

# Basic Syntax

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We review some basic grammatical ideas and terminology, and look at some common constructions in English.

## 1 Categories

### 1.1 Word level (lexical and functional) categories

(1)			
a.	<i>N</i>	noun	<i>baby, toy</i>
b.	<i>V</i>	verb	<i>see, kiss</i>
c.	<i>P</i>	preposition	<i>in, on, near</i>
d.	<i>ADJ</i>	adjective	<i>tall, grateful, alleged</i>
e.	<i>ADV</i>	adverb	<i>quickly, frankly, ...</i>
f.	<i>DET</i>	determiner	<i>the, a, that</i>
g.	<i>QUANT</i>	quantifier	<i>all, some, many</i>
h.	<i>COMP</i>	complementizer	<i>that, whether, for</i>
i.	<i>COORD</i>	coordinator/conjunction	<i>and, or</i>

Many linguists also employ abstract categories I (INFL), SPEC (Specifier) that don't correspond to particular word classes.

#### Open Questions

- Are there any other categories?
- Are the categories primitive, or do they decompose (e.g.  $N=[+N, -V]$ ,  $V=[-N, +V]$ , etc.)?
- What relations are there between the categories? (e.g. COMPs and Ps are similar; are adjectives and adverbs really distinct?)
- Many words are problematic:
  - e.g. *than*:  
(2) a. Kim is taller than [ Sandy (is)  $\Delta$  ].  
b. Kim is taller than [ Sandy ].
  - e.g. *either*, ...  
(3) a. Sam is either very honest or very stupid.  
b. Sam is either running slowly or walking fast.

### 1.2 Subcategories

Most of the above categories subdivide:

Nouns:

- mass *gold, water, spaghetti, wheat*
- count *baby, noodles, oats*

Prepositions:

- locative *in, over, near in the house*
- temporal *before, after before the war*
- 'case marking' *Sam is fond [of Sandy]*

Adjectives:

- predicative *Sam became **famous***
- attributive *An alleged criminal/\*The criminal became alleged*

Verbs:

- main *see, kiss*
- auxiliary *be, have, can, must*
- aspectual auxiliary *Sam **has** gone*
- modal auxiliary *can, must, need*

One could call these subcategories, but the term subcategorization is generally used more narrowly for the way in which different words select (require/allow) different kinds and numbers of complement:

**Adjectives:**

- (4)
- grateful [to her parents] [for everything]
  - fond [of children]
  - eager [to please]
  - happy [that it worked]

**Verbs:**

- (5)
- |    |                 |                             |   |
|----|-----------------|-----------------------------|---|
| a. | <i>die</i>      | $\square$                   | <i>Sam died</i>                         |
| b. | <i>love</i>     | <i>NP</i>                   | <i>Sam loves Kim</i>                    |
| c. | <i>give</i>     | <i>NP, PP<sub>to</sub></i>  | <i>give a book to Kim</i>               |
| d. | <i>buy</i>      | <i>NP, PP<sub>for</sub></i> | <i>buy a book for Kim</i>               |
| e. | <i>spare</i>    | <i>NP, NP</i>               | <i>spare me a minute</i>                |
| f. | <i>put</i>      | <i>NP, PP<sub>loc</sub></i> | <i>put a book on the table</i>          |
| g. | <i>persuade</i> | <i>NP, S<sub>fin</sub></i>  | <i>persuade Sam that she should go</i>  |
| h. | <i>concede</i>  | <i>PP, S<sub>fin</sub></i>  | <i>concede to Sam that she is right</i> |
| i. | <i>prefer</i>   | <i>S<sub>bse</sub></i>      | <i>prefer that you go</i>               |
| j. | <i>try</i>      | <i>VP</i>                   | <i>Sam tried to leave</i>               |
| k. | <i>seem</i>     | <i>PP<sub>to</sub>, VP</i>  | <i>Sam seemed to Sandy to leave</i>     |

The verb *be* is uniquely liberal in what it allows:

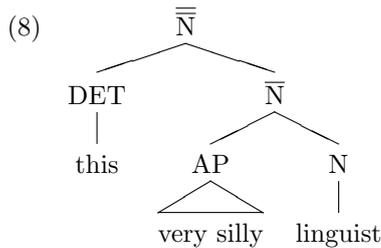
- (6) Sam is a fool/in a mess/happy/leaving (NP;PP;ADJP;VP)

### 1.3 Phrasal Categories

Most word level categories have phrasal projections, e.g.

- (7)
- |    |             |                                |
|----|-------------|--------------------------------|
| a. | <i>NP</i>   | <i>this baby, a large toy</i>  |
| b. | <i>VP</i>   | <i>see the baby</i>            |
| c. | <i>PP</i>   | <i>on the mat</i>              |
| d. | <i>ADJP</i> | <i>grateful to her parents</i> |
| e. | <i>ADVP</i> | <i>fortunately for us</i>      |
| f. | <i>DP</i>   | <i>?=NP</i>                    |
| g. | <i>QP</i>   | <i>almost all</i>              |

There are generally agreed to be phrasal projections between the lexical categories, and the full phrases, e.g. (with  $\overline{N}$ =NP):



Perhaps not every phrase type is the projection of a lexical or functional category. In particular, there are several views of sentences (clauses):

- They are headless (exocentric);
- They are projections of V;
- They are projections of I (INFL, an abstract category)

There are associated views about the category of *that the world is round*:

- it is an  $\bar{S}$  (projection of S);
- it is a projection of C (the complementizer *that*): CP

### Different kinds of sentence/clause

#### Finite/Non-finite:

- (9) a. (that/whether) Sam is a fool  
 b. (for) Sam to be a fool

#### Root/Embedded:

- (10) a. Sam is crazy.  
 b. I believe [ that Sam is crazy ]

#### Relative Clauses:

- (11) a. The person who spoke to me [+WH, +subj]  
 b. The person to whom I spoke [+WH, -subj]  
 c. The person that spoke to me [+that, +subj]  
 d. The person that I spoke to [+that, -subj]  
 e. The person I spoke to [-that]  
 f. The person to speak to [-finite]  
 g. The person for us to speak to [-finite]

## 2 Grammatical Relations

The *HEAD* of a phrase is the element that gives it its grammatical character (e.g. the element that makes an NP nominal).

There is a fundamental distinction between:

- complements, arguments: (more or less) obligatory participants; the things that the head subcategorizes;
- adjuncts, modifiers: optional, and iterable ‘circumstantials’

(12) Unusually, Sam put the cat outside at 3:00 in the afternoon.  
 ADJUNCT ARG HEAD ARG ARG ADJUNCT ADJUNCT

(13) that clever Professor of Latin from Madrid  
 ADJUNCT HEAD ARG ADJUNCT

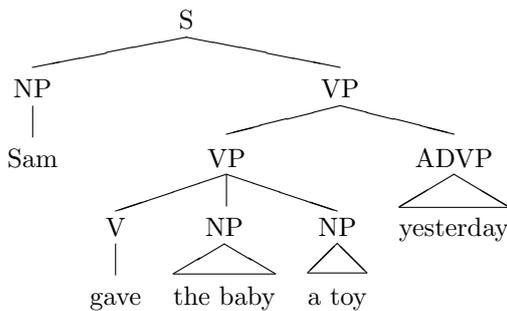
(14)

- |    |                |                      |                                      |
|----|----------------|----------------------|--------------------------------------|
| a. | <i>HEAD</i>    |                      |                                      |
| b. | <i>SUBJ</i>    | Subject              | <b>The baby</b> <i>cried</i>         |
| c. | <i>OBJ</i>     | Direct Object        | <i>The baby</i> saw <b>the cat</b>   |
| d. | <i>IOBJ</i>    | Indirect Object      | <i>The baby</i> <b>it to the cat</b> |
| e. | <i>POBJ</i>    | Prepositional Object | <i>near</i> <b>the wall</b>          |
| f. | <i>COMP</i>    | Complement Clause    | <i>I think</i> <b>that he is sad</b> |
| g. | <i>XCOMP</i>   | 'open' complement    | <i>Sam seems</i> <b>to be happy</b>  |
| h. | <i>ADJUNCT</i> | adjuncts             | <i>temporal/locative phrases</i>     |

### 3 Some Common Constructions

#### 3.1 Main Clauses, VPs

(15)



#### 3.2 Unbounded Dependencies

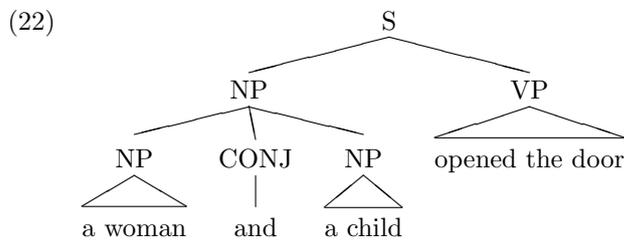
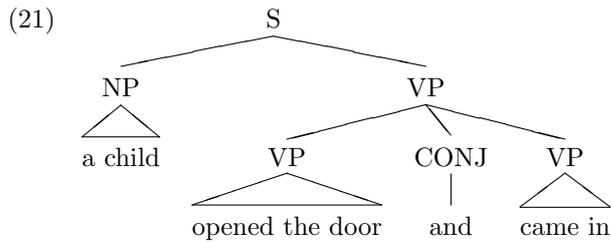
- (16) a. On Kim, Sandy depends  $\Delta$ .  
 b. \*Kim, Sandy depends  $\Delta$ .  
 c. On Kim, Chris believes [<sub>S</sub> Sandy depends  $\Delta$  ]  
 d. \*Kim, Chris believes [<sub>S</sub> Sandy depends  $\Delta$  ]
- (17) a. \*Who do you believe [ the claim that Sam likes  $\Delta$  ]  
 b. \*Who do you know [ a man who likes  $\Delta$  ]  
 c. \*Who do you like [ Sam and  $\Delta$  ] ?  
 d. Who do you think [[ Sam likes  $\Delta$  ] and [Kim hates  $\Delta$  ]]?  
 e. \*Whose do you admire [  $\Delta$  book ]?  
 f. \*Who do you believe that  $\Delta$  likes Sam?  
 g. When do they \*deny/?believe [ that Sam left  $\Delta$  ]
- (18) a. Kim<sub>i</sub>, Sandy loves  $\Delta_i$  (Topicalization)  
 b. I wonder [ who<sub>i</sub> Sandy loves  $\Delta_i$  ] (Wh-question)  
 c. The person [ who<sub>i</sub> Sandy loves  $\Delta_i$  ] (Wh-relative)  
 d. It's Kim [ who<sub>i</sub> Sandy loves  $\Delta_i$  ] (It-cleft)  
 e. This is [ what<sub>i</sub> Kim loves  $\Delta_i$  ] (Pseudo-cleft)
- (19) a. Sandy<sub>i</sub> is hard to love  $\Delta_i$  (Tough Movement)

- b. I bought it<sub>i</sub> for Sandy to eat Δ<sub>i</sub> (Purpose Infinitive)
- c. This is the person<sub>i</sub> [ Sandy loves Δ<sub>i</sub> ] (Relative)
- d. It's Kim<sub>i</sub> Sandy loves Δ<sub>i</sub> (It cleft)

### 3.3 Coordinate Structures

In general:

$$(20) \quad XP \rightarrow XP \text{ CONJ } XP$$

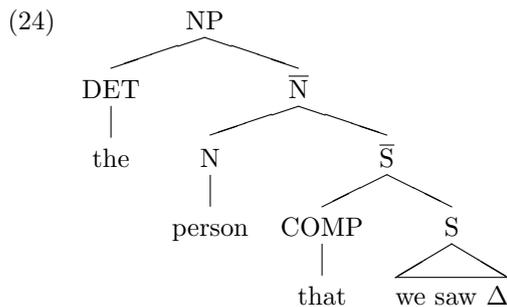


But notice:

$$(23) \quad \text{Sam is dangerous, a fool, and out of her mind. (AP, NP, PP)}$$

### 3.4 Relative Clauses

There are many analyses, but one possibility is:



### 3.5 Expletive Subjects, Extraposition

Expletive NPs are items like *it* and *there*:

- (25) a. It seems that we were wrong.
- b. There will be problems.

Extraposition is exemplified in the following:

- (26) a. That the world is round is obvious.  
 b. It is obvious [ that the world is round ].
- (27) a. I read [ a book by Chomsky ] last week.  
 b. I read [ a book ] last week [ by Chomsky ].
- (28) a. Sam is *too* clever *to fall for that trick*  
 b. Sam is *so* clever *that she will not fall for that trick*

### 3.6 Control, Raising

In both Control and Raising there appears to be a verb or adjective followed by a VP:

- (29) Sam tries to be funny. (Control, cf. also *hopes, is eager*)
- (30) Sam tends to be funny. (Raising, cf. also *seems, is likely*)

The difference is that in Control, the main clause subject (*Sam*) is a semantic argument of the main clause verb.

Syntactically, there are two main kinds of analysis:

- (31) a. Sam tries [<sub>VP</sub> to be funny].  
 b. Sam tends [<sub>VP</sub> to be funny].
- (32) a. Sam<sub>i</sub> tries [<sub>S</sub> PRO<sub>i</sub> to be funny]. (Control)  
 b. Sam<sub>i</sub> tends [<sub>S</sub> t<sub>i</sub> to be funny]. (Raising – NP Movement)

## 4 Others

- (33) Sam went to Spain and Sandy  $\Delta$  to Italy. (Gapping)
- (34) Sam went to Spain but Sandy didn't  $\Delta$ . (VP Ellipsis)
- (35) Did Sandy go to Spain? (Subj-Aux Inversion)
- (36) Sam put in the shed *an old and very smelly collection of sacks* (Heavy NP Shift)

## 5 Reading

For reasonable, and (from a computational perspective) useful, descriptions of many constructions of English, the following are recommended: Gazdar et al. (1985, Ch6, pp109-136), Borsley (1996), Bennett (1995), Sag and Wasow (1999).

For more broader and more detailed discussion of particular constructions, look at Huddleston and Pullum (2002). For a serious discussion of basic ideas, and much insight into the constructions themselves, look at Huddleston (1984). Traditional grammar books such as Quirk et al. (1972) give a great deal of detail, and are useful as antidotes to the simplifications you find in the more theoretical books (on the other hand they often simply ignore constructions that have proved interesting and important in recent years).

## References

Paul Bennett. *A course in Generalized Phrase Structure Grammar*. UCL Press, 1995.

Robert D. Borsley. *Modern Phrase Structure Grammar*. Number 11 in Blackwell textbooks in linguistics. Blackwell Publishers, 1996.

Gerald Gazdar, Ewan Klein, Geoffrey Pullum, and Ivan Sag. *Generalized Phrase Structure Grammar*. Blackwell, Oxford, 1985.

R. Huddleston. *Introduction to the Grammar of English*. CUP, Cambridge, 1984.

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R. Quirk, S. Greenbaum, G. Leech, and J. Svartvik. *A Grammar of Contemporary English*. Longman, London, 1972.

Ivan A Sag and Thomas Wasow. *Syntactic Theory: a Formal Introduction*. Number 92 in CSLI Lecture Notes. CSLI Publications, 1999.