

The Fifth Numazu Linguistics Seminar  
1998

Minimalist Explorations

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**Levels of Representation  
and  
The Structures of Anaphora**

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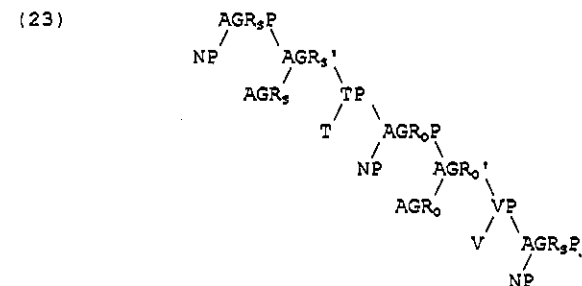
**1. Where do the Binding Conditions Apply?**

- (1) Which book that John<sub>i</sub> read did he<sub>i</sub> like
- (2) \*He<sub>i</sub> liked every book that John<sub>i</sub> read
- (3) \*I don't remember who thinks that he<sub>i</sub> read which book that John<sub>i</sub> likes
- (4) John said that Bill had seen HIM
- (5) John<sub>i</sub> wonders which picture of himself<sub>i</sub> Mary showed to Susan
- (6) \*John<sub>i</sub> wonders who showed which picture of himself<sub>i</sub> to Susan
- (7) There is a man in the room
- (8) A man is t in the room
- (9) There arrived two knights on each other's horses
- (10) two knights arrived t on each other's horses
- (11) I saw two men on each other's birthdays
- (12) "Such examples indicate that [overt] movement and movement in the LF-component have quite different effects with respect to the binding theory. This theory applies properly after syntactic movement, but each rule of the LF component converts S-structures to which the binding theory applies correctly to LF-representation to which it applies incorrectly." [Chomsky (1981,p.197)]
- (13) Some linguists seem to each other [t to have been given good job offers]
- (14) \*There seem to each other [t to have been some linguists given good job offers]
- (15) a Some defendant<sub>i</sub> seems to his<sub>i</sub> lawyer to have been at the scene  
b \*There seems to his<sub>i</sub> lawyer to have been some defendant<sub>i</sub> at the scene
- (16) A man is likely to be here
- (17) There is likely to be a man here
- (18) Many linguistics students aren't here
- (19) There aren't many linguistics students here
- (20) The associate of there always displays 'low' behavior, while an overtly moved NP displays 'high' behavior.

*Levels of Representation*

**2. More on Feature Movement and (Lack of) Binding**

- (21) a There is/\*are a man here  
b There are/\*is men here
- (22) a The DA proved [two men to have been at the scene] during each other's trials  
b \*The DA proved [there to have been two men at the scene] during each other's trials



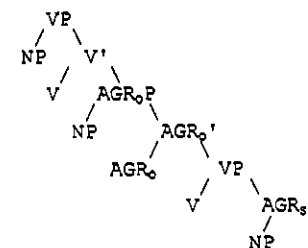
- (24) The ECM subject undergoes raising. The associate of there must then undergo raising of a quite different sort.

**3. Overt Raising to [Spec, Agr<sub>0</sub>]**

- (25) The DA proved [no suspect<sub>i</sub> to be at the scene of the crime] during his<sub>i</sub> trial
- (26) \*The DA proved [there to be no suspect<sub>i</sub> at the scene of the crime] during his<sub>i</sub> trial
- (27) The DA proved [noone to be at the scene] during any of the trials
- (28) \*The DA proved [there to be noone at the scene] during any of the trials
- (29) The version of expletive replacement espoused in Chomsky (1991) - adjunction to there, rather than substitution for it - potentially makes the necessary distinction between NPs with high behavior and associates of there. The latter will adjoin to there, hence arguably will not be in the appropriate position to c-command the anaphors, NPIs, etc.
- (30) There aren't many linguistics students here
- (31) Pictures of many students aren't here
- (32) Pictures of few students are here
- (33) There are few linguistics students here
- (34) Many linguistics students aren't here

- (35) On May's and Chomsky's theory of adjunction, when  $\alpha$  adjoins to  $\beta$ ,  $\beta$  becomes a segmented category, and  $\alpha$  c-commands anything  $\beta$  did prior to the adjunction.
- (36) All else equal, movement should never be of an entire syntactic category, but only of its formal features.
- (37) Some linguists seem to each other [t to have been given good job offers]
- (38) \*There seem to each other [t to have been some linguists given good job offers]
- (39)a No good linguistic theories seem to any philosophers [t to have been formulated]  
 b Some defendant<sub>i</sub> seems to his<sub>i</sub> lawyer [t to have been at the scene]
- (40)a \*There seem to any philosophers [t to have been no good linguistic theories formulated]  
 b \*There seems to his<sub>i</sub> lawyer [t to have been some defendant<sub>i</sub> at the scene]
- (41) On this kind of account, the elements of the theory of anaphora are not merely formal features.
- (42) "...the features adjoined to AgrO...have A-position properties, c-commanding and binding in the standard way." [Chomsky (1995a, p.272)]
- (43) Thus, for all purposes (except scope), feature movement is claimed to have the same consequences as NP movement.
- (44)a [INFL AN [FF (linguists)  $\alpha$ ]]  
 b [INFL FF (linguists) [AN  $\alpha$ ]]
- (45) "On reasonable assumptions, neither of these structures qualifies as a legitimate binding-theoretic configuration, with AN taking FF (linguists) as its antecedent." [Chomsky (1995a, pp.275-76)]
- (46)a [AGR<sub>0</sub> AN [FF (two men) [ $\beta$ ]]]  
 b [AGR<sub>0</sub> FF (two men) [AN  $\beta$ ]]
- (47) The accusative NP overtly raises to Spec of AGR<sub>0</sub> (with V raising to a still higher head position). The licensing is at LF, but is as if at S-structure, since the only relevant movement is overt. Covert movement, involving merely formal features, is incapable of creating new licensing configurations for anaphora etc.

(48)



## 4. Feature Movement and Control

- (49) (?)There arrived three men (last night) without [PRO] identifying themselves
- (50) \*I met three men (last night) without identifying themselves
- (51) Jan<sub>i</sub> opowiadał Marii<sub>j</sub> o swoim<sub>i,j</sub> ojcu  
 John telling Mary about self's father  
 (John was telling Mary about his/\*her father)
- (52) Jan<sub>i</sub> kazał Marii<sub>j</sub> [PRO]<sub>i,j</sub> napisać artykuł  
 John told Mary write article  
 (John told Mary to write an article)
- (53) Three men arrived (last night) without PRO identifying themselves
- (54) Without PRO identifying themselves, three men arrived
- (55)?\*Without identifying themselves, there arrived three men
- (56) Someone seems to be available without PRO seeming to be eager to get the job
- (57) \*There seems to be someone available without PRO seeming to be eager to get the job
- (58)?\*There arrived three men (last night) without PRO saying hello
- (59) ?The news upset John while reading the paper
- (60)?\*There arrived three packages without exploding
- (61) Sono entrati tre uomini senza identificarsi
- (62)(\*)Il est entré trois hommes sans s'annoncer
- (63) There arrived two knights on each other's horses
- (64) I saw two men on each other's birthdays
- (65) If, as I have argued, the configuration for this high binding is provided by overt raising to Spec of Agr<sub>0</sub>, failure of Control by a complement is even more mysterious.

## 5. Inherent Case as Structural

- (66) Is inherent Case 'structural'? Stjepanović (1996) argues that it is.
- (67) SC has many verbs with the lexical property of licensing Case other than accusative (hence presumably inherent) on their complements.
- (68)a 'vladati' (rule) and 'ovladati' (master) license instrumental  
 b 'pomoći' (help) licenses dative  
 c 'sjetiti' (remember) licenses genitive.
- (69) As in English, an accusative object (presumably structurally Case-marked) can bind into an adverbial.
- (70) Slikao je Samprasa i Ivanišević a za vrijeme meča jednog protiv drugog  
 'He photographed Sampras and Ivanisevic (Acc.) during each other's matches'
- (71) Significantly, a dative object has the same binding potential:
- (72) Pomogao je Samprasu i Ivaniševiću za vrijeme meča jednog protiv drugog  
 'He helped Sampras and Ivanisevic (Dat.) during each other's matches'
- (73) Similarly a dative quantifier, just like an accusative quantifier, can successfully bind a pronoun within an adverbial, thus obviating WCO:
- (74) Ona kritikuje svakoga bez njegovog znanja  
 'She criticizes everyone (Acc.) without his knowing'
- (75) Ona pomogne svakome bez njegovog znanja  
 'She helps everyone (Dat.) without his knowing'
- (76) With the possible exception of one rather unclear control example, an overwhelmingly consistent pattern has emerged: scope and binding go together, and both are 'low' except when there is overt raising.
- (77) The analysis, slightly modifying Chomsky (1995a), is that covert raising affects only formal features, but that scope (Chomsky's proposal) and binding (my extension) involve more than formal features.

## 6. A Puzzling Divorce of Binding and Scope

- (78) Yatsushiro (1996) shows that, unexpectedly, scope and binding diverge, and in just the way that Chomsky claims (evidently incorrectly) that they do in English.
- (79) Yatsushiro provides strong arguments that in Japanese unaccusative constructions, the complement of the unaccusative verb remains in its underlying position in overt syntax.

- (80) It is then not surprising that the complement has 'low' scope (even if it raises in LF, since that raising would be just of formal features).
- (81) Dokoka-ni daremo-ga ita  
 somewhere-Loc everyone-Nom be-past  
 'Everyone was somewhere'  
 somewhere>everyone  
 \*everyone>somewhere
- (82) What is not at all expected is that the complement can bind into the locative, but that is just what happens:
- (83) [Otagai-no heya]-ni [Uli to Susi]-ga ita  
 each other-gen rooms-Loc Uli and Susi-Nom be-past  
 'Uli and Susi were in each other's rooms'

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1. General Properties of Pseudogapping

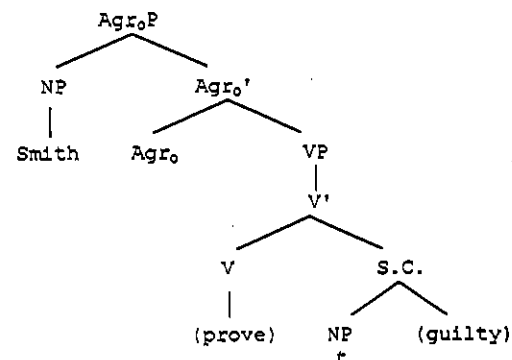
- (1) John will select me, and Bill will you
- (2) Mary hasn't dated Bill, but she has  $\emptyset$  Harry [Sag (1976)]
- (3) This ellipsis phenomenon displays some properties of Gapping (there is a right side remnant) alongside some properties of VP-ellipsis (there is a finite auxiliary).
- (4)a Mary hasn't dated Bill, but Susan has  
b \*Mary hasn't dated Bill, but Susan, Harry
- (5)a (\*)Bill ate the peaches and Harry did the grapes  
b (\*)Bill ate the peaches and Harry will the grapes [Jackendoff (1971)]
- (6) (\*)John reviewed the play and Mary did the book [Lappin (1991)]
- (7)a (?)If you don't believe me, you will  $\emptyset$  the weatherman  
b (?)I rolled up a newspaper, and Lynn did  $\emptyset$  a magazine  
c (?)Kathy likes astronomy, but she doesn't  $\emptyset$  meteorology [Levin (1978)]
- (8)a \*You probably just feel relieved, but I do  $\emptyset$  jubilant  
b \*Rona sounded annoyed, and Sue did  $\emptyset$  frustrated  
c These leeks taste terrible. \*Your steak will  $\emptyset$  better. [Levin (1978)]

2. Towards an Analysis

- (9) More than just the verb can be deleted:
- (10) The DA proved Jones guilty and the Assistant DA will ~~prove Smith guilty~~
- (11) ?John gave Bill a lot of money, and Mary will ~~give Susan  $\emptyset$  lot of money~~
- (12) If we reject an ellipsis rule affecting a discontinuous portion of the structure, we will want to consider the possibility that Pseudogapping constructions result from VP ellipsis, with the remnant having moved out of the VP by some rule.
- (13) Jayaseelan (1990) presents just such an analysis, with the movement rule being Heavy NP Shift.

- (14) ?John gave Bill a lot of money, and Mary will ~~give Susan  $\emptyset$  lot of money~~
- (15) \*John gave  $\bar{t}$  a lot of money [the fund for the preservation of VOS languages]
- (16) \*John gave Bill a lot of money, and Mary will ~~give Bill a lot of advice~~
- (17) John gave Bill  $\bar{t}$  yesterday [more money than he had ever seen]
- (18) In the acceptable examples seen so far, the remnant is accusative: either the direct object in a simple transitive construction, or the first object in a double object construction, or an exceptionally Case marked subject of a complement. This suggests raising to Spec of Agr<sub>0</sub> as the alternative to HNPS. Later, I will consider the driving force for the raising (and conclude that not just accusative NP can raise).
- (19) The DA proved Jones guilty and the Assistant DA will ~~prove Smith guilty~~
- (20) If LF copying can peer into the LF derivation (a possibility discussed by Hornstein (1994)), then potentially there is a stage where the accusative NP has raised but the V has not yet raised:

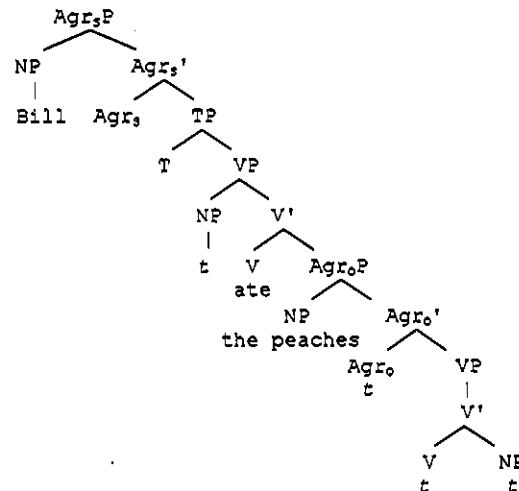
(21)



- (22) Jones was arrested  $t_{Jones}$  and Smith was ~~arrested  $t_{Smith}$~~  too
- (23) You have to sign onto it [the printer] like you do  $\emptyset$  the terminal [Levin (1979/1986)]
- (24) The best cases of objects of prepositions as remnants "...are likely those whose preposition forms a constituent with the verb rather than the following NP."
- (25) The terminal must be signed onto
- (26) \*I signed onto yesterday the terminal in the computer lab

- (27) a ?John spoke to Bill and Mary should Susan  
       b Bill was spoken to by John
- (28) a ?John talked about linguistics and Mary will philosophy  
       b Linguistics was talked about by John
- (29) a \*John swam beside Bill and Mary did Susan  
       b \*Bill was swum beside by John
- (30) a \*John stood near Bill and Mary should Susan  
       b \*Bill was stood near by John
- (31) a John took advantage of Bill and Mary will Susan  
       b Bill was taken advantage of by John
- (32) a \*John spoke to yesterday the man he met at the beach  
       b \*John talked about yesterday the man he met at the beach  
       c \*John took advantage of yesterday the man he met at the beach  
       d \*John swam beside yesterday the man he met at the beach  
       e \*John stood near yesterday the man he met at the beach
- (33) A technical problem: on the theory of LF movement advocated by Chomsky (1995a), and further defended by Lasnik (1995a, b, c), the necessary structure for LF copying would not be created. On that theory, since movement is invariably triggered by the need for formal features to be checked, all else equal only formal features move. When movement is overt (triggered by a strong feature), PF requirements demand that an entire constituent move, via a sort of pied piping. However, when movement is covert, PF requirements are irrelevant so economy dictates that movement *not* be of the entire constituent, but just of the formal features. It is very difficult to see how covert raising of (the formal features of) the remnant NP to Spec of Agr<sub>s</sub> could possibly create the appropriate ellipsis licensing configuration.
- (34) Could raising to Spec of Agr<sub>s</sub> be overt in English? Koizumi (1993;1995) argues that it is.
- (35) \*Bill the peaches ate
- (36) If the complement remnant raises overtly, then the V of which it is a complement must also raise overtly to a still higher position, given the word order of English. Koizumi's specific proposal, which he calls the split VP hypothesis, is that V raises to a higher 'shell' V position, as shown in (41):

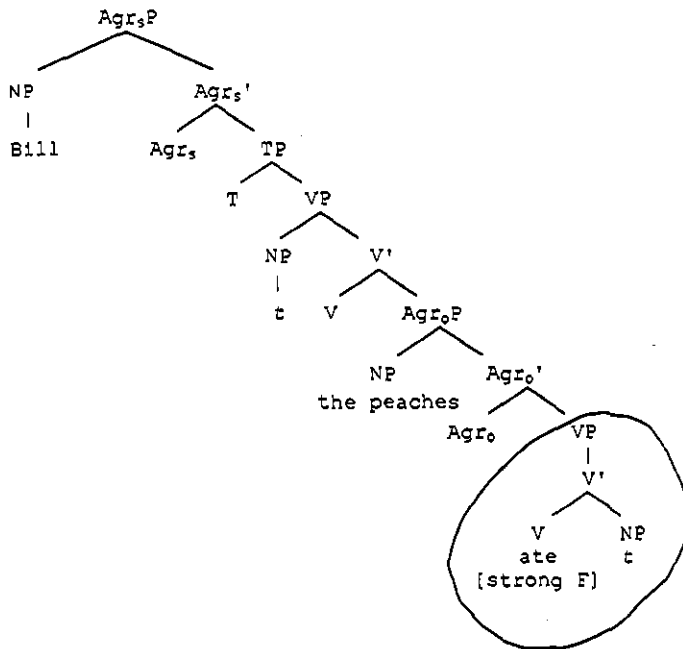
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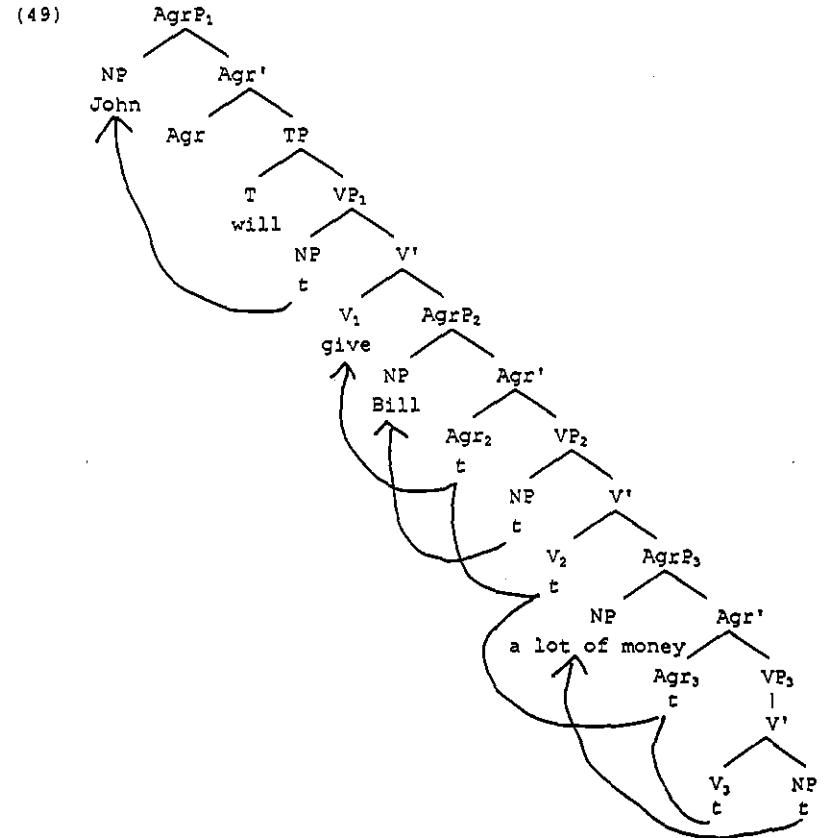
- (38) Note that if the licensing configuration is created prior to the LF/PF split, then ellipsis could just as easily be a PF deletion phenomenon, the sort of analysis of ellipsis consistently advocated by Chomsky, as in Chomsky (1995a,b), or, much earlier, in a 1971 lecture cited by Wasow (1972), where, according to Wasow, Chomsky "suggests that VP deletion and Sluicing can be formulated as very late rules which delete unstressed strings."
- (39) In Lasnik (1995a, c) I offer several arguments for a Koizumi-type approach (summarized in other talks in this Workshop), and I suggest that the NP raising is driven by an 'EPP' feature that resides in Agr<sub>o</sub>. Further, following Chomsky, I assume that Agr<sub>o</sub> and Agr<sub>s</sub> are really the same category, the distinction merely mnemonic. Overt object shift and overt subject shift are then the same phenomenon: satisfaction of the EPP.
- (40) ?John spoke to Bill and Mary should to Susan
- (41) ?John talked about linguistics and Mary will about philosophy
- (42) ?John spoke to the women during each other's presentations, and Mary will the men
- (43) \*John spoke to the women during each other's presentations, and Mary will to the men
- (44) Mary hasn't dated Bill, but she has Harry ~~t<sub>i</sub> dated t<sub>i</sub>~~
- (45) \*She has Harry dated

(46) Suppose that the strong feature driving V raising is a feature of the V that raises (rather than of the position it raises to). (I suggest that it is the  $\theta$ -feature that will be checked against the subject.) Now suppose, following Chomsky (1993) but contra Chomsky (1995c), that an unchecked strong feature is an ill-formed PF object. Then we correctly derive the result that deletion of (a category containing) an item with an unchecked strong feature salvages the derivation. The portion of the structure that would have caused a PF crash is literally gone at that level:

(47) ...Bill did the peaches



(48) John will give Bill a lot of money



(50) ?Mary gave Susan a lot of money, and John will ~~give Bill a lot of money~~

(51) \*Mary gave Bill a lot of money, and John will ~~give Bill~~ a lot of advice

(52) If the first object begins higher than the second, relativized minimality will guarantee that the first object remains higher. The consequence of this is that there could not be a VP (or any other constituent) to delete which includes the first object but excludes the second.

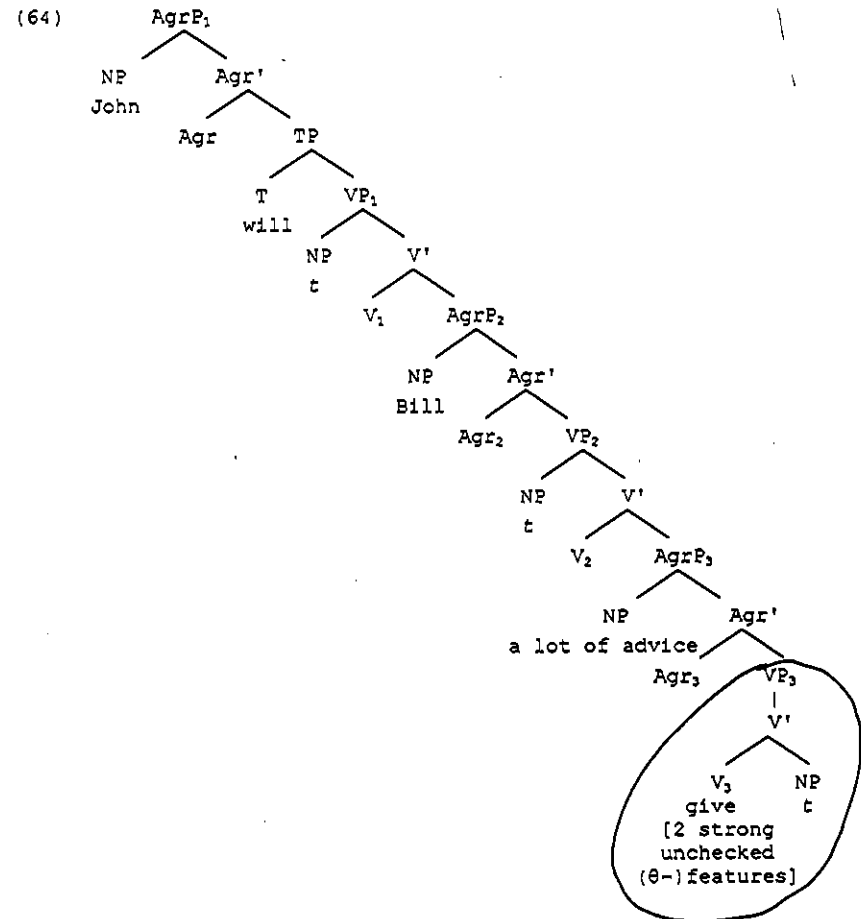
(53) ?John gave a lot of money to Bill, and Mary will ~~give a lot of advice to Bill~~

(54) ?\*John gave a lot of money to Bill, and Mary will ~~give a lot of money to Susan~~

- (55) \*Mary gave Susan a lot of money, and John will ~~give~~ Bill a lot of advice

3. A Speculation on the Marginal Character of Pseudogapping

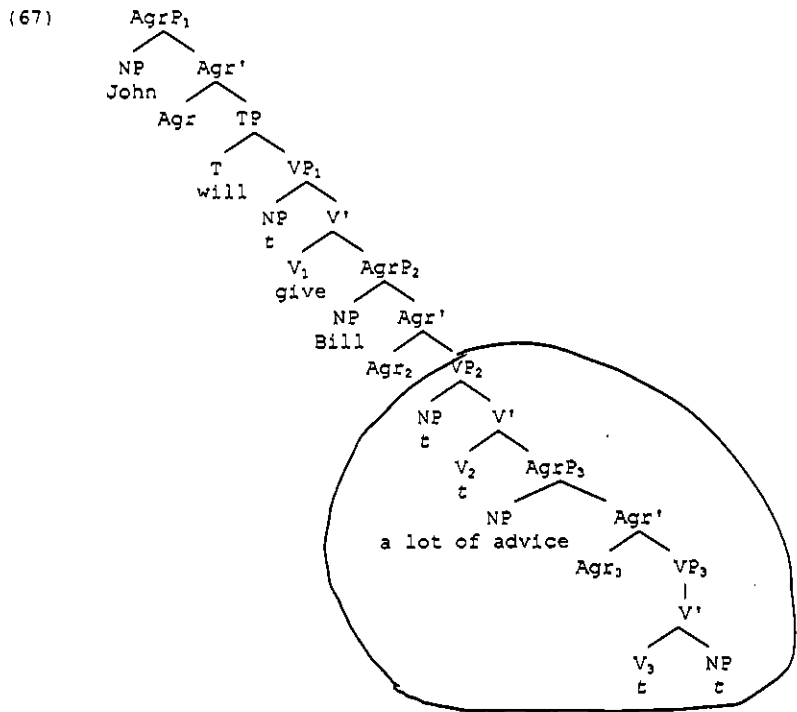
- (56) Even the 'good' Pseudogapping examples are somewhat degraded. That might be something to be explained.
- (57) My PF deletion analysis, coupled with the Chomsky (1993) position that a strong feature not overtly checked causes a PF crash, explains why Pseudogapping is possible at all. The unchecked strong feature of the V that fails to raise is remedied by deletion of the VP containing that V.
- (58) Chomsky (1995c), though, replaced the PF crash analysis of strong features with an LF analysis, proposing that unless a strong feature "is checked before Spell-Out it will cause the derivation to crash at LF..."
- (59) Speculation: What if the proposals of Chomsky (1993) and Chomsky (1995c) are both correct? Then a strong feature that is not checked in overt syntax will cause the derivation to crash at both PF and LF. A standard EPP violation will fall under this analysis, as will a sentence in which a verb fails to raise overtly, yet survives to the level of PF.
- (60) When a constituent containing the verb is deleted (as in Pseudogapping), the PF violation is avoided, but the LF violation persists. What do we expect the status of such a violation to be?
- (61) (\*) You read what
- (62) \*I wonder you read what
- (63) \*Mary gave Susan a lot of money, and John will ~~give~~ Bill a lot of advice



4. Another Relativized Minimality Effect?

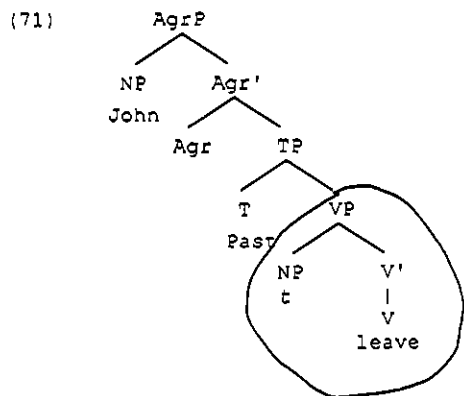
- (65) \*Mary gave Susan a lot of advice, and John will give Bill a ~~lot of advice~~
- (66) ?????



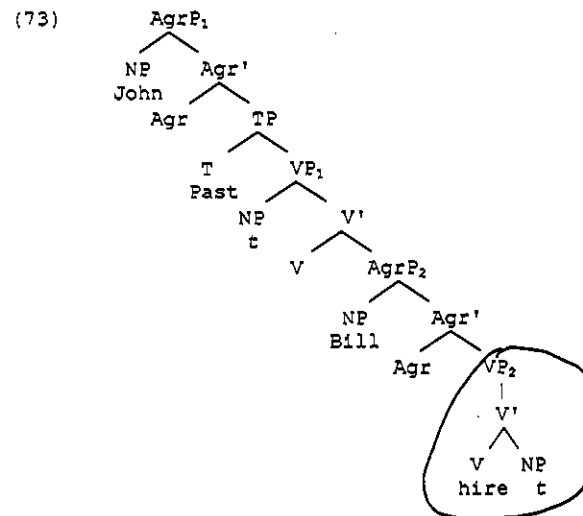


- (68) The VP ellipsis site must be governed by an appropriate head. Zagana (1982;1988)
- (69) The licensing head is a particular sort of Infl, with tense being the crucial feature. Martin (1992;1996)

(70) Mary left, and John did too



(72) Mary hired Susan, and John did Bill



- (74) In both (65) and (73), two maximal projections, VP and AgrP, intervene between Past and the target VP, VP<sub>2</sub>.
- (75) There is one potentially relevant difference: in the more-or-less acceptable (73) the intervening V head is empty, while in the unacceptable (65) the intervening V is the lexical verb give, which has raised from the lowest VP. This is suggestive of relativized minimality.
- (76) Suppose the head licensing VP ellipsis does so by attracting a feature of the head of the VP. As a consequence of having 'lost' this feature, the VP would now be PF defective unless it deleted. In (65), a feature of the raised lexical V has been attracted, but that V has not been deleted, resulting in a PF crash.
- (77) In the reasonably acceptable Pseudogapping structure (73), even though hire is geometrically rather remote from the licensing Tense, there is no nearer V with a feature for Tense to attract, so, in the spirit of relativized minimality, it can attract a structurally distant feature.

5. A Brief Reconsideration of Heavy NP Shift

- (78) ?John gave Bill a lot of money, and Mary will give Susan ~~a lot of money~~
- (79) \*John gave t a lot of money [the fund for the preservation of VOS languages]



On Pseudogapping

- (94) \*John saw Bill, fortunately, and Mary did ~~see~~ Susan,  
fortunately
- (95) \*John saw Bill, fortunately, and Mary did ~~see Bill,~~  
fortunately, (too)
- (96) Correspondingly, HNPS around such high adverbs seems much  
less available than around lower ones:
- (97) John saw yesterday his old friend from Philadelphia
- (98)?\*John saw fortunately his old friend from Philadelphia

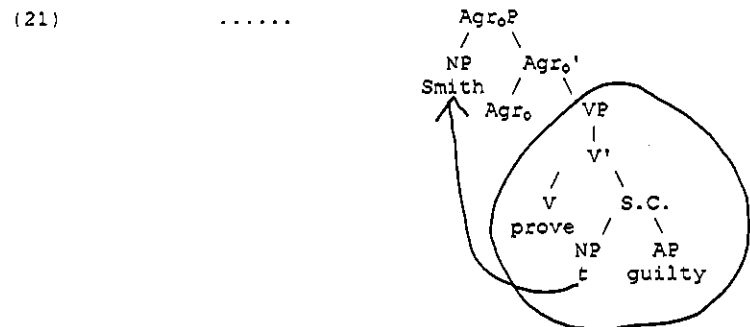
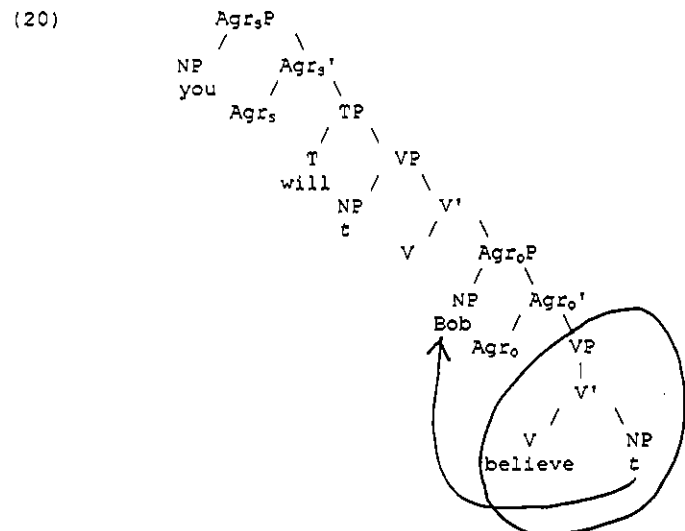
On Feature Strength:  
Three Minimalist Approaches to Overt Movement

Feature Strength

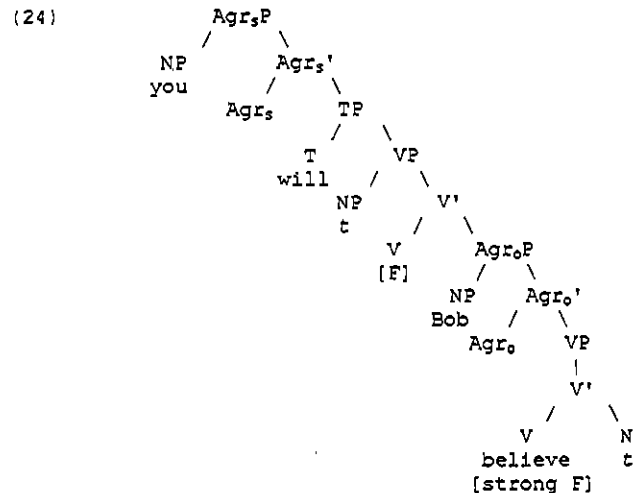
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- (1) Given an economy condition like Procrastinate, we would expect all movement to be covert. When movement is overt, it must have been forced to operate 'early' by some special requirement. Chomsky (1993;1994;1995) codes this requirement into 'strong features'.
- (2)A A strong feature that is not checked in overt syntax causes a derivation to crash at PF. Chomsky (1993)  
 B A strong feature that is not checked (and eliminated) in overt syntax causes a derivation to crash at LF. Chomsky (1994/1995c)  
 C A strong feature must be eliminated (almost) immediately upon its introduction into the phrase marker. Chomsky (1995a)
- (3) Justification for (A): "...the position of Spell-Out in the derivation is determined by either PF or LF properties, these being the only levels, on minimalist assumptions. Furthermore, parametric differences must be reduced to morphological properties if the Minimalist Program is framed in the terms so far assumed. ... we expect that at the LF level there will be no relevant difference between languages with phrases overtly raised or in situ (e.g., wh-phrases or verbs). Hence, we are led to seek morphological properties that are reflected at PF." Chomsky (1993, p.192)
- (4) Technological details: "...'strong' features are visible at PF and 'weak' features invisible at PF. These features are not legitimate objects at PF; they are not proper components of phonetic matrices. Therefore, if a strong feature remains after Spell-Out, the derivation crashes... Alternatively, weak features are deleted in the PF component so that PF rules can apply to the phonological matrix that remains; strong features are not deleted so that PF rules do not apply, causing the derivation to crash at PF." Chomsky (1993, p.198)
- (5) Justification for (B) (apparently empirical rather than conceptual):
- (6) \*John read what?
- (7)a "...Spell-Out can apply anywhere, the derivation crashing if a 'wrong choice' is made...If the phonological component adds a lexical item at the root, it will introduce semantic features, and the derivation will crash at PF. If the covert component does the same, it will introduce phonological features, and the derivation will therefore crash at LF...
- b Suppose that root C (complementizer) has a strong feature that requires overt wh-movement. We now want to say that unless this feature is checked before Spell-Out it will cause the derivation to crash at LF to avoid the possibility of accessing C after Spell-Out in the covert component." Chomsky (1994, p.60)
- (8) Technology: "Slightly adjusting the account in Chomsky (1993), we now say that a checked strong feature will be stripped away by Spell-Out, but is otherwise ineliminable." Chomsky (1994, p.60)
- (9) Spell-Out: C [strong Q] John read what \*LF
- (10) Spell-Out: John read what  
 LF: C [strong Q] John read what \*LF
- (11) Justification for (C) (contra (A)): "...formulation of strength in terms of PF convergence is a restatement of the basic property, not a true explanation. In fact, there seems to be no way to improve upon the bare statement of the properties of strength. Suppose, then, that we put an end to evasion and simply define a strong feature as one that a derivation 'cannot tolerate': a derivation D-E is canceled if E contains a strong feature..." Chomsky (1995a, p.233)
- (12) Technology: "A strong feature...triggers a rule that eliminates it: [strength] is associated with a pair of operations, one that introduces it into the derivation...a second that (quickly) eliminates it." Chomsky (1995a, p.233)
- (13) Ellipsis provides potential evidence for (A), if it is, as suggested by Chomsky and Lasnik (1993), a PF deletion process.
- (14) Two instances: first Pseudogapping then Sluicing.
- (15)a If you don't believe me, you will  $\emptyset$  the weatherman  
 b I rolled up a newspaper, and Lynn did  $\emptyset$  a magazine  
 c Kathy likes astronomy, but she doesn't  $\emptyset$  meteorology Levin (1978)
- (16)a The DA proved Jones guilty and the Assistant DA will ~~prove Smith guilty~~  
 b ?John gave Bill a lot of money, and Mary will ~~give Susan a lot of money~~
- (17) You might not believe me but you will Bob
- (18) NP-raising to Spec of Agr<sub>o</sub> ('Object Shift') is overt in English. [Koizumi (1993;1995), developing ideas of Johnson (1991)]

(19) Pseudogapping as overt raising to Spec of Agr<sub>0</sub> followed by deletion of VP. [Lasnik (1995c)]



(22) \*You will Bob believe  
 (23) \*The Assistant DA will Smith prove guilty

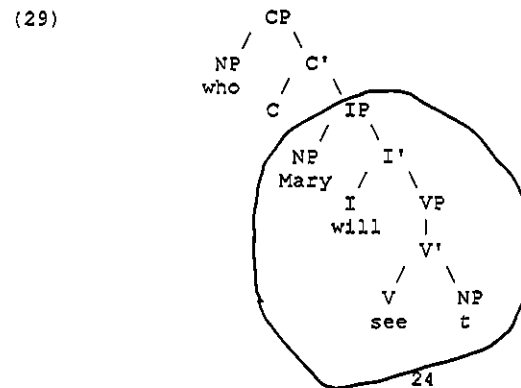


(25) Suppose the strong feature driving V-raising resides in the lexical V rather than in the higher 'shell' V. The strong feature of the verb must either be checked by overt raising to the shell V or be contained in an ellipsis site. PF deletion could eliminate the unchecked strong feature.

(26) Sluicing - WH-Movement followed by deletion of IP (abstracting away from 'split Infl' details). [Saito and Murasugi (1990), Lobeck (1990)]

(27) Speaker A: Mary will see someone.  
 Speaker B: I wonder who ~~Mary will see~~.

(28) Speaker A: Mary will see someone.  
 Speaker B: Who ~~Mary will see~~?



- (30) \*Who Mary will see?  
 (31) Who will Mary see?
- (32) Suppose that in a matrix interrogative, it is Infl that has a strong feature, rather than C. The strong feature of Infl must **either** be checked by overt raising to the interrogative C or be contained in an ellipsis site. PF deletion could eliminate the unchecked strong feature.
- (33) Infl-raising to C is uncontroversially overt in normal matrix interrogatives. NP-raising to Spec of Agr<sub>o</sub>, on the other hand, is standardly assumed to be covert in English. Lasnik (1995a,b), based on Lasnik and Saito (1991) [see also Postal (1974) and Wyngaerd (1989)] and den Dikken (1995), argues that such movement is, indeed, overt.
- (34)a There is a man here  
 b There are men here
- (35)a Many linguistics students aren't here  
 b There aren't many linguistics students here
- (36)a Some linguists seem to each other [t to have been given good job offers]  
 b \*There seem to each other [t to have been some linguists given good job offers]
- (37)a No good linguistic theories seem to any philosophers [t to have been formulated]  
 b \*There seem to any philosophers [t to have been no good linguistic theories formulated]
- (38)a Some defendant<sub>i</sub> seems to his<sub>i</sub> lawyer [t to have been at the scene]  
 b \*There seems to his<sub>i</sub> lawyer [t to have been some defendant<sub>i</sub> at the scene]
- (39) "The operation Move...seeks to raise just F." Chomsky (1995a)
- (40) When movement is covert, hence only of formal features, the referential and quantificational properties needed to create new binding and scope configurations are left behind, so no such new configurations are created. Lasnik (1995a,b;1997) (contra Chomsky (1995a), at least in part)
- (41) The DA questioned two men during each other's trials  
 (42)a The DA proved [two men to have been at the scene] during each other's trials  
 b \*The DA proved [there to have been two men at the scene] during each other's trials

- (43) The DA questioned noone during any of the trials  
 (44)a The DA proved [noone to be at the scene] during any of the trials  
 b \*The DA proved [there to be noone at the scene] during any of the trials
- (45) The DA questioned no suspect<sub>i</sub> during his<sub>i</sub> trial  
 (46)a The DA proved [no suspect<sub>i</sub> to be at the scene of the crime] during his<sub>i</sub> trial  
 b \*The DA proved [there to be no suspect<sub>i</sub> at the scene of the crime] during his<sub>i</sub> trial
- (47) One further argument: Given the feature movement theory of covert movement, if an instance of movement creates a new ellipsis configuration, that movement must be overt. (This is true whether ellipsis is PF deletion or LF copying.)
- (48) Possible arguments against the PF approach to strong features (2A):
- (49)a 'Look-ahead' is needed. At a given point in the overt portion of a derivation, it is necessary to inspect the PF representation to see whether Procrastinate can be evaded. [The LF approach (2B) shares this problem.]  
 b The derivation of \*John read what in (9-10) above, with covert insertion of C with a strong feature, won't be blocked.
- (50) (2C) above, repeated here, is designed to eliminate the Look-ahead problem.
- (51) A strong feature must be eliminated (almost) immediately upon its introduction into the phrase marker. Chomsky (1995a)
- (52) "We...virtually derive the conclusion that a strong feature triggers an overt operation to eliminate it by checking. This conclusion follows with a single exception: covert merger (at the root) of a lexical item that has a strong feature but no phonological features..." Chomsky (1995a, p.233)
- (53) (54) is thus still problematic.
- (54) \*John read what
- (55) To prevent this, covert insertion of strong features must be barred. Chomsky proposes to do this with the economy principle (56):
- (56)  $\alpha$  enters the numeration only if it has an effect on output.
- (57) "Under [(56)], the reference set [for economy comparisons] is still determined by the numeration, but output conditions enter into determination of the numeration itself..." Chomsky (1995a, p.294)

- (58) Look-ahead?
- (59) "With regard to the PF level, *effect* can be defined in terms of literal identity... $\alpha$  is selected only if it changes the phonetic form.
- (60) At the LF level the condition is perhaps slightly weaker, allowing a narrow and readily computable form of logical equivalence to be interpreted as identity."
- (61) Clearly, covert insertion of a C will have no phonetic effect. Will it have an effect at the LF output?
- (62) If it will, then covert insertion is allowed, and we generate (54) with structure (63):
- (63) C [<sub>IP</sub> John read what]
- (64) If it will not, then we generate (54) with structure (65):
- (65) [<sub>IP</sub> John read what]
- (66) (65) violates no morphological requirements, and, if C has no effect on output, then it should mean exactly *What did John read?*
- (67) "...the interface representations ( $\pi, \lambda$ ) are virtually identical whether the operation [covert insertion of strong features] takes place or not. The PF representations are in fact identical, and the LF ones differ only trivially in form, and not at all in interpretation." Chomsky (1995a, p.294)
- (68) Chomsky (1995a) proposes that strength is always a property of an 'attracting' head, never a property of the item that moves. The above analyses of Pseudogapping and Sluicing are incompatible with that proposal.
- (69) There is a possible alternative analysis, based on the Chomsky (1995a) theory of pied-piping, particularly as explicated by Ochi (1997).
- (70) "For the most part - perhaps completely - it is properties of the phonological component that require pied-piping. Isolated features and other scattered parts of words may not be subject to its rules, in which case the derivation is canceled; or the derivation might proceed to PF with elements that are 'unpronounceable,' violating FI." Chomsky (1995a, p.262)
- (71) " Just how broadly considerations of PF convergence might extend is unclear, pending better understanding of morphology and the internal structure of phrases. Note that such considerations could permit raising without pied-piping even overtly, depending on morphological structure..." (Chomsky 1995a, p.264)

- (72) Matrix interrogative C might then contain the strong feature, with the matching feature of Infl raising overtly to check it. This leaves behind a phonologically defective Infl, which will cause a PF crash unless either pied-piping or deletion of a category containing that Infl (Sluicing) takes place.
- (73) Similarly for the feature driving overt V-raising: it could be a strong feature of the higher V. Once the matching feature of the lower lexical V is 'attracted', the lower V becomes defective. A PF crash will be avoided if either pied-piping or deletion of a category containing the lower V (VP Deletion = Pseudogapping in the relevant instances) takes place.
- (74) However, there is independent evidence for strong features residing in moving categories.
- (75) For example, Bošković (1997a) shows that in Serbo-Croatian, WH-phrases have a strong focus feature: they all have to move overtly.
- (76)a Ko šta gdje kupuje?  
 who what where buys "Who buys what where?"  
 \*Ko kupuje šta gdje?  
 \*Ko šta kupuje gdje?  
 \*Ko gdje kupuje šta?

A Gap in an Ellipsis Paradigm:  
Theoretical Implications?

Gap in an Ellipsis Paradigm

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1. A Gap in a Paradigm

- (1) John slept, and Mary will too  
(2)a \*John slept, and Mary will ~~slept~~ too  
b John slept, and Mary will ~~sleep~~ too  
(3) ?John was sleeping, and Mary will too  
(4)a \*John was sleeping, and Mary will ~~sleeping~~ too  
b John was sleeping, and Mary will ~~sleep~~ too  
(5) John has slept, and Mary will too  
(6)a \*John has slept, and Mary will ~~slept~~ too  
b John has slept, and Mary will ~~sleep~~ too  
(7) **Hypothesis 1:** Any form of a verb V can be 'deleted under identity' with any form of V.  
(8) \*John was here, and Mary will too [See Warner (1986)]  
(9)a \*John was here and Mary will ~~was~~ here too  
b John was here and Mary will ~~be~~ here too  
(10) **Hypothesis 2** (merely a descriptive generalization): A form of a verb V other than be or 'auxiliary' have can be 'deleted under identity' with any form of V. A form of be or auxiliary have can only be deleted under identity with the very same form.  
(11) **Hypothesis 3:** A form of a verb V can only be deleted under identity with the very same form. Forms of be and auxiliary have (finite ones, at least) are introduced into syntactic structures already fully inflected. Forms of 'main' verbs are created out of lexically introduced bare forms and independent affixes.  
(12) John [Af] sleep, and Mary will ~~sleep~~ too

2. Motivation for the Hybrid Morphological Account

- (13) Lasnik (1995d) proposes this morphological difference between main and auxiliary verbs in English to account for the fact that finite auxiliaries show the full range of raising effects (like all verbs in French), while main verbs in English show none of them. The proposal is that the English finite auxiliaries (and all finite verbs in French) are lexically introduced with inflectional features which must be checked against a functional head (or heads). English main verbs are lexically uninflected, so they don't raise.

- (14)a \*John not left  
b \*John left not  
(15) Just as in Chomsky (1955) and Chomsky (1957), the process associating the finite affix with the bare verb ('Affix Hopping') requires adjacency.  
(16) The strictly lexicalist theory of Chomsky (1993) in which all verbs (in fact all lexical items) are introduced fully inflected does not account for (14).  
(17)a Strong lexicalism: verbs are pulled from the lexicon fully inflected.  
b There is no affix hopping.  
c The inflected V raises to Agr (and T) to 'check' the features it already has. This checking can, in principle, take place anywhere in a derivation on the path to LF.  
d Once a feature of Agr has done its checking work, it disappears.  
(18)a In French, the V-features of Agr (i.e., those that check features of a V) are strong.  
b In English, the V-features of Agr are weak.  
(19)a If V raises to Agr overtly, the V-features of Agr check the features of the V and disappear. If V delays raising until LF, the V-features of Agr survive into PF.  
b V-features are not legitimate PF objects.  
c Strong features are visible at PF; weak features are not. Surviving strong features cause the derivation to 'crash' at PF.  
d This forces overt V-raising in French.  
(20) In English, delaying the raising until LF does not result in an ill-formed PF object, so such a derivation is possible. What makes it necessary is:  
(21) 'Procrastinate': Whenever possible, delay an operation until LF.  
(22) Why do have and be raise overtly?  
(23) Have and be are semantically vacuous, hence not visible to LF operations. (Chomsky does not discuss modals.) Thus, if they have not raised overtly, they will not be able to raise at all. Their unchecked features will cause the LF to crash.  
(24) \*John not left



- (25) \*John left not  
 (26) One or the other of these should be allowed. If something rules out (24), then (25) should, as a consequence, be permitted, since Procrastinate crucially only chooses among convergent derivations.

### 3. An Alternative Treatment of the Gap?

- (27) Given that finite forms of be raise, while finite forms of main verbs do not, could it be that, for some reason, a trace can't serve as (part of) an antecedent for ellipsis? This possibility was considered, and rejected, in Lasnik (1995d).
- (28) a Linguistics, I like t, and you should ~~like linguistics too~~  
 b?Someone will be t in the office. Yes there will ~~be someone in the office.~~  
 c That this approach will fail is likely t. No it isn't ~~likely that this approach will fail.~~
- (29) " [<sub>VP</sub> [<sub>V</sub> e] X ] cannot antecede VP-ellipsis." (Roberts (n.d.); Roberts (1998))
- (30) "...a trace of verb movement cannot serve as part of a VPE antecedent." Potsdam (1996)
- (31) A number of languages with overt V raising to I nonetheless allow VP ellipsis, with the effect that everything in the VP except the V is deleted. Doron (1990) shows this for Hebrew:
- (32) Q: Salaxt et ha-yeladim le- beit-ha-sefer  
 you-sent Acc the kids to school  
 "Did you send the kids to school?"  
 A: Salaxti  
 I sent  
 "I did"
- (33) Martins (1994) shows the same thing for Portuguese and McCloskey (1990) does for Irish:
- (34) A Martas deu um livro ao João? Sim, deu.  
 the Martha gave a book to- the John yes gave  
 "Did Martha give a book to John? Yes, she did."
- (35) Q: Ar chuir tú isteach air  
 INTERCOMP put [PAST] you in on it  
 "Did you apply for it?"  
 A: Chuir  
 put [PAST]  
 "Yes."
- (36) [<sub>VP</sub> [<sub>V</sub> e] X ] cannot antecede VP-ellipsis of [<sub>VP</sub> [V ] X ].

- (37) "...a raised V has fewer features than a non-raised V, assuming that the features that cause raising are not copied (this has to be assumed in a minimalist framework or the raising operation would not eliminate features and so would have no motivation, and so would be impossible given the general last-resort nature of movement)." Roberts (n.d.)

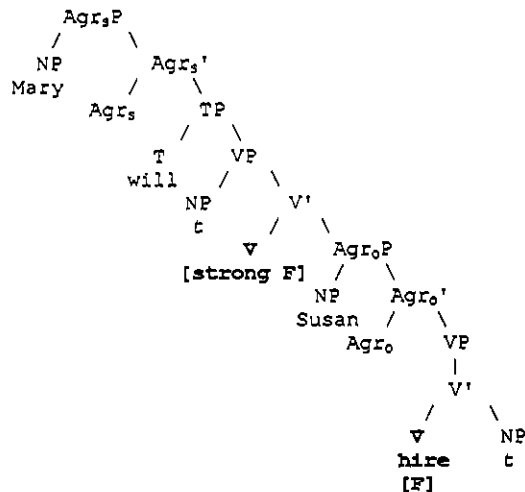
### 4. Problems for the Alternative

- (38) A candidate for a VP headed by verb trace anteceding deletion of a VP headed by a lexical verb:  
 Pseudogapping as overt NP raising to Spec of Agr<sub>o</sub> followed by VP ellipsis. (Lasnik (1995c), based on the proposal of Koizumi (1993), following Johnson (1991), that 'object shift' is overt in English)
- (39) a John hired Bill and Mary will Susan  
 b John [<sub>VP</sub> hired [<sub>AGR</sub> Bill [<sub>VP</sub> t ]]] and Mary will [<sub>AGR</sub> Susan [<sub>VP</sub> hire t ]]
- (40) Crucially, Pseudogapping is not just deletion of the verb:  
 (41) The DA proved Jones guilty and the Assistant DA will ~~prove Smith guilty~~  
 (42) ?John gave Bill a lot of money, and Mary will ~~give Susan a lot of money~~
- (43) If (36) is correct, it should presumably generalize to all heads, not be limited to V and trace of V:  
 (44) [<sub>YP</sub> [Y e] X ] cannot antecede YP-ellipsis of [<sub>YP</sub> [Y ] X ].
- (45) Sluicing (Ross (1969)), now standardly analyzed as IP ellipsis (Lobeck (1990) and Saito and Murasugi (1990)), provides another potential counter-example.
- (46) Speaker A: Mary will see someone  
 Speaker B: Tell me who ~~Mary will see~~
- (47) Speaker A: Mary will see someone  
 Speaker B: Who ~~Mary will see~~
- (48) Speaker A: Never will [<sub>IP</sub> Harry t go to a linguistics lecture again]  
 Speaker B: Tell me why [<sub>IP</sub> Harry will never go to a ~~linguistics lecture again~~]
- (49) Speaker A: Never will [<sub>IP</sub> Harry t go to a linguistics lecture again]  
 Speaker B: Why [<sub>IP</sub> Harry will never go to a ~~linguistics lecture again~~]

- (50) Speaker A: Never will [<sub>TP</sub> Susan t understand some linguists]  
 Speaker B: Tell me which linguists [<sub>TP</sub> ~~Susan will never understand~~]
- (51) Speaker A: Never will [<sub>TP</sub> Susan t understand some linguists]  
 Speaker B: Which linguists [<sub>TP</sub> ~~Susan will never understand~~]

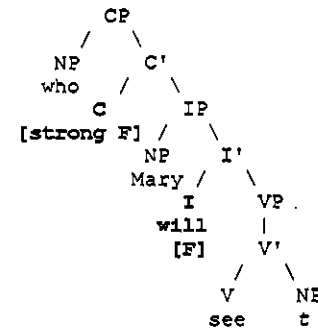
5. Why Isn't Roberts' Line of Reasoning Valid?

- (52) Given that a raised X<sup>0</sup> has had a feature (or set of features) checked and deleted, why can it antecede the deletion of an XP with its head in situ (as in Pseudogapping and Sluicing)?
- (53) An ultimately related question: Given that NP raises but V doesn't raise in the Pseudogapping construction, why must V raise in corresponding non-elliptical version?
- (54) \*Mary will Susan hire
- (55) A parallel question: Given that Infl doesn't raise to Comp in the Sluicing construction, why must Infl raise in the corresponding matrix non-elliptical version?
- (56) \*Which linguists Susan will never understand
- (57) Overt movement is driven by a 'strong feature' of a head, which attracts a matching feature within the complement of that head. All movement, whether covert or overt, is fundamentally feature movement. [Chomsky (1995a)]
- (58)



- (59) "For the most part - perhaps completely - it is properties of the phonological component that require pied-piping. Isolated features and other scattered parts of words may not be subject to its rules, in which case the derivation is canceled; or the derivation might proceed to PF with elements that are 'unpronounceable,' violating FI." Chomsky (1995a, p.262)
- (60) "Applied to the feature F, the operation Move thus creates at least one and perhaps two "derivative chains" alongside the chain CH<sub>F</sub>=(F, t<sub>F</sub>) constructed by the operation itself. One is CH<sub>FF</sub>=(FF[F], t<sub>FF(F)</sub>), consisting of the set of formal features FF[F] and its trace; the other is CH<sub>αF</sub>=(α, t<sub>α</sub>), α a category carried along by generalized pied-piping and including at least the lexical item containing F. CH<sub>FF</sub> is always constructed, CH<sub>αF</sub> only when required for convergence...As noted, CH<sub>αF</sub> should be completely dispensable, were it not for the need to accommodate to the sensorimotor apparatus." [p.265]
- (61) " Just how broadly considerations of PF convergence might extend is unclear, pending better understanding of morphology and the internal structure of phrases. Note that such considerations could permit raising without pied-piping even overtly, depending on morphological structure..." [p.264]
- (62) In (58), if only the attracted features raise, but the V does not raise, a PF crash will ensue, but only if the offending item exists at that level. Deletion provides another way to salvage the derivation. When the lower VP is deleted without the V having raised, a PF crash is avoided and the result is acceptable Pseudogapping.

(63)



- (64) An account completely parallel to that provided for (58) is available for (63).

- (65) Note that now, the major prima facie counter-examples to Roberts' proposal ((36), as generalized to (44)), are completely compatible with it.
- (66) So why not accept the Roberts-Potsdam account of the gap in the original ellipsis paradigm?
- (67) John slept, and Mary will too
- (68) \*John was here, and Mary will too
- (69) John was here, and Mary will ~~be here~~ too
- (70) Here be does not raise at all, with or without pied-piping, whereas was obviously does raise, resulting in features being checked and deleted.
- (71) BUT what are those features? It is hard to see how they could be anything other than inflectional features. But checking and deleting the inflectional features of was makes it more like be, not less like be.

## VI. Another Kind of Justification for (44)

- (72) [Under ellipsis] Corresponding X<sup>0</sup> traces [unlike XP traces] must have the same binder in both the antecedent and target clauses.
- (73) Chicken, she'll eat, but ostrich, she won't
- (74) Potsdam claims that in Hebrew and Irish, both V-raising languages that have VP ellipsis, "the raised verbs in ellipsis antecedent and target clauses must be the same." He suggests that (72) is universal.
- (75) Q: dina soreget et ha- svederim Se- hi loveSet  
Dina knits ACC the sweaters that she wears  
"Does Dina knit the sweaters that she wears?"  
A1: lo, aval ima Sela soreget  
no, but mother hers knits  
"No, but her mother does."  
A2: lo, ima Sela kona (la)  
no, mother hers buys (to-her)  
"No, her mother buys them (for her)."  
Hebrew Doron (1990)
- (76) A1 is 'strict' or 'sloppy'. A2 is only strict.
- (77) Ivan piše rad pažljivo, a njegov asistent čita  
Ivan writes paper carefully and his assistant reads  
"Ivan is writing a paper carefully, and his assistant is reading it carefully."  
Serbo-Croatian
- (78) Marko gradi sebi kucu, a Marija kupuje  
Marko builds himself house and Marija buys  
"Marko is building himself a house, and Maria is buying herself a house."

- (79) Q: Does Dina knit the sweaters that she wears?  
A: No her mother<sub>i</sub> buys the sweaters that she<sub>i</sub> wears
- (80) The putative answer (79)A is strikingly unresponsive to the question.
- (81) dina soret et ha-svederim Se- hi loveSet,  
Dina knits the sweaters that she wears  
be-?od ima Sela kona  
while mother hers buys
- (82) dina ohevet ko sveder Se- hi loveSet  
Dina loves every sweater that she wears  
aval ima Sela sonet  
but mother hers hates  
"Dina loves every sweater that she wears but her mother<sub>i</sub>  
hates every sweater that she<sub>i,j</sub> wears."

Some Reconstruction Riddles

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1. Condition C Complement/Adjunct Reconstruction Asymmetries  
(The 'Lebeaux Effect')

- (1) a Which report that John<sub>i</sub> revised did he<sub>i</sub> submit?  
b Which report that John<sub>i</sub> was incompetent did he<sub>i</sub> submit?  
Freidin (1986)
- (2) a \*He<sub>i</sub> believes the claim that John<sub>i</sub> is nice.  
b \*He<sub>i</sub> likes the story that John<sub>i</sub> wrote.  
c \*Whose claim that John<sub>i</sub> is nice did he<sub>i</sub> believe?  
d Which story that John<sub>i</sub> wrote did he<sub>i</sub> like?  
Lebeaux (1988)
- (3) a \*Which claim that John<sub>i</sub> was asleep did he<sub>i</sub> later deny  
b Which claim that John<sub>i</sub> made did he<sub>i</sub> later deny  
Munn (1994)
- (4) a \*Which claim [that John<sub>i</sub> was asleep] was he<sub>i</sub> willing to discuss  
b Which claim [that John<sub>i</sub> made] was he<sub>i</sub> willing to discuss
- (5) a \*The claim that John<sub>i</sub> is [sic] asleep, he<sub>i</sub> was willing to discuss  
b The claim that John<sub>i</sub> made, he was willing to discuss  
Chomsky (1993)
- (6) a \*The claim that John<sub>i</sub> was asleep, he<sub>i</sub> won't discuss  
b The claim that John<sub>i</sub> made, he<sub>i</sub> won't discuss  
Chomsky and Lasnik (1993)
- (7) The claim that John<sub>i</sub> was asleep seems to him<sub>i</sub> [<sub>IP</sub> t to be correct]  
Chomsky (1993)
- (8) \*I seem to him<sub>i</sub> [t to like John<sub>i</sub>]
- (9) a The 'Extension Condition': structure must be built strictly cyclically.  
b Adjuncts are exempt from the Extension Condition; relative clauses are adjuncts.  
c "Reconstruction" is essentially a reflex of the formation of operator-variable constructions.  
b An operator chain (a sequence of copies) undergoes complementary deletion.  
c Condition C is an LF requirement. Chomsky (1993)
- (10) a [Which claim [that John made]] was he willing to discuss  
~~which claim~~ PF  
b [Which ~~claim~~ [that John made]] was he willing to discuss  
~~which claim~~ LF  
c For which x that John made, he was willing to discuss x claim Interpretation (?)

Reconstruction Riddles

OR?

- (11) a [Which claim [that John made]] was he willing to discuss  
~~which claim~~ PF  
b [Which ~~claim~~ [that John made]] was he willing to discuss  
~~which claim~~ LF  
c For which x, x a claim that John made, he was willing to discuss x Interpretation (?)
- (12) a Which claim [that John was asleep] was he willing to discuss [~~which claim that John was asleep~~] PF  
b [Which ~~claim~~ [that John was asleep]] was he willing to discuss [~~which claim that John was asleep~~] LF  
c For which x, he was willing to discuss x claim that John was asleep Interpretation (?)
- BUT CRUCIALLY NOT**
- (13) a Which claim [that John was asleep] was he willing to discuss [~~which claim that John was asleep~~] PF  
b [Which ~~claim~~ [that John was asleep]] was he willing to discuss [~~which claim that John was asleep~~] LF  
c For which x that John was asleep, he was willing to discuss x claim Interpretation (?)
- OR**
- (14) a Which claim [that John was asleep] was he willing to discuss [~~which claim that John was asleep~~] PF  
b [Which claim [that John was asleep]] was he willing to discuss [~~which claim that John was asleep~~] LF  
c For which x, x a claim that John was asleep, he was willing to discuss x Interpretation (?)
- (15) "...preference principle for reconstruction: Do it when you can (i.e., try to minimize the restriction in the operator position)."
- (16) Which piece of evidence that John was guilty did he successfully refute?
- (17) The widespread belief that John is incompetent, he deeply resents
- (18) Whose argument that John was incorrect did you show him?
- (19) How many arguments that John's theory was correct did he publish?
- (20) This argument that John's theory is correct, he is now ready to publish.
- (21) Which proof that Mary's theory is superior to John's did she present?
- (22) Mary's attempt to hire John's student, he heartily endorsed.
- (23) John's request to attend Mary's lecture, she immediately granted.

- (24)a The claim that the director<sub>i</sub> was corrupt, he<sub>i</sub> was unwilling to discuss  
 b That the director<sub>i</sub> was corrupt, everyone knew that he<sub>i</sub> would always be able to deny with a straight face  
 Postal (1997)
- (25)a Whose allegation that John<sub>i</sub> was less than truthful did he<sub>i</sub> refute vehemently?  
 b Whose claim that the Senator<sub>i</sub> had violated the campaign finance regulations did he<sub>i</sub> dismiss as politically motivated?  
 Kuno (1997)
- (26)a \*Which claim that John<sub>i</sub> was asleep did he<sub>i</sub> later deny  
 b Which claim that John<sub>i</sub> made did he<sub>i</sub> later deny  
 Munn (1994)
- (27) Later than what, one might ask?
- (28) \*Whose claim that John<sub>i</sub> is nice did he<sub>i</sub> believe?  
 Lebeaux (1988)
- (29) Susan: John is nice.  
 Mary: John is nice.  
 !!John: I believe Susan but I don't believe Mary.
- (30) Which ['pro'] report that John<sub>i</sub> was incompetent did he<sub>i</sub> submit?  
 Freidin (1986)
- (31) What if the complement/relative asymmetry with WH-movement is illusory. How problematic is that for the theory?
- (32)a (9)a vs. b is arguably just a stipulation, as is (9)c.  
 b (15) is clearly a stipulation.
- (33) If anything, then, lack of that asymmetry would be a 'better' state of affairs. (The only mildly negative consequence, depending on your point of view, is that a potential argument for traces, i.e., copies, disappears.)
- (34)a The Projection Principle requires that heads and their arguments, and the arguments of these heads, and so on, must be present in the base.  
 b Adjuncts need not be present in the base.  
 c Condition C is not earmarked for any particular level--it applies throughout the derivation, and marks as ungrammatical any configuration it sees, in which a name is c-commanded by a coindexed pronoun.  
 Lebeaux (1988); Lebeaux (1990)
- (35) The claim that John<sub>i</sub> was asleep seems to him<sub>i</sub> [<sub>i</sub> t to be correct]  
 Chomsky (1993)
- (36) Lexical material is inserted only in the head position of an A-chain. Lebeaux (1988); Lebeaux (1990)

## 2. On Lack of Reconstruction With A-Movement

- (37) "[Reconstruction] is a consequence of operator-variable constructions driven by FI, a process that may (or sometimes must) leave part of the trace - a copy of the moved element - intact at LF..." Chomsky (1995a)
- (38) "That reconstruction should be barred in A-chains is thus plausible on conceptual grounds."
- (39) \*John<sub>i</sub> expected [him<sub>i</sub> to seem to me [<sub>i</sub> t to be intelligent]]
- (40) "...under reconstruction the violation [of Condition B] should be eliminated, with him interpreted in the position of t..."
- (41)a (it seems that) everyone isn't there yet  
 b Everyone seems [t not to be there yet]  
 c I expected [everyone not to be there yet]  
 Chomsky (1995a)
- (42) "[the lack of wide scope for negation in (41)b] indicates that there is no reconstruction to the trace position..."

## 3. Quantifier Lowering?

- (43) Some politician is likely to address John's constituency  
 May (1977)
- (44) "[{(43)}] may be taken as asserting either (i) that there is a politician, e.g., Rockefeller, who is likely to address John's constituency, or (ii) that it is likely that there is some politician (or other) who will address John's constituency."
- (45) On the first reading, the speaker has a particular individual in mind (a politician, in this instance), but, for some discourse reason or other, does not identify that individual. On the second reading (the 'lowered' one), the speaker does not have any particular individual in mind. The ambiguity might then fall under theme-rheme properties, the 'wide scope' quantifier being a theme or topic.
- (46) Some politician addressed John's constituency  
 a ...namely Rockefeller  
 b ...I can tell by all the balloons and flags on the green
- (47) Someone is likely to clean the blackboard
- (48) Someone cleaned the blackboard  
 a ...namely, Joe the maintenance man  
 b ...I have no idea who, but the board was covered with phrase structure trees last night, and is now bare
- (49)a No large Mersenne number was proven to be prime \*  
 b It was proven that no large Mersenne number is prime

- (50)a Noone is certain to solve the problem \*  
 b It is certain that noone will solve the problem
- (51)a Every coin is 50% likely to land heads \*  
 b It is 50% likely that every coin will land heads
- (52)a Every coin is 3% likely to land heads \*  
 b It is 3% likely that every coin will land heads
- (53)a A hippogryph is likely to be apprehended  
 b It is likely that a hippogryph will be apprehended
- (54)a A hippogryph is anxious to be apprehended \*  
 b \*It is anxious that a hippogryph will be apprehended
- (55) Some linguist is anxious to solve the problem of quirky Case
- (56) (55) can be appropriately uttered whether or not the speaker has a particular linguist in mind. The second circumstance might involve, say, a report of an anonymous e-mail posting urgently requesting information about quirky Case.
- (57)a No agent<sub>i</sub> was believed by his<sub>i</sub> superior to be a spy for the other side \*  
 b\*It was believed by his<sub>i</sub> superior that no agent<sub>i</sub> was a spy for the other side  
 May (1985)
- (58) Some professor<sub>i</sub> is believed by his<sub>i</sub> students to be a tyrant
- (59)a Howard Lasnik is believed by his students to be a tyrant  
 b Some professor (or other), I have no idea exactly who, is believed by his students to be a tyrant
- (60) The context for (59)b might be the discovery of graffiti scrawled on the lavatory wall saying "Our professor is a tyrant".
- (61) (✓)Each other's supporters frightened the candidates  
 (62) (\*)Each other's supporters attacked the candidates
- (63) (✓)Each other's supporters seem to the candidates to be unscrupulous  
 (64) (\*)Each other's supporters asked the candidates to be more honest
- (65) If the contrasts in (61)-(64) are genuine, they might be handled 'on-line', as in Belletti and Rizzi (1988) or, for that matter, in Lebeaux's theory.
- (66) For 'anti-reconstruction' with Condition C, and possibly for lack of Quantifier Lowering, these interpretive processes could be limited to LF. But this begs the question:  
 (67) Why would traces of A-movement, unlike traces of  $\bar{A}$ -movement, not be accessible to LF processes?
- (68) Recall that Chomsky simply stipulates that reconstruction is a property of operator-variable constructions.
- (69) A more interesting (though more radical?) possibility: A-movement, unlike  $\bar{A}$ -movement, does not leave a trace, where a trace is, following Chomsky, a copy of the item that moves, and LF reconstruction effects result from failure to delete (a portion of) a lower copy.
- (70)  $\bar{A}$ -movement typically creates an operator-variable relation, so at least an 'initial' trace is necessary. For A-movement, on the other hand, the trace is seemingly a theoretical excrescence. There are not two separate interpretive roles for a moved NP and its trace to fulfill.
- (71) "In the phonological component, traces delete. We have found no reason to extend that convention to the  $N \rightarrow \lambda$  computation, and indeed cannot; were we to do so,  $\theta$ -positions would be invisible at LF..." Chomsky (1995a)
- (79) Alternative:  $\theta$ -roles are 'checked' in the course of a derivation. The moved argument is itself a record of the crucial part of the history of its derivation. [On  $\theta$ -roles as features, see, for example, Bošković and Takahashi (1995) and Lasnik (1995c).]

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- (1) "That reconstruction should be barred in A-chains is ... plausible on conceptual grounds." Chomsky (1995a, p.326)
- (2) Chomsky's concern at this point is trace deletion. He suggests that certain analyses of Chomsky (1991) and Chomsky and Lasnik (1993) based on intermediate trace deletion are incorrect, and that there is, in fact, no process of trace deletion.
- (3) The effects of trace deletion follow from reconstruction "understood in minimalist terms".
- (4) ??Who do you wonder [<sub>CP</sub> whether [<sub>IP</sub> John said [<sub>CP</sub> t' e [<sub>IP</sub> t solved the problem]]]] (-Y)
- (5) Deletion is possible only to turn an illegitimate LF object into a legitimate one, where the legitimate LF objects are:
- (6a) Uniform chains (all of whose members are in A-positions; A'-positions; or X<sup>0</sup>-positions)  
b Operator-variable pairs.
- (7) Deletion in the chain (Who, t', t) is permissible since the chain is neither uniform (Who and t' are in A'-positions, t in an A-position) nor is it an operator-variable pair.
- (8) More generally, in the case of successive-cyclic A'-movement of an argument, an intermediate trace (starred or otherwise) can (in fact must) be deleted in LF, voiding an ECP violation when the trace to be deleted is starred.
- (9) On the other hand, long movement as in (10) will be an ECP violation, since the movement chain in this instance is uniformly A', so economy prevents the deletion of t':
- (10) \*How do you wonder [<sub>CP</sub> whether [<sub>IP</sub> John said [<sub>CP</sub> t' e [<sub>IP</sub> Mary solved the problem t]]]] (-Y)
- (11) Similarly, ultra-long A-movement will also be properly excluded, even when the first step is 'short', as in (12):
- (12) \*John seems [that [it is likely [t' to be arrested t]]]
- (13) \*John seems [that [t<sub>2</sub> [it was told t<sub>1</sub> [that ...]]]] (-Y)
- (14) The chain of John in (13) is non-uniform so the deletion process should be applicable, incorrectly it appears.
- (15) Chomsky (1995a, p.326) concludes, "We do not want to permit the intermediate (offending) trace t<sub>2</sub> to delete, unlike what happens in [long wh-movement of an argument]. The distinction suggests a different approach to intermediate trace deletion: perhaps it is a reflex of the process of reconstruction, understood in minimalist terms ... The basic assumption here is that there is no process of reconstruction; rather, the phenomenon is a consequence of the formation of operator-variable construction driven by F[ull]I[nterpretation], a process that may (or sometimes must) leave part of the trace - a copy of the moved element - intact at LF, deleting only its operator part."
- (16) In fact, it does seem that the only successful uses of economy-constrained deletion in chains involve long wh-movement of arguments, where a non-uniform chain is turned into an operator-variable pair.
- (17) The new approach correctly predicts that there are no instances where an ECP violation is voided by deletion of an offending intermediate trace turning a non-uniform chain into a uniform chain.
- (18) BUT it is not clear that t<sub>2</sub> in (13) is an offending trace in the relevant sense (i.e., in the sense of the earlier theory).
- (19) Is movement from that intermediate position to the surface position of John too far?
- (20) Even if it is, that could presumably be remedied by further adjunction steps.
- (21) A conceivable way to retain the essence of the new analysis:
- (22)a Accept the new assumption that there is no trace deletion.  
b But retain from the earlier approach the idea that only operator-variable pairs and uniform chains are legitimate LF objects.
- (23) Then (13), repeated as (24), would be correctly excluded, but not because of an offending trace per se. The whole chain would be an offending one.
- (24) \*John seems [that [t<sub>2</sub> [it was told t<sub>1</sub> [that ...]]]]
- (25) The account of (12), repeated as (26), remains unchanged.
- (26) \*John seems [that [it is likely [t' to be arrested t]]]
- (27) Though the chain is legitimate, it contains an offending trace, one that now could not be eliminated under any circumstances, since (26) doesn't involve an operator chain.

- (28) → The major phenomenon originally motivating the uniform chain approach now loses its account. The offending intermediate trace in the case of argument movement (4) was deletable by virtue of being part of a non-uniform chain, while the corresponding offending trace in the case of adjunct movement (10), as part of a uniform chain, was not deletable.
- (29) But in the new approach, deletability has nothing to do with uniformity. Rather, the intermediate trace in (4) deletes as a direct consequence of operator-variable formation. Similarly, the intermediate trace in (10) should be able to delete.
- (30) Chomsky's (class lectures, 1995) alternative 'functional' explanation of adjunct-argument asymmetry: Extraction of adjuncts out of islands creates 'garden paths', because there are numerous structural positions from which an adjunct could have fronted.
- (31) \*Ni xiangxin Lisi weisheme lai de shuofa?  
"You believe [the claim [that [Lisi came why]]]?"
- (32) \*John-wa Mary-ga naze sore-o katta kadooka siritagatte iru no?  
"John wants to know [whether [Mary bought it why]]?"
- (33) a Why do you think John said Mary went home?  
b How do you think John said Mary solved the problem?
- (34) a All trace deletion is just a consequence of the process of operator-variable creation.  
b Traces in other types of constructions are then never eliminated.
- (35) That they are not eliminated in A-constructions provided part of Chomsky's account of the extreme ungrammaticality of 'improper' movement, as in (24).
- (36) Almost paradoxically, Chomsky concludes that the impossibility of eliminating an A-trace makes it plausible that reconstruction should be barred in A-chains.
- (37) \*John expected [him to seem to me [<sub>i</sub> t to be intelligent]]
- (38) "Under the relevant interpretation, [(37)] can only be understood as a Condition B violation, though under reconstruction the violation should be obviated, with him interpreted in the position of t ..." [p. 326]
- (39) John expected [ to seem to me [<sub>i</sub> him to be intelligent]]
- (40) a B is a governing category for  $\alpha$  if and only if B is the minimal category containing  $\alpha$ , a governor of  $\alpha$ , and a SUBJECT accessible to  $\alpha$ .  
b SUBJECT = AGR in a finite clause; NP of S in an infinitival; NP of NP in an NP.  
c  $\gamma$  is accessible to  $\alpha$  iff  $\alpha$  is in the c-command domain of  $\gamma$  and ...  
Chomsky (1981)
- (41)  $\alpha$  in (39) is not the GC for him, since there is no SUBJECT accessible to him in that domain.
- (42) Further, by hypothesis, there is no SUBJECT at all in the intermediate clause, after reconstruction.
- (43) Thus, the GC for him would actually be the matrix, and the required Condition B effect is obtained after all.
- (44) The GC for  $\alpha$  is the minimal complete functional complex (CFC) that contains  $\alpha$  and in which  $\alpha$ 's binding condition could, in principle, be satisfied. Chomsky and Lasnik (1993), based on Chomsky (1986a)
- (45) The requirement on him, that it be A-free in a local domain, could, in principle, be satisfied in  $\alpha$  in (39). And since him is, in fact, A-free in that domain (which is a CFC), Condition B is satisfied (incorrectly so), as Chomsky implies.
- (46) \*John<sub>i</sub> believes him<sub>i</sub> to be intelligent
- (47) If him, the 'ECM' subject is in the lower clause, then, by the above line of reasoning, (46) is incorrectly not a Condition B violation. This can be taken as (additional) evidence that him raises into the higher clause.
- (48) \*Himself seems to him [<sub>i</sub> t to be clever]
- (49) Prior to movement, Condition A is presumably satisfied, since, as (50), from Chomsky (1995a), shows, the (NP in the) to phrase c-commands into the complement infinitival (though for reasons that are not immediately clear).
- (50) \*They seem to him<sub>i</sub> [<sub>i</sub> t to like John<sub>i</sub>]
- (51) For Belletti and Rizzi (1988), (48) is in accord with Condition A, but it violates Condition B, which, according to Belletti and Rizzi, must be satisfied specifically at S-structure (unlike Condition A, which can be satisfied anywhere in the course of the derivation).
- (52) a Chomsky's (37) could also be ruled out in the same way, if its S-structure configuration is in violation of Condition B.  
b But not in a theory with no S-structure.

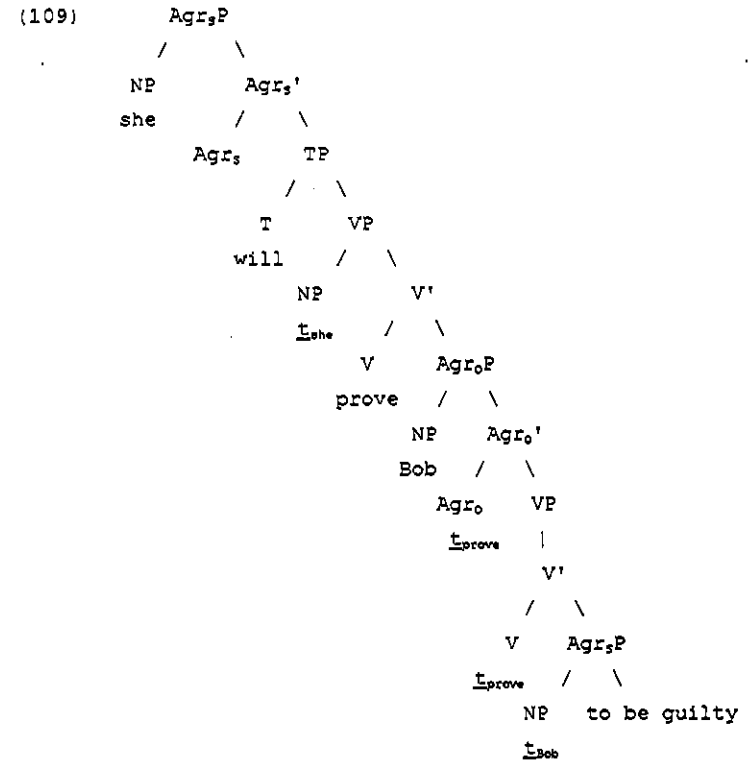


- (53) a (it seems that) everyone isn't there yet  
 b I expected [everyone not to be there yet]  
 c everyone seems [i not to be there yet]
- (54) "Negation can have wide scope over the Q in [(53)a], and it seems in [(53)b] but not in [(53)c],.... reconstruction in the A-chain does not take place, so it appears."  
 Chomsky (1995a, p.327)
- (55) a Everyone didn't leave  
 b Everyone seems not to have left Hornstein (1995, p.239)
- (56) a John would prefer for everyone not to leave (\*Neg>V)  
 b John wanted very much for everyone not to leave (\*Neg>V)  
 Hornstein (1995, p.239)
- (57) School policy requires that everyone not get an A  
 (58) It is important for everyone not to get an A
- (59) The DA proved [two men to have been at the scene of the crime] during each other's trials  
 (60) The DA proved [no suspect<sub>i</sub> to have been at the scene of the crime] during his<sub>i</sub> trial  
 (61) The DA proved [noone to have been at the scene] during any of the trials
- (62) ?\*The DA proved [that two men were at the scene of the crime] during each other's trials  
 (63) ?\*The DA proved [that no suspect<sub>i</sub> was at the scene of the crime] during his<sub>i</sub> trial  
 (64) ?\*The DA proved [that noone was guilty] during any of the trials
- (65) There is a man here
- (66) a There is/\*are a man here  
 b There are/\*is men here
- (67) There aren't many linguistics students here
- (68) a The DA proved [two men to have been at the scene of the crime] during each other's trials  
 b \*The DA proved [there to have been two men at the scene of the crime] during each other's trials
- (69) a The DA proved [no suspect<sub>i</sub> to have been at the scene of the crime] during his<sub>i</sub> trial  
 b \*The DA proved [there to have been no suspect<sub>i</sub> at the scene of the crime] during his<sub>i</sub> trial
- (70) a The DA proved [noone to have been at the scene] during any of the trials  
 b \*The DA proved [there to have been noone at the scene] during any of the trials

- (71) a Some applicants<sub>i</sub> seem to each other<sub>i</sub> to be eligible for the job  
 b\*There seem to each other<sub>i</sub> to be some applicants<sub>i</sub> eligible for the job den Dikken (1995)
- (72) There seems/\*seem to be a man here  
 (73) There seem/\*seems to be men here
- (74) The high behavior of the ECM subject in (68)a-(70)a is the result of overt raising.
- (75) Mary hired John, and Susan will ~~hire~~ Bill
- (76) The DA proved Jones (to be) guilty and the Assistant DA will ~~prove~~ Smith (~~to be~~) guilty
- (77) The mathematician made every even number out not to be the sum of two primes  
 (78) The only reading is the implausible one where the mathematician was engaged in the futile activity of trying to convince someone that no even number is the sum of two primes (and not the far more plausible one where she is merely trying to convince someone that Goldbach's conjecture is false).
- (79) everyone seems [i not to be there yet]
- (80) With undeniable overt raising, the scope reconstruction at issue is unavailable.
- (81) I believe everyone not to have arrived yet (?Neg>V)  
 (82) I proved every Mersenne number not to be prime (?Neg>V)
- (83) Everyone is believed not to have arrived yet (\*Neg>V)  
 (84) Every Mersenne number was proved not to be prime (\*Neg>V)
- (85) In (84), there is strong bias towards narrow scope, but it is still not available. Only the wildly false wide scope reading exists.
- (86) How can we reconcile the substantial evidence that ECM subjects undergo overt raising with the scope fact in (81)-(82)?
- (87) a When it is completely clear from the word order that raising has taken place, narrow scope for a universal ECM subject is impossible.  
 b But when the word order is equivocal, narrow scope is possible.
- (88) Could it be that in the latter circumstance, overt raising has not taken place?

- (89) Mary proved every Mersenne number not to be prime, and John will every Fibonacci number
- (90) The fact that every Fibonacci number is a Pseudogapping remnant indicates that it has overtly raised. If, simultaneously, it could take scope under the (elided) negation as it can in (91), we would have a contradiction.
- (91) John proved every Fibonacci number not to be prime
- (92) However, it seems that unlike the situation in (91), narrow scope is not possible for every Fibonacci number in (89).
- (93) (The ECM subject in the first conjunct in (89), every Mersenne number, also cannot take narrow scope under the negation in its clause. I assume this is a parallelism effect of the sort investigated by Lasnik (1972) and, more recently and more interestingly, by Fox (1995).)
- (94) We are seemingly led to the conclusion that raising must be optional (a familiar kind of conclusion in GB analyses, but not in Minimalist ones).
- (95) All of the binding and ellipsis phenomena above just indicate that raising is possible, available when necessary but not necessarily obligatory.
- (96) BUT
- (97)a \*Joan believes him<sub>i</sub> to be a genius even more fervently than Bob<sub>i</sub> does  
 b Joan believes he<sub>i</sub> is a genius even more fervently than Bob<sub>i</sub> does
- (98) It is actually not so uncommon for 'object shift' to be obligatory with pronouns even when it is optional with lexical NPs.
- (99)a Mary made John out to be a fool  
 b Mary made out John to be a fool
- (100)a Mary made him out to be a fool  
 b \*Mary made out him to be a fool
- (101) The mathematician made every even number out not to be the sum of two primes (\*Neg>V)
- (102) The mathematician made out every even number not to be the sum of two primes (?Neg>V)
- (103)a The lawyer made no witnesses out to be idiots during any of the trials  
 b?\*The lawyer made out no witnesses to be idiots during any of the trials

- (104)a The DA made the defendants out to be guilty during each other's trials  
 b?\*The DA made out the defendants to be guilty during each other's trials
- (105)a The DA made no suspect<sub>i</sub> out to have been at the scene of the crime during his<sub>i</sub> trial  
 b?\*The DA made out no suspect<sub>i</sub> to have been at the scene of the crime during his<sub>i</sub> trial
- (106) 'Raising to object' parallels 'raising to subject' and provides further evidence for Chomsky's claim that "...reconstruction in [an] A-chain does not take place..."
- (107) How is the optionality of 'raising to object' to be instantiated?
- (108) She will prove Bob to be guilty



- (110) The driving force for the overt movement of the NP is a strong 'EPP' feature in Agr<sub>0</sub> (which I take to be the same item as Agr<sub>s</sub>. Lasnik (1995c)
- (111) One way to make the raising optional might be to abandon the idea that Agr<sub>0</sub> is the same item as Agr<sub>s</sub>, assuming, instead, that only the latter obligatorily has an EPP feature. Agr<sub>0</sub> would only optionally have the feature.
- (112) Chomsky (1995a, p.350) hints at an alternative possibility: "If Agr has no strong feature, then PF considerations, at least, give no reason for it to be present at all, and LF considerations do not seem relevant... Agr exists only when it has strong features."
- (113) Along these lines, suppose, then, that the optionality of raising is the optionality of Agr<sub>0</sub>.
- (114)a If Agr<sub>0</sub> is present, overt raising will be forced by its strong EP feature.  
 b If Agr<sub>0</sub> is absent, there will be no overt raising; the nominal's Case will be checked by covert raising of its formal features to the V.
- (115)a Under circumstance (114)b, the nominal will not participate in high binding, nor will it survive as a Pseudogapping remnant.  
 b On the other hand, it will be able to take low scope, as in the instances of ambiguous interaction between universal and negation discussed earlier.
- (116) Some politician is likely to address John's constituency
- (117) "[116]] may be taken as asserting either (i) that there is a politician, e.g., Rockefeller, who is likely to address John's constituency, or (ii) that it is likely that there is some politician (or other) who will address John's constituency." May (1977)
- (118) Chomsky distinguishes this phenomenon from the one found in (absence of) low scope under negation for a universal quantifier subject.
- (119) everyone seems [t not to be there yet]
- (120) "[The effect of QL] could result from adjunction of the matrix quantifier to the lower IP (c-commanding the trace of raising and yielding a well-formed structure if the trace of quantifier lowering is deleted, along the lines of May's original proposal). But reconstruction in the A-chain does not take place, so it appears." Chomsky (1995, p.327)
- (121) Under the null hypothesis that QL is precisely an A-movement reconstruction effect, some other way of resolving the apparent contradiction must be found.
- (122) In this connection, it must first be noted that it is not entirely clear precisely what the phenomenon of QL is. It is often taken as paraphrasability by a sentence with expletive subject, as perhaps intended in the May (1977) quotation in (117) above. Thus, the QL version of (123) is taken to be synonymous with (124).
- (123) Some politician is likely to address John's constituency
- (124) It is likely that some politician will address John's constituency
- (125) How general is the phenomenon?
- (126) No large Mersenne number was proven to be prime
- (127) Noone is certain to solve the problem
- (128) It was proven that no large Mersenne number is prime
- (129) It is certain that noone will solve the problem
- (130) Suppose there are five fair coins, flipped in a fair way:
- (131) Every coin is 3% likely to land heads
- (132) It is 3% likely that every coin will land heads
- (133) At least on the paraphrase characterization, then, there is reason to believe that Zubizarreta and Hornstein are correct in taking absence of low reading in an example like (134) to potentially argue for failure of Quantifier Lowering, and that Chomsky is correct that that absence is indicative of impossibility of reconstruction with A-movement.
- (134) everyone seems [t not to be there yet]
- (135) Could it be that there is no QL (and because there is no A-movement reconstruction)?
- (136) Interestingly, Postal (1974) claims exactly that a quantifier that has undergone subject raising to subject position invariably takes high scope, that is, that there is no QL.
- (137) Postal also suggests that the same is true for subject raising to object position, i.e., ECM constructions, but that seems much less clear.
- (138) First, there are the universal-negative interactions discussed above.
- (139) Second, quantificational subjects do seem to allow scope beneath ECM verbs, as in (140), which, in contrast to (141), has a pragmatically sensible reading.
- (140) The defense attorney proved none of the defendants to be guilty
- (141) None of the defendants were proved to be guilty by the defense attorney
- (142) May's (1985) widely cited argument that actual syntactic lowering must be involved in the second reading of examples like (116), repeated here.

- (143) Some politician is likely to address John's constituency
- (144) Such a 'lowered' reading for the quantifier is incompatible with the binding of a pronoun in the upper clause.
- (145) No agent<sub>i</sub> was believed by his<sub>i</sub> superior to be a spy for the other side
- (146) No large Mersenne number was proven to be prime
- (147) Noone is certain to solve the problem
- (148) Some professor<sub>i</sub> is believed by his<sub>i</sub> students to be a tyrant
- (149) \*It is believed by his<sub>i</sub> students that some professor is a tyrant
- (150) If, indeed, there is no A-movement reconstruction, why should that be?
- (151) Recall that for Chomsky, there is simply the stipulation that reconstruction is a property solely of operator-variable constructions. Further, the mechanism for instantiating the property - no deletion of traces in A-chains - does not seem to capture it at all.
- (152) Possible alternative: A-movement, unlike  $\bar{A}$ -movement, does not leave a trace, where a trace is, following Chomsky, a copy of the item that moves, and LF reconstruction effects result from failure to delete (a portion of) a lower copy.
- (153)  $\bar{A}$ -movement typically creates an operator-variable relation, so at least an 'initial' trace is necessary.
- (154) For A-movement, on the other hand, the trace is seemingly a theoretical excrescence. There are not two separate interpretive roles for a moved NP and its trace to fulfill.
- (155) Mary was elected and John was ~~elected~~ too
- (156) Mary was elected ~~Mary~~ and John was ~~elected~~ ~~John~~ too
- (157) "In the phonological component, traces delete. We have found no reason to extend that convention to the  $N \rightarrow \lambda$  computation, and indeed cannot; were we to do so,  $\theta$ -positions would be invisible at LF..." Chomsky (1995, p. 301)
- (158) Suppose that instead of being determined specifically at the LF level,  $\theta$ -roles are 'checked' in the course of a derivation.
- (159) The absence of scope reconstruction would then follow from the fact that, plausibly, determination of scope is not satisfaction of a formal feature, but rather, is a matter of interpretation at the interface.
- (160) "...there should be no interaction between  $\theta$ -theory and the theory of movement." Chomsky (1995a, p.312)
- (161) In particular, according to Chomsky, movement can never create a  $\theta$ -configuration.
- (162) In a theory with D-structure, this is virtually automatic. But within a minimalist approach where LF is assumed to be the sole interface with semantics, the consequence that " $\theta$ -relatedness is a 'base property'..." would be considerably more surprising and interesting.
- (163) "A  $\theta$ -role is assigned in a certain structural configuration..."
- (164) If  $\alpha$  raises to a  $\theta$ -position Th, forming the chain  $CH = (\alpha, t)$ , the argument that must bear a  $\theta$ -role is CH, not  $\alpha$ . But CH is not in any configuration, and  $\alpha$  is not an argument that can receive a  $\theta$ -role. [p.313]
- (165) Apparent unintended consequence: A-movement of an argument should never be permitted (assuming that  $\theta$ -role assignment is at LF).
- (166) Alternatively,  $\theta$ -roles are assigned prior to movement.
- (167) But then whether A-movement leaves a trace or not is irrelevant to  $\theta$ -assignment.
- (168) In passing, I note that ironically, this conclusion undermines the argument against movement into a  $\theta$ -position. If an A-trace is not only not helpful in the assignment of a  $\theta$ -role, but would actually make such assignment impossible, then, obviously, the argument that such a trace must exist for  $\theta$ -theoretic reasons fails. But if A-traces don't exist, then an argument will invariably be a single-membered chain no matter how many times it moves. Thus, even if it were to move into a  $\theta$ -position, it would still be in a 'configuration' in the relevant sense, so the  $\theta$ -role should be assignable.
- (169) How can movement without a trace possibly be reconciled with a 'bare phrase structure' theory of structure building. A-movement not leaving a trace means that a 'term' in the sense of Chomsky (1995a) is eliminated.

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