

Lgcs 10, Intro to Ling. Lecture notes. 30 Nov 2010.

0. Announcements

-HW 8: Due next Tues. To be distributed on Thursday.

1. Current Class Grammar

Lexicon

N → *kittens, squirrels, guys, love, downfall, ...*

V → *like* [__ NP], *love* [__ (NP)], *disappear* [__], *devour* [__ NP],
eat [__ (NP)], *put* [__ NP PP], *approve* [__ (PP)], *look* [__ AP],
think [__ CP], *wonder* [__ CP], ...

A → *happy, wise, brave, afraid, caring, ready...*

P → *on, near, in, to, with, ...*

Pron → *he, she, it, that, those, these, ...*

D → *the, those, these, some, a, three, ...*

T → *be, have, will, should, can, ...*

C → *that, whether, if, ...*

Deg → *really, quite, kinda, pretty, ...*

Adv → *always, usually, recklessly, quickly, silently, ...*

PAdv → *right, directly, ...*

PS Rules

S → NP (T) VP

NP → Pron | CP | (D) (AP*) N (PP) (**PP**₀)

VP → (Adv) V (**NP** | **NP PP** | **AP** | **PP** | **CP**) (**PP**₀)

AP → (DegP) A (PP)

PP → (PAdv) P (NP)

CP → C S

DegP → (DegP) Deg

AP* → (AP*) AP

Changes to the last grammar are marked in **bold**.

Exercise 1. Give the phrase structure trees for the following sentences:

- (1) He is being nice.
- (2) He has been nice.
- (3) He might be nice.
- (4) He is nice.
- (5) They are just above the city.

2. Headedness.¹ In English, heads precede their complements. English is thus said to be **head-initial**. **Headedness** refers to the order of heads and complements in a language. As you saw in Assignment 7, Japanese is **head-final**.

The following sentences are in Korean; is Korean head-initial or head-final?

- (6) Kutul-un mokcek-ul chukwuha-yess-ta
they-TOP objective-ACC pursue-PAST-DECL
'They pursued their objective.'
- (7) Kutul-un mokcek-ul chukwuhayya ha-n tako tonguyha-yess-ta
they-TOP objective-ACC pursue must-pres that agree-PAST-DECL
'They agreed that they should pursue their objective.'

Languages are often **harmonic** with respect to headedness: they tend to be consistently head-initial or head-final. There are, however, cases of mixed headedness, as in Dutch and German.

3. Complements vs. Modifiers. Two types of PPs may follow the head in NP and VP: those that are **complements** and those that are **modifiers**. Modifiers must **follow** complements, are **always optional**, and may **occur any number of times**.

- (8) The student of linguistics from Texas is here.
- (9) *The student from Texas of linguistics is here.
- (10) We put the kittens on the bed on the last Friday of the month.
- (11) *?We put the kittens on the last Friday of the month on the bed.

¹ Sections 2 and 4 of these notes are both adapted from Chapters 5 and 6 of the online textbook, *The Syntax of Natural Language*, <http://www.ling.upenn.edu/~beatrice/syntax-textbook/>.

4. Head Movement. Tense in English can be expressed in one of two ways. The future tense is expressed by *will*, which precedes the verb and is a free morpheme:

(12) They will talk.

The past tense, on the other hand, is expressed by a bound morpheme, which combines with the verb to form a morphologically complex word:

(13) They talk-ed.

We already have a syntactic position for *will*: like other auxiliaries and modals, *will* occurs in T. Assuming that the T node is associated with tense, this analysis can be extended to the past tense morpheme *-ed*, so that it also starts out in T:

(14) [_S [_{NP} [_{PRON} They]] [_T -ed] [_{VP} [_V talk]]]

This of course raises the question of how the tense morpheme combines with the verb root. There are two options here: either V raises to T, to combine with the tense morpheme, or V lowers to T, to combine with the verb root. This type of movement is called **Head Movement**, as one head is moving to another.

Before choosing an option for English, consider the future tense in French, which is formed by combining the infinitive form of a verb with a suffix:

(15) Future tense of <i>chanter</i> ‘to sing’	Present tense of <i>avoir</i> ‘to have’
je chanter- ai	j’ ai
tu chanter- as	tu as
il chanter- a	il a
nous chanter- ons	nous avons
vous chanter- ez	vous avez
ils chanter- ont	ils ont

Note that the suffixes are nearly identical to the present tense forms of the verb *avoir* ‘to have’. This suggests that the French future tense developed from the combination of the free morpheme *avoir* with the main verb (in this case *chanter*). One has moved to the other position to create the future tense.

4.1 Position of Adverbs. In French, there is evidence for head movement in a certain direction. Consider the following examples, and in particular the word ordering with respect to adverbs:

(16) Vous voyez Jean.
You see Jean
‘You see Jean.’

(17) Vous avez souvent vu Jean
You have often seen Jean
‘You have often seen Jean.’

(18) Vous voyez souvent Jean.
you see often Jean
‘You often see Jean.’

(19) *Vous souvent voyez Jean.
you often see Jean

What does this suggest about the position of V in French, when there is no **free morpheme** generated in T?

(20) *V-to-T Movement*
Raise V to T (as long as T is not occupied by a free morpheme.)

In English, adverbs **cannot** occur between a verb and its complement:

(21) You often saw John.
(22) *You saw often John.

This suggests that in English, T lowers to V:

(23) *Tense Lowering*
Lower T to V (as long as T is not occupied by a free morpheme.)

Summarizing: T houses all information about tense. When a tense morpheme is **bound**, T and V must somehow combine. In French, V raises to T. In English, T lowers to V. This accounts, in both languages, for the positioning of adverbs with respect to the main verb and auxiliaries.

There is one verb in English that does not fit the regular pattern:

(24) He is often an animal. cf.: *I see often animals.

This is main verb *be*. What does this suggest about main verb *be* in English?

4.2 VP Ellipsis

Additional evidence for analysis of Head Movement in English comes from a phenomenon called VP Ellipsis (French does not permit VP Ellipsis).

In English, a VP can be deleted when it is identical to another VP in preceding discourse:

- (25) a. Mike is usually sleeping by now.
b. Sabina is, too.

This is called VP Ellipsis, since the VP has been elided. Propose a rule for VP Ellipsis that derives this sentence.

- (26) *VP Ellipsis* (Optional)

Consider now an example with main verb *be*:

- (27) a. Mike is really happy.
b. Sabina is __, too.

How can we account for this case?

Exercise: Provide a derivation of *Sabina is, too*.

Consider now an example

- (28) a. Mike usually sleeps at night.
b. Sabina does, too.

What has happened in this case?

4.3 Head Movement Crosslinguistically

Interestingly, there may be a correlation across languages between the richness of morphological agreement a language has, and whether it has verb raising (Platzack and Holmberg 1989, Roberts 1993, Vikner 1997, among others.)

Specifically: Languages that have rich agreement tend to have verb raising, while languages with poor agreement tend not to.

Rich agreement languages: Italian, Spanish, French, Icelandic, Yiddish.

Poor agreement languages: Danish, Swedish, English.

- (29) að Jón keypti raunverulega bókina (Icelandic)
that Jón bought actually book.def
'...that Jón actually bought the book'

- (30) az zey redn mistome mame-loshn (Yiddish)
that they speak probably mother-tongue
'...that they probably speak Yiddish'

- (31) at Peter ofte drikker kaffe om morgenen (Danish)
that Peter often drinks coffee in morning.def
'...that Peter often drinks coffee in the morning'

- (32) att Ulf faktiskt köpte boken (Swedish)
that Ulf actually bought book.def
'...that Ulf actually bought the book'

5. Yes/No Questions

We don't yet have a rule for *Yes/No*-Questions in English:

- (33) Can we go?
- (34) Will you stay?

It appears here that T is moving to the front of the sentence (this is sometimes called **inversion**), but what position is T moving to?

Some evidence bearing on this question comes from the behavior of *Yes-No* Questions in embedded clauses. For example:

- (35) He asked me whether I would marry him.
- (36) He asked me would I marry him.
- (37) *He asked me whether would I marry him.

These examples show that inversion is **not** grammatical if a complementizer is present. This suggests that T moves to what position in embedded clauses?

Consider now *Yes/No*-Questions in other languages:

- (38) Hwæ er ge nu secan gold on treowum? (Old English)
Whether you now seek gold in trees
'Have you read the book?'
- (39) Razve on ne prixodil? (Russian)
Whether he not came
'Hasn't he come?'
- (40) Aya Ali ketab darad? (Persian)
Whether Ali books has?
'Does Ali have books?'
- (41) Naoko-ga Kimiko-o mi-ta ka/no
Naoko-NOM Kimiko-ACC see-PAST Q
'Did Naoko see Kimiko?'

What, then, is the rule for forming *Yes-No* Questions in English?

Consider now *Yes-No Questions* in French:

- (42) Avez-vous vu Jean?
have you seen Jean
'Have you seen Jean?'
- (43) Voyez-vous Jean ?
see you Jean
'Do you see Jean ?'

How are these derived?

Consider now the *Yes-No Questions* for the following, which have main verb *be*?

- (44) You are awake.
- (45) It is an animal.

How can we account for these cases?

Finally, how can we account for the *Yes/No*-Questions counterparts of the following declaratives?

- (46) He knows.
- (47) Does he know?
- (48) You talked.
- (49) Did you talk?

Start symbol for declaratives?

- (50) ?inna lwalada qad taraka lbayta (Arabic)
That the-boy did leave the-house
'The boy left the house.'
- (51) Que vengan todos! (Spanish)
That come all
'Let them all come!'

6. Dutch

(i) Propose rules for NP, VP, and S in Dutch, based on (52) and (53) alone.

(52) Ik heb een kat gezien.
I have a cat seen
“I have seen a cat.”

(53) Jan zal Marie kussen.
Jan will Mary kiss
“Jan will kiss Mary.”

(ii) Draw a phrase structure tree for (52), given your rules.

(iii) Are Dutch VPs head-initial or head-final?

(iv) The following sentences illustrate *Yes-No* Questions in Dutch:

(54) Hebt u een kat gezien?
Have you a cat seen
“Have you seen a cat?”

(55) Zal Jan Marie kussen?
Will Jan Mary kiss
“Will Jan kiss Mary?”

(56) Ziet u een kat?
see you a cat
“Do you see a cat?”

(57) Kust Jan Marie?
Kisses Jan Mary
“Is Jan kissing Mary?”

Based on these examples, how are questions formed in Dutch? How are these examples different from English? Give a derivation for example (56).

(v) Consider now the following declarative examples, in which no auxiliary occurs:

(58) Ik zie een kat.
I see a cat
“I see a cat.”

(59) Jan kust Marie.
Jan kiss Mary
“Jan is kissing Mary.”

Do these examples require you to revise your rule for VP, or are they already accounted for by your answer to question (iv)?

(vi) Derive (59).

(vii) The following examples illustrate the placement of main verbs with respect to adverbs like *always* in Dutch.

(60) Jan kust altijd Marie.
Jan kisses always Marie
“Jan always kisses Marie.”

(61) *Jan altijd kust Marie.
Jan always kisses Marie

Assume that the rule for adverbs is the same in Dutch as it is in English.

Is the placement of the verb with respect to the adverbial what you would expect, given your answers to (i)-(v)? Explain in one sentence, and provide a derivation for (60).