

THE GREAT DETOUR

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Frege's Identity Crises

1. Some Quotes From Frege

Identity gives rise to challenging questions which are not altogether easy to answer. Is it a relation? A relation between objects, or between names or signs of objects? In my *Begriffsschrift* I assumed the latter. (Gottlob Frege, “On Sense and Reference”)(1892)¹

¹As translated by Max Black, *Philosophical Review*, 1948.

2. More Quotes

Identity of content differs from conditionality and negation in that it applies to names and not to contents. Whereas in other contexts signs are merely representations of their content, so that the every combination into which they occur expresses only relation between the respective contents, they suddenly display their own selves from their combined by the means of the signs for identity of content; for it expresses the circumstances that two names have the same content and the introduction of a sign for identity of content necessarily produces a bifurcation in the meeting of all signs: they stand at times for their content, at times for themselves . . .
–*Begriffsschrift*, section 8 (1879)

3. More Quotes

. . . from identity [Gleichheit] of Bedeutung there does not follow identity of the thought [expressed]. If we say 'The Evening Star is a planet with a shorter period of revolution than the Earth', the thought we express is other than in the sentence 'The Morning Star is a planet with a shorter period of revolution than the Earth'; for somebody who does not know that the Morning Star is the Evening Star might regard one as true and the other as false. And yet the Bedeutung of both sentences must be the same; for it is just a matter of interchange of the words 'Evening Star' and 'Morning Star', which have the same Bedeutung, i.e. are proper names of the same heavenly body. We must distinguish between sense and Bedeutung. –*Function and Concept* (1891)

4. Frege's Systems

Table: Begriffsschrift

Expressions:	Names	Relation-words	Sentences
Reference:	Things	Relations (functions)	Circumstances

Table: Sinn und Bedeutung

Expressions:	Names	Relation-words	Sentences
Sinne:	Individual Sinne	Relation Sinne	Gedanken
Reference:	Things	Sets*	Truth-values

5. More Quotes

From "The Thought" (1918-19), p. 131 in Quintons' *Mind* translation, 1956.

If someone wants to say the same today as he expressed yesterday using the word "today", he must replace this word with "yesterday". Although the thought is the same its verbal expression must be different so that the sense, which would otherwise be affected by the differing times of utterance, is re-adjusted. The case is the same with words like "here" and "there". In all such cases the mere wording, as it is given in writing, is not the complete expression of the thought, but the knowledge of certain accompanying conditions of utterance, which are used as means of expressing the thought, are needed for its correct apprehension. The pointing of fingers, hand movements, glances may belong here too. The same utterance containing the word "I" will express different thoughts in the mouths of different men, of which some may be true, others false.

6. Three Problematic Pairs

- (A) Hesperus is Hesperus
- (B) Hesperus is Phosphorus

- (C) Hesperus is a planet
- (D) Phosphorus is a planet

- (E) Today be sunny (May 28)
- (F) Yesterday be sunny (May 29)

The members of each pair share conceptual content, but have different cognitive significance.

7. "Cognitive Significance"

Tests for Differing cognitive significance:

- ▶ Cognitive Value ("Sense and Reference") —a priori or not.
- ▶ Competent listener could regard one as true, the other as false ("Function and Concept")
- ▶ Competent speaker could assert one, deny or be up in the air about the other
- ▶ Typical perceptual evidence different
- ▶ Different actions suited to truth

8. Lexical Semantics

- (a) 'is a planet' stands for the property of being a planet.
(Which is to say, a function from an object a to the circumstance that a is a planet.)

- (b) 'Phosphorus' stands for the the last celestial object, other than the Sun and the Moon, to disappear from the morning sky (namely, the planet Venus).

- (c) 'Hesperus' stands for the first celestial object, other than the Sun or the Moon, to a appear in the evening sky (namely, the planet Venus).

- (d) '=' stands for identity.

9. Compositional Semantics

- ▶ That $\phi(\alpha)$ is true iff (stands for the circumstance that) the object α stands for has the property ϕ stands for
- ▶ That $\rho(\alpha, \beta)$ is true iff (stands for the circumstance that) the objects that α and β stand for stand in the relation that ρ stands for.

10. Remarks on Conditions

General thesis. When we ask "Under what conditions, is so-and-so such-and-such," we are always taking certain things as *given* (fixed, known, assumed) and other things as open or variable. We are asking what *else* has to be the case, for so-and-so to be such-and-such, *given* thus-and-so.

When we take different things as given, we will get different conditions, possibly on different objects. But this will not be disagreement.

11. Bernie Example

Under what conditions will Bernie be President?

Given that the world and the U.S. continue to exist etc., Bernie will be President if *Bernie secures the nomination of a political party and that party wins the states Obama won in 2012*. [Condition on Bernie]

Given all of that, and given that Bernie wins the Democratic nomination, Bernie will win if *the Democrats win the states Obama won in 2012*. [Condition on the Democrats].

12. Three Levels of Truth-conditions

(C) Hesperus is a planet

Given that (C) is in English, consisting of the expressions 'Hesperus' and 'is a planet', we can give truth-conditions as conditions on those expressions:

E-conditions: Given, in addition, the compositional rule, we get conditions on the *Expressions* :

(C) is true *iff* $\exists x, F$ such that 'Hesperus' stands for x , 'is a planet' stands for F , and x has F .

13. Three Levels of Truth-conditions

Augmented E-conditions: Given that, and the lexical facts about 'is a planet':

(C) is true *iff* $\exists x$ such that 'Hesperus' stands for x , and x is a planet.

O-conditions: Given the compositional rules, and the lexicon, we get conditions on the *Objects, properties, and relations referred to*:

(C) is true *iff* Venus is a planet.

14. Identity Statements

(A) Hesperus = Hesperus

(B) Hesperus = Phosphorus

Augmented E-conditions

(A) is true iff the object 'Hesperus' stands for that is identical with the object 'Hesperus' stands for.

(B) is true iff the object 'Hesperus' stands for is identical with the object 'Phosphorus' stands for.

We get, for free, the different truth conditions that Frege introduced the revisions in §8 to achieve. But we get them for free; they fall out of the semantics.

15. Problem Solved

In understanding an utterance, we grasp not only the O-conditions of its truth, but also the E-conditions, including the E-conditions augmented in various ways. Understanding involves *perception* of the utterance, or of a token produced by the utterance, recognition of its form, and application of the compositional rules and lexical facts, in order to understand what must be the case, for it to be true.

Thus there is no mystery how one can learn, from (A) but not (B), that 'Hesperus' and 'Phosphorus' co-refer; one does not need to elevate the E-circumstances to O-circumstances to account for this, pace §8 of the *Begriffsschrift*