Fundamentals of Grammar

Evidence for Phrases

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evidence for syntactic phrases

three types of evidence

▶ “movement”
▶ pronominalization
▶ coordination
Definition
Movement is the phenomenon whereby we can find pairs (or larger sets) of sentences with systematically meanings that have groups of words in different positions.

- we can capture this relationship through “movement rules” (transformations) that target phrases

Example
Basic English word order is SVO. This is generated by the PSRs:

\[
S \rightarrow NP \ VP \\
VP \rightarrow V \ NP
\]
## movement

### Example

<table>
<thead>
<tr>
<th>English data:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I like <strong>peanuts</strong>.</td>
<td>You bought <strong>something</strong>.</td>
</tr>
<tr>
<td><strong>Peanuts</strong>, I like.</td>
<td>What did you buy?</td>
</tr>
</tbody>
</table>

- basic structures generated by PSRs
- movement rules (transformations) can derive further structures

Rules of so called “topicalization” and English question formation are movement rules which target phrases.

### Example

- I bought [a red pencil].
- [A red pencil], I bought.
- *Pencil, I bought a red ___
The data:

- \([_NP\text{a student}] \text{ solved } [_NP\text{the problem}]\)
- \([_NP\text{the problem}] \text{ was solved (by } [_NP\text{a student}])\)

What happens:

- subject NP demoted to optional ‘by phrase’
- object NP promoted to subject
- auxiliary verb “to be” inserted
- verb inflected with “passive morphology”
- (NPs move as a unit, not just the head nouns)
The data:

- They turned over the rock
- They turned the rock over
- *They turned the over rock

(We will use the term “particle” to refer to an intransitive preposition, i.e., one which has no NP object.)

What happens:

- Prt moves around entire NP
- Prt cannot move inside NP!
movement
indirect object movement (aka dative shift)

The data:
- I made some cookies for my class.
- I made my class some cookies.
- *I made class some cookies for my

What happens:
- indirect object is promoted to position above direct object
- preposition is deleted
movement
summary

- PSRs give basic word order
- movement rules can apply, yielding a wide range of possible orders
- movement provides evidence for phrases
  - either a whole phrase moves
  - or a head moves around a whole phrase ("head movement")
- types of movement phenomena we’ve seen so far:
  - topicalization
  - wh-movement
  - particle shift
  - dative shift
process by which an entire phrase is replaced by a word (termed a proform) that serves as a “placeholder”

- proform: general term for such a word
- pronoun: a specific type of proform which replaces NPs
pronominalization
pronouns replace NPs

some data
the devilish mouse stole the cheese full NP
*the devilish it stole the cheese replace N
*the it stole the cheese replace N’
it stole the cheese replace full NP

We can conclude that English pronouns target full NPs (thus we have a new syntactic test for NP).
Every proform has an antecedent

Linguistic antecedents
A linguistic antecedent is an actual expression earlier in the same sentence (or an earlier sentence).

Example

- The interesting lecture began early, but it ended on time.
- Tom Cruise plays the lead in that film. He is rather short.

Pragmatic antecedents
A pragmatic antecedent is one that is reconstructed from context at the utterance time (not from a linguistic expression).
other proforms

English provides proforms for several types of phrases:

- **PP proform:**
  \(\text{The young children laughed on the schoolbus today; they will not laugh there tomorrow.}\)
  \((\text{there} = [_{\text{PP}} \text{on the schoolbus}])\)

- **VP proform:**
  \(\text{The young children laughed on the schoolbus today; the bus driver did so after the children left.}\)
  \((\text{did so} = [_{\text{VP}} \text{laughed on the schoolbus}])\)

- **S proform:**
  \(\text{The young children laughed on the schoolbus today. I didn’t know that, I can’t believe it.}\)
  \((\text{that, it} = [_{\text{S}} \text{The young children laughed on the schoolbus today}])\)
Because they substitute for phrases, proforms can undergo movement.

<table>
<thead>
<tr>
<th>input</th>
<th>the large rhino chased the frightened villagers</th>
</tr>
</thead>
<tbody>
<tr>
<td>pronominalization</td>
<td>it chased them</td>
</tr>
<tr>
<td>passivization</td>
<td>they were chased (by it)</td>
</tr>
<tr>
<td>input</td>
<td>the leprechaun gave a pot of gold to the townsfolk</td>
</tr>
<tr>
<td>pronominalization</td>
<td>he gave it to them</td>
</tr>
<tr>
<td>IO movement</td>
<td>he gave them it</td>
</tr>
</tbody>
</table>
Interrogative proforms, or wh- words, are used in English wh-questions.

- pronouns: who(m), what, whose, which
- other proforms, when, where, why, how

The world-record holder for hot-dog eating is coming to town. Who is coming to town?
pronominalization

wh- movement

English requires a movement rule (transformation) which moves wh- words to the left periphery.

<table>
<thead>
<tr>
<th>input</th>
<th>they saw <strong>the world record holder</strong> in Cafe Allegro.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pronom.</td>
<td>they saw <strong>who</strong> in Cafe Allegro?</td>
</tr>
<tr>
<td>wh-mvt</td>
<td><strong>who(m)</strong> did they see ___ in Cafe Allegro?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>input</th>
<th>She parked the bus <strong>in the underground lot</strong>.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pronom.</td>
<td>She parked the bus <strong>where</strong>?</td>
</tr>
<tr>
<td>wh-mvt</td>
<td><strong>where</strong> did she park the bus ___?</td>
</tr>
</tbody>
</table>
summary: pronominalization

- proforms act as syntactic placeholders for entire phrases
- (almost) every proform has a linguistic or pragmatic antecedent
- they can undergo movement, just like the phrases they replace
Identify the type of movement:

- The sherrif sent a **search party** out to find the kids.
- Dora made her mother a **birthday card**
- The cheese was eaten by the rat.
practice: movement

Identify the type of movement:

- The sherrif sent a search party out to find the kids.
  - particle shift, “sent out a search party”

- Dora made her mother a birthday card

- The cheese was eaten by the rat.
practice: movement

Identify the type of movement:

- The sherrif sent a [search party] out to find the kids.
- Dora made her [mother] a [birthday card]
  - IO mvt (dative shift), “a bday card for her mother”
- The [cheese] was eaten by the [rat].
Identify the type of movement:

- The sherrif sent a **search party** out to find the kids.

- Dora made her **mother** a **birthday card**

- The **cheese** was eaten by the **rat**.
  - passivization, “the rat ate the cheese”
practice: pronominalization

Identify the type of antecedent:

▶ The children’s movie seemed very long to me, but it didn’t seem so to Max.

▶ My son can tie his shoes, I told everyone he can do so.
practice: pronominalization

Identify the type of antecedent:

▶ The children’s movie seemed very long to me, but it didn’t seem so to Max.
  ▶ it = [NP the children’s movie]
  ▶

▶ My son can tie his shoes, I told everyone he can do so.
  ▶
  ▶
practice: pronominalization

Identify the type of antecedent:

- The children’s movie seemed very long to me, but it didn’t seem **so** to Max.
  - **so** = \([AP \text{ very long}]\)

- My son can tie his shoes, I told everyone **he** can do **so**.
Identify the type of antecedent:

▶ The children’s movie seemed very long to me, but it didn’t seem so to Max.

▶ My son can tie his shoes, I told everyone he can do so.

▶ he = [NP my son]
Identify the type of antecedent:

- The children’s movie seemed very long to me, but it didn’t seem so to Max.
- My son can tie his shoes, I told everyone he can do so.

\[
\text{do so} = [_{vp} \text{tie his shoes}]
\]