Formal semantics and pragmatics, and their origins in philosophy

Meta-semantics

NASSLLI

June 24, 2018

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0. What is meta-semantics?

Semantics, as it is generally practiced today, can appear to be a purely descriptive enterprise, tasked with assigning the correct meaning to each expression of a language.

The appearance should be resisted. Semantics does provide explanations: it tells us that sentences mean what they do because they have a syntactic structure and because their constituents mean what they do. But this sort of explanation bottoms out at lexical meaning.

We need an account of where meaning is coming from. This is what meta-semantics is about.

1. The use theory

1. The use of words

|	
hello	used as a greeting or to begin a telephone conversation
very	used for emphasis
here	used when pointing or gesturing to indicate the place in mind
why	(with a negative) used to make or agree to a suggestion

In its most radical form the use-theory of meaning identifies the meaning of every expression of a language with its use among speakers of the language.

The radical view is clearly false for the simple reason that in any interesting language there are meaningful sentences that have never been used.

A sensible but bold use-theory would identify only the meanings of words, or perhaps just a subclass of words, with their use.

1. The use theory

2. Language games
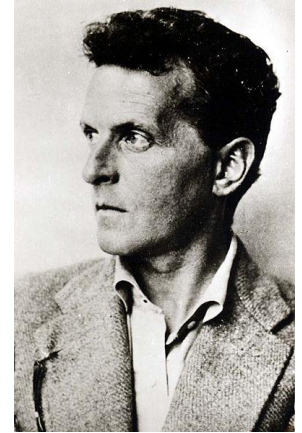
"The language is meant to serve for communication between a builder A and an assistant B. A is building with building-stones: there are blocks, pillars, slabs and beams. B has to pass the stones, and that in the order in which A needs them. For this purpose they use a language consisting of the words block, pillar, slab, beam. A calls them out;—B brings the stone which he has learnt to bring at such-and-such a call.—Conceive this as a complete primitive language."

The use of a word is a regularity within a language game. The regularity must be robust and articulated without circularity.

1. The use theory

3. Inferential roles

If we want a use theory to be systematic (many use-theorists don't!) we need to find some common role all lexical items play – otherwise we won't be able to plug the account of their use into a compositional theory. This common role might be that of inference.

Introduction rule for $\wedge$:   from φ and ψ infer $\varphi\wedge\psi$

Elimination rule for $\wedge$:   from $\varphi\wedge\psi$ infer φ; from $\varphi\wedge\psi$ infer ψ

Inferential role semantics: understanding a word consists in knowing its inferential role, which in turn is nothing more than knowing how to employ the word in deductive reasoning.

1. The use theory

4. Conceptual roles

More generous views about the roles of words in language accept sources of meaning other than inferential know-how.

Conceptual role semantics: understanding a word consists in knowing its conceptual role, which in turn is nothing more than knowing how to employ the word in general cognition (including, non-inferential mental processes such as categorization, association, and imagination).

The credibility of such a theory of meaning depends on how many types of roles it allows words to play. The more roles it provides, the more credible it will be. But this trend makes it harder to combine the theory with compositional explanations.

2. Grice's program

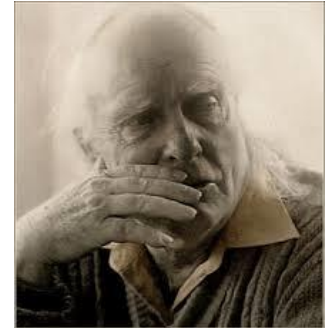### 1. Natural and non-natural meaning
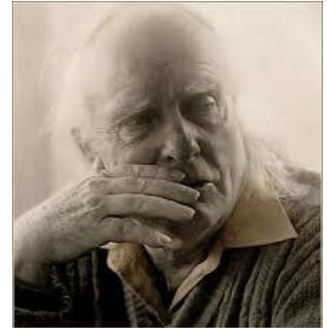
(1)   Those spots mean that the patient has measles.

(2)   Those three rings mean that the bus is full.

The most striking differences between these sentences involve factivity and agency: (1) entails that the patient has measles, while (2) does not entail that the bus is full; (2) entails that someone meant by those rings that the bus is full, while (1) does not entail that someone meant by those spots that the patient has measles.

A natural thought (one that Grice nonetheless does not endorse explicitly) is that while (1) is about a relation between facts, (2) describes a relation between an agent and a proposition. He calls the former natural meaning, the latter non-natural meaning.

2. Grice's program

2. Analysis of speaker meaning

Grice proposed the following analysis of non-natural meaning (in the context of language use also known as speaker meaning) in terms of intentions:

By uttering x the utterer U meant that p iff for some audience A, U uttered x intending
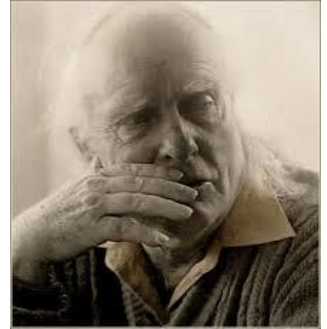
(i) that A should believe that p,
(ii) that A should recognize (i), and
(iii) that (i) should be fulfilled because (ii) is fulfilled.

There are lots of counterexamples, lots of refinements. The core idea is that speaker meaning involves an intention to influence the hearer via the recognition of this very intention.

2. Grice's program

3. From speaker meaning to linguistic meaning

Grice's analysis goes in several steps:

- what it is for an unstructured utterance type (e.g. a nod) to have meaning in a person's idiolect,

- what it is for a structured complete utterance type (e.g. an utterance of the sentence I am content) to have meaning in a person's idiolect,

- what it is for an incomplete utterance type (e.g. an utterance of the adjective content within the sentence I am content) to have meaning in a person's idiolect,

- what it is for any of these utterance types to have meaning among a group of speakers.

3. Lewis's program

1. Languages
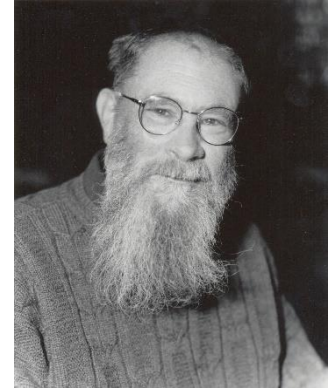
What is language?

Lewis calls a language is just a set of expressions paired with their interpretations. Some of these expressions are sentences and the interpretation of sentences specifies truth-conditions.

Sometimes (e.g. when there are infinitely many expressions) we might need to specify a language through a recursive procedure—a grammar. Languages can be associated with infinitely many different grammars and, according to Lewis, there is no objective ground for preferring one grammar over the others.

3. Lewis's program

## 2. Conventions of truthfulness and trust
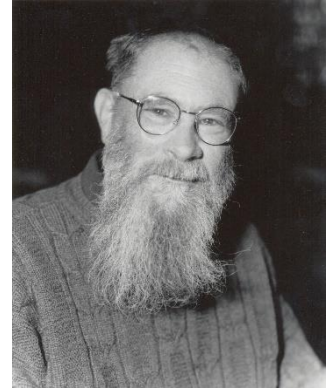
What makes it the case that a group of people speaks a particular language L?

According to Lewis, it is a convention of truthfulness and trust in L, sustained by shared interest in communication. Such a convention involves uttering sentences in L, trying not to utter sentences in L when they are false in L, and believing that the sentences uttered are true in L.

So, is it a matter of convention that aim at speaking truthfully and that we tend to believe each other? No, and Lewis does not say that it is. The alternative to truthfulness and trust in L is truthfulness and trust in a different language L'. As long as we try to communicate with one another, truthfulness itself has no alternative, and is thus not a convention.

3. Lewis's program

3. Conventions in general
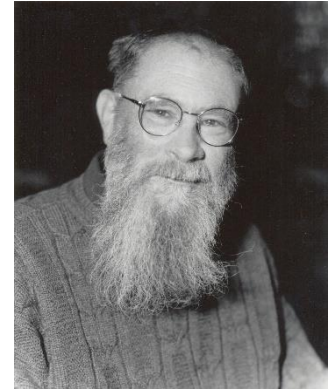
What is a convention?

> A regularity of behavior R among members of the population P in a recurrent situation S is a convention iff it is common knowledge among members of P that in any instance of S among members of P,
>
> (i) almost every agent conforms to R,
>
> (ii) almost every agent expects almost every agent to conform to R,
>
> (iii) almost every agent prefers to conform to R on the condition that the others do, since S is a coordination problem for which R is a solution.

Let the coordination problem be driving on the highway. One solution is everyone driving on the right, the other is everyone driving on the left. American drivers have a preference for the first but we can tell their preference is conditional because it switched when they go to Britain.

4. Comparison
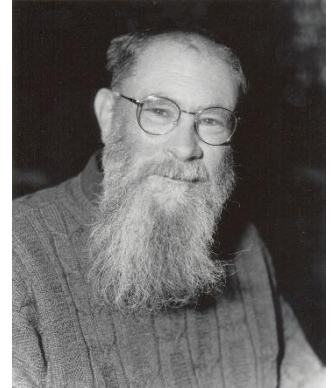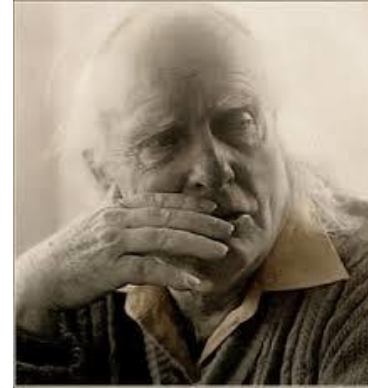
Grice and Lewis both seek to ground linguistic meaning in use.

For Grice and Lewis alike, words are used for forming sentences. For Grice, sentences are for meaning something; for Lewis sentences are for saying something.

We use expressions in a verity of ways, but only their communicative uses have a role in fixing their meanings.

5. Is meaning in the head?

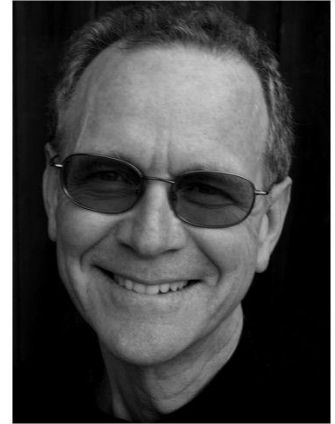### 1. Two theses about meaning

Understanding/meaning (U/M):

If a speaker understands a sentence in a language, she knows that the sentence has a certain meaning in that language.

Meaning/truth-conditions (M/T):

A meaning of a sentence determines a set of conditions under which it is true.

5. Is meaning in the head?

2. The arthritis argument

Felix is a speaker of English who has an inflammation in his thigh. He sincerely utters (A):

(A) I have arthritis.

Twin-Felix, a molecule by molecule duplicate of Felix a speaker of twin-English, where arthritis refers to all instances of joint or bone ailment. By (M/T) arthritis has different meanings in English and Twin-English. Felix knows (A) has its English meaning and, since they are duplicates, Twin-Felix knows it has its Twin-English meaning. But then, by (U/M) Felix also knows that (A) has its Twin-English meaning. However, it may never have occurred to Felix that that there are languages where the sentences he knows have different meanings.

5. Is meaning in the head?

3. The water argument
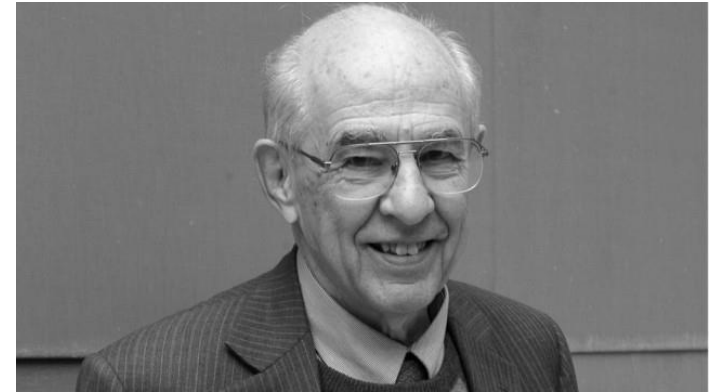
Oscar is a speaker of English around 1750 who sincerely utters (W) (pointing at a glass of water in front of him):

(W) This is water.

Twin-Oscar, a molecule by molecule duplicate of Oscar lives on Twin Earth, a superficially indistinguishable planet where instead of H2O, XYZ fills the river and lakes. In English, water refers to Twin-English, water refers to H2O, not XYZ; in Twin-English, it is the other way around. By (M/T) water has different meanings in English and Twin-English. Oscar knows (W) has its English meaning and, since they are duplicates, Twin-Felix knows it has its Twin-English meaning. But then, by (U/M) Oscar also knows that (W) has its Twin-English meaning. However, it may never have occurred to Oscar that that there are languages where the sentences he knows have different meanings.

5. Is meaning in the head?

4. Comparison

The arthritis and water arguments have a similar structure. They both rely on the intuition—which is plausible enough—that subtle differences in the environment may affect the truth-value of a sentence without affecting a normal speaker's understanding of it.

In the first case, these differences involve the use of a word, while in the second they involve the underlying nature of its referent. In both cases, we discover a conflict between (U/M) and (M/T)—between the thesis that understanding requires knowledge of meaning and the thesis that meaning determines truth-conditions.

5. Is meaning in the head?

5. One answer: externalism

Externalists maintain that Felix and Oscar differ mentally from their twins (which is why they only know a single meaning for arthritis and water, respectively).

Twin Felix is in some sense familiar with arthritis, since he presumably knows people who suffer from this condition. But when he uses the word arthritis he talks and thinks about a different ailment—tharthritis.

Twin Oscar is some sense familiar with water, since it is the liquid he is looking at when he makes his utterance. But when he uses the word water he talks and thinks about a different liquid—twater.

5. Is meaning in the head?

6. Externalism and skepticism

Externalism goes against the deeply held Cartesian intuition that what our mentality—how one represents the world to oneself and what it is like for one to have those representations—is an intrinsic matter. The only way our environment can influence our mental life is by making a difference to what goes on inside.

If externalism is right, if I am in fact not a brain in a vat then I couldn't be one. If I were a brain in the vat I would not have the thoughts I have (although I could have thoughts that would be indistinguishable from the thoughts I actually have).

If follows that if I know that I believe that water is wet then water (and hence the external world) exists.

5. Is meaning in the head?

7. Another answer: two kinds of meaning

We need to distinguish between wide and narrow content for mental sates as well as between wide and narrow meaning for words. The arguments by Burge and Putnam equivocate because (U/M) is about narrow meaning, while (M/T) is about wide meaning.

What matters fro individuating mental states is narrow content: Felix and Oscar have the same mental states, and so internalism can be maintained.

5. Is meaning in the head?

8. Internalism and linguistics
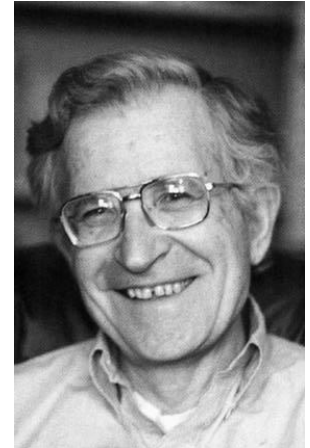
Chomsky argues that the linguistically relevant notion of meaning is narrow.

London can be used to talk about a particular place near the river Thames but also about a political institution which could, in principle, be relocated. But no place could be at another place.

Why not say that London is polysemous?

(1) ?? Giants are mythical creatures and many of them are basketball players.
(2) London is near the ocean but if sea levels rise it may have to move.

5. Is meaning in the head?

9. Deference

Externalists tend to believe that linguistic competence rests, in part on deference.

Felix counts as understanding I have arthritis in part because if an English-speaking doctor were to tell him that this sentence is false, he would be inclined to concede that he was mistaken. Oscar counts as understanding This is water in part because if an English-speaking chemist were to tell him that this sentence is false, he would be inclined to concede that he was mistaken.

Internalists tend to be skeptical about the role of deference in understanding. Chomsky, for example, thinks we should defer to experts about the nature of arthritis and water, but not when it comes to the meaning of arthritis and water.

the end