Gottlob Frege on Sense and Reference: Perspective in Philosophy of Language

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Abstract
Gottlob Frege's original contribution to the province of philosophy of language is enormous. His seminal achievements in the realms of mathematical logic and linguistic analysis, no doubt, elevate him to limelight as a great philosopher par excellence and unarguably one of history's greatest thinkers whose life and ideas have had profound influence on the intellectual dispositions of contemporary analytic or linguistic philosophers. This paper, therefore, examines the nature and character of language, as a linguistic phenomenon, using the matrix of Frege's analysis and understanding of sense and reference. It employs the method of textual analysis in its interpretation of Frege's conception of lexical and sentential semantics. It provides conceptual and logical clarification of salient themes and topical issues bordering on Linguistic Philosophy, Syntax, Semantics, amongst others. It contributes significantly to the general body of knowledge and, of course, adds to the corpus of existing literature on philosophy of language. It posits, in conclusion, that Frege's thesis that the meaning of a sentence is the association or function of sense and reference is plausible. It recommends that there be a reconstructive adaptation of Frege's idea or notion of referential concept of meaning.
Keywords: Gottlob, Frege, Sense, Reference, Perspective, Philosophy, Language

Introduction
The intellectual burden of this paper is to attempt an exposition of Frege's conceptions of sense and reference, noting how they feature in a linguistic or speech community. The problem of how words relate to reality; the nature of truth and meaning; reference; logical necessity; and other allied problems are important subject matters of the philosophy of language. In the Dialogue *Sophist* the issue of correct application of language; i.e., the art of correct speaking and correct writing of language, was uppermost in the mind of Plato. According to him, unless language is correctly applied man is most likely to be led astray (Plato 239b). This Platonic project of antiquity has ultimately given rise to a modern trend called "Verbal Hygiene", an exercise in "Cleaning Up" of language (Nwigwe 1). More so, language is central to our thinking and ways of life. The objects of experience do not exist separately from the concept we have of them. Thus, words enter into the way structure of our experience.

Referential Theory of Meaning
This linguistic theory holds that the meaning of an expression is what it refers to, or what it stands for. For example word, there is an associated concept. It is this concept which is framed in the mind of the users of the language that links the sounds associated with the word to the actual 'thing' or 'entity' represented by the word. For instance, 'Barinedum' simply means 'Barinedum' as a person's name; 'horse' means or refers to either the class of horses or the property all horses share. Thus, anything so-called that is picked out in the external world

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or covered by the referring expression falls into that class (Ejele 101). It is on the strength of the foregoing that technical terms such as referent, reference, referential, referring, etc, are used with respect to the entity in the external world to which a linguistic expression relates. In this way, it relates words to things, or words through concepts to things. In sum, words have meaning because they stand fort things. This implies that a sentence means what it means because its parts correspond referentially to the elements of an actual or possible state of affairs in the world.

Recall that philosophy of language studies the phenomenon of natural language – the way it functions, especially its linguistic meaning and the way language is used – that is to say, its pragmatic application. This paper, therefore, seeks to explore Frege's idea of modes of signification (*modi significandi*) vis-à-vis his central notions of *sense* and *reference.*

Frege on Sense and Reference
In linguistic, *sense* refers to the ordinary linguistic meaning of an expression. It is the decontextualized meaning of an expression which is abstracted from other innumerable usages of the expression in question. It is no more than the conceptual meaning of a word associated with the form of the word in the mind of the speaker of the language; it is the 'signification' of the word (Okoro 52). Frege meticulously developed a systematic philosophy of language. William Wallace remarks that, "He (Frege) had profound influence on other philosophers of logic and language, such as Bertrand Russel and Ludwig Wittgenstein" (114). His place in the historical development of the aforementioned disciplines cannot be overemphasized. For Stephen Law:

> *The declarative sentences in which these names appear have truth-values, they are either true or false. These sentences can also be used to communicate pieces of information. Frege says that the feature of the name relevant to the truth of the sentence in which it appears is its reference, whereas the feature of the name relevant to the information communicated is the sense (140).*

Here, Frege's attempts to draw a line of distinction between the concepts of *sense* and *reference.* For him, the feature of the name relevant to the truth of the sentence is *reference* while, on the contrary, the composite feature of the name relevant to the information or body of the message intended to be conveyed is the *sense.*

Reference is concerned with the physical object in the extra-linguistic world which is represented by an expression. Reference, in the opinion of Ndimele, is also referred to as *denotation* (158). Reference is directly connected with the external world. Whereas, sense refers to the system of linguistic relation existing between words (lexical items), reference deals with things, objects, entities, or states of affairs in the external world which are represented by linguistic units. Reference is thus an extra-linguistic notion. It contrasts with sense-an intra-linguistic notion. Meanwhile, sense is a property that arises from the meaning relation between lexical items and sentences. What is more, reference is basically the relationship holding between words and the things (their referents). It is an extra-linguistic relationship. It is also important to note that 'referent' is a thing or item named or signified by work(s) (Ejele 14).

In light of the above background, James Maduabuchi emphatically remarks that:

> *Nonetheless, compositionality for Frege is neither a metaphysical principle nor a psychological one. Rather, it is a semantic principle, integral to our understanding of how thoughts can be expressed by language. As such, compositionality ranks as the distinctively linguistic contribution Frege's*

> *philosophy of logic makes to philosophy of language, not just as a guiding maxim*
> *but also in particular aspect of Frege's more detailed proposals (7).*

The import of the above remark is that Frege's landmark achievement in the areas of non-fundamental mathematics, which lies at the intersection between geometry and complex analysis; mathematical logic; analytic philosophy; and, of course, philosophy of language marks a watershed in the annals of the history of thought. His deep commitment to the articulation and systematization of syntax and semantics is highlighted in the above passage. His attempt to theorize a consistent, functional and logically coherent system of linguistic analysis is indeed a radical shift i.e. paradigm shift in linguistic philosophy. William Lawhead avers that:

> *... through the criticisms of the mathematician and logician Gottlob Frege, it*
> *became clear that logic and mathematics contain a priori, necessary truths that*
> *cannot be reduced to the empirical truths of psychology ... His research*
> *programme in The Philosophy of Arithmetic, was an attempt to base the*
> *foundations of arithmetic on certain generalization about human consciousness*
> *(528).*

Frege's ambition to develop the frontiers of syntax and semantics, using the rules of logic, is manifestly evident in his rational attempt to ensure clarity and coherence in our use of language. He anchored and hinged his approach on the foundational or axiomatic rules of logic and mathematics. His effort to reduce or, better still, remove ambiguity, tautology and equivocation from human communication culminates in his idea of *sense* and *reference.*
Furthermore, Lawhead quotes Frege as saying that, "the structure of language and reality are the same since language is reducible to elementary units corresponding to the fundamental units that comprise the world of facts" (575). Frege's theory involves giving up on the thought that referring is the *sole* linguistic function of a proper name. Names refer, says Frege, but they also have a second important linguistic feature; a feature Frege calls *sense* or *sinn* in German.

Another fundamental, perplexing and vexing question is: How does distinguishing the sense of "the Morning Star" from that of "the Evening Star" allow Frege to explain why sentences containing these two names express different thoughts? Frege's way of representing generality required him to reject the traditional identification of names and predicates.
Frege has this to say:

> *Suppose one evening you observe Hesperus, the evening star, and then the next*
> *morning you see Phosphorus, the morning star. You have in fact observed the*
> *same star twice over, since it presents itself in two quite different ways, changing*
> *its position in the sky according to the time of day (On Sense and Meaning 41).*

The sense of a name is the particular mode of presentation associated with that man. The sense of the names 'Hesperus' and 'Phosphorus' differ, because the mode of presentation associated with them differs. While 'Hesperus' and 'Phosphorous' may share the same reference, they differ in sense (*Begriffsschriftt* 140).

On identity claim, the reference of 'evening star' and 'morning star' are the same, but not their senses (*Conceptual Notation* 40). In the logic developed by Frege, sentences were constructed from predicates using a small number of operators corresponding to traditional forms of judgement, such as universal affirmative judgements, which are of the form 'All *F*s are *G*'. Proper names, such as 'Socrates', were regarded as predicates, that is, as being of the same logical type as expressions like 'is mortal'. Thus, the famous argument:

All human are mortal

> Socrates is a human
> Therefore, Socrates is mortal

Might have been represented as:

> All *H* are *M*
> All *S* are *H*
> ∴ All *S* are *H*

Frege would then represent the sentence 'Socrates is mortal' in his logic, as: *M(S)*, and the generalization "Everything is mortal" as: *M(x)*, where the singular term 'Socrates' has been replaced by a variable.

Frege on the Rules of Sense
i. Sense are the linguistic meanings of expressions of a language
ii. Senses determine nominata / truth-values
iii. Senses determine cognitive significance
iv. Senses are the ways in which objects are picked out (*On Sense and Meaning* 62).
Note that identity is a relation between names of objects. Frege assumes that identity is a relation. Thus, a relation is a way in which things *x* and *y* may be related.

Critical Remarks
Frege's contribution to the study of language consists in his recognition of the necessity of compositionality to an account of truth and meaning. Meaning, for Frege, derives from the object of reference. His conception of concepts as unsaturated is his insistence that the semantics of predicates must reveal the role they play in determining truth-values; that the semantics of sentences must reveal the role their constitutes parts play in composing entities that have truth-values. The shortcoming, however, is that Frege's position is too limited on the actual nature of language and what language involves e.g. linguistic behaviour is not considered.
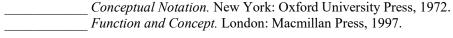
Conclusion
In the Fregean perspective, language is a linguistic system characterized by an association between *sense* and *referents* (symbols). His supposition or major assumption is that there exists an intricate web of relationship or nexus between syntax and sentential, or even lexical, semantics. In conclusion, his linguistic theory has some measure of creative ingenuity, novelty, and originality.

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