

## Ling 315 Lecture notes. 17 January 2007.

### 1. Diagnostics for identifying a word's syntactic category, revised.

Our goal when doing syntactic categorization is to divide up the lexicon into smaller categories, so that our theory does more than simply provide a list of words. Words can be divided into categories based on shared *syntactic* and *morphological* criteria.

Morphological criteria for categorizing words concern what affixes they may combine with. E.g., nouns may generally inflect for number, and so have distinct singular and plural forms, e.g., *dog, dogs*.

Syntactic criteria for categorizing words concern the fact that different categories of words have different *distributions* within a sentence. E.g., if we want to complete the sentence *They have no* \_\_, we can use a noun, as in (1), but not a verb, preposition, adjective or adverb, as in (2):

- |                                                           |           |
|-----------------------------------------------------------|-----------|
| (1) They have no <i>car/conscience/friends/ideas</i>      | N         |
| (2) *They have no <i>went/for/older/conscientiously</i> . | V/P/A/Adv |

Given that different categories have different morphological and syntactic properties, we can use these properties to determine a word's categorization.

What we want is a set of tests that, taken together, **uniquely identify** each of the categories.

Finding precise tests that have no counterexamples is not always easy. Our last class discussion involved hypotheses followed by counterexamples followed by more refined hypotheses (followed by more counterexamples...).

The following is an updated compilation of the tests we've come up with so far. Note, however, that these tests are not foolproof; for example, morphology can be irregular, so a word might have only some, or even none, of the relevant morphological properties.

#### Nouns

- Cannot have NP sisters, e.g., \**the destruction the city* cf. *the destruction of the city*.
- Cannot have accusative pronoun objects, e.g., \**the letter her* cf. *the letter from her*.
- May occur in the following frame: *They have no* \_\_.
- Can inflect for number (singular/plural).

#### Verbs

- May occur in the following frame: *They/it might* \_\_.
- Can inflect for tense (e.g., *-ed*) and aspect (e.g., *-ing*).
- Can have NP sisters (e.g., *saw him*).

#### Prepositions

- Can be modified by *right* or *straight* e.g., *right/straight into the wall*.
- Can have NP sisters, e.g., *above the floor*.
- Can have accusative pronoun objects, e.g., *above her*.

#### Adjectives

- Can follow another adjective, e.g., *that weird little thing*.
- Cannot alone precede a singular count N followed by a V, e.g., \**Weird glass broke*.
- Can appear in the following frame: *They seem* \_\_.
- Can appear in the following frame: *They are very/really* \_\_.
- Can appear in the following frame: *They are more* \_\_ *than you are*.
- Can occur between a D and an N, e.g., *that little thing*.
- Can inflect for comparative (e.g., *-er*) and superlative (e.g., *-est*).

#### Determiners

- Cannot follow an adjective, e.g., \**little the thing*.
- Can alone precede a singular count N followed by a V, e.g., *That glass broke*.

#### Adverbs

- Can appear in the following frames:  
*She treats them* \_\_.  
*She behaved* \_\_.  
*He worded the statement* \_\_.
- Can be modified by *very*:  
*She treats them very* \_\_.  
*She behaved very* \_\_.  
*He worded the statement very* \_\_.
- Often are derived by adding *-ly* to an adjective, e.g., *quickly*.

#### Auxiliaries

- Move to the beginning of the sentence to form a yes-no question, e.g.,  
*I should go* → *Should I go?*
- Precede sentential negation (*not*), e.g.,  
*I should go* → *I should not go*
- Are used to form tag-questions, e.g.,  
*I should go* → *I should go, shouldn't I?*

## 2. Our current grammar.

### Lexicon

N → *kittens, squirrels, bed, ...*

V → *love, hugged, slept, yawned, ...*

A → *happy, nice, ...*

D → *the, those, ...*

P → *on, near, ...*

### Phrase Structure Rules

S → NP VP

VP → V (NP) (PP) (PP)

NP → (D) (A) N (PP)

PP → P (NP)

## 3. Constituent structure and ambiguity.

Our grammar accounts for the ambiguity of the following examples by assigning them more than one tree. Which interpretation goes with which tree, and why?

- (3) Those people stared at the man on the bus.
- (4) The detectives watched the man with binoculars.
- (5) Some people put those things on your bed on the floor.

Motivate the proposed structures using the constituency tests (see class discussion).

Provide tree structures for the following examples, and use the constituency tests to test those trees.

- (6) Sara looked out the window.
- (7) Sara looked up the number.
- (8) Sara ran up the mountain.
- (9) Sara rang up her friend.
- (10) Sara ran over the border.
- (11) Sara ran over that thing.
- (12) Sara threw the towel in.
- (13) Sara threw the towel in the basket.

Revise the PS Rules so that they generate the following sentences:

- (14) Those beds are (very) soft.
- (15) The kittens like (very) soft beds
- (16) Those beds feel (very) soft.
- (17) Those beds are (very) soft.
- (18) Those beds are (very) soft.
- (19) Those (very) soft beds would be nice.
- (20) The suspect will leave.
- (21) The suspect has left.
- (22) The suspect might leave.
- (23) The suspect could cry.

- (24) I wrote a letter and a postcard.
- (25) I wrote to you and to him.
- (26) \*I wrote to you and a postcard.
- (27) \*I wrote a letter and to you.

If there's time: pronouns, names, complementizers.

- (28) That man knows that he lied to the public.
- (29) That man remembers that he lied to the public.
- (30) The public believes that the problem is real.
- (31) Some people are wondering whether the problem is real.
- (32) Some people know whether the problem is real.
- (33) Most people hope that things will be OK.

## 4. Personal Pronouns.

Pronouns are a class of words that are traditionally said to 'stand in place of' or 'refer back to' certain noun phrases. Pronouns such as *I, me, we, him*, etc. are called *personal pronouns* because they encode the grammatical property of *person*, which (usually) relates to who is speaking. *I/me/my/we/us/our* are said to be *first-person pronouns* in that they are expressions whose reference (usually) includes the person/s speaking; *you/your* are *second-person pronouns*, in that their reference (usually) includes the addressees, but excludes the speaker(s); *he/him/his/she/her/it/its/they/them/there* are *third-person pronouns*, in that they refer to entities other than the speaker/s and addressee/s.

Personal pronouns differ morphologically from nouns and other pronouns in modern English in that they generally encode the grammatical properties *person* (first, second or third), *number* (singular or plural), *gender* (feminine, masculine or neuter/inanimate), and *case* (nominative accusative, or genitive).

(34) Personal pronouns

Person	Number	Gender	Nom	Acc	Gen
1	Sing	M/F	<i>I</i>	<i>me</i>	<i>my/mine</i>
1	Pl	M/F	<i>we</i>	<i>us</i>	<i>our/ours</i>
2	Sing/Pl	M/F	<i>you</i>	<i>you</i>	<i>you/yours</i>
3	Sg	M	<i>he</i>	<i>him</i>	<i>his</i>
3	Sg	F	<i>she</i>	<i>her</i>	<i>her/hers</i>
3	Sg	N	<i>it</i>	<i>it</i>	<i>its</i>
3	Pl	M/F/N	<i>they</i>	<i>them</i>	<i>their/theirs</i>