Lecture 6: POS and phrase labels

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1 Parts of speech

The parts of speech we'll talk about are: Noun, pronoun, adjective, determiner, verb, adverb, preposition, particle, conjunction and complementizer.

1.1 Verbs

Verbs inflect for tense, number and person (both part of agreement) and aspect, or gender.

1.1.1 Irregular Verbs

There are some verbs which appear frequently as irregular in many languages. The most common of these are be and have.

1.1.2 Pseudo Irregular

There are verbs, especially in English, which appear to be irregular, but in many cases actually aren’t; they just follow a different verb paradigm. For example: swim, swam, swum. This follows the German strong verbs, which change tense by changing the vowel.

Semitic languages such as Arabic and Hebrew have an even more in depth ‘root’ system. By changing the other letters in root word, one can create many tenses, and also many other words relating to the root word. For example, in Arabic the root -k-t-b- means book, and many related words can be formed using those consonants.

1.1.3 Modal Verbs

Modal verbs are ‘defective’ in that their paradigms are incomplete. These are verbs such as can, should, and may. Their purpose is to express the
mode of an action, usually something like permission, obligation, ability, or possibility. They are incomplete because there is no progressive (I am shoulding?) and no infinitive (to may?).

1.1.4 Verb Forms

There are eight verb forms in English; five are listed here.

- **VBP** 1st person present: Choose.
- **VBZ** 3rd person present: Chooses.
- **VBD** past: Chose.
- **VBN** perfect: Chosen.
- **VBG** progressive: Choosing.

1.2 Adverbs

Adverbs are used to modify a verb, an adjective, or a whole sentence. Sentential adverbs such as *hopefully* and *soon* are used to show how or when a sentence will take place. Adjectival adverbs, or qualifiers include *very*, *really*, and *mostly*. These modify how strongly an adjective is to be taken. Verbal adverbs are the normal *-ly* kind that most people think of such as *happily* and *quickly*.

1.3 Prepositions

Prepositions are used to express location, orientation, possession, ‘how’, time, and reason or purpose. They are combined with a Noun Phrase (above the mucky muck).

1.4 Particles

Particles are prepositions acting as adverbs. In the sentence ‘Mary took the laundry in.’, ‘in’ is a particle. In ‘Turn the light on’, ‘on’ is a particle.

1.5 Conjunctions

Conjunctions are used to tie phrases together; this includes sentences, nouns, verbs, and pronouns. The most common conjunctions are *for, and, nor, but,*
or, yet, and so.

1.6 Complementizer

Complementizers are words like that, if, and because. Examples include ‘because I said so’, where because is the complementizer, and ‘I said I like cake’, which uses a null complementizer between said and I.

2 Parsing

Parsing can sometimes be difficult even for humans because sentences can have multiple meanings depending on how they are read. ‘I hit the man with the bat’ probably means that you used your bat to swing at the man, but it could mean that you hit the guy who was currently holding the bat. Likewise, for the sentence ‘I saw the man with the telescope’, it probably implies that using the telescope, you were able to look at the man, but it could mean you looked at the man currently holding the telescope.

2.1 NP - Noun Phrase

Noun phrases are headed by nouns. The only single words that can exist as an NP by themselves are pronouns and proper nouns. Noun phrases are modified by determiners, adjectives, Prepositional Phrases, and relative clauses. Noun Phrases themselves can exist as arguments of Verb Phrases, and Sentences. Some examples include ‘I’, ‘the girl’, ‘every good boy’, and ‘all the news that’s fit to print’.

2.2 PP - Prepositional Phrase

Prepositional phrases are headed by prepositions, and have Noun Phrases as arguments. They can modify Noun or Verb Phrases, and are occasionally an argument to Verb Phrases. Examples include ‘in the box’, ‘after 1978’, and ‘at the end of the day’.
2.3 VP - Verb Phrase

Verb Phrases are headed by verbs. They can have Noun Phrases, Preposition Phrases, or Sentence clauses as arguments or none at all. They are modified by adverbs or Prepositional Phrases. Examples include ‘sing’, ‘sing a song’, ‘sing out loud’, and ‘try to write a play’. Verbs can act as Noun Phrases when they are in their gerund (-ing) form. ‘Writing a play is tricky.’

2.4 S - Sentence/Clause

Sentence clauses are headed by verbs. With a complementizer, they modify nouns and Verb Phrases. They can be used as arguments. Some examples are ‘I like cake’, and ‘I think that I like cake.’