Syntax: Basics of X-bar (X') theory

- This is an expanded discussion of syntax basics—see lecture outline for crucial points
- See O'Grady et al. (2010) reading (optional) for further discussion and English examples

(1) Structure matters: Words form **constituents** (groups, ≈phrases) in syntactic structure

(a) Native speaker behavior shows us that these groupings are valid
- Movement, replacement, etc. → operations over syntactic constituents
- Meaning is affected by syntactic constituency
  She watched the spies with the binoculars

(b) Therefore, we need our model of mental grammar to build syntactic structure on the basis of constituents as well

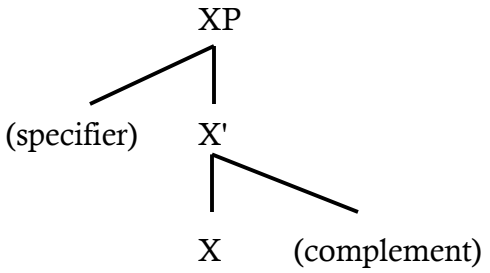
(2) The **X' schema**

(a) This is a model of the syntactic component of mental grammar

(b) We will first learn how the model works, and then begin to test it on language data

(c) Our goal for this course is to learn enough syntactic theory to be able to examine interesting phenomena in Japanese — so there are many details of the X' model (and syntax in general) that we will not pursue

(3) The general version of the X' schema *for English* is:



(a) **head** — The word that is the "core" of the phrase
- determines the type of phrase (X is the head of XP, for any X)

(b) **complement** — the phrase that is the sister of X (the head)
- A complement is a phrase that the head *requires* inside its own phrase
- Examples: Direct object (complement of V)
  Object of preposition (complement of P)

(c) **specifier** — the phrase that is the daughter of XP
- A specifier is a "subject-like" phrase that occurs with a head *(yes, this is vague!)*
- Examples: Demonstrative, possessor (spec. of N); some adverbs (spec. of V, A, P)
- The subject of a sentence is the specifier of the IP phrase [also called TP]

- The *linear order* of elements (left-to-right) is **language-specific**
- Nodes are generally **binary-branching** (exceptions will be noted)

(4) **Lexical categories** as **heads** of phrases

(a) "Lexical" (~open-class) categories = N, V, A, P

(b) These words are **heads** of phrases (phrases may also contain specifier, complement, and/or modifier [below], which generally provide more information about the head)

- Whenever you see a word that is one of these categories, it ***must project a phrase***

(5) The **sentence** as **IP** [also called **TP**]

(a) The head of a sentence is **I** [or **T**], the "inflectional [tense] head"; morphemes (possibly abstract/null ones) involving grammatical features such as *tense* (past, future, etc.) and *modality* (possibility, necessity, etc.) typically go in this position

(b) The **complement** of an IP [or TP] is the **predicate** of the sentence

(c) The **specifier** of an IP [or TP] is the **subject** of the sentence

- Note: We how have a *structural* way to define these traditional terms — how can we describe their **position in the tree**?
  - Subject =
  - Direct object =

(6) Complementizer phrases (CPs)

(a) A **complementizer** (C) is a head (i.e., word) that turns a sentence (IP [or TP]) into something that can be a complement

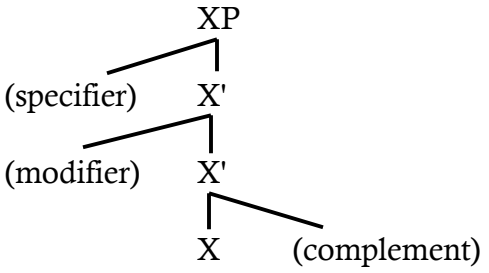
- Example: Embedded clauses

(b) The *complement* of C is IP [or TP]

(c) The *specifier* of C is ... a very useful position to move things into in some languages

(d) A main-clause (matrix) IP [or TP] is probably also contained inside a CP, but we can't necessarily see that until we start looking at the syntax of questions

(7) To the general structure we can add **modifiers** *(warning: the reading takes a shortcut here!)*



- **modifiers** are also known as **adjuncts**

(a) Modifiers cause **recursive** (extra stacked) **X' nodes** to appear

(b) Modifiers are **optional** (their presence is not required by the head)

- Examples: APs modifying N, or certain PPs modifying N, V

(c) Again, **linear order** (left/right side of X') depends on language and/or modifier type

(8) Where are we? Evaluating the X' schema/back to our starting point

- We are predicting that the maximal string of elements ***dominated by a common node*** in a syntax tree is a **constituent** according to native-speaker judgments