Basic syntactic constructions: The empirical landscape

L614
(with slides taken near-verbatim from Detmar Meurers)

Spring 2015
Subcategorization

(1) a. I laugh. \quad <\text{NP}>
   
   b. I saw him. \quad <\text{NP NP}>
   
   c. I give her the book. \quad <\text{NP NP NP}>
   
   d. I said that she left. \quad <\text{NP S[that]}>

Cannot always be derived from semantics:

(2) a. Paul ate a steak. \quad <\text{NP NP}>
   
   b. Paul ate. \quad <\text{NP}>

(3) a. Paul devoured a steak. \quad <\text{NP NP}>
   
   b. * Paul devoured \quad <\text{NP}>
Government

- One element decides on the form of another element, e.g.
  - verbs govern the case of their nominal argument
  - verbs govern the form of their verbal argument
Government

Case

(4) a.  *He left.
   b.  *Him left.

(5) a.  She sees *him.
   b.  *She sees he.
Government
Verb form

(6) a. Peter will *win* the race.  
    b. *Peter will *won* the race.  
    c. *Peter will *to win* the race.

(7) a. Peter has *won* the race.  
    b. *Peter has *win* the race.  
    c. *Peter has *to win* the race.  

(8) a. Peter seems *to win* the race.  
    b. *Peter seems *win* the race.  
    c. *Peter seems *won* the race.
Agreement

- Two elements agree in some (abstract) property, e.g.:
  - Subject-verb agreement in *person* and *number*
  - Pronoun-antecedent agreement in *person*, *number*, and *gender*
  - Adjective-noun agreement in *case*, *gender*
Agreement

Subject-Verb Agreement

(9) a. She walks / *walk.
   b. The men *walks / walk.

(10) a. Maria lacht / *lachen / *lache / *lachst.
    b. Die Männer *lacht / lachen / *lache / *lachst.

(11) a. That they are alive is / *are a pleasant surprise.
    b. Daß sie leben ist / *sind erfreulich.

(12) a. Hier wird / *werden gelacht.
(13) a. *He*$_i$ claimed that *her$_i$/j* car broke down.
   b. *She*$_i$ claimed that *her$_i$/j* car broke down.
   c. *They*$_i$ claimed that *their$_i$/j* car broke down.
Agreement
Adjective-Noun Agreement in Gender

(14) a. *La fille est heureuse / heureux.
   The girl is happy / happy.

   b. *Le garçon est heureuse / heureux.
   The boy is happy / happy.
Agreement within the Noun Phrase

(15) a. (Fritz hat) eine kluge Lehrerin
Fritz has a wise teacher<sub>fem</sub>
b. (Fritz hat) einen kleinen Lehrer
Fritz has a small teacher<sub>masc</sub>
c. Die Männer *lacht / lachen / *lache / *lachst.

(16) a. (Fritz mag) kluge Lehrer.
b. (Fritz mag) die klugen Lehrer.
Arguments vs. Adjuncts

Semantic Contribution

- Arguments and adjuncts differ in semantic contribution:
  - Arguments denote:
    - participants of an event
      (17) Sandy kissed Robin.
    - individuals/entities for which a state of affairs holds
      (18) Sandy knew the answer.
  - Adjuncts denote the circumstances under which an event took place or a state of affairs occurred, referring to:
    - time
      (19) Sandy knew the answer on Monday.
    - frequency
      (20) Sandy forgot her umbrella twice.
Arguments vs. Adjuncts

Semantic Contribution (cont.)

- place
  
  (21) Sandy kissed Robin \textit{in the park}.

- manner
  
  (22) Sandy kissed Robin \textit{passionately}.

- cause
  
  (23) Sandy knew the answer \textit{because she had studied for the test}.

- effect or purpose
  
  (24) Sandy kissed Robin \textit{to show his affection}.
Arguments vs. Adjuncts

Iterability

- Adjuncts can be iterated (subject to semantic restrictions), but arguments cannot.

(25) John buttered the toast at midnight with a knife in the bathroom.

(26) *John buttered the toast the bread.
Arguments vs. Adjuncts

Obligatoriness

- Adjuncts are optional, arguments (of verbs) are obligatory.

(27)  a. John buttered the toast at midnight with a knife.
    b. John buttered the toast at midnight.
    c. John buttered the toast.

(28) * John buttered.
Arguments vs. Adjuncts

Predictability

- The selection and semantic contribution of arguments tends to be idiosyncratic, whereas that of adjuncts is uniform and predictable.

- Idiosyncratic selection, e.g., consider obligatoriness:
  
  (29)  
  a. John ate the steak.  
  b. John ate.

  (30)  
  a. John devoured the steak.  
  b. *John devoured.

- Idiosyncratic semantic contribution:
  
  (31) John fears thunderstorms.
  (32) Thunderstorms frighten John.
Arguments vs. Adjuncts

Order among complements/adjuncts

- In languages with relatively fixed word order
  - complements allow no scrambling, whereas
  - adjuncts can be ordered more freely.

(33) a. John buttered the toast with a knife in the bathroom at midnight
    b. John buttered the toast at midnight with a knife in the bathroom.
    c. John buttered the toast in the bathroom at midnight with a knife.

(34) a. Mary gave John a book.
Arguments vs. Adjuncts

Relative order of complements with respect to adjuncts

- English adjuncts tend to occur after complements:

  (35) The authorities blamed the arson on the skydivers [without checking the facts].

  (36) * The authorities blamed [without checking the facts] the arson on the skydivers.
Arguments vs. Adjuncts

Substitutability

- In English, a V’ can be substituted under *do so* ellipsis.
  - Complements must be within the antecedent of *do so*, whereas adjuncts may be either inside or outside.

(37) Calvin saw Hobbs in the garden and Peter did so too.
(38) Calvin saw Hobbs in the garden and Peter did so in the kitchen.
(39) *Calvin saw Hobbs in the garden and Peter did so John in the kitchen.
A head generally realizes its arguments locally within its head domain (i.e., as sister of lexical head in X-bar tree).

Certain kind of constructions resist this generalization, such as, for example, *wh*-questions (here from the NYT):

(40) a. Who do you think _ writes well about human sadness?
   b. Who do you think the cops are going to believe _?

How can the non-local relation between a head and such arguments be licensed?
   - How can their properties be captured?
A first example: *Wh*-elements

*Wh*-elements can have different functions:

(41) a. Who did Hobbs see _?  
   b. Who do you think _ saw the man?  
   c. Who did Hobbs give the book to _?  
   d. Who did Hobbs consider _ to be a fool?

*Wh*-elements can also occur in subordinate clauses:

(42) a. I asked who the man saw _.  
   b. I asked who the man considered _ to be a fool.  
   c. I asked who Hobbs gave the book to _.  
   d. I asked who you thought _ saw Hobbs.
Different categories can be extracted:

(43)  a. Which man did you talk to _ ?  
     b. [To [which man]] did you talk _ ?  
     c. [How ill] has the man been _ ?  
     d. [How frequently] did you see the man _ ?

This sometimes provides multiple options for a constituent:

(44)  a. Who does he rely [on _ ]?  
     b. [On whom] does he rely _ ?

Unboundedness:

(45)  a. Who do you think Hobbs saw _ ?  
     b. Who do you think Hobbs said he saw _ ?  
     c. Who do you think Hobbs said he imagined that he saw _ ?
A syntactic link from filler to gap is needed

(46)  a.  Kim_i, Sandy trusts _i.
    b.  [On Kim]_i, Sandy depends _i.

(47)  a.  * [On Kim]_i, Sandy trusts _i.
    b.  * Kim_i, Sandy depends _i.

And this link has to be established for an unbounded length:

(48)  a.  Kim_i, Chris knows Sandy trusts _i.
    b.  [On Kim]_i, Chris knows Sandy depends _i.

(49)  a.  * [On Kim]_i, Chris knows Sandy trusts _i.
    b.  * Kim_i, Chris knows Sandy depends _i.

(50)  a.  Kim_i, Dana believes Chris knows Sandy trusts _i.
    b.  [On Kim]_i, Dana believes Chris knows Sandy depends _i.

(51)  a.  * [On Kim]_i, Dana believes Chris knows Sandy trusts _i.
    b.  * Kim_i, Dana believes Chris knows Sandy depends _i.
Unbounded dependency constructions

An unbounded dependency construction
- involves constituents with different functions
- involves constituents of different categories
- is in principle unbounded

There are several types of unbounded dependency constructions (UDCs), cf., e.g., Pollard and Sag (1994, ch. 4).
- Strong UDCs: an overt constituent occurs in a non-argument position.
- Weak UDCs: no overt constituent in a non-argument position.
Strong UDCs

An overt constituent occurs in a non-argument position:

**Topicalization:**
(52) Kim$_i$, Sandy loves $_i$.

**Wh-questions:**
(53) I wonder [who$_i$ Sandy loves $_i$].

**Wh-relative clauses:**
(54) This is the politician [who$_i$ Sandy loves $_i$].

**It-clefts:**
(55) It is Kim$_i$ [who$_i$ Sandy loves $_i$].

**Pseudoclefts:**
(56) [What$_i$ Sandy loves $_i$] is Kim$_i$. 
Weak UDCs

No overt constituent in a non-argument position:

**Purpose infinitive (for-to clauses):**
(57) I bought it; for Sandy to eat \( \_i \).

**Tough movement:**
(58) Sandy; is hard to love \( \_i \).

**Relative clause without overt relative pronoun:**
(59) This is [the politician]; [Sandy loves \( \_i \)].

**It-clefts without overt relative pronoun:**
(60) It is Kim; [Sandy loves \( \_i \)].
In non-finite constructions, the subject of the embedded verb is not expressed as a locally realized dependent.

**Problem 1:** What is interpreted to be the subject of the non-finite verb?

(61)  
  a. John tried to dance.  
  b. John promised Peter to dance.  
  c. John persuaded Peter to dance.
Non-finite constructions: An empirical challenge

**Problem 2:** Why do verbs selecting non-finite complements differ w.r.t. what kind of controllers can occur?

(62) a. John tried to dance. (subject)
b. John appeared to dance. (subject)

(63) a. John persuaded Peter to dance. (object)
b. John expects Peter to dance. (object)

(64) a. *It tried to rain. (subject)
b. It appeared to rain. (subject)

(65) a. *John persuaded it to rain. (object)
b. John expects it to rain. (object)
Classifying non-finite complements

Verbs selecting non-finite arguments can be classified w.r.t.

- their orientation (subject, direct or indirect object):
  - What is interpreted to be the subject of the non-finite complement?
    ⇒ Determined by interpretation of embedded infinitive.

- the nature of the relationship of the embedding verb to the controller:
  - Is the controller an argument of the embedding verb?
    ⇒ A range of tests
**Relationship: embedding verb ↔ controller**

Empirical basis of classification

*Raising verbs* only mediate the requirement of the complement:

1. If the embedded verb **requires** a non-referential (= dummy) **subject**, so does the raising verb:

   (66) a. It rains.
   b. * God rains.

   (67) a. It seems to rain.
   b. * God seems to rain.

   (68) a. * It wants to rain.
   b. * God wants to rain.
Empirical basis of classification (cont.)

1'. The same holds when a dummy subject is permitted:

(69) a. There is a dragon in the wood.
   b. Hobbs is a dragon in the wood.

(70) a. There seems to be a dragon in the wood.
   b. Hobbs seems to be a dragon in the wood.

(71) a. *There wants to be a dragon in the wood.
   b. Hobbs wants to be a dragon in the wood.
Empirical basis of classification (cont.)

Test 2: clausal subjects

2. If the embedded verb permits a clausal subject, so does the raising verb:

\[(72)\]  
\(\begin{align*} 
  a. & \quad \text{That Sarah dances fascinates John.} \\
  b. & \quad \text{Sarah fascinates John.}
\end{align*}\]

\[(73)\]  
\(\begin{align*} 
  a. & \quad \text{That Sarah dances seems to fascinate John.} \\
  b. & \quad \text{Sarah seems to fascinate John.}
\end{align*}\]

\[(74)\]  
\(\begin{align*} 
  a. & \quad * \text{That Sarah dances wants to fascinate John.} \\
  b. & \quad \text{Sarah wants to fascinate John.}
\end{align*}\)
3. If the embedded verb has a subject with an idiomatic interpretation, so does it when selected by a raising verb:

(75)  The cat is out of the bag.
(76)  The cat seems to be out of the bag.
(77)  % The cat wants to be out of the bag.
Empirical basis of classification (cont.)
Test 4: subjectless constructions

4. In languages where **subjectless constructions** exist, raising verbs can embed such subjectless complements:

(78) a. Dort scheint getanzt zu werden.
    there seems danced to be
    ‘People seem to dance over there.’

    b. Ihn scheint zu frieren.
    him seems to freeze
    ‘He seems to freeze.’

(79) a. *Dort versucht getanzt zu werden.
    there tries danced to be

    b. *Ihn versucht zu frieren.
    him tries to freeze
Empirical basis of classification (cont.)

Test 5: passivization

5. **passivization of the non-finite complement** results in a paraphrase

    b. A book was read by John.

(81) a. John seems to read a book.
    b. A book seems to be read by John.

(82) a. John wants to read a book.
    b. % A book wants to be read by John.
Raising as a widespread phenomenon
Complements of other categories

Not only VP but also AP complements are possible complements of raising verbs like *seem* or *appears*:

(83) John seems/appears intelligent.
(84) John seems/appears to be intelligent.
Raising as a widespread phenomenon
More on AP complements

Such AP complements behave parallel to the VP complements of raising verbs, e.g., with respect to clausal subjects:

(85) a. That he came to her wedding is tasteless.
    b. John is tasteless.

(86) a. That he came to her wedding seems to be tasteless.
    b. John seems to be tasteless.

(87) a. That he came to her wedding seems tasteless.
    b. John seems tasteless.

(88) a. * That he came to her wedding wants to be tasteless.
    b. John wants to be tasteless.