Introduction to Generative Syntax
Week 1: Fundamentals

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1 What is Generative Grammar about?

1.1 Generative Grammars are explicit grammars

(1)   A generative grammar is an *explicit* grammar. Traditional grammars usually are not at all explicit. In fact they assume a lot of the reader's own intuitions: that the reader will be able to fill in the pattern correctly.

1.1.1 Case Study: Anaphors and Pronouns in English

(2)   a. *I kicked me.
       b.   You kicked me.
       c.   He kicked me.

(3)   a.   I kicked you.
       b. *You kicked you.
       c.   He kicked you.

(4)   a.   I kicked myself.
       b. *You kicked myself.
       c. *He kicked myself.

(5)   a. *I kicked yourself.
       b.   You kicked yourself.
       c. *He kicked yourself.

The notation with the asterisk (*) used here is standard in linguistics. A sentence with an asterisk at the beginning is considered to be unacceptable by native speakers.[1]

We see that pronouns and anaphors are in complementary distribution.

(6)   a.   I kicked him.
       b.   You kicked him.
       c.   He$_i$ kicked him$_k$.

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[1]There is another use in historical linguistics, where forms marked with the asterisk are reconstructed historical forms.

      d. *He$_i$ kicked him$_i$.

(7)   a. *I kicked himself.
       b. *You kicked himself.
       c. He$_i$ kicked himself$_i$.
       d. *He$_i$ kicked himself$_k$.

The notation with the subscripts (i and k) indicates reference. Two linguistic items that have the same index refer to the same thing. Two linguistic items that have different indices refer to different things.

(8)   a. Mark$_i$ says that Sally dislikes him$_i$.
       b. *Mark$_i$ says that Sally dislikes himself$_i$.

(9)   a. Mary$_i$ wishes that everyone would praise her$_i$.
       b. *Mary$_i$ wishes that everyone would praise herself$_i$.

(10)   a. Mary introduced the clown$_i$ to himself$_i$.
       b. *Mary introduced himself$_i$ to the clown$_i$.
       c. The clown$_i$ introduced himself$_i$ to Mary.
       d. The clown$_i$ introduced Mary to himself$_i$.

(11)   a. John's mother likes herself.
       b. *John's mother$_i$ likes her$_i$.
       c. *John's mother likes himself.
       d. John$_i$'s mother likes him$_i$

(12)   a. The mother$_i$ of John likes herself$_i$.
       b. *The mother$_i$ of John likes her$_i$.
       c. *The mother of John$_i$ likes himself$_i$.
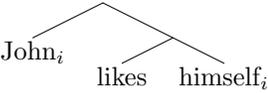   d. The mother of John$_i$ likes him$_i$.

As we will see, there is a lot more to be said about this. . .
   The examples up to (10) are consistent with the following two claims:

(13)   Principle A *to be revised*: Anaphors (reflexive pronouns) in English must have a co-referring antecedent to their left within the same clause.

(14)   Principle B *to be revised*: Pronouns in English must not have a co-referring antecedent to their left within the same clause.

However the final examples show that the principle governing the distribution and interpretation of anaphors and pronouns is considerably more subtle as the final two cases show.
   As you probably know, words are not grouped simply into sequences of words in natural languages, but into groups called *syntagmas* or *phrases*. In (12-c) for example, the structure we end up looks like this:

(15)   a.

$$\text{John}_i \quad \text{likes} \quad \text{himself}_i$$

a.

b.   [John$_i$ [likes himself$_i$]]

(16)   a.
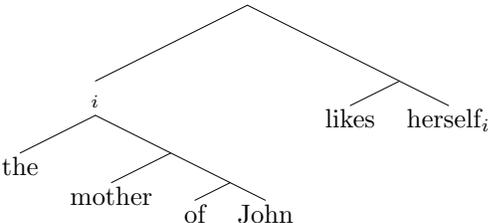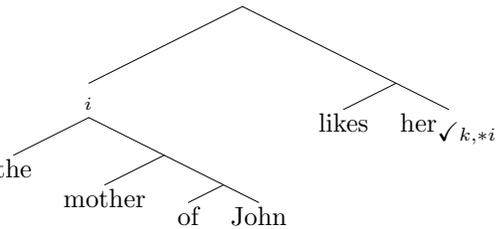
$$\text{the} \quad \text{mother} \quad \text{of} \quad \text{John} \quad_i \quad \text{likes} \quad \text{herself}_i$$

b.   [[the [mother [of John]]]$_i$ [likes herself$_i$]]

(17)   a.

$$\text{the} \quad \text{mother} \quad \text{of} \quad \text{John} \quad_i \quad \text{likes} \quad \text{her}_{\checkmark k,*i}$$

b.   [[the [mother [of John]]]$_i$ [likes her$_{\checkmark k,*i}$]]

(18)   a.

$$\text{the} \quad \text{mother} \quad \text{of} \quad \text{John}_i \quad \text{likes} \quad \text{himself}_i$$

b.   [[the [mother [of John$_i$]]] [likes himself$_i$]]

(19)   a.
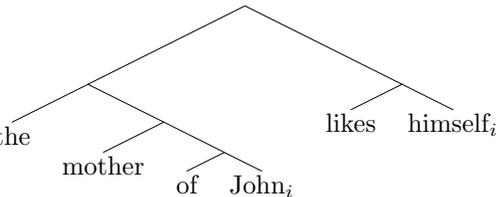
$$\text{the} \quad \text{mother} \quad \text{of} \quad \text{John}_i \quad \text{likes} \quad \text{him}_i$$
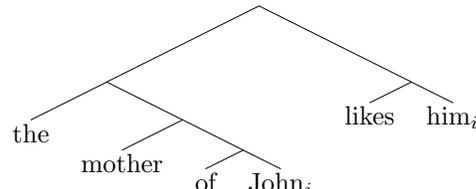
b.   [[the [mother [of John$_i$]]] [likes him$_i$]]

(20)   **C-command** A node α *c-commands* another node β iff[2] you can get
from α to β by going one step up from α in the tree and then as
many steps down as you like. You must not go the same step down
that you went up.

(21)   **Principle A** Anaphors in English must have a co-referring antecedent

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[2]*iff* means 'if and only if'.

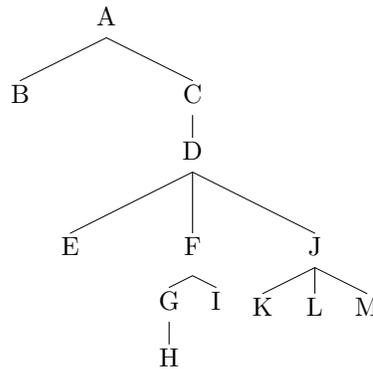which c-commands them and which is within the same clause.

(22)   **Principle B** Pronouns in English must not have a co-referring antecedent which c-commands them and which is within the same clause.

Even a relatively superficial look at the distribution and interpretation of pronouns and reflexives leads to immediate complexities that traditional grammars typically do not treat. A grammar that is explicit and allows to generate all and only the sentences that are grammatical in the language that is being described is called *descriptively adquate* following Chomsky (1965): it describes the language correctly.

But how do we approach these questions? And What do we do once we have an explicit description of these facts? And why bother?

Some terminological and substantive conventions regarding trees:

(23)

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                          A
                        /   \
                      B       C
                              |
                              D
                            / | \
                          E   F    J
                             / \   / | \
                            G   I K  L  M
                            |
                            H
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(24)   All of A–M are called nodes of the tree.

(25)   The lines connecting any two nodes are called branches.

(26)   By convention, the left to right order in the trees corresponds to the temporal sequence of words spoken. In (23) we have $B \prec E \prec H \prec K \prec L \prec M$, also we have $B \prec C$ and $B \prec D$ as well as $F \prec J$.

(27)   If some node α is connected to another node β by a single line going down, then α is the mother of β and β is the daughter of α.
Thus we have A is the mother of B and C, C is the mother of D, J is the mother of K, L, and M, etc.
A doesn't have a mother.

(28)   Two nodes that have the same mother are called sisters.
Thus B and C are sisters, E, F and J are sisters of each other, G and I are sisters, and K, L, and M are sisters.

(29)   A node α immediately dominates another node β iff α is β's mother.

(30)   A node α dominates another node β iff

a. α immediately dominates β or
b.   there is a node γ, such that α dominates γ and γ dominates β.

Thus A dominates all other nodes. C dominates everything except for A and B, F dominates G, H, and I, I dominates nothing, etc.

(31)   The undominated node is called the root.
A is the root.

(32)   Nodes that do not dominate anything are called terminal nodes.
B, E, H, K, L, and M are terminal nodes.

(33)   The subtree dominated by a particular node is called a constituent rooted at that node.

(34)   By convention, every node has exactly one mother. Every tree has exactly one root. No branches cross.

References

Abels, Klaus. to appear. 'expletive negation' in russian: A conspiracy theory. *Journal of Slavic Linguistics* .

Aitchison, Jean. 1994. Predistinate grooves: Is there a preordained language "program"? In *Language - introductory readings*, ed. Virginia P. Clark, Paul A. Eschholz, and Alfred F. Rosa, 117–136. New York: St. Martin's Press, 5 edition.

Baker, Mark. 2003. *Lexical categories: verbs, nouns, and adjectives*. Cambridge: Cambridge University Press.

Brown, Sue, and Steven Franks. 1995. Asymmetries in the scope of russian negation. *Journal of Slavic Linguistics* 3:239–287.

Cann, Ronnie. 1999. Specifiers as secondary heads. In *Specifiers: Minimalist approaches*, ed. David Adger, Susan Pintzuk, Bernadette Plunkett, and George Tsoulas, 21–45. Oxford, UK: Oxford University Press.

Chomsky, Noam. 1957. *Syntactic structures*. The Hague: Mouton.

Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1986. *Knowledge of language*. New York: Praeger.

Chomsky, Noam. 1995. Bare phrase structure. In *Government and binding theory and the minimalist program*, ed. Gert Webelhuth, 383–439. Oxford: Basil Blackwell.

Chomsky, Noam. 2000. *New horizons in the study of language and mind*. Cambridge, UK.: Cambridge University Press.

Chomsky, Noam, Adriana Belletti, and Luigi Rizzi. 2002. *On nature and language*. Cambridge: Cambridge University Press.

Cinque, Guglielmo. 1999. *Adverbs and functional heads - a cross-linguistic perspective*. New York and Oxford: Oxford University Press.

Cinque, Guglielmo. 2000. On greenbergs universal 20 and the semitic dp.

Cinque, Guglielmo. 2004. Deriving greenbergs universal 20 and its exceptions.

Cormack, Annabel. 1999. Without specifiers. In *Specifiers: Minimalist approaches*, ed. David Adger, Susan Pintzuk, Bernadette Plunkett, and George Tsoulas, 46–68. Oxford, UK: Oxford University Press.

Duffield, Nigel. 1999. Adjectival modifiers and the specifier-adjunct distinction. In *Specifiers: Minimalist approaches*, ed. David Adger, Susan Pintzuk, Bernadette Plunkett, and George Tsoulas, 126–145. Oxford, UK: Oxford University Press.

Gopnik, M, and Martha B. Crago. 1991. Familial aggregation of a developmental language disorder. *Cognition* 39:1–50.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA.: MIT Press.

Kracht, Marcus. 2003. *The mathematics of language*. Studies in Generative Grammar 63. Berlin, New York: Mouton de Gruyter.

Muysken, Pieter. 1982. Parametrizing the notion head. *Journal of Linguistic Research* 2:57–76.

Pesetsky, David. 1995. *Zero syntax*. Cambridge, MA: MIT Press.

Pesetsky, David, and Esther Torrego. to appear. Tense, case, and the nature of syntactic categories. In *The syntax of time*, ed. Jacqueline Guron and Jacqueline Lecarme. Cambridge, MA: MIT Press.

Pinker, Steven. 1994. *The language instinct*. New York: Morrow.

Riemsdijk, Henk van. 1998. Categorial feature magnetism: The endocentricity and distribution of projections. *Journal of Comparative Germanic Linguistics* 2:1–48.

Smith, Neil, and Ianthi-Maria Tsimpli. 1995. *The mind of a savant - language learning and modularity*. Malden: Blackwell.

Smith, Neil, Ianthi-Maria Tsimpli, and Jamal Ouhalla. 1993. Learning the impossible: The acquisition of possible and impossible languages by a polyglot savant. *Lingua* 91:279–347.

Starke, Michal. 2001. On the inexistence of specifiers and the nature of heads.