

Semantics

The study of meaning

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Definition of semantics

- Semantics is generally defined as:
- (1) *Semantics is the study of meaning.*
- But...

Definition of semantics

- **Three categories of meaning:**
- **a.** meaning conveyed through human behaviour
[*human behaviour significance/meaning*]
- **b.** meaning conveyed through behaviour involving structured sets of conventional, commonly accepted symbols (language, traffic symbols, body language, etc.) [*communicated meaning*]
- **c.** meaning conveyed through speaking / behaviour involving language [*linguistic meaning*]

Definition of semantics

- Therefore, semantics is the study of **linguistic meaning**. Or we can say:
- (2) *Semantics is the study of meaning as expressed by the words, phrases and sentences of human languages.*

Definition of semantics

- But a sentence might convey different meanings by different speakers and in different contexts.
- **Semantics** concerns the aspects of linguistic meaning that are independent of the use of language on any particular occasions by any particular individuals within any particular speech communities.

Definition of semantics

- Therefore, a more accurate way to interpret semantics is that:
- (3) *Semantics is the study of those aspects of the meaning of linguistic expressions abstracted away from users, context and other cognitive and social factors.*

What is meaning?

- We often find ourselves talking about the meanings of words and sentences in daily life. For example,
 - -- *“what is the meaning of ‘facebook’?”*.
 - -- *“Facebook is a social networking/media website”*.
 - *“It is ‘脸书’, something like Chinese ‘微信’*.
 -
- It seems that **“meaning is more words”**.
- **Can meanings be more words?**

What is meaning?

- **How do scientists study linguistic meaning?**
- The meaning of an expression seems to be something abstract, obscure, and mysterious.
- So scientists have been trying to identify meaning with something else, especially something relatively more familiar and observable.
- **Two identity theories of meaning:**
 - the referential theory
 - the ideational theory

The referential theory

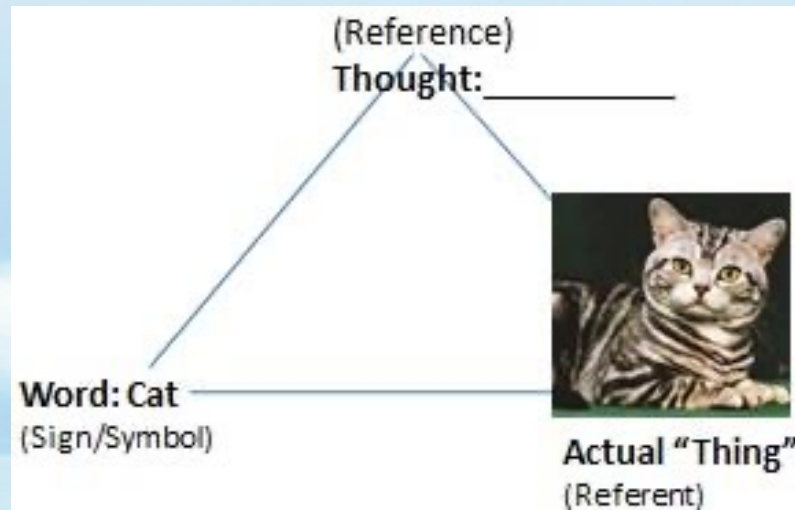
- The meaning of an expression is its referent, the entity it refers to.
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- *Taylor kissed John.*
- *Taylor* refers to a specific person named “Taylor”.
- *John* refers to a specific person named “John”.
- *Kiss* refers to a specific act --- “touch somebody with one’s lips”.

The referential theory

- **The referential theory has encountered some objections.**
-
- **Your comments on this theory??**

The ideational theory

- The meaning of an expression is the idea/concept regularly associated with it.
- The meaning of “cat” is the mental representation/imagery of the class of cats rather than the actual cats in the real world.

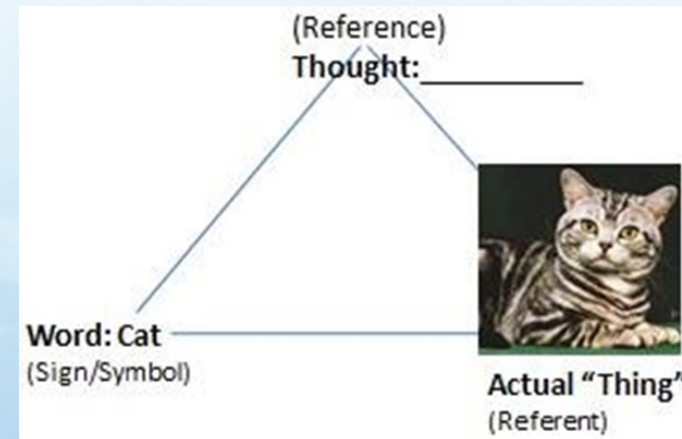


The ideational theory

- **The ideational theory has considerable charms.**
- First, resolving some of the challenges the previous theory encounters.
-
- Second, consistent with the intuition that language is used to externalize one's thoughts.

The ideational theory

- The ideational theory has been facing some challenges.
- Your comment on this theory??



The ideational theory

- *Noam Chomsky is a linguist and philosopher.*



- *I saw a magpie on that tree.*



Meaning relations

- Relations between word meanings
- Relations between sentence meanings

Relations between word meanings

- **Synonymy**
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- almost/nearly big/large broad/wide buy/purchase
- cab/taxi car/automobile couch/sofa freedom/liberty
answer/reply

Relations between word meanings

- **Antonymy**

- **Complementary or contradictory antonyms**

- one member is true, the other member cannot be true.
- -- male/female, married/unmarried, alive/dead, present/absent/ ...

- **Relational antonyms**

- the existence of one of the terms implies the existence of the other term.
- -- over/under, buy/sell, doctor/patient, teacher/pupil, stop/go, ...

- **Gradable or scalar antonyms**

- referring to opposite ends of a continuum
- hot/cold, big/small, tall/short, good/bad, strong/weak, beautiful/ugly, happy/sad, ...

Relations between word meanings

- **Hyponymy**
- One sense is a **hyponym** of another sense if the first sense is more specific, denoting a subclass of the other.

hypernym	<i>vehicle</i>	<i>fruit</i>	<i>furniture</i>	<i>mammal</i>
hyponym	<i>car</i>	<i>mango</i>	<i>chair</i>	<i>dog</i>

■

Relations between word meanings

- **Homonymy**
- **Homonyms** are words with the same/similar spelling or/and pronunciation but with multiple unrelated senses.
- John cashed a check at the bank.
- Mary sat on the bank of the river and watched the currents.

Relations between word meanings

- **Polysemy** occurs when a single linguistic form has two or more related senses.
- **Man:** 1. human species, 2. males of human species, 3. adult males of human species
- **Date:** 1. a fruit, 2 a particular day, 3. a romantic meeting, 4. the person you date, ...

Relations between sentence meanings

- **Entailment**
- Given two sentences p and q , Whenever p is true, if q is also true then p entails q .
- p : *John loves Mary.*
- q : *A man loves Mary.*
- $p \rightarrow q$ (p entails q)

Relations between sentence meanings

- **Entailments are typically not preserved under negation.**
- *The 11th G20 summit was held in Hangzhou.*
- It entails:
- *The 11th G20 summit was held in China.*
- *The 11th G20 summit was not held in Hangzhou.*
- It does not entail:
- *The 11th G20 summit was held in China.*

Semantic roles

- Meaning of a sentence
- 1) The lion licked the trainer.
- 2) The trainer licked the lion.
- position of words?
- 3) The trainer was licked by the lion.
- relation of NPs to the verb?
- 4) The trainer gave the lion a treat.
- 5) The trainer gave a treat to the lion.

Semantic roles

- Semantic roles refer to the roles that words (NPs) play in a state/event/situation described by a sentence.
- Common roles that NPs play:

Semantic roles

- AGENT: the entity that performs/initiates an action
 - -- ***John** left the room.*
 - -- ***John** broke the window.*
 - -- *The window was broken by **John**.*
- PATIENT/THEME: the entity that is involved in or affected by the action or whose location is described.
 - -- *John threw away **the books**.*
 - -- ***The books** are in library.*

Semantic roles

- INSTRUMENT: the means by which an action is performed or something comes about
 - -- *John broke the window with **a rock**.*
- EXPERIENCER: the entity which is aware of the action or state described by predicate, but which is not in control
 - -- ***John** feels sad.*
 - -- ***John** saw me.*
 - -- *The answer seemed wrong to **John**.*

Semantic roles

- BENEFICIARY: the entity for whose benefit the action is performed
 - -- *You filled in the form for **John**.*
 - -- *The baked **John** a cake.*
- SOURCE: the entity from which something moves
 - -- *John just came back from **Harvard**.*
 - -- *John got the idea from **his trip to the west**.*

Semantic roles

- GOAL: the entity towards which something moves
 - -- *I told the joke to **John**.*
 - -- *John drove to **the west**.*
- LOCATIVE: the entity which describes the location of an action or situation
 - -- *John put the book **under the table**.*
 - -- *John had to walk **around the table**.*

Semantic roles

- CAUSE: the entity that causes an event to happen
 - -- ***The sun*** ripened the corn.
- POSSESSOR: the entity that owns or is temporarily in control of some other entities
 - -- ***John*** has three cats.
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Semantic roles

- **Sematic role vs grammatical role**
- 1. The boy opened the door with the key.
- 2. The key opened the door.
- 3. The door opened.

Semantic roles

- **Identify the semantic roles of the NPs in the following sentences**
 - .
 - *Johnny wrote a love letter.*
 - *The snow is melting.*
 - *I heard him.*
 - *The scandal surprised them.*
 - *She put the keys on the desk.*
 - *Allen sent the book to Mary.*
 - *Mary bought the book from John.*
 - *Europe is seeing further signs of hope.*