ENG 236: Semantics and Pragmatics ❖ Spring 2006: TUE & FRI 9.00-10.30 @ E 002
Linguistics Section ❖ Department of English Studies ❖ University of Cyprus
Kleanthes K. Grohmann (Room M 004, Phone x2106, kleanthi@ucy.ac.cy)

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CLASS 4: REFERENCE & COMPOSITIONALITY

REFERENCE

Upshot of today's class:

Knowing the meaning of *Shelby barks* amounts to knowing that it's true if (and only if) Shelby barks. (PHP: 28)

The semantics of names briefly presented in PHP's chapter 1 assumes that the meaning of names is their reference. So now we will talk some more about *reference*.

(1) a. Confucius was the greatest.
b. Who was Alexander again?
c. Miss Emma purred.
d. Shelby barks.

• *names* vs. *predicates*

PROPOSITIONS

(2) a. Shelby barks.
b. John is coughing.
c. Miss Emma purred.

There'll be more on propositions and the philosopher / logician Gottlob Frege below. For now let's say that *propositions* that are incomplete are *unsaturated propositions*. Examples of such follow (where 'Ø' is just my notation; preferably replace it by 'x'):

(2') a. Ø barks.
b. Ø is coughing.
c. Ø purred.

Semantics of Predicates

(meaning of the) *sentence* "–" (contribution of the sentence's) *subject* [= *property*]

We'll consider predicates, propositions, and the like in much more detail.

SATURATION

Since (2'a-c) can only be interpreted as (2a-c), respectively, if 'Ø' is replaced by a subject, we can say something more about predication: *predication is saturation*.

An unsaturated proposition consists of the predicate alone (i.e. minus the subject) — and a predicate in turn is saturated by its argument(s) = the *semantics of predication*.

(For now, let's keep things simple and only consider one-place predicate sentences.)

> Semantics of Subjects
>
> The semantics of a subject (at least when it is a name) is a *thing referred to*.

> Semantics of Predication
>
> A predicate is saturated by its argument(s).

Here's useful terminology (**morphosyntactic** and semantic):

- **predicate** a kind of grammatical unit (refer to traditional grammar books for more)
- **name** another kind of grammatical unit (aka "proper name" / always an N/NP)
- **noun phrase** a kind of grammatical unit centered on a noun (our syntactic NP)
- **subject** a grammatical function an NP can have in a sentence (SpecIP)
- property a semantic object, an unsaturated proposition (thing predicate denotes)
- referent a thing which serves as the semantic meaning of a name (and others)
- **predication** the grammatical relationship between predicate and subject (NP–VP)
- saturation making an incomplete semantic object more complete (e.g. predication)
- **argument** a phrase whose referent saturates a predicate (e.g. a subject)

COMPOSITIONALITY

We have already come across the principle of compositionality last semester in both the morphology part and the syntax part of the course. Then we said (informally) that the meaning of the whole is made up of the meaning of its parts. As PHP puts it:

> Principle of Compositionality
>
> The meaning of a piece of language is based solely on the meanings of its (linguistically relevant) parts, and the way they are put together. (PHP: 34)

(3) a. The cat ate the rat.
b. The cat ate the rat which sat on the mat.
c. The cat which is fat ate the rat which sat on the mat.

Here's some variations on a theme, taken from a class handout (Zimmermann 2005).

(4) John is coughing.

(5) ⟦ John is coughing ⟧
= {(*w*,*t*) | John is coughing in *w* at *t* }
= ⟦ John ⟧ "+" ⟦ is coughing ⟧

⟦ John ⟧ ⟦ is coughing ⟧
= $?_1$ = $?_2$

(6) a. ⟦ John is coughing ⟧ = {(*w*,*t*) | John is coughing in *w* at *t* }
b. ⟦ Tim is coughing ⟧ = {(*w*,*t*) | Tim is coughing in *w* at *t* }
c. ⟦ Tom is coughing ⟧ = {(*w*,*t*) | Tom is coughing in *w* at *t* }

Kripke's Hypothesis (Kripke 1980)
⟦ John ⟧ = John, ⟦ Tim ⟧ = Tim, ⟦ Tom ⟧ = Tom,…
More generally: ⟦ *NN* ⟧ = the bearer of *NN*

(7) ⟦ John is coughing ⟧
= {(*w*,*t*) | John is coughing in *w* at *t* }
= ⟦ John ⟧ "+" ⟦ is coughing ⟧

⟦ John ⟧ ⟦ is coughing ⟧
John = $?_2$

Contents as contributions

(5) ⟦ is coughing ⟧
= ⟦ John is coughing ⟧ "–"⟦ John ⟧
= {(*w* ,*t*) | John is coughing in *w* at *t* } "–" John
= {(*w* ,*t*) | ____ is coughing in *w* at *t* }

Contributions as functions
The content of the predicate must contain sufficient information to determine the proposition expressed by the sentence once the content of the subject is provided:

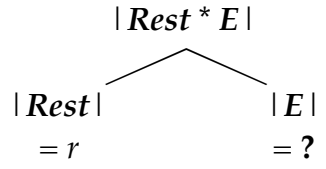
Filling subject content …	*into the predicate content yields …*
John	{(*w* ,*t*) | John is coughing in *w* at *t* }
Tim	{(*w* ,*t*) | Tim is coughing in *w* at *t* }
Tom	{(*w* ,*t*) | Tom is coughing in *w* at *t* }
…	…

The table can be thought of as (representing) a function. This function is taken to be the content of the predicate. More generally:

Frege's strategy (Frege 1884)

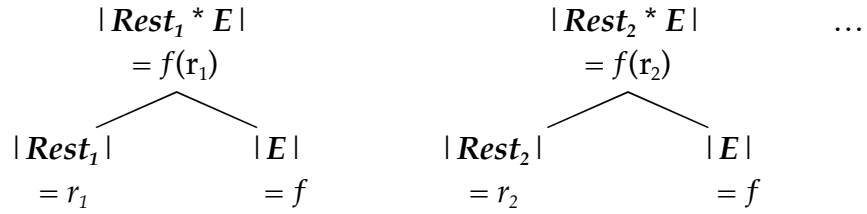
Unless independently identifiable (by the semanticist), the meaning of an expression ***E*** may be construed as the contribution ***E*** makes to the meaning of (larger) expressions in which ***E*** occurs, i.e. as a function that assigns the meaning of the whole to the meanings of alternative complementary part(s):

(8) *from:*



where * is the relevant syntactic combination and |***A***| is expression ***A***' s meaning (semantic value, content, extension, intension,…)

to:



where f is the function assigning to any |***Rest***| the value |***Rest*** * ***E***|.

NB: Only one of the constituents (immediate parts) may receive its meaning by Frege's strategy.

Semantic composition

If one of the constituent's meaning is obtained by Frege's principle, then the meaning of the whole is obtained by *functional application*:

|***r***| "+" f = f(|***r***|) [= the value f assigns to |***r***|]

Summary

The content of the predicate ***is coughing*** — and of predicates in general — is a function from individuals to sets of indices.

REFERENCES

Frege, Gottlob. 1884 [sic]. *Die Grundlagen der Arithmetik*. Breslau. [transl.: Austin, John L. 1953[2]. *The Foundations of Arithmetic*. Oxford: Blackwell.]

Kripke, Saul. 1980. *Naming and Necessity*. Cambridge, Mass.: Harvard University Press.

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