

Case, EPP, and A-Movement

1 Subjects across Categories

IPs and DPs seem to have subjects i.e. in our terms specifiers:

- (1) a. IP: [_{IP} [The Romans] [_{I'} T⁰ [_{vP} destroyed the city]]].
- b. DP: [_{DP} The Romans'] [_{D'} D⁰ [_{NP} destruction of the city]]].

Phrases headed by other categories do not seem to generally allow for overt subjects.

- (2) a. AP: John had his accident while [_{AP} (*he/him) still sober].
- b. AP: What is John like? - [_{AP} (*he/him) very nice].
- c. VP: What did John do? - [_{VP} (*he/him) go home].

But sometimes they do. These cases have been referred to as *small clauses*.

- (3) AP:
 - a. John finds [_{AP} Bill [absolutely crazy]].
 - b. We consider [_{AP} it [unlikely that John will win]].
- (4) PP:
 - a. I expect [_{PP} that man [off my ship]].
 - b. The captain allowed [_{PP} him [into the control room]].
- (5) bare VP:
 - a. Mary had [_{VP} her brother [open the door]].
 - b. Nobody heard [_{VP} it [rain (last night)]]].
- (6) passive VP:
 - a. We all feared [_{VP} John [killed by the enemy]].
 - b. I don't want [_{VP} advantage [taken of John]].
 - c. I want [_{VP} it [understood that the orders have already been given]].

The relevant factor seems to be the availability of case. A subject may surface in its base position only if case is available to it in its base position. This point is explored at some length in Stowell (1983).

1.1 Constituency Tests: XP or DP+Predicate

Two potential analyses are available for the cases in (3-6):

- (7) a. the XP analysis:
... V [_{XP} DP [_{X'} X⁰ ...]]
- b. the NP+Predicate analysis:
... V DP [_{XP}[_{X'} X⁰ ...]]

1.1.1 Subcategorization

Certain noun phrases do not normally appear as objects - this is the case with expletives.

- (8) expletives:
 - a. There is a man in the garden./*A man is there_{expl} in the garden. (not expletive)
 - b. It is raining./*I saw it_{expl}.

Likewise certain phrasal constituents receive a special idiomatic interpretation when they appear together with certain other lexical items. These combinations are called idiom chunks and for the idiomatic reading to be available, the phrasal constituent cannot be an argument of another predicate.

- (9) idiom chunks:
 - a. [[*the cat*] [*out of the bag*]]
 - i. *The cat* is *out of the bag*.
 - ii. # I persuaded [the cat] [to be out of the bag].
 - b. *take advantage*
 - i. Lane took advantage of Andrew./ Advantage was taken of Andrew.
 - ii. # I persuaded advantage [to be taken of Andrew].

Now what is relevant here is that expletives and idiom chunks can appear as 'objects' of the embedding predicate in the cases that are of interest here.

- (10) expletive *it*:
 - a. We consider it unlikely that John will win.
 - b. Nobody heard it rain last night.
 - c. I want it understood that the order was given.
- (11) expletive *there*:
 - a. In my screenplay, I had there be a scene where Old Biff met a kid version of his grandma, Getrude.
 - b. We let there be two strategies in the population, Hawk and Dove.(expletive *there* is limited to appearing with bare VP phrases. We will return to this later.)

- (12) idiom chunks:
- a. I don't want advantage taken of John.
 - b. We considered the chips down.

Given that expletives and idiom chunks cannot ordinarily appear as 'objects' of the relevant predicates, we can conclude that the putative object is not an object of the embedding predicate i.e. we choose the XP analysis in (7a) over the object + predicate analysis in (7b).

1.1.2 Adverbial Intervention

In support of the constituency assumed in (3-6), Stowell (1983) offers the following argument:

PP and adverbial constituents of VP, including emphatic reflexives, are normally freely ordered within VP; in particular, they may intervene between a direct object and a control complement.

- (13) a. I persuaded Bill *myself* [to leave].
 b. Ann told David *early this morning* [to call his mother].

However, no constituent of VP may be embedded within the substructure of another complement - we could call this the phrasal integrity condition.

- (14) a. *I consider [the mayor *myself* to be very stupid].
 b. *I want [him *very much* to be off my ship].
 c. *I want [fun *myself* to be had by all].

We find that the relevant kinds of modifiers cannot intervene between the embedded subject and the embedded predicate in cases like (3-6).

- (15) a. *I consider [the mayor *myself* very stupid].
 b. *I want [him *very much* off my ship].
 c. *We feared [John *with great concern* killed by the enemy].

Now since we take *the mayor to be very stupid* to be a constituent, the parallels between (14) and (15) suggest that *the mayor very stupid* could also be a constituent.

1.1.3 Right Node Raising: a non-argument

A sequence like *the mayor very stupid* cannot be 'right node raised' i.e. it cannot participate in shared constituent co-ordination.

- (16) *I find it easy to prove - but Kevin found it hard to prove - [the mayor dishonest].

This could be used as an argument against the constituency we are assuming. But this is not a solid argument because failure to under 'right node raising' does not necessarily show that something isn't a constituent. There could be some other reason.

And according to Stowell, the reason is a structural adjacency condition on case assignment in

English. He proposes that (16) is bad because the right node raised constituent is not in an appropriate case-assignment relationship. His argument receives some support from the fact that the infinitival counterpart of (16) also does not allow for right node raising.

- (17) *I find it easy to prove - but Kevin found it hard to prove - [the mayor to be dishonest].

1.2 An Argument from Subcategorization

Sometimes in the literature what we are calling XP's with overt specifiers are called small clauses - basically clauses without inflectional material (finite inflection and the infinitival *to*).

The substantive part of the small clause proposal is that it treats as one all the cases that we have been examining irrespective of whether they are headed by A/P/V etc. Thus it predicts that a predicate that subcategorizes for a small clause based on say an AP should also subcategorize for a small clause based on say a VP.

This is not the case.

- (18) a. *I consider [_{PP}John off my ship]./I consider [_{AP} this unlikely].
 b. *I proved [_{PP}the weapon in his possession]./I proved [_{AP} his theory false].
 c. *I expect [_{AP}that man very stupid]./I expect [_{PP}that man off my ship].
 d. *We all feared [_{AP}John unfriendly]./We all feared [_{VP}John killed by the militants].

In contrast, if we insert a *to be* to the above XP's, we convert them into IP's and all the examples become grammatical. This suggests that the predicates are subcategorizing for particular syntactic categories, and that the relevant phrases do not constitute a single category.

1.3 Some scepticism

There is some discussion in the literature which argues against adopting the conclusion that we have come to in the preceding discussion. See Williams (1983) and Safir (1983) for details.

One important piece of evidence adduced against our conclusion comes from German. In German, it seems that any constituent can be fronted to the first position.

- (19) a. Ich habe Hans für schlau gehalten
 I-Nom have John-Acc for smart held
 'I considered John smart.'
 b. Hans habe ich für schlau gehalten
 John-Acc have I for smart held
 'I considered John smart.'
 c. Für schlau habe ich Hans gehalten
 for smart have I John-Acc held
 'I considered John smart.'

But somewhat strikingly, the sequence [John smart] cannot appear in first position.

- (20) *Hans für schlau habe ich gehalten
 John-Acc for smart have I considered
 'I have considered John smart.'

This failure has been taken to argue against the constituency of *John smart*. This is a serious objection and we will discuss responses to it later in the semester.

2 Some initial evidence for Subject Movement

There is clear evidence that subjects originate lower than [Spec,IP].

But exactly where they originate (i.e. are merged) is a matter of some debate - proposals include [Spec,VP], [Spec,vP], where vP is a specialized functional projection that takes VP as a complement, and a special adjoined position to the VP.

For consistency with much current work, I will adopt the [Spec,vP] option without motivating it in any detail - see Kratzer (1996), von Stechow (1996), Beck and Johnson (2004). among others for some arguments in favor of the vP proposal.

- Extensions to non-verbal categories.

2.1 Quantifier Stranding

Quantifiers associated with a subject can appear in a range of positions.

- (21) a. All the dragons had all escaped.
 b. The dragons had all escaped.
- (22) a. Both the twins might have been at the party.
 b. The twins might both have been at the party.
 c. The twins might have both been at the party.

- The above pattern is limited to a small class of quantifiers such as *all*, *both* etc. Not all quantifiers can float e.g. *a*, *most*, *no*, *the*, *every* etc.

Two explanations: Q-float and Q-stranding

- (23) a. Q-float: $Q + DP \dots VP \rightarrow DP \dots Q VP$
 b. Q-stranding: $\dots Q + DP VP \rightarrow DP \dots Q VP$

This range can be explained elegantly if we assume the Q-stranding proposal according to which the surface position of the stranded quantifier is a position occupied by the subject at some point in the derivation. See Sportiche (1988) for details.

2.2 Expletive Constructions

2.2.1 Basic Properties of Expletives

(24) Expletives

- a. nominal expletive *there*, nominal associate:
There is a man in the garden.
There were many people at Barbara's party.
- b. *it*:
 - i. weather/ambient expletive *it*, no associate:
It is raining/windy.
It is 11.37a.m. right now.
 - ii. clausal expletive *it*, clausal associate:
It is true that he doesn't know what he wants.

- Expletives are semantically vacuous. They cannot bear a θ -role. Thus they are restricted to appearing in positions to which no θ -role is assigned.

Since by definition, complement positions are subcategorized for¹, expletives are blocked from appearing in object positions. This leaves the subject positions of predicates that do not assign a θ -role to their subjects i.e. non- θ -positions.

(25) non- θ -position \rightarrow expletive possible; θ -position \rightarrow expletive impossible

- a. There/*David were several people on the beach yesterday.
- b. David/*There ate an apple.

There are other factors that regulate the distribution of expletives to which we will return shortly.

- Expletives cannot be stressed.

(26) a. *there*:

- i. *THERE were several people on the beach.
- ii. Several people were THERE on the beach.

b. *it*:

- i. *IT is clear that he is otherwise occupied.
- ii. IT is brown, not THAT.

(capitalization indicates stress.)

- Not all languages have (overt) expletives.

¹This assumption works pretty well for *there* expletives. The situation with the clausal expletive *it* is a little more complex because of its interaction with extraposition. We find cases where clausal expletive *it* appears in subcategorized positions.

- i. a. I mentioned it to Tom [that Mary was leaving].
b. Jonas will see to it [that you have a reservation].
c. I expected it correctly [to be hard to teach that stuff].

Williams (1980) and Postal and Pullum (1988) have used data of this sort to argue against a small clause proposal of the sort defended in the main text. Runner (2000) provides a response to Postal and Pullum (1988)'s criticism.

2.2.2 Sentences with and without expletives

Sentences with expletive *there* have closely related sentences without expletives.

- (27) a. Predicate = PP
i. There is a man in the garden.
ii. A man is in the garden.
- b. Predicate = AP
i. There are only three taxicabs available at any given time.
ii. Only three taxicabs are available at any given time.
- c. Predicate = Progressive VP
i. There were many people playing volleyball on the beach.
ii. Many people were playing volleyball on the beach.
- d. Predicate = Passive VP
i. There were several people arrested at the rally.
ii. Several people were arrested at the rally.

Despite its vacuous semantics, *there* can be identified as the syntactic subject of the sentence by the word order and its position with respect to auxiliary inversion:

- (28) a. Isn't there going to be a party at Minjoo's tonight?
b. There's going to be a party at Minjoo's tonight, isn't there?

- (29) Support for Movement:
a. *there* T⁰ ... [_{vP} Subject v'.....
b. Subject T⁰ ... [_{vP} <Subject> v'.....

- The Definiteness Effect and other semantic restrictions on existential constructions.

3 Case Assignment and Subject Movement

The distribution of DPs has been argued to be regulated in part by the following principle:

- (30) *The Case Filter*: *DP, where DP is lexical and does not bear Case.

In the formal terms that we have been assuming, this reduces to the observation that DPs have uninterpretable and unvalued Case features that need to be valued and deleted.

- Case distinctions are only overtly visible on pronouns in English. But the syntactic system of English seems to treat all DPs alike irrespective of whether they overtly express case or not - what seems to matter is *abstract* case.

- θ -related case vs. structural case
- idiosyncratic/lexical case vs. structural case

- see Woolford (2006).

- Do we need Case in the syntax?

An influential line of work (McFadden (2004), Bobaljik (2005), ?) has argued that we do not. These authors argue that case is purely interpretive i.e. it reflects structural relations between heads and DPs but does not otherwise regulate the distribution of DPs. Alternative explanations are offered for distributional facts like (31).

3.1 Subject Case: Nominative

Nominative is assigned by finite T^0 .

- (31) a. That he/Joey likes Norah is strange.
 b. *He/Joey to like Norah is strange.
 c. To like Norah is strange.
- (32) a. ... $T^0[\text{nom}]$ [_{vP} DP[uCase:-] [_{v'} v⁰ [_{VP} V ...]]]
 b. [_{TP} DP[uCase:nom] [_{T'} $T^0[\text{nom}]$ [_{vP} <DP> [_{v'} v⁰ [_{VP} V ...]]]]

Now why does the subject DP move to [Spec,TP]? Recall that Agree can value features *in-situ*. One answer could be that the uCase:Nom feature is strong i.e. Nom*. This would force overt movement concomitant with feature checking.

- What is nominative?

One answer: nominative is whatever the case licensed by finite T^0 is.
 We could even call it *Tense*, and skip having a [nom] feature on T^0 altogether.

3.2 Case vs. EPP

While making the uCase:Nom feature strong definitely yields the right word order, certain facts about constructions with expletive *there* suggest a different treatment.

How is case assigned in expletive constructions?

- (33) There is a man in the garden.

There is one case assigner: T^0 and potentially two elements that might need case: *there* and *a man*.

Two options:

1. Postcopular DPs don't need case (or else *be* assigns case to the postcopular DP). T^0 assigns nominative to *there*.

→ no case on associate DP.

2. *there* is an atypical DP. It does not need case - this is probably related to its adverbial origins. T^0 assigns case to the NP associate of *there*.

→ nominative case on associate DP.

→ [nom] case feature cannot be strong.

→ Some other feature drives movement to [Spec,TP].

The case on the associate *a man* is not overt, and putting a pronoun where the form would be revealing leads to ungrammaticality for independent reasons.

(34) *There was he/him in the garden.

So we look at Icelandic where case distinctions on indefinite DPs are more clearly visible than in English.

(35) Icelandic

a. ThaDh hefur maThur dansaDh i garDhinum
there has man-Nom danced in garden-the

'A man has danced in the garden.'

b. ThaDh hefur einhver borDhaDh epli
there has someone-Nom eaten apple-Acc

'Someone has danced in the garden.'

c. expletive is needed:

*hefur einhver borDhaDh epli
has someone-Nom eaten apple-Acc

'Someone has danced in the garden.'

→ The associate is in the nominative.

The Icelandic facts support Option 2.

We now need another strong feature to drive movement to [Spec,TP]. For historical reasons, this feature is called the **EPP** (Extended Projection Principle) feature:

(36) $T[tense, uD^*]$

The only feature the expletive *there* has is an [D] feature. This feature allows it to delete the EPP feature of T^0 .

- Subject-Verb Agreement

3.3 Case on objects: Accusative

- (37) a. If T^0 values the case of an DP, the case of the DP is nominative.
b. If transitive v^0 values the case of an DP, the case of the DP is accusative.

A basic generalization which follows from the definition of Agree:

- (38) *X[F] ... Y[uF:-] ... Z[F]
where ... indicates a c-command relationship.

Some derivations:

- (39) a. He likes him.
b. *He likes he.
c. *Him likes he.
d. *Him likes him.

4 C-selection, S-selection, and L-selection

4.1 Categorical Selection

- (40) C-selection: categorial selection - certain heads impose particular demands on the category of the XP they combine with. These demands are referred to as **c-selection**.

Some things we could code using c-selection:

- (41) *know* can take NPs, indicatives S's, and interrogative S's.
a. John knows [_{NP} the time].
b. John knows [_S that the world is full of noises].
c. John knows [_S what the time is].
- (42) *ask* can take NPs and interrogative S's, but not indicative S's.
a. John asked me [_{NP} the time].
b. *John asked me [_S that the world was full of noises].
c. John asked me [_S what the time was].
- (43) *wonder* can only take interrogative S's, not NPs or indicative S's.
a. *Paul wonders [_{NP} the time].
b. *Paul wonders [_S that the world is full of noises].
c. Paul wonders [_S what the time is].
- (44) a. A: adjectives require PP complements.
PP: *fond of the tall student*, DP: **fond the tall student*, NP: **fond tall student*, AP: **fond tall*
b. N: nouns require PP complements.
PP: *queen of the blue isle*, DP: **queen the blue isle*, NP: **queen blue isle*, AP: **queen blue*

- c. P: prepositions typically require DP complements.
 DP: *on the brown table*, NP: **on brown table*, AP: **on brown*, PP: **on below the brown table*

We can build c-selection into our system by adding **uninterpretable** categorial features on heads. A head which c-selects (= subcategorizes) for an XP will have an uninterpretable X categorial feature, indicated as [**uX**]. For a syntactic derivation to succeed (i.e. **converge**), all the uninterpretable features must be deleted by a matching categorial feature on its complement.

4.2 Semantic Selection

Semantic selection is the idea that predicates impose selectional constraints on their complements by imposing constraints on the semantics of the complement. For example, for the verbs in (43), we could have something like the following:

- (45) a. *know*: complement must be a question or a proposition
- b. *ask, wonder*: complement must be a question

S-selection seems particularly helpful in cases where an argument of a particular sort is needed, but its category is not fixed.

- (46) *put* selects for a location:
 - a. Bill put the book on the table.
 - b. Bill put the book under the table.
 - c. Bill put the book there.
 - d. Bill put the book away.
 - e. *Bill put the book.

One can imagine theories that only have c-selection, theories that only have s-selection, and also theories that have both c-selection and s-selection (cf. Grimshaw (1979)).

Certain authors have argued that s-selection is the most basic form of selection and that certain aspects of c-selection can be derived from the semantic properties of the relevant head. Theories that attempt to eliminate c-selection in favor of s-selection need (and have) explanations for contrasts between *ask* and *wonder* which have similar s-selectional needs:

- (47) a. John asked me the time.
- b. *John wondered the time.

4.3 Lexical Selection

Sometimes particular heads will select for particular lexical items, not just particular categories. This is called **L(exical)-selection** by Pesetsky (1991).

- (48) a. verbs:
 - i. *depend, rely - on*
 - ii. *hope - for*
 - iii. *toy - with*

- b. nouns:
 - i. *love - for, of*
 - ii. *desire - for, *of*
- c. adjectives:
 - i. *proud, ashamed - of*
 - ii. *similar - to*
 - iii. *different - from*
 - iv. *consistent - with*

L-selection displays considerable idiosyncrasy. Lexical items that are semantically close can l-select different prepositions. There is also unpredictable crosslinguistic variation in this domain. L-selection is also found with clausal complements.

- (49) a. i. She liked the concerto.
 ii. She liked hearing the concerto.
 iii. She liked to hear the concerto.
 b. i. She enjoyed the concerto.
 ii. She enjoyed hearing the concerto.
 iii. *She enjoyed to hear the concerto.
- (50) a. i. He succeeded in convincing her.
 ii. *He succeeded to convince her.
 b. i. *He managed in convincing her.
 ii. He managed to convince her.

The consensus in the literature seems to be that we need s-selection augmented with l-selection. What would traditionally be put under c-selection can be derived from s-selection, certain principles that govern how certain meanings are canonically realized syntactically, and other independent properties of the lexical item (See Pesetsky (1991) for details).

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