

ING218
Lecture 4
Semantic Roles

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sentence

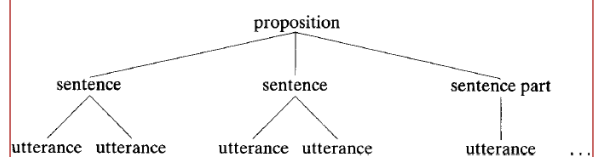
Vs

Proposition

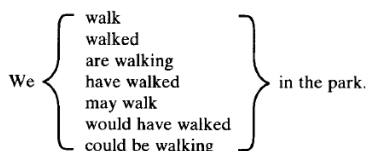
A sentence contains certain information, but the same information can be presented in different sentences and in parts of sentences; the information presented, apart from the way it is presented is called **Proposition**.

A proposition is something abstract but meaningful. It can be expressed in different sentences and in parts of sentences, perhaps with differences focus but always with the same basic meaning.

And, as you recall, any sentence can be expressed in different utterances, produced by different people at different times and in different places. Schematically:



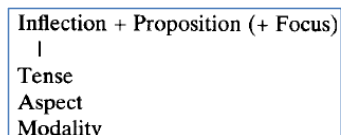
Consider these ways of modifying our original sentence:



An English sentence has certain kinds of modification that, together, we call **inflection**. Inflection includes **tense** (the distinction between present *walk* and past *walked*, for instance); **aspect** (*are walking*, *have walked*), and **modality** (*may walk*, *could walk*, *should walk*, among other possibilities).

Inflection is **different** and separate from proposition.

A general scheme for a simple sentence has these parts:



The description of a sentence is a **SYNTACTIC ANALYSIS**.

The description of a proposition is a **SEMANTIC ANALYSIS**.

There are somewhat different ways of doing syntactic analysis, but generally these sentence functions are recognized: **subject**, **predicate**, **object**, **complement** and **adverbial**.

TABLE 4.1 The syntactic analysis of sentences

<i>Subject</i>	<i>Predicate</i>	<i>Object</i>	<i>Adverbial</i>
A window	broke.		
Tom	broke	a window.	
Our dog	is		under the house.
Denise	put	marmalade	on her toast.
Albert	sends	e-mail	to his friends.

<i>Subject</i>	<i>Predicate</i>	<i>Complement</i>	
I	am	thirsty.	
Hector	is	afraid	of the dark.
Mr Whipple	is	a banker.	

<i>Subject</i>	<i>Predicate</i>	<i>Indirect object</i>	<i>Direct object</i>
Albert	sends	his friends	e-mail.

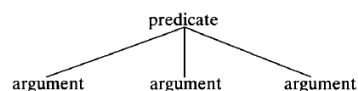
Note that every lexeme and function word is assigned to one of the syntactic functions, subject, predicate, etc., and these functions are listed in the order they have in the sentence. Thus *a window* is subject of the predicate *broke* in the first sentence and object of the same predicate in the second sentence. Note also that the predicate is always a verb. If we change *Albert sends his friends e-mail* to *Albert sent his friends e-mail*, the predicate changes from *sends* to *sent*.

The semantic analysis deals with meaning, the proposition expressed in the sentence, not necessarily with all the function words in the sentence. In semantic analysis we first separate Inflection from Proposition. Then *Albert sends his friends e-mail* and *Albert sent his friends e-mail* have the same proposition, {Albert, send, Albert's friends, e-mail}. The first sentence adds Present Tense to that proposition and the second sentence adds Past Tense.

When Inflection—including Tense—is separated from Proposition, we see that the forms of the verb *be* (*am, is, are, was, were*) have no meaning. They are clearly part of the syntactic structure of sentences but not of the semantic structure. In semantic analysis every proposition contains one predicate and a varying number of referring expressions (noun phrases) called **arguments**, like *a window, Albert, marmalade, the house*. The predicate may be a verb, an adjective, a preposition, or a noun phrase. Here are the propositions expressed in the sentences above, with the predicate underlined:

{break, a window }
 {break, Tom, a window }
 {under, our dog, the house }
 {put-on, Denise, marmalade, Denise's toast }
 {send, Albert, e-mail, Albert's friends }
 {thirsty, I }
 {afraid-of, Hector, the dark }
 {a banker, Mr Whipple }.

The arguments that accompany the predicate have different semantic functions, or roles, in the proposition. What roles they have depends partly on the nature of the predicate and partly on their own meanings. The semantic structure of a proposition can be represented this way:



Different predicates—verbs, adjectives, prepositions—can be described according to the number of referring expressions, or arguments, that can occur with them and the roles these arguments have. An account of the number of arguments that a predicate has is called the **valency** of that predicate. Valency theory is a description of the semantic potential of predicates in terms of the number and types of arguments which may co-occur with them. Some predicates, such as *break*, have variable valency: a valency of one in *A window broke* and a valency of two in *Tom broke a window*.

TABLE 4.2 Semantic roles

actor	The role of an argument that performs some action without affecting any other entity. <i>Sylvia left.</i>
affected	The role of an argument that undergoes a change due to some event or is affected by some other entity. <i>A window broke. Tom broke a window. Betty likes opera. Opera delights Betty.</i>
affecting	The role of an argument that, without any action, affects another entity. <i>Betty likes opera. Opera delights Betty.</i>
agent	The role of an argument that by its action affects some other entity. <i>Tom broke a window.</i>
associate	The role of an argument that tells the status or identity of another argument, the theme : <i>Roger is a student.</i>
effect	The role of an argument that comes into existence through the action of the predicate. <i>Tillie baked a pie.</i>
place	The role of an argument that names the location in which the action of the predicate occurs. <i>The fireman climbed a ladder.</i>
theme	The role of an argument that is the topic of a predicate that does not express action – a stative predicate. <i>Audrey is a computer expert.</i>

Exercises

Practice 4.1

For each sentence here decide if it has the semantic structure Actor+Action or Affected+Event. Does the subject name something that is acting or something that is affected?

- (a) My head aches.
- (b) All animals breathe.
- (c) Denis is (always) complaining.
- (d) Fanny fainted.
- (e) The pond froze (last night).
- (f) The woman frowned.
- (g) They gossip (a lot).
- (h) Arnold hurried.
- (i) The lock has rusted.
- (j) You were snoring.

Practice 4.2.

Four structures are represented in the sentences below: 1 agent-action-affected, 2 agent-action-effect, 3 actor-action-place, 4 affecting-affect-affected, the last of these occurring in the order affected-affect-affecting, as well. Read each sentence and tell its structure.

- (a) Jenny admired the painting.
- (b) Derek bent the tube.
- (c) Fabian broke a vase.
- (d) The children built a sand castle.
- (e) The boys climbed the wall.
- (f) I closed the door.
- (g) The chef cooked a great meal.
- (h) Sandra covered the birdcage.
- (i) We crossed the street.
- (j) That medicine cured my headache.
- (k) A mad bull damaged the fence.
- (l) Stout troops defended the castle.

- (m) Stout troops destroyed the castle.
- (n) We quickly dug a ditch.
- (o) Little Audrey drew a picture of two kittens.
- (p) (On the way to the post office) I dropped the package.
- (q) We enjoyed the concert.
- (r) Alan entered the library.
- (s) Doris hid the money (in the flowerpot).
- (t) Mr Bainbridge (accidentally) killed a bird.
- (u) Mother mended the shirt.
- (v) The submarine sank a troop ship.

PRACTICE 4.4

The following verbs are like *bathe* and *drown*. Each one can occur with a subject and object, expressing, respectively, agent and affected. And each verb can occur with only a subject, which may express agent and affected, as in the case of *Maureen bathed*, or, as in *Harvey drowned*, the subject tells who is affected but is not clear about agency. Which of the following are like *bathe* and which are like *drown*?

change	scratch	suffocate
choke	shave	undress
dress	show off	wake (up)
fail	stand (up)	wash

PRACTICE 4.5

Each of the following sentences has a verb and two arguments, and in each case that verb can also be used in a sentence with only one argument. Decide which of the three types is represented. Which predicates are like *eat*, which are like *bathe*, and which are like *roll*? One of them is like *eat* and *roll*.

- (a) Mary woke her husband (at seven o'clock).
- (b) Our team lost the game.
- (c) The boys are flying kites.
- (d) They played tennis (all afternoon).
- (e) The heat melted the paraffin.
- (f) Mr Carson started the car.
- (g) David rang the bell.
- (h) Allen wouldn't help us.
- (i) Yolanda weaves tablecloths (for pleasure).
- (j) Did your barber shave you?

The End,
Thank You