Miscellaneous review

LING 200B · Ethan Poole · 6 October 2021

1 Grammatical categories

✳ Let us assume the following grammatical categories:

(1) **Lexical / content categories**

a. N = noun

b. V = verb

c. A = adjective

d. Adv = adverb

(2) **Functional categories**

a. P = preposition / postposition

b. D = determiner (e.g. articles, quantifiers, pronouns)

c. T = tense marker[1] (e.g. Tns, auxiliaries, infinitival *to*)

d. C = complementizer (e.g. *that*, *for*, *if*)

[1] T = I(nfl) = ArgSP

- ***Pronouns are determiners***
  - There are interesting parallels between personal pronouns and determiners, and they are in complementary distribution:[2]

[2] Postal (1966); Abney (1987)

(3) a. [**We** (syntacticians)] don't trust [**you** (phonologists)].

b. ***We** *most* syntacticians like trees. *(with no pauses)*

⇒ Thus, we will treat all pronouns as being determiners.

- ***Auxiliaries of English***
  - Auxiliaries have distinct syntactic properties in English that motivate giving them a grammatical category distinct from V:

(4) **Inversion in questions**

a. **Was** *she* going to Duluth? [aux]

b. ***Went** *she* to Duluth? [main verb]

c. Did *she* **go** to Duluth? [main verb]

(5) **Position w.r.t. negation**

a. Lena { **could not** / **couldn't** } go to Duluth. [aux]

b. *She { **went not** / **wentn't** } to Duluth. [main verb]

c. She **didn't go** to Duluth. [main verb]

  - Auxiliaries: *be*; perfective *have*; and modals like *must*, *can*, *may*, *should*, etc.

– Importantly, auxiliary is a syntactic class, not a semantic class. For example, deontic *must* and *have to* mean the same thing, but *have to* is not an auxiliary:[3]

(6) a. Does she **have** to go to Duluth?

b. *__Has__ she to go to Duluth?

⇒ We will treat auxiliaries in English as belonging to T:

(7) **Similar position within a clause**

a. It's vital [that Susan **should** show an interest].

b. It's vital [for Susan **to** show an interest].

(8) **Complementary distribution of modals and tense**

a. She **will** enjoy syntax.

b. She { **enjoys** / **enjoyed** } syntax.

c. *She **will** { **enjoys** / **enjoyed** } syntax.

[3] In the same vein, what corresponds to an auxiliary in English may not behave specially in another language. In such cases, there is no motivation to treat auxiliaries differently from ordinary (main) verbs.

- ***Some notes about English***[4]
  - Infinitival *to* is distinct from preposition *to*.
  - Complementizer *that* is distinct from determiner *that*.
  - Complementizer *for* is distinct from preposition *for*.

[4] See the LING 120B handouts if you are interested in the empirical arguments for these claims.

2 The Extended Projection Principle

- Certain configurations, namely clauses, must have subjects. This requirement is purely syntactic in nature and not semantic, because it can be satisfied by expletives, which have no intrinsic meaning:

(9) a. *__(It)__ was alleged that the President lied under oath.

b. *__(There)__ are potatoes in the pantry.

∗ Chomsky (1982) named this requirement the *Extended Projection Principle* (EPP). Here is a simple formulation of it:[5]

[5] In Chomsky (1981), it is referred to as *Principle P*.

(10) **Extended Projection Principle (EPP)**
A T head must be extended into a TP projection containing a specifier.

- ***Behind the (bad) name***
  - The EPP is an addendum to the *Projection Principle*, which is designed to ensure continuity between the different levels of syntactic representation in GB:

(11) **Projection Principle**
Representations at each syntactic level (i.e. LF, D-structure, and S-structure) are projected from the lexicon, in that they observe the subcategorization [=selectional] properties of lexical items. [Chomsky 1981:29]

  - In the simple cases, it might seem that the requirement to have a subject would follow from the Projection Principle. However, (9) shows that this is not the case.
  - Projection Principle + subject requirement = Extended Projection Principle

– In practice, however, the 'EPP' has come to refer only to the requirement to have a subject.

⇒ ***Analysis of the EPP***
We can account for the EPP by assuming that T always bear [•D•].

3 Extended projections and *fseq*

- Clauses are built out of VPs, TPs, and CPs.

  ⇒ A CP–TP—VP structure constitutes an EXTENDED PROJECTION of the V.[6]

[6] Grimshaw (1991)

✳ The functional heads in a verbal extended projection are extrinsically ordered.[7] This sequence is called the (verbal) FUNCTIONAL SEQUENCE (*fseq*):

[7] Ramchand (2018) argues that the ordering is semantically motivated and thus is intrinsically ordered.

(12) a. **What we will assume for now**
fseq = ⟨C > T > V⟩

b. **Standard minimal *fseq***
fseq = ⟨C > T > *v* > V⟩

- Clauses follow *fseq*, but they can be truncated, e.g. only up to T.

- ***Cartography***
Throughout the quarter, we will see that there are compelling arguments that *fseq* is quite large and articulated, though we generally abstract away from irrelevant functional structure.

  ⇒ The endeavour to figure out all the projections of *fseq* is called CARTOGRAPHY.[8]

[8] Rizzi (1997); Cinque (1999)

- ***Simplifying our trees***
We can simplify our trees by omitting the bullet features that are universally implied by and subsumed under *fseq*:

(13) Given a functional sequence $\langle X_1 > X_2 > \cdots > X_n \rangle$, where X_i takes $X_{i+1}P$ as its complement, X_i is assumed to bear $[\bullet X_{i+1} \bullet]$.

- ***Outside of the verbal domain***
Nominals are extended projections of N, and we can specify the nominal *fseq*:[9]

(14) *fseq* = ⟨P > D > N⟩

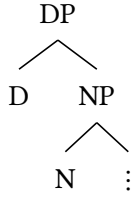
[9] Whether we include P in the nominal *fseq* is up for debate. Kayne (2000, 2005) argues that at least some prepositions belong in the verbal *fseq*.

4 Nominals as DPs

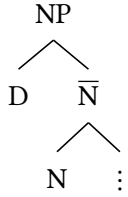
- Minimalist syntax standardly assumes the *DP Hypothesis* that nominal expressions are projections of determiners, not nouns:[10]

[10] Abney (1987)

(15) **Nominals as DPs**



(16) **Nominals as NPs**



⇒ Both the DP-structure and the NP-structure have the same constituency. The question is one of headedness: are nominal phrases headed by D or by N?

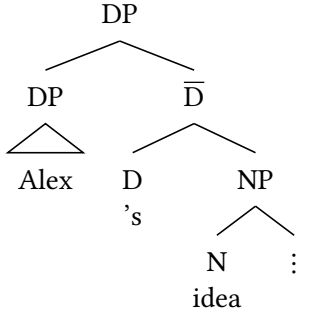
- ***Conceptual arguments***
  - ***Projection***
    If determiners are in [Spec, NP], they would be the only grammatical category that does not project.[11]
  - ***Parallelism***
    Under the DP Hypothesis, there is a parallelism between the verbal and nominal domains: the verbal domain has V–T, and the nominal domain has N–D.
- ***Distribution***
  - Following Postal (1966), it is standardly assumed the pronouns are determiners:

    (17) we linguists, you phonologists
  - Pronouns and nominal phrases have the same syntactic distribution: wherever pronouns can go, nominal phrases can go, and vice versa.
  - If pronouns are determiners, then nominal phrases must be of the same grammatical category, namely DPs.
- ***Selection***
  Determiners seem to select for the noun, which would be atypical of specifiers:

  (18) a. much { **poetry** / *poem / *poems }
  b. every { *poetry / **poem** / *poems }[12]
  c. many { *poetry / *poem / **poems** }
  d. enough { **poetry** / *poem / **poems** }
- ***Saxon genitive***
  - Determiners and the Saxon genitive are in complementary distribution:

    (19) a. Alex's idea
    b. *Alex's the idea
    c. *the Alex's idea
  - We can explain this complementary distribution if *'s* (or a genitive-case assigner) is a D head, such that it cannot cooccur with other determiners.[13]

    (20)



[11] This was especially problematic for X̄-Theory, where every head must project an intermediate projection and a phrasal projection. For determiners, these extra projections were always superfluous.

[12] To the extent that *every poetry* is acceptable, it has a shift in meaning to "every kind of poetry".

[13] A complication with this analysis is that some determiners can in fact occur with the Saxon genitive: *Alex's every idea.*

- ***Noun-to-determiner movement***
  - In English, adjectives normally occur between the noun and the determiner:

    (21) a. some angry children
    b. *angry some children

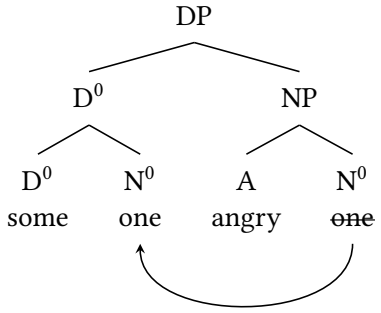
  - However, with some nominal phrases like *someone* and *no one*, the adjective must follow the noun:

    (22) a. someone angry
    b. *angry someone
    c. *some angry one *(with intended interpretation)*

    (23) a. no one angry
    b. *angry no one
    c. *no angry one *(with intended interpretation)*

  - Abney (1987) proposes that these cases are due to incorporation (= head movement) of the noun into the determiner across the adjective:

    (24)



  - Because heads cannot move into their specifiers (on standard assumptions), this requires the DP analysis of nominal phrases.

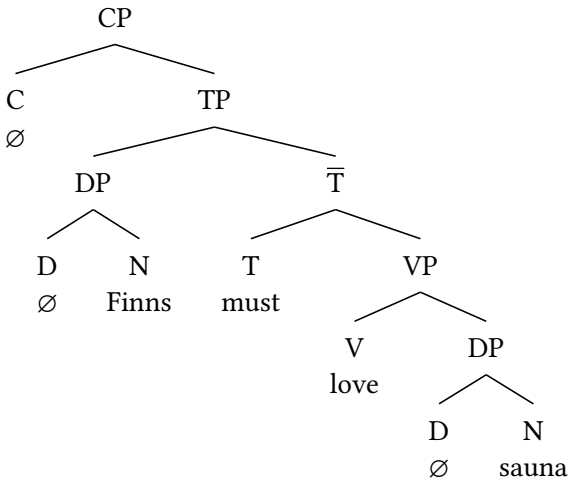
5 Null elements

⁕ ***Enjoy the silence***
Syntactic elements do not need to have phonological exponence. In other words, they can be null / silent / covert.

- ***Motivating null elements***
  Some combination of the following:
  - Detectable via coordination, binding, selection, complementary distribution, etc.
  - Parsimony and theory-internal reasons
  - Semantic contribution

- ***Example: Null determiners***
  - Bare nominals are DPs headed by a null determiner:

(25)



  - ***Evidence: Coordination***
    Bare nominals can be coordinated with expressions that are unambiguously DPs:

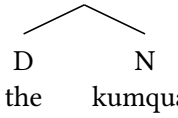
    (26) a. [**Finns**] and [$_{DP}$ **the majority of Scandinavians**] love coffee.
    b. Finns love [**coffee**] and [$_{DP}$ **the simple things in life**].

  - ***Evidence: Selection***
    The null determiner in bare nominals has selection properties (only plurals and mass nouns), which mirror overt determiners:

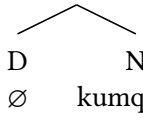
    (27) a. I wrote { poems / poetry / *poem }.
    b. I've read enough { poems / poetry / *poem }.

  - ***Conceptual argument: Uniform nominal syntax (parsimony)***
    The assumption that bare nominals are headed by a null determiner allows us to arrive at a unitary characterization of the syntax of nominals:

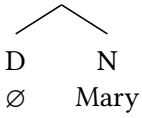
(28)



(29)



(30)



(31)

- ***Null finite C***
  We will assume that finite clauses are always CPs. If there is no overt complementizer, then it is null:[14]

  (32) [$_{CP}$ ∅$_{C}$ Rose thinks [$_{CP}$ ∅$_{C}$ Blanche is sleeping]]

- ***Null subjects***
  - *pro*: Null finite subject; possible in languages with 'subject-drop', e.g. Spanish.
  - PRO: Null nonfinite subject; we will talk about this later.

[14] See the LING 120B handouts if you are interested in the empirical arguments for these claims.

6 English verbal inflection

- Recall that modals and tense are in complementary distribution:

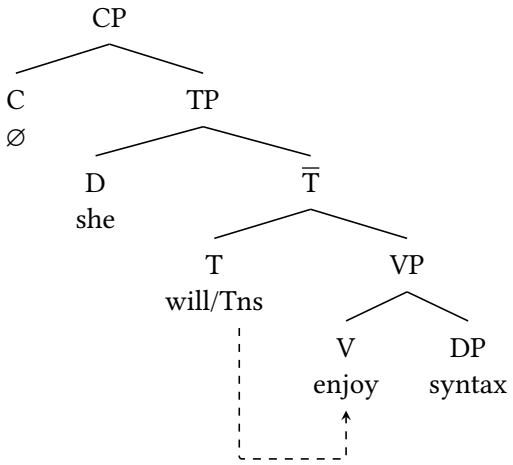
  (33) a. She **will** enjoy syntax.

  b. She { **enjoys** / **enjoyed** } syntax.

  c. *She **will** { **enjoys** / **enjoyed** } syntax.

⇒ This suggests that modals and verbal tense occupy the same syntactic position. On that logic, because modals occupy T, verbal tense occupies T as well, and a morphological process passes the tense information down to the verb:

(34)



- ***Do-support***
  Tense is blocked from lowering onto the verb (roughly) whenever overt material intervenes, like clausal negation. In such cases, tense spells out as the dummy auxiliary verb *do*:

  (35) a. She **did** not **enjoy** syntax.

  b. *She {not} **enjoyed** {not} syntax.

∗ ***Formalizing the analysis***

- There are *many* formal analyses of English verbal inflection, all of which are loosely based on the intuitions outlined above.
- For our purposes, since this is not a class about English syntax, we just need an analysis that *works well enough*.
- Let us adopt the simple analysis below:[15]

  (36) **Affix Attachment** *(English particular)*
  When PF processes a structure whose head H contains an (undeleted) tense affix which needs a verbal host and which is not already attached to an (auxiliary or main) verb:

  a. if H c–commands an overt verb and there is no overt intervening material, the affix is lowered onto the relevant verb [=Affix Hopping]

  b. otherwise, the affix is spelled out as an appropriately inflected form of *do* [=*do*-support]

[15] This is equivalent to the *Merger under Adjacency* analysis of Affix Hopping in Distributed Morphology (Halle and Marantz 1993, 1994; Bobaljik 1995).

What to read if you want to learn more?

- Grimshaw (1991): Extended projections
- Salzmann (2020): Revisits the NP vs. DP debate in Minimalist syntax

References

Abney, Steven. 1987. The English noun phrase in its sentential aspect. Ph.D. dissertation, MIT, Cambridge, MA.

Bobaljik, Jonathan. 1995. Morphosyntax: The Syntax of Verbal Inflection. Ph.D. dissertation, Massachusetts Institute of Technology.

Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, Noam. 1982. *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, MA: MIT Press.

Cinque, Guglielmo. 1999. *Adverbs and functional heads.* Oxford: Oxford University Press.

Grimshaw, Jane. 1991. Extended projections. Ms., Brandeis University.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, eds. Kenneth Hale and Samuel Jay Keyser, 111–176. Cambridge, MA: MIT Press.

Halle, Morris, and Alec Marantz. 1994. Some key features of Distributed Morphology. In *Papers on Phonology and Morphology*, eds. Andrew Carnie and Heidi Harley, volume 21 of *MIT Working Papers in Linguistics*, 275–288. Cambridge, MA: MITWPL.

Kayne, Richard. 2000. *Parameters and universals.* Oxford University Press.

Kayne, Richard. 2005. *Movement and silence.* Oxford University Press.

Postal, Paul. 1966. On so-called "pronouns" in English. In *Report of the 17th Annual Round Table Meeting on Language and Linguistics*, ed. Francis P. Dinneen, 177–206. Washington, DC: Georgetown University Press.

Ramchand, Gillian. 2018. *Situations and Syntactic Structures.* Boston, MA: MIT Press.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of Grammar*, ed. Liliane Haegeman, 281–337. Dordrecht: Kluwer.

Salzmann, Martin. 2020. The NP vs. DP debate. Why previous arguments are inconclusive and what a good argument could look like. Evidence from agreement with hybrid nouns. *Glossa* 5:83.