Frege, “On Sense and Reference

Frege is responding to the **Referential Theory of Meaning**: the meaning of an expression just is the object that expression refers to.

According to Frege, meaning the simple reference theory did not work. The meaning of an expression has to be something more than the object the expression refers to.

But why is that?

1. **Three Puzzles**

A. **Frege’s Puzzle About Identity**

Sameness, or identity, appears to be a kind of relation. But a relation between what?

Consider some identity sentences:

i. Mark Twain = Samuel Clemens

ii. Samuel Clemens = Samuel Clemens

iii. The morning star = the evening star

iv. The morning star = the morning star.

**Two proposals:**

**First Proposal:** Sameness is a relation between objects.

Consider (i) and (ii). The Referential Theory would entail that these two sentences mean the same thing.

It looks like (i) and (ii) say the same thing if (i) is true (and it is). They both express that a certain object is identical to itself.

However, (i) and (ii) differ in cognitive significance. (ii) looks like the sort of thing that is analytic\(^1\) and knowable a priori\(^2\). But (i) looks neither analytic nor a priori. It looks substantive and cognitively significant. That is, (ii) is informative (i.e. its truth was a discovery) while (i) is not.

**Second Proposal:** Sameness is a relation between signs of objects, i.e., the relation that two signs have when they denote the same object.

“What is intended to be said by ‘a = b’ seems to be that the signs or names ‘a’ and ‘b’ designate the same thing.” (7) — Is that right?

“If the sign ‘a’ is distinguished from the sign ‘b’ only as object (here, by means of its shape), not as a sign, (i.e. not by the manner in which it designates something), then the cognitive value of ‘a = a’ becomes essentially equal to that of ‘a = b’, provided ‘a = b’ is true. A difference can arise only if the difference between the signs corresponds to a difference in the mode of presentation of that which is designated.” (7)

Frege goes for the second proposal. But more needs to be said about this way in which the designated objects are given…. But, first, let’s get to the other two puzzles.

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\(^1\) Roughly: true just in virtue of the meaning of the component words.

\(^2\) Roughly: knowable with justification that is independent of experience.
B. Substitutivity

**Principle of Substitution:** if you substitute for an expression an expression with the same meaning, you preserve its truth value.

If the Referential Theory is true, then ‘Samuel Clemens’ and ‘Mark Twain’ have the same meaning.

Now consider propositional attitude reports: X believes that..., X hopes that..., X fears that....

If the Referential Theory is true, then if

- a. ‘Clare believes that Mark Twain wrote *Huckleberry Finn*’; is true, then
- b. ‘Clare believes that Samuel Clemens wrote *Huckleberry Finn*’ is true.

C. Apparent Reference to Non-Existents

**Compositionality:** the meaning of a sentence is a function of the meaning of its parts.

A problem: There is no actual person to which ‘Superman’ refers.

According to the Referential Theory, then, ‘Superman’ has no meaning.

So, any sentence containing ‘Superman’ will be meaningless.

But, intuitively, we want to say that such sentences do have meaning.

2. Sense and Reference

Signs, or expressions in a language, have two things:

1. **reference:** the object that an expression refers to, picks out, designates
2. **sense:** what someone who understands the expression grasps; contains the mode of presentation of the reference.

Expressions stand for, or designate, their reference; they express their senses.

**Different kinds of expressions:**

a. Singular terms (e.g. proper names, definite descriptions)
b. Predicates
c. Sentences.

**Sense and reference for singular terms**

reference: the object that an expression refers to, picks out, designates

sense: what someone who understands the expression grasps; contains the mode of presentation of the reference.

**Sense and reference for predicates**

All that Frege has given to us so far is a theory about names of objects.

Consider the sentence ‘Bob is tall’. Frege has told us what to do with ‘Bob’, but not what to do with ‘is tall’. The sense of ‘is tall’ is a function. Frege thinks of functions as unsaturated or incomplete entities.

sense: a function which maps the senses of referring terms onto propositions. E.g., the concept is tall maps the sense of ‘Bob’ onto the thought or proposition that Bob is tall.

The reference of a predicate is also going to be a function. This time the function is what Frege calls a concept.

reference: a function from references (or objects, like Bob) onto truth-values (True or False). E.g. when an object, say Bob, is mapped onto the value True by a concept, say the concept is tall, we say that Bob falls under the concept *is tall*.

**Sense and reference for sentences**

Remember compositionality

sense: the thought or proposition expressed by the sentence. It is a function of the senses of component expressions that make up the sentence.
reference: a truth value, either True or False. It is a function of the reference of the expressions that make up the sentence.

3. **For Discussion: Frege’s Response to the Puzzles**

Frege responds directly to three of the four puzzles. What are his responses to:

a. The Puzzle About Identity?

b. The Apparent Reference to Non-Existents?

c. Substitutivity?