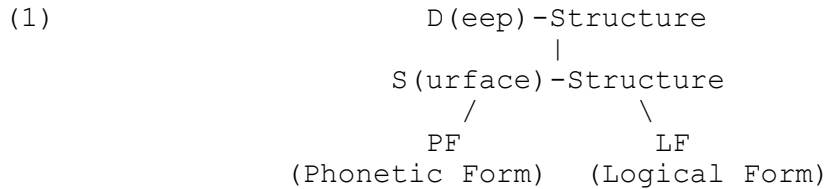


On Ellipsis: Generative Approaches to the Interpretation of Missing Constituents

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I. Background Chomsky and Lasnik (1977), Chomsky (1981)

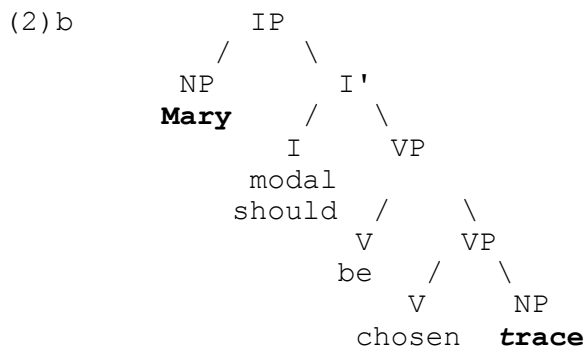
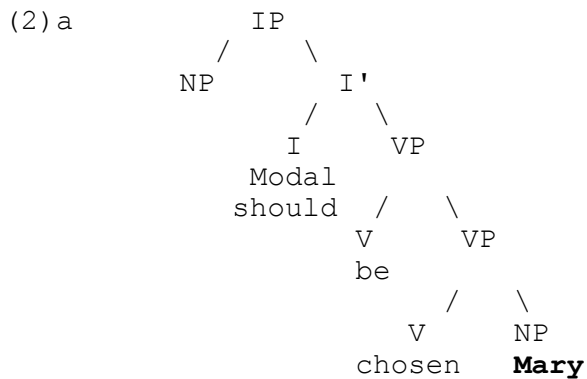


Items from the lexicon are inserted into the D-Structure in accord with their syntactic properties and semantic roles, including thematic (θ) relations (agent of..., patient of..., etc., roughly corresponding in simple cases to subject of..., object of...).

A. Movement

Transformations successively alter the D-Structure (the movement transformations leaving traces, markers indicated the position something moved from) eventually producing an S-Structure. For instance, in a passive sentence such as (2), the thematic object is transformationally displaced to subject position, as in the D-structure and S-structure given in simplified form in (2)a and b respectively. [Sentence = IP, the projection of the verbal inflectional element I which encodes tense and agreement information.]

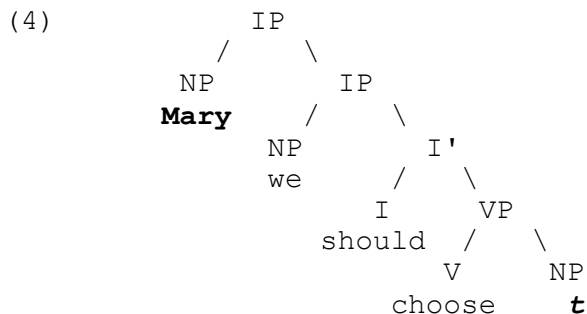
(2) Mary should be chosen *t*(race)



Transformations continue the derivation from S-structure to LF (in this instance producing no major changes). Phonological rules continue the derivation from S-Structure to PF (with the traces deleted).

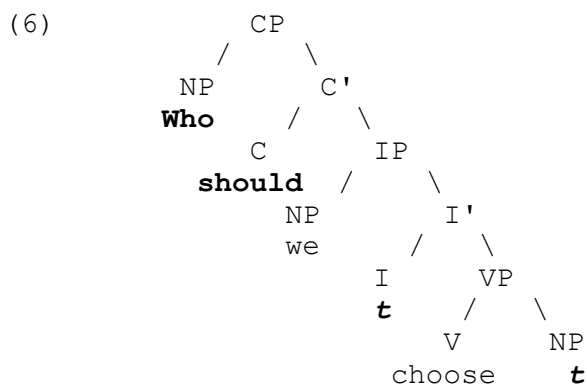
The movement transformation just seen moves an NP to subject position. Some other transformations move NPs to a pre-subject position. Topicalization, as in (3), is one such.

(3) Mary, we should choose *t*



One of the best studied constructions involves fronted interrogative expressions, as in (5). CP is Complementizer Phrase, where Complementizer is a mood and/or force marker. Who moves to 'specifier' of CP (WH-movement) and the modal auxiliary moves to C.

(5) Who should we choose *t*



B. Ellipsis

Another major target of syntactic investigation has been sentences with missing constituents. (7) illustrates VP ellipsis and (8) illustrates IP ellipsis (labeled 'Sluicing' by Ross (1969)).

(7) You should choose Mary and we should ~~choose Mary~~ too

(8) We should choose someone, but I don't know who ~~we should choose~~ *t*

As indicated with the strike-out notation, there is an 'identity' requirement relating the missing constituent and a linguistic antecedent. Thus, (8) cannot mean:

(9) You should choose someone, but I don't know who we will fire

There are a number of interesting questions (several of them hotly debated currently) about the precise nature of the identity requirement. For instance, (8) already suggests that strict formal identity is not required, since the ellipsis site has a trace in the position where the antecedent has the indefinite expression *someone*. Given that the trace can plausibly be regarded as a sort of indefinite,

a more abstract kind of semantic identity might be at work. On the other hand, there are phenomena indicated that formal identity is required for ellipsis. For example, actives and corresponding passives are very close semantically, but neither qualifies as an antecedent for the other in VP ellipsis or sluicing:

- (10) *John was praised by Mary and Bill should ~~praise John~~ too
- (11) *Mary praised John and Harry was ~~praised by Mary~~ too
- (12) *Someone shot Ben, but I don't know by whom ~~Ben was shot~~ *t*

Consider next the phenomenon of 'sloppy identity' identified by Ross (1969). An example like (13) is ambiguous, even when *he* in the first conjunct is taken as referring to John.

- (13) John thinks he is clever and Bill does ~~think he is clever~~ too

On what Ross called the 'strict' reading, the missing *he* in the second conjunct also refers to John. On the 'sloppy' reading, it refers to Bill. Thus, on this reading John attributes cleverness to himself, and Bill attributes cleverness to himself. On this reading, the pronoun and its missing correlate are behaving like bound variables. What is interesting is that even on the sloppy reading, for most speakers a formal identity effect is clearly discernible. Mismatch of agreement features inhibits the reading:

- (14) ??John thinks he is clever and Mary does ~~think she is clever~~ too
- (15) *Mary thinks she is clever and Bill does ~~think he is clever~~ too

Given the organization of the grammar schematized in (1), there are two natural approaches to ellipsis. In one, 'PF deletion', the understood material in the ellipsis site is present throughout the syntactic derivation from D-Structure through S-Structure to LF. It is only eliminated by a deletion operation in the PF component. Thus, for all purposes except phonetic ones the elided material is in the structure.

In the alternative theory, 'LF copying', the elided constituent is absent throughout the derivation, being inserted only in the LF component. The two approaches can be summarized as:

- (16) PF deletion approach: Elided and corresponding non-elided sentences are identical except at the level of PF.
- (17) LF copying approach: Elided and corresponding non-elided sentences are identical only at LF.

Obviously, the two approaches are very close in their effects, seemingly making identical predictions about the 'observable' levels of PF and LF. However, there have been a number of arguments that seem to favor one or the other of the approaches. A critical survey of those arguments will be the major theme of this presentation.

II. A standard argument for LF copying: Missing ambiguities

A. Specific/non-specific ambiguities

- (18) Mary wants to catch a fish
- (19)a There is a certain fish that Mary want to catch
- b Mary hopes her fishing is successful
- (20) (18) is two-ways ambiguous. But (21) is not four-ways ambiguous, only two. The interpretation of the ellipsis target must

parallel that of the antecedent.

- (21) Mary wants to catch a fish and John does too
- (22) Suppose, as extensively argued by May (1977) among many others, that quantificational ambiguities are resolved by LF configuration. In particular, LF movement operations (movement between S-Structure and LF) create 2 different LF structures for (18), each corresponding to one of the 2 indicated readings. A fish is ultimately realized as a restricted existential quantifier and its trace as a variable bound by the operator. (PRO is the silent subject 'controlled' by the higher subject Mary.)

- (23)a [A fish] [Mary wants [PRO to catch t]]
b Mary wants [a fish [PRO to catch t]]

- (24) Then, the reasoning goes, the LF movement operation (Quantifier Raising - QR) takes place in the first clause of (21), and the resulting VP structure is copied into the missing VP position in the second clause.

B. Scope ambiguities with two quantifiers

- (25) Some linguist admires every philosopher
- (26)a For each philosopher, there is some linguist who admires him or her
b There is a linguist who has universal admiration for philosophers
- (27) Unsurprisingly, (28) has the same ambiguity:
- (28) Some psychologist admires every philosopher
- (29) Here again, combining (25) with an elliptical version of (28) gives a sentence that is not four-ways ambiguous:
- (30) Some linguist admires every philosopher and some psychologist does too
- (31) Some linguist₁ [every philosopher₂ [t_1 loves t_2]]
(32) Every philosopher₂ [some linguist₁ [t_1 loves t_2]]
- (33) The same line of reasoning as in (24) could apply here as well.

C. Questions about the argument

- (34) The result crucially depends on a particular ordering of operations: First, movement in the antecedent, then copying the resulting structure. Does this follow from any deeper principle?
- (35) The copying process provides a trace (=variable) in the right position. But the moved item (=operator) is generally outside of the ellipsis site. So how does the elliptical clause get an operator?
- (36) Perhaps most importantly, the argument relies on the assumption that the parallelism phenomenon is a special property of ellipsis. But as already observed in Lasnik (1972), it arises with or without ellipsis. (See Tancredi (1992) for extensive discussion.)
- (37) Mary wants to catch a fish and John wants to catch a fish too
- (38)a There is a certain fish that Mary want to catch, and there is a

certain fish that John wants to catch
 b Mary hopes her fishing is successful, and John hopes his fishing
 is successful

(39) Similarly for:

(40) Some linguist admires every philosopher and some psychologist
 admires every philosopher too

(41) Thus, the parallelism phenomenon doesn't tell us anything about
 ellipsis per se. In fact, as suggested by Chomsky and Lasnik
 (1993), it becomes a mild argument against an LF copying
 approach:

(42) We need some principle, call it PARR, that gives parallel
 interpretation in the non-elliptical sentences. The null
 hypothesis would be that the same principle is at work in the
 elliptical sentences. But then an additional mechanism ensuring
 parallelism would be redundant.

III. Arguments for PF deletion

A. Sluicing and preposition stranding Ross (1969), as developed
 by Merchant (1999), Merchant (2001)

(43) Some languages (mostly Germanic ones) allow WH-movement of the
 object of a preposition 'stranding' the preposition.

(44) Who has Peter talked with *t*

(45) Vem har Peter talat med *t* **Swedish**

(46) Hvem har Peter snakket med *t* **Danish**

(47) Other languages (the large majority) do not allow preposition
 stranding. (* indicates unacceptability.)

(48) *Pjon milise me **Greek**
 who she.spoke with

(49) *Kim je govorila Ana sa **Serbo-Croatian**
 who Aux spoken Ana with

(50) Sluicing mirrors these properties, arguing, as noted by Ross and
 by Merchant, for an analysis involving movement followed by
 deletion. (*(xxx) indicates unacceptability if 'xxx' is absent.)

(51) Peter was talking with someone, but I don't know who

(52) Peter har talat med någon; jag vet inte (med) vem **Swedish**
 Peter has talked with someone I know not (with) who

(53) Peter har snakket med en eller anden, men jeg ved **Danish**
 Peter has talked with one or another but I know
 ikke (med) hvem
 not (with) whom

(54) I Anna milise me kapjon, alla dhe ksero *(me) pjon **Greek**
 the Anna spoke with someone but not I.know with who

(55) Ana je govorila sa nekim, ali ne znam *(sa) kim **S-C**
 Ana Aux spoken with someone but not I.know with who

the best argument I know for QR.

- (69) To maintain a PF account, it would presumably be necessary to posit a movement operation between D-Structure and S-Structure that has the effect of removing from inside its antecedent the VP that is to be deleted.
- (70) Just that has been suggested by Baltin (1987) (who proposes that the relative clause moves) and Lasnik (1993) and Hornstein (1994) (who explore movement of the entire NP direct object).

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