DP movement

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DP movement

After this lecture, you should have mastered the following skills:

• Draw the theta grids of raising predicates like *likely* and *seem*.

• Draw tree indicating DP movement of embedded subjects.

• Explain how the Case filter motivates the movement of DPs out of infinitival clauses into main clauses.
DP movement

• Describe how the passive voice head affects the introduction of external arguments and Case assignment by verbs.
• Show passive DP movement in a tree.
DP movement

• In the last lecture, we saw the need for transformational rules to supplement the work of the X-bar theory in the generation of sentences.

• The kind of transformations we looked at moved heads into other heads.

• In this lecture we will look at transformations that move DPs.
DP movement

• Unlike head-to-head movement, where movement is motivated by word orders that cannot be generated using X-bar theory, the movement of DPs takes X-bar-generated trees and turns them into other acceptable X-bar-generated trees.
DP movement

• What motivates the movement is not a failure of X-bar theory, but instead the fact that certain DPs can appear in positions we don’t expect given our theory of theta roles.
DP movement

• If we try to sketch the theta grid of the verb *leave*, we’ll see that *leave* requires one obligatory argument: an agent as in:
DP movement

1) leave

Agent
DP
i
DP movement

• This can be seen in the following paradigm:

2) a. Bradley\textsubscript{i} left.
   b. Stacy\textsubscript{i} left Tucson.
   c. Slavko\textsubscript{i} left his wife.
   d. *It left. (Where it is a dummy pronoun, not a thing.)
DP movement

• The only obligatory argument of the verb *leave* is the agent, which is the external (subject) argument.

• Other arguments are possible as in (b) and (2c), but not required.

• Note that the agent role must be assigned to an argument within the clause that contains *leave*:
DP movement

3) a. *[I want Bradley_i [that left]].
   b. *John_i thinks [that left]]

• When we try to assign the theta role to a DP that is outside the clause (such as the object *Bradley or John* in (3), we get an ungrammatical sentence.
DP movement

• We posit the following constraint:

4) *Locality Constraint on Theta Role Assignment*

Theta roles are assigned within the clause containing the predicate that introduces them (i.e., within the VP or other predicate).
DP movement

• This constraint requires that the DP getting the theta role be local to the predicate that assigns it.

• In the sentences in (3) the DP is actually in a different clause from the predicate that assigns it, so the Locality Constraint correctly predicts them to be ungrammatical.
DP movement

• Now, consider the sentence:

5) \([\text{John}_i \text{ is likely [to leave]}]\)

• *John* is the agent of *leaving*, but the DP *John* appears in the main clause, away from its predicate.

• Another surprising thing is that there seems to be no subject of the embedded clause.
DP movement

• This is a direct violation of the \textit{Locality constraint}.

Solution:

• There is a transformation that takes the DP \textit{John} and moves it from the lower clause to the higher clause.
DP movement

• The theta grid for *likely* includes only one argument: the embedded clause. This is seen in the fact that it can appear as the sole theta-marked argument:
DP movement

6) a) [(That John will leave)\_j is likely].
   b) It is likely [that John will leave]\_j.
   c) is likely

\[
\begin{array}{c}
\text{CP} \\
[-Q, +\text{FINITE}] \\
\hline
j
\end{array}
\]
DP movement

• A careful examination of this sentence shows that *John* does not get its theta role from *is likely*.

• Instead it is what *John* is doing that is likely.

• The sentence is a clear violation of the locality condition on theta role assignment.
• We will assume that the theta condition holds at D-Structure.
• This means that theta role assignment must happen before that application of all transformations.
• We can therefore arrange for John’s theta role to be assigned clause internally, at D-Structure.
• The D-structure of the sentence will look like (7)
• The subject DP is generated in the specifier of the embedded voice VP, where it is assigned the agent theta role.
• After that, we need a transformation that moves this DP to the specifier of the main clause TP.
• This transformation is called DP movement:
8) **DP Movement**

Move a DP to a specifier position.

- Notice that in the tree, the specifier of the higher clause’s TP is unoccupied. It is into this position that we move *John* in the tree diagram in (9):
• This particular kind of DP movement is commonly called *raising*, because we are raising a DP from the lower clause to the higher clause.

• The surface structure of this tree looks like (10) where there is a trace left in each position that the DP has occupied.
• Transformations are powerful tools, so we have to limit their use.
• We want to ensure that they are only used when required.
• Transformations, therefore need motivation or trigger.
• Consider the sentences in (11):

11)a. [That John will leave] is likely.
   b. It is likely [that John will leave].

• The presence of the theta-role-less *it* in (b) is forced by the EPP- the requirement that the specifier of TP be filled by something (a subject).
We might speculate that the absence of a subject is the trigger for DP movement: The DP moves to the specifier of TP to satisfy the EPP.

Since we have two TPs, this applies twice.

[A] The DP moves from its position in the specifier of the embedded VP to the specifier of the lower TP to satisfy this TP’s EPP requirement.
• Then it moves again to the specifier of the higher TP to satisfy that TPs EPP requirement as indicated by [B] in (12):
EPP

[CP [TP T+is [VP tV [AP likely [CP [TP to [VP John leave]]]]]]]

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Case assignment

• We will appeal to the idea of Case assignment to provide additional motivation for DP movement.
Passives

• Consider the following sentences in (13) and (14):

13) The policeman kissed the puppy.  \textit{Active}
14) The puppy was kissed by the policeman \textit{Passive}
• The two sentences don’t mean exactly the same thing. (13) is about a policeman and (14) is about the puppy.

• However, the describe same basic event in the world with the same basic participants: there is some kissing going on, and the kisser (agent) is the policeman and the kissee (theme) is the puppy.
• The two sentences differ:
• In the passive sentence, the agent is represented by the preposition *by*.
• This is an adjunct, and as an adjunct, it is not included in the basic theta grid and is not subject to the theta criterion.
• If the agent here is an adjunct and not subject to the theta criterion, it should be optional.
• This is indeed the case as can be seen in 15):
  15) The puppy was kissed.
• This shows that passives and actives have different thematic properties.
• Actives have an agent and a theme, whereas passives lack the agentive theta role in their theta grids.
• Using evidence from idiomatic expressions, we assume that there is a tight link between a verb and its theme that it doesn’t share with its agent.

• If we adopt the approach that agents are introduced by the voice head, then these facts follow directly:

• The main verb has the theme in its theta grid (18a), so it can combine in unique idiomatic ways with the theme.
• The agent, however is never in the theta grid of the root verb. It comes from the voice element so idiomatic meaning cannot form around it.
18) a) *kiss*

b) 

<table>
<thead>
<tr>
<th>Agent DP</th>
<th>VP</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \emptyset \text{ active} )</td>
<td>([-\text{PASSIVE}, -\text{PERFECT}, -\text{PROGRESSIVE}])</td>
</tr>
</tbody>
</table>
• The passive form of the auxiliary, $be_{\text{pass}}$ has a different theta grid.
• It lacks the agent theta role and requires the following verb to be a participle.
19) $be_{pass}$
• In the active, the theme argument appears in object position; in the passive it appears in the subject position.

• We will claim that the theme is generated in the main verb’s complement position in both actives and passives, but then moved to subject position (i.e., specifier of TP) in passives.
• The D-structure of the passive sentence looks like (20). The dotted arrows represent theta (θ) assignment.

• Because –en absorbs the agent theta role, there is only one DP (*the puppy*) in the sentence, the one that gets the theme theta role.
• Even if there is a *by* phrase, it is an adjunct and does not get a theta role from the verb.

• The theme is the internal argument (i.e., it is not underlined in the theta grid) so it does not appear in the specifier of VP.

• It must appear in the complement, like other internal theta roles.
Sample derivation
• The EPP is not satisfied here.
• There is nothing in the specifier of the passive TP.
• The surface order of the passive is then derived by DP movement as in (21):
• The DP *the puppy* moves to satisfy the EPP.

• Passives often occur with what appears to be the original external argument in a prepositional phrase marked with *by*.

22) The puppy was kissed by the policeman.

• We treat these *by*-phrases as optional adjuncts, they are adjoined to V′:
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... V'

V'  PP

V  DP by the policeman

48
Up to this point, we’ve motivated DP movement using the EPP.

In this section, we’re going to look at data that might need an additional mechanism to account for DP movement.
CASE

• In the account of raising, we saw that one way to satisfy the EPP was to insert an expletive. For this reason, this option isn’t available in raising environments:

24) *it is likely John to leave. (cf. It is likely that John left.)
CASE

• It does not explain why *only* the subject DP of an embedded clause can satisfy the EPP; an object DP may not move to satisfy this requirement:

25) *Bill$_i$ is likely John to hit t$_i$
The same kind of problem appears in passives. It isn’t clear why it isn’t possible to satisfy the EPP in passive by inserting an expletive:

26) *it was kissed the puppy.

Our theory predicts such sentences should be acceptable. In order to explain why they are not, we have to add a new theoretical tool: Case.
In many languages of the world, nouns bearing various grammatical relations take special forms.

For example, in Japanese subjects are marked with the suffix –*ga*, objects are marked with –*o* and indirect objects and certain adjuncts are marked with –*ni*:
27) Asako-ga ronbun-o kai-ta.
Asako-NOM article-ACC wrote-PAST
“Asako wrote the article.”

28) Etsuko-ga heya-ni haitte-kita.
Etsuko-NOM room-DAT in-came
“Etsuko came into the room.”
CASE

• The suffixes represent *grammatical relations*. The three most important grammatical relations are *subject, object* and *indirect object*.

• These are not the same as thematic relations.

• Grammatical relations represent how a DP is functioning in the sentence syntactically.

• The morphology associated with grammatical relations is called *case*. 
The two cases we will be mainly concerned with are the **nominative case** which is found with subjects and **accusative case** found with objects.

English is a morphologically poor language. It is only in pronouns that we find manifestation of case. Most pronouns have different forms depending on what case they are in:
CASE

31)

Nominative  I  you  he  she  it  we  you  they
Accusative  me  you  him  her  it  us  you  them
• Ghanaian languages are like English in that they also have morphologically impoverished case systems.
CASE

• “Languages like Latin or German have a morphologically rich case system where distinct cases are overtly marked on nouns, adjectives, determiners, etc., as well as on pronouns. For Example:

Latin

31) a) Caesar Belgas vincit.

Caesar Belgians beats

‘Caesar beats the Belgians’.
b) Belgae Caesarem timent.
Belgians Caesar fear
‘The Belgians fear Caesar.’

32) German

a) Der Student hat den Lehrer gesehen
The student has the teacher seen
NOMINATIVE ACCUSATIVE
b) Der Lehrer hat den Studenten gesehen.
The teacher has the student seen
NOMINATIVE   ACCUSATIVE”

(Haegeman 1994: 157-158)
CASE

• Though full DPs in English or Ghanaian languages do not have the overt case marking that we find in pronouns, we assume that there are null case suffixes in these languages.

• This is what is called *abstract Case.*
CASE

• Case then is a general property of language and it is associated with a syntactic phenomenon: the grammatical functions (relations) of DPs.
• DPs are given Case if and only if they appear in specific positions in the sentence.

32) Shows the three Case assigning positions:
Case assigning positions

33) NOMinative Case Specifier of finite T
ACCusative Case Sister to Transitive V
PREPositional Case Assigned by a preposition
CASE

• Case serves as our motivation for DP movement.
• A DP needs a license to surface in the sentence, and it can only get a license (Case) in specific positions.
• If it isn’t in one of these positions, it must move to a place where it can get Case.
• The *Case filter* ensures that all DPs have Case.
The Case Filter

34) *The Case Filter*

All DPs must be marked with a Case. If a DP doesn’t get Case the derivation will crash.
• We use a mechanism called **feature checking** to implement the Case filter.
• The idea, borrowed from phonology, is that words are composed of atomic features.
• A word like *he* is composed of features representing person, number, gender, etc.
35) *he*

- masculine
- 3rd person
- singular
- nominative
• Case assigners like T also have feature matrixes as is (36):
36) $T(\emptyset_{\text{pres}})$
• The Case filter becomes a requirement that a noun like *he* be close enough to a Case assigner like *is* to check that the noun has the right features.

• **The noun must be close to its Case assigner:**
37)

```
...
  TP
  DP
  \(\Delta\)
  he
  [NOM] \(\emptyset_{\text{pres}}\)
  [NOM]
  checking

\textit{Nominative Case}
```
Accusative Case

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VP
  /
V'
  /
V
  /
loves
[ACC]
  /
checking

DP
  /
him
[ACC]
39)
• If the Case assigner is not local (that is if the noun is not in the specifier or complement of the Case assigner), then the feature won’t be checked and the Case filter is violated.
Raising: Reprise

• Using what we have just learned, we revisit raising sentences.
• Consider the following sentences:
40) a) It is likely that Patrick left.
   b) That Patrick left is likely.
   c) * Patrick is likely that $t_i$ left.
   d) * It is likely Patrick to leave.
   e) * Patrick to leave is likely.
   f) Patrick is likely $t_i$ to leave.
• Sentences (40a-c) involve tensed (finite) embedded clauses.

(40a) shows that we can satisfy the EPP with an expletive, provided the embedded clause is finite.

• Sentence (40d) shows that an expletive won’t suffice with a non-finite embedded clause.
• Sentences (40b) and (40e) show that a tensed clause can satisfy the EPP, but a non-finite clause cannot.
• Finally we see that raising is possible with a non-finite clause (40f) but not a finite clause (40c).
• The distribution is based on a single issue: case.
• The derivation of (40f) can be shown as in (41):
• *Patrick* starts out where it gets its theta role (the specifier of VP of the embedded TP.  
• It moves to the specifier of that TP to satisfy the EPP, but it is not a Case position. The T _to_ shows that the clause is non-finite.  
• So the DP moves from this position to the specifier of the higher TP, where it can check its nominative case.
Passives: Reprise

• Case theory also allows us to explain passive constructions.

• This, however, requires an additional piece of machinery to be added to the passive morphology.

• Only active transitive verbs can assign accusative case.
42) He kissed her.
Passive verbs cannot:
43) a) She was kissed.
   b) *She was kissed him.  
   c) *It was kissed her.  (where it is an expletive)
• Burzio (1986) proposed a principle that links the external theta role to accusative Case assignement (commonly known as **Burzio’s Generalization**): A predicate that has no external theta role cannot assign accusative Case.

• We code Burzio’s Generalization in our theta grid for $be_{pass}$
44) \textit{be}_{pass} (to be revised)

\begin{verbatim}
VP
[-PASSIVE, -PERFECT, -PROGRESSIVE, -ACC, FORM participle]
\end{verbatim}
• This theta grid says that the complement of \( \text{be}_{\text{pass}} \) has to be a participle, must be a main verb, and cannot assign accusative Case to its complement.
45)
• Since the participle is [-ACC], there is now no Case for the DP, so it must move to satisfy the Case filter.

• With this in mind we can reconsider the derivation of the passive as in (46)>
• The passive morphology has conspired to absorb both the accusative Case and the external theta role. This means that there is no DP in the specifier of finite T.

• There is a Case position open so the theme DP can move to specifier of TP.

• This gives us the trigger for DP movement in passives:
• A DP moves to get Case from its Caseless theta position to the nominative Case-assigning specifier of TP.

• The DP now moves for two reasons: first to satisfy the EPP, but it must also move to get Case.
TYING UP A LOOSE END

• On the basis of evidence from VSO languages like Irish.

• We have argued that the subject DP is generated in the specifier of VP, not TP.
47)
• The problem is: Why do subjects appear before T in languages like English?

Solution:

• All subject DPs move to the specifier of finite T to get Case. In actives and intransitives, the movement is from the specifier of VP.

• In passives, it is from the underlying object position.
• The difference between SVO languages like English and VSO languages is in where nominative Case is assigned.

• In SVO languages, nominative Case is assigned in the specifier of finite T. In VSO languages, nominative Case is assigned when the DP is immediately c-commanded by finite T (which allows it to remain inside VP).
49)
Acknowledgements

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