university of groningen / faculty of arts

LOT Summer School 2008

Introduction to syntax

Utrecht, June 30 - July 4

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Introduction to syntax

Day One

Syntax within a model of the Faculty of Language

June 30, 2008

Things you know after the course

- basic concepts of generative grammar today
- analysis of syntactic phenomena from that perspective
- a little bit about controversies and alternatives

Things I expect you to know

- basic descriptive terms relevant to syntactic analysis
  - categories: N(oun), A(djective), V(erb), P(re/postposition)
  - functional elements: C(omplementizer), T(ense), D(eterminer)

- basic terms relevant to syntactic configuration
  - head, projection, phrase
  - specifier, complement, adjunct

- basic aspects of structural (tree) representation
  - constituent
  - dominance, c-command, sister
    [these will be defined anew, so don't worry]

- basic terms relevant to syntactic processes
  - active/passive
  - case/agreement
  - perhaps movement [will be discussed]

Things I don't expect you to know

- generative grammar
- the minimalist program
- anything beyond the most basic syntax (see above)

Plan

- syntax within a model of the human language faculty — Monday
- basic syntactic phenomena as a function of Merge
  - structure and constituency — Tuesday
  - dependency and locality — Wednesday
- controversies — Thursday
- alternatives — Friday

Reading material
relevant to today's class

Hauser, M., N. Chomsky, W.T. Fitch. 2002. The Faculty of Language: what is it, who has it, and how did it evolve? *Science* 298, 1569-1579.
basic text on what is taken to be the definitive property of the language faculty; also find the reply by Pinker and Jackendoff, 'The faculty of language, what is special about it?'

Wolfram, S. 2002. *A new kind of science*. Champaign IL: Wolfram Media. pp. 23-41. *Online at www.nks.com.*
shows how complexity can be the output of a simple program

Tallerman, M. 2005². *Understanding syntax*. Arnold.
to catch up on your basic syntax knowledge

Adger, D. 2003. *Core syntax*. Oxford University Press.
the only syntax textbook based on the minimalist program

Jackendoff, R. 1997. The architecture of the language faculty. Cambridge: MIT Press. pp. 1-20.
candid summary of goals and ambitions of the minimalist program

Bošković, Ž. and H. Lasnik, eds. 2007. *Minimalist syntax: the essential readings*. Malden: Blackwell Publishing.
generous selection of minimalist texts produced in the US

Start of the first lecture

What is a syntactic fact ?

1. **Anything to do with the organization of sentences/clauses (E-language perspective)**

2. **Anything to do with form-meaning pairing [above the word level] (I-language perspective)**

E-language: **the total of the expressions of a language (external to the speaker)**

I-language: **the knowledge used to generate E-language expressions (internal to the speaker)**

Generative grammar favors the I-language perspective:

- **humanist perspective: not about language, but about mankind**
- **challenge: describe a system that generates infinite expressions through finite means**
- **the system must be simple**

  » the simpler it gets, the more likely it is that it is not particular to language

But we will first explore syntax from the E-language perspective:

» what can be say about the organization of sentences/clauses?

Definitions

- **sentence: difficult**
  - **orthographic (sequence running from capital to stop) - uninteresting**
  - **prosodic (maximal independent prosodic unit) - perhaps the best shot**

➜ **syntactic processes are typically contained within subparts of sentences**

- **clause**
  - **subject-predicate nexus (to be defined)**
  - **plus some extra material (functional elements, linkers, adjuncts)**

➜ **A clause is a minimal projection containing material associated with a subject-predicate nexus**
(still too vague)

Subject, predicate, nexus

- **predicate:** phrase referring to a property applied to an entity ('owned' by that entity)

- **subject:** phrase referring to an entity owning the property referred to by the predicate

  » a clause must have a subject (by definition)
  = EPP (extended projection principle)

- **nexus:** a meaningful combination of two elements such that they are interpreted as being in a relation

  » there is an operation that combines elements
  = Merge

What does it mean to be 'associated' with a subject-predicate nexus?

(1) John said that Bill was probably not arrested

subject: *Bill*
predicate: *be* (not) *arrested*

elements you want to be part of the clause as well:

- **negation (*not*)**
- **adverbials (*probably*)**
- **tense/mood/aspect (PAST tense in *was*)**
- **linker (complementizer *that*)**

(2) Who did John say that they arrested

» **an element 'associated' with a subject-predicate nexus may be outside the clause proper**

Definition of the clause: capitalizing on certain clausal features

- **tense/mood/aspect: typically shows up as inflection on the verb**

  - » **cover term INFL or T**
  - » **the clause is a projection of INFL (IP) or Tense (TP)**

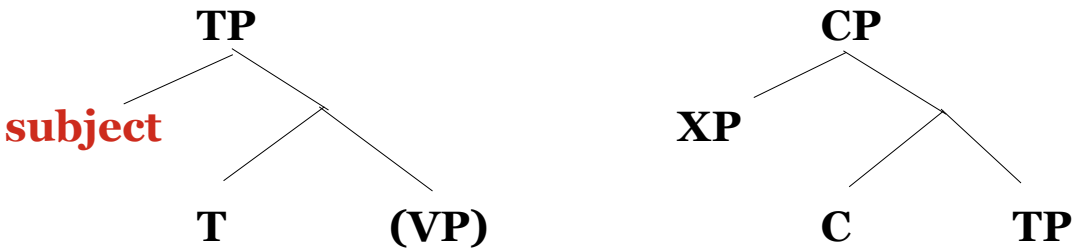
    - ⊡ **projection of *x* : a phrase built upon *x***

- **complementizer: highest functional element associated with subject-predicate nexus (by definition)**

  - » **term C(OMP)**
  - » **the clause is a projection of C (CP)**

Definition of clause

- **A clause is the maximal projection of the highest functional category associated with a subject-predicate nexus**



- **(trivially) A clause may contain a clause**

(1) [John said [that Bill said [that Mary said [that it was raining]]]]
(2) [[That it was raining] irritated John]

Summary of E-language perspective:

- **A clause has a subject**
- **A clause is the projection of a functional element**
- **There must be a mechanism combining elements**
- **A clause is a recursive element**

What is a clause?
I-language perspective

A clause is a form-meaning pairing

- **Ambition: to model the knowledge needed to generate a clause**

  » knowledge = faculty of language

- **What should the model minimally contain?**

  A. A resource of elements manipulated (a kind of Lexicon)

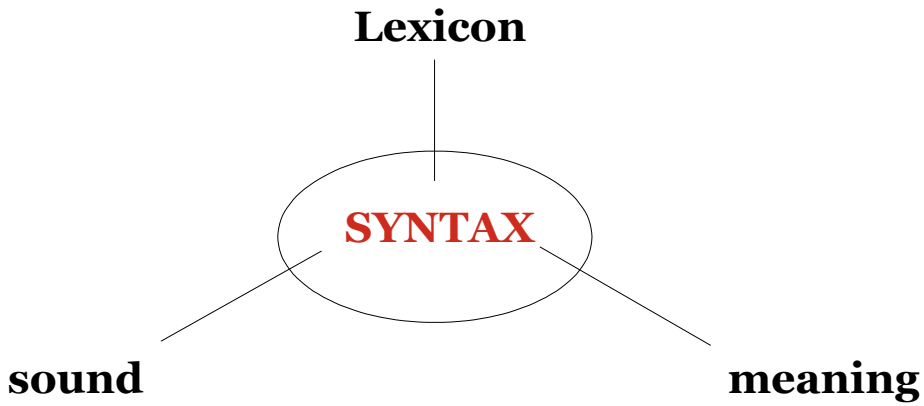
  B. A component dealing with sound properties (PF/AP)

  C. A component dealing with meaning properties (LF/CI)

  D. Something to connect A, B, and C

PF: phonetic form; AP: acoustic-phonetic; LF: logical form; CI: conceptual-intentional

Model of grammar



- The process of getting from the resource to the interfaces is called 'derivation'

Syntax

Syntax: the total of operations
establishing relations
among members of the resource
such that these relations are interpretable
at the sound/meaning interfaces

(put differently:

such that these members are interpreted
for sound and meaning
as being ordered w.r.t. each other)

The rest of the lecture, something about

A. the resource

B. sound

C. meaning

D. the combinatorial mechanism (narrow syntax)

A. The resource

- **What's in the resource ?**

  1. words ***or*** **2. anything**

- **Syntax manipulates not just words but also phrases (1) and perhaps morphemes (2)**

(1) **[the old man] and [the sea]**

(2) **[vader en moeder]-tje**
father and mother-DIM 'playing house'

Parallel vs. layered derivations

- **if the resource contains only words,**
  then phrases are construed in 'parallel derivations'
  and then combined

- **if the resource contains anything,**
  then phrases may be part of the resource,
  and must be the output of a previous derivation,
  yielding ' layered derivations'

Interface effects

- **in a layered derivation model**
  elements construed in a separate derivation
  pass through the interface components (sound/meaning)
  before being included in the next resource

(1) ***backgrounding***
I just LOVE it [that Spain won the European Cup]

(2) ***idiom***
I'm all ears (*all eyes / *ears)

(3) ***sound effects***
productive: bak-je > bak-kie (cup-DIM)
idiomatic: een prik-kie / *prik-je (a prick-dim; 'a small amount of money')

- **the output of a derivation may be part of the resource for the next derivation**

Interface effects in a parallel derivation model

- a derivation is made up of phases

  » at the conclusion of a phase,
  the structure is shipped off to the interfaces

  » the derivation then continues
  without access to the part shipped off (it's gone)

  » at the end of the derivation,
  the various parts are reassembled at the interfaces

- we will return to phases in lecture 4

B. Sound

- **form**
- **order**

Sound: form

(1) John loves Mary
(2) John and Bill love Mary

- what determines these forms?

LANDMARK	WHAT'S IN THE RESOURCE ?	WHAT HAPPENS ?
Chomsky 1981	*-s*	form created in syntax
Chomsky 1993	*loves*	form checked in syntax
Halle & Marantz 1993 Zwart 1997	root *love*	root acquires features in syntax; spelled out as *loves* at the sound component ('morphology after syntax')

Morphology after syntax

- **syntax yields** *love* + 3SG
- **morphology has paradigms**

LOVE	
love	-
loves	3SG
loved	PAST

- **morphology returns the form that best matches the requested features**

Sound: order

- language is ordered in time
- ideally: the order is a function of syntax (Kayne; we return to this)
- the structure-order relation may be parametrized
  - » some languages are VO, others are OV
- what if order has no semantic effect ?
  - » Chomsky 2001: then it is not a fact of syntax but 'phonology'

Chomsky 2001, Derivation by phase. In Kenstowicz, ed. *Ken Hale: a life in language*. MIT Press.
Kayne 1994, *The antusymmetry of syntax*. MIT Press.

C. Meaning

(1) Someone loves everyone

a. ∃x, ∀y : x loves y (a single x)

b. ∀y, ∃x : x loves y (many x-es)

- **If meaning is a function of syntax, *everyone* must be higher than we see it**
  - **» covert movement**
- **Argued to be inevitable in cases like (2) (= ACD, antecedent-contained deletion)**

(2) Dulles suspected everyone Angleton did

Dulles [$_{VP}$ suspected [everyone Angleton did [$_{VP}$ --]]]

interpreting the empty VP requires 'reconstructing' the antecedent VP in the empty slot including the empty VP itself > infinite regress

but if* everyone Angleton did *must be interpreted higher than we see it, at the meaning component it must look something like this:

[everyone Angleton did [$_{VP}$ --]] [Dulles [$_{VP}$ suspected --]]

now we can reconstruct the VP* suspected *in the empty VP, yielding

everyone Angleton suspected, Dulles suspected

Argument from Fiengo & May, 1994, *Indices and identities*, MIT Press.

- **Discussion point: how strong is the argument for covert movement?**

Dulles [$_{VP}$ suspected [everyone Angleton did [$_{VP}$ --]]]

interpreting the empty VP requires 'reconstructing' the antecedent VP in the empty slot including the empty VP itself > infinite regress

but if* everyone Angleton did *must be interpreted higher than we see it, at the meaning component it must look something like this:

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- **Alternative: the empty VP does not exist in syntax, but only in the sound component (ellipsis as an interface effect)**

Sound & meaning
What is a syntactic fact?

- A syntactic fact is a form-meaning pairing.

- Sound without meaning

  » inflectional morphology
  » the position of the verb in inversion/verb-second

  NB, prosody is not without meaning, so it must be a function of syntax

- Meaning without sound

  » covert 'movement'
  » wide scope ?
  » lexical ambiguity
  » different types of empty categories ?
  » the distinction between bound and free pronouns ?

D. Narrow Syntax

- establishes relations among members of a resource

- Merge (we return to this later)

  » takes two elements from the resource
  » yields a set

  put differently
  » transfers elements from the resource to a workspace (syntax)

- Recursion

  » arises when one of the two elements merged
  is the output of a previous operation Merge

- Recursion is inevitable if the system is to combine more than two elements

Recursion

- **Hauser/Chomsky/Fitch 2002:**
  the unique and defining property of the human language faculty

- **different conceptions over the years**

  - » **embedding: a clause within a clause, an NP within an NP**
    (cf. Everett on Pirahã)

  - » **merging: an X within an X**
    (see above, results after two operations Merge)

  - » **layering: output of derivation 1 is in the resource for derivation 2**

- **Merge looks like the 'simple program' we want**
  in order to create complexity with simple means

  (cf. Wolfram, A new kind of science)