of existence; one belongs to the world of thought and the other to the physical world. Therefore, according to Russell, the relation between sense and reference becomes wholly unintelligible.

Meaning as the expression of thought in relation to the world can be called the representational concept of meaning. Wittgenstein's Tractatus has very eminently made the concept of representation the logical basis of understanding of language and meaning. Frege's sense and Wittgenstein representations are significant concepts of logical semantics. As a result of representational semantics, meaning becomes a matter of logical representation of the world and a line of representation between language, thought and world has been proposed. The representational semantics of Frege involves the problem of relating sense with language. Frege could not solve the problem as to how sense, being a real entity in the ontological sense, can be expressed in the linguistic medium, which is contingent in the world. Wittgenstein could realize the real difficulty in Frege's semantics and therefore, through Tractatus advocated stronger role of language in representational framework. It is language and language alone which plays the role of cementing the gap between language and thought. In Tractatus Logico Philosophicus, Wittgenstein holds that thought and language are in the

same logical space and both possesses identical logical structure for which thought is completely reflected in language. The logical form of language is the same as the logical form of thought. On this basis. Wittgenstein argued that sense is fully language dependent and therefore, there is no problem of thought or sense being unrepresented. Thus language can transparently express thought.Where as in Frege semantics is still concerned with the problem of sense and reference and how sense can determine thereference in the world; Wittgenstein holds that neither sense nor reference is sufficientin itself to fix the relation between language and the world. For him, therefore,there is no semantic problem of setting the language -world relationship. The relationship is built in to the semantic space that takes care of sense and reference of the linguistic representations. Wittgenstein tries to overcome the semantic dualism between sense and reference by integrating them in to a single frame of reference, which may be called semantic frame-work.



ACTIVITY 2.1

- State the distinction between sense and reference.

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- Who criticised Frege's distinction between sense and reference?

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2.8 LET US SUM UP

- We can conclude our discussion on Frege's view about the distinction between sense and reference by quoting the conclusion

of Frege's article "On Sense and Reference." When we found "a=a" and "a=b" to have different cognitive values, the explanation is that for the purpose of knowledge, the sense of the sentence, viz, the thought expressed by it, is no less relevant than its reference, i.e. its truth value. If now 'a=b' then indeed the reference of 'b' is the same as that of 'a' and hence the truth value of 'a=b' is the same as that 'a=a'. In spite of this, the sense of 'b' may differ from that of 'a' and thereby the sense expressed in 'a=b' differs from that of 'a=a'.

- According to Frege sense is the mode of presentation of an object and reference is the object expressed in statement. An expression designates these two things –the object which is called the reference and the mode of presentation of the object which is called the sense.
- Frege makes the distinction between sense of an expression, i.e., the way in which it designates something, and reference of an expression, i.e., the object designated by it. In the light ofthis distinction it may be said that an identity statement will be true and informative at the same time ifthe identity sign is flanked by two expressions with the same reference but different senses.



2.9 FURTHER READINGS

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3. Dummet, M, 1981, Frege: Philosophy of Language, Second Edition, Gerald Duckworth and Co. Ltd, London.
4 Frege, G, 1971, On Sense and Meaning, in the Philosophy of Language, ed. by J.R Searle, Oxford University Press.