TWO PRELIMINARIES

1. Use vs. mention:
   (a) Orange is a color. \( \top \)
   (b) ‘Orange’ is a color. \( \bot \)
   (c) Orange is an adjective. \( \bot \)
   (d) ‘Orange’ is an adjective. \( \top \)
   In (a) and (c), the word ‘orange’ is used. In (b) and (d), the word ‘orange’ is mentioned.

   We can signify that we are mentioning but not using an expression by putting single quotes (‘,’) around it, or by putting it in italics; I usually do the latter.

2. Meaning:
   (a) orange
   (b) toujours
   (c) pickny
   (d) The orange cat ate six fish.
   (e) Cat orange six the ate fish.
   (f) Teh rangeo tac aet ixs shif.

   (a) and (b) are meaningful expressions; (c) is not. Being meaningful is relative to a language; (a) is meaningful in French and English, while (b) is meaningful in French but not English.

   (d) is a complex meaningful expression. (e) and (f) are not. (e) is not meaningful, though its constituent expressions are individually meaningful. (f) is not meaningful, and its constituent expressions are not individually meaningful.

THREE VERY PLAUSIBLE PRINCIPLES ABOUT MEANING

1. TRUTH. If \( S \) is true in \( L \), then \( S \) is meaningful in \( L \).

2. MEANING. If \( S \) is meaningful in \( L \), then each constituent expression of \( S \) is meaningful in \( L \).

3. COMPOSITIONALITY. The meaning of a complex expression depends on the meanings and arrangements of its constituent parts. Somewhat more formally:

   If \( S \) and \( S^* \) are complex expressions in \( L \) that differ in meaning, then either (i) the constituent expressions in \( S \) are arranged differently than those of \( S^* \) or (ii) there is some pair of expressions \( e \) and \( e^* \) such that \( e \) is a constituent of \( S \) and \( e^* \) is a constituent of \( S^* \) and \( e \) and \( e^* \) are expressions in \( L \) that differ in meaning (or both i and ii).
SINGULAR TERMS

1. Singular term = an expression that stands for a distinct object

2. Four important kinds:
   (a) Ordinary proper names (Charlie Chaplin, Chicago, Caesar's Palace, etc.)
   (b) Definite descriptions (the tallest man in the world, the fifth President of the United States, etc.)
   (c) Singular indexical pronouns (I, you, now, here.)
   (d) Demonstratives (simple: this, that; complex: that professor, this restaurant)

3. Note that when Frege uses the expression proper name in ‘On Sense and Reference’ he means singular term, not ordinary proper name. (Though he does not discuss pronouns or demonstratives here.)

4. Our Question: what is the meaning of a singular term?

5. Here is one answer, variously known as Millianism (after John Stuart Mill, who suggested something like it for ordinary proper names), the ‘Fido’-Fido Theory (as Gilbert Ryle called it, mockingly), and the Referential Theory (as Lycan calls it in our optional textbook):

   ‘FIDO’-FIDO: The meaning of a singular term is whatever object it stands for.

FOUR PROBLEMS FOR THE ‘FIDO’-FIDO THEORY

1. Frege’s puzzle
   (a) \( a = b \), even if true, can differ in meaning from \( a = a \).
   (b) So by Compositionality, \( a \) and \( b \) can differ in meaning, even when \( a = b \) is true.
   (c) ‘Fido’-Fido implies that if \( a = b \) is true, then \( a \) and \( b \) do not differ in meaning.

2. Negative existentials
   (a) For some singular terms \( a \), \( a \) does not exist. is true.
   (b) So by Truth, \( a \) does not exist. is meaningful.
   (c) So by Meaning, \( a \) is meaningful.
   (d) So by ‘Fido’-Fido theory there is some object (i.e., the object \( a \) stands for) that does not exist.

3. Fictional entities
   (a) Sherlock Holmes was a detective. is meaningful.
   (b) By Meaning, Sherlock Holmes is meaningful.
   (c) So by ‘Fido’-Fido theory there is an object that Sherlock Holmes stands for.
   (d) But Sherlock Holmes does not exist.

4. Substitution
   (a) The following three sentences can all be true:
      \[ a \] Lois Lane thinks that Superman is amazing.
      \[ b \] Lois Lane does not think that Clark Kent is amazing.
      \[ c \] Superman = Clark Kent.
   (b) Exercise for the reader: derive a paradox.
FREGE’S SOLUTION TO FREGE’S PUZZLE

1. Begriffsschrift solution: \( a = b \) means the names \( a \) and \( b \) designate the same object. (often called a ‘metalinguistic’ solution). This makes it clear how \( a = a \) and \( a = b \) can differ in “cognitive value”.

2. Problem: \( a = b \) is not about names; if it were, “We would express no proper knowledge by its means” (209).
   (Another problem not mentioned by Frege: translation.)

3. New solution given by Frege: \( a \) and \( b \) each have a sense. and a referent; sense of \( a \) different from the sense of \( b \); referent of \( a \) the same as referent of \( b \); this explains how \( a = a \) and \( a = b \) can differ in cognitive significance (or meaning) even when \( a = b \) is true.

FREGE’S THEORY OF SENSE AND REFERENCE FOR SINGULAR TERMS

1. Each meaningful expression has a determinate sense. (‘Sinn’) and (at most) a single referent. (‘Bedeutung’).

2. Referent of a singular term is the “definite object” (“this word ['object'] taken in the widest range,” 210) that it stands for. We say that a term refers to or designates its referent.

3. Sense of a singular term contains a “mode of presentation” and is what determines the term’s referent (if any). We say that a term expresses its sense.

4. Sense \( \neq \) conception (‘Vorstellung’, often translated as ‘idea’). Frege’s anti-psychologism about sense (though see footnote 2 on p. 210); the “third realm”. Telescope analogy (p. 213).

5. Some theoretical work for sense suggested by Frege:
   (a) Someone who understands \( t \) knows what the sense of \( t \) is
   (b) \( t \) and \( t' \) in \( L \) are synonyms in \( L \) iff the sense of \( t \) in \( L \) = the sense of \( t' \) in \( L \) (similar criterion for translation)
   (c) \( t \) is ambiguous in \( L \) iff more than one sense is associated with \( t \) in \( L \)

FREGE’S THEORY EXTENDED TO SENTENCES

1. The sense of a complete declarative sentence is a thought. (‘Gedanke’). NB: “By a thought I understand not the subjective performance of thinking but its objective content, which is capable of being the common property of several thinkers” (214).

2. The referent of a complete declarative sentence is its truth value. (of which there are exactly two: true. and false.). “Every declarative sentence concerned with the referents of its words is therefore to be regarded as a proper name [=singular term], and its referent, if it exists, is either the true or the false” (216).

3. The basic idea is that sentences express thoughts, which are modes of presentation of truth-values.

4. Weird? Well, yes. (Maybe less weird in German?) Frege’s argument:
   (a) Frege endorses a compositionality thesis about reference: reference of a complex expression is determined by the references of its constituent expressions.
   (b) So reference of a sentence is determined by reference and structure of its constituent expressions.
   (c) But two sentences whose expressions are all coreferential (and arranged in the same way) can express different thoughts; e.g. \( \text{The morning star is a body illuminated by the sun.} \) and \( \text{The evening star is a body illuminated by the sun.} \)
   (d) So reference of a sentence \( \neq \) thought it expresses.
   (e) We care about reference of constituent expressions of a sentence just when we care about truth value of sentence: “It is striving for truth that drives us always to advance from the sense to the referent” (216).
   (f) “We are therefore driven into accepting the truth value of a sentence as its referent” (216).
5. Dummett’s objection: if sentences are proper names, then there is nothing special about them.

6. Note also that Frege holds that what he calls “concept-words” (and which we would call predicate terms) have sense and reference. He doesn’t discuss this at all in ‘On Sense and Reference’, but if you are interested in his ideas about this you can look at the fascinating ‘On Concept and Object’ (also see the diagram from the 1891 letter to Husserl).

SENSE WITHOUT REFERENCE

1. Sense of a singular term sometimes fails to determine any reference:

   (a) Unsatisfied definite descriptions: the celestial body furthest from the earth, the least rapidly converging series

   (b) Fictional names: Odysseus

2. Given compositionality of reference, if a constituent expression in a sentence has a sense but lacks reference, the sense of the sentence lacks reference too. So the sentence Odysseus was set ashore at Ithaca while sound asleep lacks a reference. In this paper, Frege says that such a sentence expresses a thought all the same: “The thought remains the same whether ‘Odysseus’ has a referent or not” (215). This is troubling, though, since it implies that there are thoughts that are neither true nor false. Commentators disagree about whether Frege’s mature views allow for this possibility or not.

3. “A logically complete language should satisfy the conditions, that every expression grammatically well constructed as a proper name out of signs already introduced shall in fact designate an object, and that no new sign shall be introduced as a proper name without having a referent assured. The logic books contain warnings against logical mistakes arising from the ambiguity of expressions. I regard as no less pertinent a warning against apparent proper names having no referents. The history of mathematics supplies errors which have arisen in this way. This lends itself to demagogic abuse as easily as ambiguity—perhaps more easily. ‘The will of the people’ can serve as an example; for it is easy to establish that there is at any rate no generally accepted referent for this expression” (222).

INDIRECT REFERENCE

1. In indirect discourse, words refer to their customary senses. So, e.g., in:

   Sarah said that Frege is difficult.

   The italicized words refer to the sense of Frege is difficult. Frege thinks this is true of other sorts of subordinate constructions. E.g.:

   Columbus inferred from the roundness of the earth that he could reach India by traveling towards the west.

   Here Frege says that the roundness of the earth refers to the sense of The earth is round.

2. When an expression refers to its customary sense, Frege says that it is being used with its ‘indirect sense’ to refer to its ‘indirect reference’. So ‘indirect reference’ = ‘customary sense’.

3. Much of the second half of “On Sense and Reference” is devoted to carefully considering when subordinate clauses and embedded sentences contribute customary or indirect senses to the thoughts expressed.

FREGEAN SOLUTIONS TO THE OTHER THREE PROBLEMS FOR ‘FIDO’–FIDO

1. Substitution

2. Fictional entities

3. Negative existentials