

## 1. Different dimensions of language

*Syntax* is the study of the logical and grammatical form of linguistic expressions.

*Semantics* is the study of the literal meanings of linguistic expressions.

*Pragmatics* is the study of what speakers mean in uttering a particular expression.

### 1.1. Denotation & Sense

*Denotation*: the part of reality to which an expression is linked.

- Ex. “Kareem Khalifa” denotes the guy who is writing this.
- *Ostensive definition* is definition by pointing to the object in question, and relates most closely to the denotation of the word

*Sense*: the cognitive significance or uptake of an expression; its content, which can be found by paraphrasing the expression, or by translation from one language to another

- Ex. “Kareem Khalifa” = “the husband of Leticia Arroyo Abad.” = “the only professor who teaches LNLT0280/PHIL0280 at Middlebury.”

*Sense/reference* distinction

- An expression which denotes just one individual is said to *refer* to that individual
- Titles and proper names are common referring expressions
- A word may have a constant sense but changeable reference

### 1.2. Lexical & Structural Meaning

*Lexical meaning*: meaning of individual words

*Structural meaning*: meaning of the way the words are combined

### 1.3. Categorematic & Syncategorematic Expressions

*Categorematic* expressions are descriptive words (e.g. nouns, adjectives, and verbs).

- Most words are categorematic (e.g. toaster, Ron, mammals)
- If it's helpful: a category is essentially a set.

*Syncategorematic* expressions are not descriptions, and do not form categories. These modify categorematic terms or to combine them in certain patterns

- Ex. As, some, because, for, to, although, if, since, and, most, all

### 1.4. Some structural features of natural languages

The syntax of natural languages is **recursive**, i.e. it can be embedded in another phrase of the same kind. This allows language to be infinitely complex, even though we are finite beings.

Corresponding to this, we are able to *interpret* all of these novel utterances, i.e. to understand their *meanings*. Thus, a recursive syntax fits hand in hand with a **compositional** semantics, i.e. meanings of complex wholes are a function of the meanings of their parts.

## 2. Truth-conditional theories of meaning

The **truth conditions** of a sentence are the conditions under which it is true.

Many linguists assume that sentence's meaning = its truth-conditions. Semantic theories that make this assumption are called **truth-conditional theories**.

Theories which analyze meaning in terms of referring to, denoting or describing things, situations and events in the world (or possible worlds) are **denotational theories**.

- Names refer to objects; don't describe the things
- Predicates denote the set of things that they describe; are categorematic.

Most formal semantic theories are both denotational and truth-conditional.

### 2.1. Possible worlds, extension, and intension

Predicates should refer not only to actual members of a set, but hypothetical members.

- Ex. Consider the phrase, “A dog on Mars” This is meaningful, so the set of dogs must include merely possible dogs.

We capture this idea using *possible worlds*: possible worlds are hypothetical ways reality might be or might have been.

- *Extension of a predicate*: the set of all things in the actual world that the predicate describes.

- *Intension of a predicate*: the set of all things in all possible worlds (including the actual world) that the predicate describes.
- *Extension of a sentence is its truth-value*, i.e. whether it is true or false in the actual world.
- *The intension of a sentence is its truth set*, i.e. the set of all possible worlds in which that sentence is true.

### 2.2. Truth-based relations between statements

A *entails* B if wherever A is true, so is B.

A *contradicts* B if wherever A is true, B is false.

A is a *tautology* if A is always true.

A statement is *analytic* if it is true simply in virtue of the meanings of its constituent words (e.g. All bachelors are unmarried.)

A statement is *synthetic* if its truth-value is not determined only in virtue of the meanings of its constituent words.

## 3. Pragmatics Sampler

### 3.1. Implicature

In normal communication, speakers and hearers cooperate.

Hearers are supposed to draw correct (often context-sensitive) inferences from speaker's utterances.

Speakers are supposed to make utterances that allow or "invite" hearer to draw appropriate inferences. These "invited inferences" are called *implicatures*.

*Principle of relevance*: what the speakers say should be relevant to the current concerns of the communicators; the hearer should assume that what the speaker says is currently relevant and draw inferences accordingly.

*Principle of informativeness 1*: Give as much information as is required

Scalar implicature: denote quantities/degrees of attributes which can be grade on a scale of informative weakness or strength, e.g.

- Ex. (weak) <*some, most, all*> (strong)

*Principle of informativeness 2*: Do not give more information than is required.

### 3.2. Indexicals

Expressions that make essential reference to the context of utterance (e.g. who the speaker or audience is; where/when the utterance was made; etc.)

- Ex. "I," "you," "here," "now"

### 3.3. Anaphors

Expressions that make essential reference to what was said/written in the context prior to the utterance.

- Ex. John [hugged Mark], and as he did so, he smiled.

The bracketed expression is the *antecedent* of the anaphor.

### 3.4. Presupposition

A statement *S presupposes* presupposition *P* if:

- If *S* is true, then *P* is true.
  - If *not-S* is true, then *P* is true. (i.e. presuppositions 'survive negation')
  - If *P* is false, then *S* is neither true nor false.
- Ex. *The bearded man ate a sandwich* presupposes that *the man had a beard*.
    - If *the bearded man ate a sandwich*, then *the man had a beard*.
    - If *the bearded man didn't eat a sandwich*, then *the man had a beard*.
    - If the *man didn't have a beard*, then it's unclear whether *the bearded man ate a sandwich* or not.

In addition to the three-step test just outlined, another is whether one can utter, "Hey! Wait a minute!" and then challenge the presupposition.

- NB: I don't find this to be very useful.

Presupposition accommodation: when a speaker presupposes something that a hearer doesn't know, yet the hearer accepts it without objection.