

- c. *John is easy (for us) to convince Bill that he should meet t*
 d. *John is easy (for us) to convince Bill to tell Mary that Tom should meet t*
 e. (i) **John is easy (for us) to convince Bill of the need for him to meet*
 (ii) **John is easy (for us) to describe to Bill a plan to assassinate t*
 f. (i) **what₂ is John fun (for us) [(who₁) to give t₂ to t₁]* (from a source like: *John is fun (for us) to give presents to*)
 (ii) **who₂ are the presents fun (for us) [(which₁) to give t₁ to t₂]* (compare: *the presents are fun (for us) to give to him*)
 (iii) **[to whom]₂ are the presents fun (for us) [(which₁) to give t₁ t₂]* (compare: *the presents are fun (for us) to give to him*)

As in other cases discussed, cases (c) and (d) are marginal.

In short, the basic properties of *easy-to-please* constructions follow directly from the assumptions we have already made, assuming that here too *wh*-movement is crucially involved. The latter assumption is particularly natural in this case, since we have analogous forms in which the *wh*-phrase may directly appear. Thus following our analysis, (121) is analogous to (128), and in such cases, we may have the full *wh*-phrase, as in (129)⁴⁴:

- (128) *John is an easy person to please*
 (129) a. *this is an easy violin on which to play sonatas*
 b. *this is a pleasant room in which to work*

Whatever the correct analysis of these structures may be, it seems clear that they involve, at some level, a phrase such as (130), as an adjectival modifier:

- (130) a. *easy – on which to play sonatas (violin)*
 b. *pleasant – in which to work (room)*

Our analysis simply assumes that the same is true quite generally of *easy*-complements. In the case of (130), the structures are embedded (presumably, in some manner, as relatives) within an NP with a head; in the case of (121), there is no NP antecedent and the structure must be interpreted as an open sentence, as in topicalization and other examples discussed above. Thus *wh*-deletion is obligatory, as in the other cases discussed, and forms analogous to (130) do not appear in the *easy-to-please* structures, just as we do not have (112), etc.

It should follow that in general, *easy-to-please* constructions have the relevant properties of *wh*-movement. Parallels have been observed in the literature. E.g., Lasnik and Fiengo (1974) note such parallels as (131)⁴⁵

- (131) a. *what did you give to John*
 b. **who did you give a book*
 c. *who did you give a book to*
 d. *John is dumb enough to sell the Brooklyn Bridge to*
 e. **John is dumb enough to sell the Brooklyn Bridge*
 f. *John is easy (for us) to sell the Brooklyn Bridge to*
 g. **John is easy (for us) to sell the Brooklyn Bridge*

Notice that the cases (127f) are exactly analogous to other examples of *wh*-island constraints, on this analysis, e.g., as in (132) and many examples already cited:

- (132) a. **who₂ do you wonder [what₁ t₂ saw t₁]*
 b. **I wonder [who₂, this book, [(which₁) t₂ really likes t₁]]*
 c. **who₂ is John more friendly to Mary than [(what₁) he is t₁ to t₂]*

In all of these cases, the sentences are ruled out on the assumption that *wh*-movement has taken place, by the *wh*-island constraint, which, as noted, follows from the conditions postulated. In the form immediately underlying case (132a) there is a residual *wh*-phrase indicating that *wh*-movement has taken place; in the case of (127f), (132b,c), and many others discussed above, there is no such residual phrase, but the effects of *wh*-movement are still evident.

There is a well-known puzzle concerning application of *wh*-movement to the sentences (133):

- (133) a. *the sonata is easy to play on this violin*
 b. *the violin is easy to play sonatas on*

Consider first (b). The phrase *sonatas* appears to be in a position susceptible to *wh*-movement; compare (134):

- (134) a. *John was told to play sonatas on his violin*
 b. *what was John told to play on his violin*

But in (133b), *wh*-movement is impossible. We cannot have (135):

- (135) a. **what sonatas is this violin easy to play on*
 b. **the sonatas that this violin is easy to play on—are in your book*

We now have an explanation for this fact. In terms of our analysis, *sonatas* in (133b) is within a *wh*-island, just as *t₂* is within a *wh*-island in the topicalization and comparatives of (132). The structure to which *wh*-movement must apply to give (135) is (136):

- (136) *this violin is easy [_S(which) for PRO to play sonatas on t]*

But *sonatas* in (136) is not subject to *wh*-movement because of SSC, as in the cases discussed earlier. Consequently, the examples of (135) are ruled out. While superficially (133b) is analogous to (134a), in the mental computation underlying (133b) there is, we now assume, a *wh*-phrase blocking the application of *wh*-movement.

Consider now (133a). Suppose that we apply *wh*-movement to *this violin*. The result is (137):

- (137) a. *what violin is the sonata easy to play on*
 b. *the violins that the sonatas are easy to play on—are being repaired*

Many speakers find these acceptable, in contrast to (135), which are universally rejected. By our analysis, the underlying structure for (133a) is (138), which should be immune to *wh*-movement just as (136) is:

- (138) *the sonata is easy [_S(which) for PRO to play t on this violin]*

why, then, should the examples (137) have a different status, for some speakers, than those of (135)?

Notice that in other contexts, the embedded \bar{S} s of (136), (138) are, as expected, both immune to *wh*-movement. Consider (139a,b), with the same embedded sentences as (136), (138), respectively:

- (139) a. *you found a violin* [\bar{S} (which) for PRO to play sonatas on *t*]
 b. *you found a sonata* [\bar{S} (which) for PRO to play *t* on this violin]

Application of *wh*-movement gives (140), impossible in both cases:

- (140) a. **what sonata did you find a violin to play on*
 b. **what violin did you find a sonata to play on*

Example (140a) is analogous to (135); example (140b) is analogous to (137). Comparing these cases, we see that it is the acceptability of (137) (for some speakers) that is the exceptional case, somehow to be explained.

A possible explanation is that there is another structure underlying (133a), namely, (141), where the PP *on this violin* is associated with the VP rather than the adjective phrase:

- (141) *the sonata is* [_{AP} *easy* [\bar{S} (which) for PRO to play *t*]] *on this violin*

If (141) is taken to underlie (133a), under one option, then (137) will be derivable by *wh*-movement. No such alternative analysis is possible in the case of (133b), (139). Therefore, no *wh*-movement is possible in these cases.

If this is the correct explanation, then we should find that in forms analogous to (133a) but where the PP is not separable from the embedded verb, forms analogous to (137) should be on a par with (135) rather than (137).⁴⁶ Compare (142), (143):

- (142) *the book is easy* [\bar{S} for PRO to put *t* on the table]
 (143) a. *what table is the book easy to put on*
 b. *the table that the book is easy to put on*

It seems to me that the prediction holds; that is, the examples (143) are excluded, in contrast to (137). The question deserves fuller investigation, but in a large class of rather puzzling cases it seems that we have an explanation for the facts in terms of a *wh*-movement analysis, given the framework of conditions and rules outlined earlier.

Consider next the examples (144):

- (144) a. *it is a waste of time for us* [*for them to teach us Latin*] (= (122a))
 b. **Latin is a waste of time for us* [*for them to teach us*]

In Chomsky (1973) the distinction was explained in terms of conditions on rule application, but that approach is ruled out in the present analysis. The correct explanation for the ungrammaticality of (144b), I think, lies in a base condition. In the underlying structure (145), the subject of the embedded infinitival must be PRO, as in the *persuade-promise* cases and others that we have discussed:

- (145) NP is Predicate (for us) [\bar{S} for – to VP]

The conditions on NP and Predicate in (145) must be specified in the base. Note that where NP is a dummy element *it* (however this is introduced), there is no constraint on –; cf. (122). The restriction to PRO applies only when the matrix NP subject is lexically specified. Furthermore, in such examples as (123a,b), where *wh*-movement is excluded in the embedded clause, there is also no constraint on – in (145). Thus we seem to have either the base condition (146a) or (146b):

- (146) a. in (145), – is PRO if \bar{S} is subject to *wh*-movement
 b. in (145), – is PRO if \bar{S} is obligatorily subject to *wh*-movement.

Of these two conditions, (146a) is preferable, if it is tenable; it is more general and can, I believe, be reformulated so as to fall together with other cases with obligatory PRO subject under generalizations relating *it* and choice of complementizer. It seems to cover all cases except for (123c).

The argument that the *for*-phrase in (123c) is within the complement offered by Bach and Horn (1976) does not seem to me entirely compelling. They note that the *for*-phrase is not preposable in (147), though it normally is when part of the matrix. Thus we have (148) but not (149):

- (147) *the house is ready for John to buy*
 (148) *for the rich, it is pleasant for the poor to do the hard work*
 (149) **for John, the house is ready to buy*

But this argument seems inconclusive, since even in the case of (149), where *for John* is surely a PP of the matrix, it is not preposable, for some reason:

- (149) *the house is ready for John*
 (150) **for John, the house is ready* (cf. *for John, the problem was easy*)

They give supplementary arguments in terms of right node raising and gapping, arguing that (151), (152) are acceptable:

- (151) *the moussaka is ready and Mike says that the egg-lemon soup is almost ready – for us to eat*
 (152) *the kidney pie is ready for us to put in the oven, and the salad – for you to put on the table*

Assuming that the *for*-phrases in *easy*-structures are in the matrix, a point that they do not contest, the strength of these arguments depends on the distinction between (151), (152) and (153), (154):

- (153) *young children are quite difficult, and Bill says that older children are still more difficult – for untrained teachers to control*
 (154) *the young children are difficult for Bill to control, and the older children – for Mary to teach*

I am not convinced that there is any relevant difference. Consequently, it is possible that the *for*-phrase associated with *ready* is also in the matrix sentence where the

complement is subject to *wh*-movement, contrary to (123c). If so, then (146a) may be the correct principle.

Whichever case of (146) holds, (144b) is ruled ungrammatical on the grounds that it requires a base form not generated by base rules (or a corresponding surface condition).

Notice that if the subject NP of the complement in (145) is PRO, then it can never be assigned *wh*- or moved by *wh*-movement. Thus it follows that the rule applying to *easy-to-please* structures is limited to an NP in the embedded predicate.

Consider again the form (126), repeated here as (155), underlying (121):

(155) *John is easy (for us) [\bar{s} [who for] PRO to please t]*

Suppose that *wh*-movement were to apply to (155), as in the COMP-COMP case of *wh*-movement, giving (156):

(156) *who is John easy (for us) to please*

Plainly (156) is ungrammatical. We might account for this fact by rule-ordering, i.e., requiring that the obligatory deletion of *who* precede *wh*-movement on the matrix cycle. But there is in fact a simpler approach that requires no such stipulation. Thus note that the resulting structure corresponding to (156) is (157), after interpretation of the *wh*-quantifier, in contrast to (158), underlying (121):

(157) *for which x, x a person, John is easy (for us) [for PRO to please x]*

(158) *John is easy (for us) [for PRO to please x]*

We have assumed that (158) is interpreted by the general rule of predication described for topicalization and other forms, with an open proposition taken to be satisfied by the referent of the focused NP, in this case, the matrix subject. But the rule of predication is inapplicable to (157), since there is no open proposition: the variable *x* is bound in (157) by the quantifier "for which *x*." Thus the sentence is uninterpretable, just as "John is easy to please Bill" is uninterpretable. This seems a natural way to account for the ungrammaticality of (156).

Some might object that (156) must be excluded as ungrammatical on syntactic grounds rather than on grounds of uninterpretability. I have argued elsewhere that, whereas speakers can make judgments of acceptability, they have no direct access to the grounds of these judgments. Thus I have no intuitive insight into the source of the unacceptability of (156). Only if these acceptability judgments come marked as "syntactic," "semantic," etc., can the objection be sustained. It seems to me that there is no merit to the contention.

Suppose that in fact convincing arguments can be given that in (123c) the *for*-phrase is embedded even where *wh*-movement takes place in the embedded clause, so that we have the underlying structure (159), where either subject or object of the embedded clause is accessible to *wh*-movement:

(159) *the house is ready [for NP to buy NP]*

Applying *wh*-movement to the object, we derive (160):

(160) *the house is ready [(which) for John to buy]*

Application of subsequent *wh*-movement to an NP in the position of *John* is impossible for familiar reasons.

Suppose that we apply *wh*-movement to the embedded subject of a structure like (159), obtaining (161):

(161) *the house is ready [[which for] t to fall down]*

With obligatory deletion of *which* followed by *for*-deletion before *to*, we derive (162):

(162) *the house is ready to fall down*

If, in contrast, applicability of *wh*-movement to the embedded clause is taken to correlate with PRO subject, as in (146a), then (162) would derive only from (163) by EQUI, just as (165) derives from (164):

(163) *the house is ready [for itself to fall down]*

(164) *John is eager [for himself to please]*

(165) *John is eager to please*

Assuming that we do derive (161), consider the effect of applying the COMP-COMP rule of *wh*-movement to give (166):

(166) **what is the house ready to fall down*

But this is ungrammatical on the same grounds that rule out (156). Thus nothing much seems to depend on where the *for*-phrase appears in (123c), apart from the generality of the base principle or corresponding surface filter.

Other structures similar to (121) are much more restricted in scope, e.g., (167):

(167) *Mary is pretty to look at*

In this case, we do not have the full range of properties (49). Thus there is no form (168), analogous to (127b):

(168) *Mary is pretty to tell Bill to look at*

Furthermore, in such structures as (167) there are very narrow restrictions on the choice of the matrix adjective and embedded verb. We may propose the same analysis as in the *easy-to-please* cases, but with idiom interpretation rules associated with the adjectives in question. Note that there are structures such as (169), but in this case the embedded complement is not associated with the adjective but with the adjective qualifier, *too*:

(169) *Mary is too pretty to expect anyone to look at (her)*

As has long been known, structures of the *easy-to-please* type do not appear as nominals, in contrast to the superficially similar forms with *eager*: compare (170):

(170) a. *John's eagerness to please – surprised me*
b. **John's difficulty to please – surprised me*

Various explanations have been proposed, relying on particular analyses of movement or deletion in the *easy* cases. Under the assumptions of EST, including the lexicalist hypothesis, the distinction between (170a) and (170b) must be formulable without reference to ordering of transformations and the like, on the assumption that *eagerness*, *difficulty*, etc., are drawn from the lexicon.⁴⁷ On our assumptions, the NPs of (170) have the underlying structures (171a,b), respectively:

- (171) a. [NP *John's* [\bar{N} *eagerness* [\bar{S} *for himself to please*]]]
 b. [NP *John's* [\bar{N} *difficulty* [\bar{S} (*who*) *for PRO to please t*]]]

The form (171a) is analogous in structure to nouns with sentential complements, as in (172):

- (172) a. *John's certainty that Bill will leave*
 b. *John's desire for Bill to leave*
 c. *the fact that Bill left*

In contrast, (171b) has the formal structure of a relative, as in (173):

- (173) a. *the certainty that you feel*
 b. *the desire (for Bill to leave) that you expressed*
 c. *the fact that Bill cited*

But the rule of interpretation for relatives plainly cannot apply in (171b), any more than it can in (174):

- (174) a. *the eagerness [(who) (for Bill) to visit t]*
 b. *the certainty [(who) that Bill will visit t]*
 c. *the desire [(who) for Bill to visit t]*
 d. *the fact [(who) that Bill visited t]*

More precisely, if the rule of relative interpretation were to apply in these cases, it would take the relative to hold of the head, as in (175):

- (175) a. *a book [(which) for you to read]*
 b. *the book [(which) that you read]*

Cf. the discussion of relativization above. This interpretation is senseless in (171b); furthermore, infinitival relatives (or relatives altogether) do not occur in general with such determiners. Thus expressions such as (171b) are ungrammatical. Perhaps this is the explanation for the absence of derived nominals corresponding to the forms of (170b). We might proceed further, i. terms of the X-bar system, to assign sentential complements of nouns, which are immune to *wh*-movement (or, perhaps, to relative interpretation), a different position in the hierarchy than relatives. Cf. Jackendoff (forthcoming) for some suggestions.⁴⁸

To summarize, I have suggested that we can eliminate from the grammar rules of comparative deletion, topicalization, clefting, object-deletion and "tough movement," rules for adjective and adjective-qualifier complements, and others, in favor of the general rule of *wh*-movement that also yields direct and indirect questions (finite and infinitival) and finite and infinitival relative clauses, several rather general rules of interpretation, and some language-specific properties of base and surface

structures. If this analysis proves tenable, we can drastically reduce the grammatical apparatus for the description of English; but more important, we can drastically limit the class of possible rules. Some curious and otherwise unexplained phenomena fall into place quite naturally, under this simplification of grammatical theory and the description of English. The properties (49), which appear (with the provisos noted) in a wide range of cases, fall together naturally, as a consequence of independent and, I think, rather natural conditions on rules: the subjacency condition, which in effect limits the "memory" available to transformational rules; SSC, which selects a most prominent NP in an embedded cyclic category that is alone accessible to rules if it is present; and PIC, which immunizes a certain category of propositions from rule application, subject to the language-specific proviso that permits COMP-COMP movement over a "bridge." Each of these conditions may be thought of as a limitation on the scope of the processes of mental computation that ultimately determine phonetic and logical form.

This discussion provides evidence in support of a positive answer to the query (50), and specifically, to the thesis that the phenomena that fall under CNPC and the *wh*-island constraints are to be explained in terms of more general properties of rules. But the evidence does not (and could not) suffice to establish the thesis, even if everything suggested here proves to be correct. This is, it remains an open possibility that some of the phenomena that fall under these constraints must be explained in other terms. Before turning to this question, I want to consider the effects of some modifications of the conditions discussed at the outset.

In our formulation of the basic conditions on rules, the notion "cyclic node" plays a crucial role. The cyclic nodes were taken to be NP and S (and perhaps \bar{S}) in the foregoing discussion. Suppose that we were to add S to the category of cyclic nodes. A slight reformulation of PIC is then required, but it is otherwise unaffected. There are interesting consequences in the case of SSC and subjacency, however.

Consider the effect on SSC. Given a structure of the form (176), no rule can now involve *X* and *Y* if *S* contains a subject not containing *Y* and not controlled by *X*:

- (176) ... *X* ... [*S* ... *Y* ...] ... *X* ...

Suppose in particular that *Y* is NP. Then a rule such as *wh*-movement, extracting an NP to the COMP position *X* outside of *S*, can apply to *Y* only if *Y* is the subject of *S*. In general, only subjects are accessible to movement rules involving an element outside of *S*, on this interpretation of SSC. It is well known that in many languages only subjects are accessible to many rules. Cf. Ross (1972); Keenan and Comrie (1973). Perhaps this fact can be explained by a modification of SSC for such languages in the manner just suggested. Note that if such a language also has COMP-to-COMP movement, the effect will be that only the subject of a subject sentence will be accessible to rules. For an apparent example, see Bell (1976).

The effect of incorporating *S* among the cyclic nodes is more far-reaching in the case of subjacency. It now follows that in a structure of the form (177), *wh*-movement cannot extract *Y* to COMP:

(177) [\bar{S} COMP [$S \dots$ [$NP \dots Y \dots$] \dots]]

In particular, it follows that *wh*-movement cannot extract anything from the subject of a sentence. Since the earliest work on transformational grammar, it has been clear that *wh*-movement must somehow be restricted in this fashion. E.g., it is noted in Chomsky (1955) that the rule of *wh*-movement must be prevented from applying to (178), to give (179):

(178) [*your interest in him*] *seemed to me rather strange*

(179) **whom did [your interest in] seem to me rather strange*

In the earliest work, it was assumed that the structural description of the rule must be designed to exclude this possibility. Later, general conditions were proposed on the functioning of rules, e.g., the Subject Condition of Chomsky (1973).⁵⁰ The Subject Condition follows at once from subadjacency, when S is taken to be a cyclic node.

Of course, it follows as well that *wh*-movement cannot extract a phrase from a nonsubject NP, as in (180):

(180) *who did you see [a picture of t]*

But the sentence (180) is grammatical. It was for this reason that subadjacency was not extended to include S in Chomsky (1973). We return to this problem directly. Let us assume that it can be overcome and that subadjacency is correctly formulated with S as one of the cyclic nodes.

As a consequence of this decision, we now have the general property (181):

(181) In the structure (177), *Y* cannot be extracted from *S*; in particular, *wh*-movement cannot move *Y* to COMP.

If the general approach sketched earlier proves tenable, then perhaps the special case of (180) is the only case.

Notice that nothing prevents extraction of *Y* outside of NP within *S*, in (177). Thus there is now no barrier against the rules indicated in (182):

(182) a. [\bar{S} COMP [S [NP *a review t₁*] *was published [of Bill's book]₁*]]
 b. [\bar{S} COMP [S [*of the students in the class*]₁ [NP *several t₁*] *failed the exam*]]]

Whether (182b) is the correct surface structure may be questioned. Note that extraction of PP as in (182b) is incompatible with *wh*-movement:

(183) a. **of the students in the class, which exam did several fail*
 b. **which exam, of the students in the class, did several fail*
 c. **I don't know which exam, of the students in the class, several failed*⁵¹

The impossibility of (183a) follows directly from the suggested analysis, but not that of (183b,c). These examples suggest that the PP is extraposed to COMP, contradicting our assumption, or perhaps that the PP is adjoined to S, creating a new S-category in the usual way, so that subadjacency blocks *wh*-movement. In

support of the latter alternative (or 182b)) are such structures as (184):

(184) *I told Mary that of the students in the class, several will fail*

Let us suppose tentatively that (182b) is correct in essence, assuming that the problem posed by (183b,c) can be overcome as suggested. Note that extraction of phrases from the subject, as in (182), contradicts the Subject Condition of Chomsky (1973), as noted by Postal (1974a). But it is compatible with the reformulation of this condition in terms of subadjacency, which of course has the added advantage of eliminating a rather ad hoc condition. Let us tentatively assume, then, that the Subject Condition is dropped in favor of subadjacency as just amended. Cf. note 50.

A different approach to these questions is suggested by Bach and Horn (forthcoming). They propose a general constraint that they formulate as follows:

(185) The NP Constraint. No constituent which is dominated by NP can be moved or deleted from that NP by a transformational rule [apart from free deletions, if such exist].

The NP Constraint differs in its empirical consequences from the modified subadjacency condition in that it excludes all movement from NP, whereas the subadjacency condition excludes only those movement rules that extract an element from S as well as NP; just *wh*-movement, if the foregoing analysis is correct.

The NP Constraint is immediately falsified by such examples as (182).⁵² In fact, if the foregoing analysis is correct, the apparent generality of (185) is illusory: the only rule subject to it is *wh*-movement, which is also the only rule extracting a constituent dominated by NP from S as well as NP. All other extraction rules, it seems without exception, apply freely to subparts of NPs, as do all interpretive rules (subject to SSC, of course, as in "we read [Bill's stories about each other]," "they read [Bill's stories about them]" with coreference of *they*, *them*).⁵³ The unique status of *wh*-movement from NPs is exactly what is captured by the analysis in terms of subadjacency, since only this rule extracts a phrase not only from NP but also from S (on the assumptions of the foregoing analysis).

Let us now turn to the remaining problem, namely, *wh*-movement from nonsubject NPs, as in (180). Bach and Horn argue, very plausibly I believe, that the interrogative (186) derives from (187), with the structure as indicated, rather than from (188) (see also Cattell, 1976):

(186) *who did John write a book about*

(187) *John wrote [NP a book] [about who]*

(188) *John wrote [NP a book about who]*

They argue further that (187) is base-generated alongside (188), as shown by the fact that we can have such sentences as (189) and by the unambiguous interpretation of (190a) as compared with the ambiguity of (190b,c):

(189) a. *John wrote it about Nixon*
 b. *a book was written about Nixon by John*⁵⁴

- (190) a. *John destroyed [his first 5 books about Nixon], in 1965*
 b. *John wrote [his first 5 books about Nixon], in 1965*
 c. *John wrote [his first 5 books] about Nixon, in 1965*

Correspondingly, on their assumptions, we can question "a book" in (187), obtaining (191), but we cannot form (193) from (192):

- (191) *what did John write about Nixon*
 (192) *John destroyed a book about Nixon*
 (193) a. **who did John destroy a book about* (cf. (186))
 b. **a book was destroyed about Nixon by John* (cf. (189b))
 c. **what did John destroy about Nixon* (cf. (191))

Suppose that we follow Bach and Horn in assuming that when *wh*-movement has taken place in nonsubject position, it has not extracted from inside an NP but rather from a PP that is not dominated by NP, but directly by VP, as in (187). This eliminates the remaining problem in the formulation of subadjacency suggested above.

It remains to determine how structures of the form (194), which are subject to *wh*-movement of each NP, are derived:

- (194) COMP NP [_{VP} V NP [P NP]]

Bach and Horn assume that all of these are base-generated. The contention is plausible in the special case of (187), where we have the corresponding pronominal form (189a), but not, I believe, in many other cases, e.g., (180) or many such cases as (195):

- (195) a. *who did he find a picture of t*
 b. *what books did he write reviews of t*

In these cases we cannot have forms corresponding to (189). Thus:

- (196) a. **he saw it of John*
 b. **he found it of John*
 c. **he wrote them of three novels*

But in these cases we can question the NP in the PP. Thus the properties that Bach and Horn consider do not correlate, contrary to what they assume. Base-generability seems to me plausible only in such cases as (187), where "write a book" is treated virtually as a verb, and in fact possessive determiners are impossible; see below; also (vi), (vii) of note 10.

Departing now from Bach and Horn's analysis, suppose that we postulate a rule of extraposition from NP to give (198) from (197), perhaps related to the familiar rule (cf. (21)), though more likely, a kind of "readjustment rule."

- (197) *he saw [_{NP} a picture [_{PP} of John]]*
 (198) *he saw [_{NP} a picture t] [_{PP} of John]*

The conditions on the choice of the matrix verb are obscure; thus the rule can apply to *see*, *find*, but not *destroy*; There appears to be some vacillation and

disagreement in informant judgment on this matter, as one might expect in the case of a marginal rule such as this.

The extraposition rule forming (198) produces a structure just like the base-generated structures, apart from the trace *t* in (198). We can at one explain the impossibility of pronouns in the NP position of (198), (196); these are not base-generated structures. For the same reason, we cannot have (199):

- (199) *what did he see of John*

Application of *wh*-movement and passive to (198) gives the forms (200):

- (200) a. *who did he see a picture of t*
 b. [*what picture t*] *did he see* [*of John*]
 c. [*a picture t*] *was seen* [*of John*]

The status of (b) and (c) is obscure; cf. note 54. Pending further investigation, I will put them aside.

We now have the following three cases, with the deep structures indicated:

- (201) *he took* [_{NP} a picture] [_{PP} of John]
 (202) *he destroyed* [_{NP} a picture of John]
 (203) *He saw* [_{NP} a picture of John]

The lexically governed extraposition rule gives (204) from (203), but does not apply to (202):

- (204) *he saw* [_{NP} a picture t] [_{PP} of John]

The cases are differentiated in the following way:

- (205) a. Possibility of pronoun in place of *a picture*: (201) but not (202), (203-4)
 b. Applicability of *wh*-movement to *John*: (201), (204) but not (202)
 c. Possibility of a possessive NP in place of *a*: (202), (203-4) but not (201)

Notice that we cannot have (206):

- (206) **who did he see Bill's picture of t*

The reason is that extraposition from NP is impossible in (207) because of SSC (cf. (21)).

- (207) *he saw* [*Bill's picture of John*]

Since extraposition from NP is impossible in this case, subadjacency (and also SSC) will prevent *wh*-movement; hence (206).

Since possessives are in any event impossible in the quasi-idiomatic case (201), we do not have (208):

- (208) a. **who did he take Bill's picture of*
 b. **who did he write Bill's book about*

Bach and Horn argue that the forms underlying (208) are blocked by base rules. But their analysis does not extend to case (203) (*see*, *find*, etc.), where *wh*-movement is possible from the PP, but we do have possessive forms, as in (207). They note the problem for their analysis in the special case of (190b,c), leaving it unsolved,

but in fact the problem is considerably more general, as we have seen. The problems all seem to be overcome in a natural way along the lines just sketched, with essential reliance on SSC and the modified version of subjacency.

There seems to be some reason, then, to take \bar{S} to be a cyclic node for the definition of subjacency (and for some languages, perhaps, SSC as well). The basic insight of Bach and Horn makes it possible to overcome what seemed to be a fundamental objection to this approach, and when incorporated within the framework outlined earlier, provides a natural explanation for an interesting class of phenomena.

There are further consequences that should be investigated. Thus, it is no longer clear that \bar{S} must be taken as a cyclic node for subjacency. The question has consequences with regard to preposing rules and other matters. Furthermore, the standard argument for the relative rather than absolute interpretation of the A/A principle—namely, that NP can be extracted from NP by *wh*-movement—disappears, leaving open the possibility that this principle can be interpreted differently. Cf. Kayne (1975) for some ramifications. Cf. also note 54. I will have to leave these interesting questions open.

I will conclude this discussion with some remarks about the adequacy of the general thesis (50): specifically, can we appeal to *wh*-movement and the conditions assumed for a general explanation of CNPC and *wh*-island constraints? Do these and similar phenomena appear outside of the domain of rules of construal in the sense suggested (including movement rules, under the trace theory)? I cannot hope to review the substantial literature on this question here, but will consider a few cases.

Some examples in the literature allegedly illustrating conditions on rules may have been wrongly analyzed. For example, I have just been arguing that the analysis of (209) in Chomsky (1973) was incorrect:

(209) **who did you see John's picture of*

To take another example, it is argued in Chomsky (1973) that (210b) is blocked by SSC applying to the rule associating *not, many*, giving essentially the meaning "few":

- (210) a. *we didn't see pictures of many of the children*
 b. **we didn't see John's pictures of many of the children* (* on the relevant interpretation)

But consider (211):

(211) *we didn't believe that Bill had seen pictures of many of the children*

It seems that in this case *not* can be associated with *many*, violating SSC and PIC if the rule is a rule of construal. In our present framework, there is no reason to suppose that it is. Thus we are left without an explanation for (210).

Perhaps what blocks (210) is not SSC but rather a prohibition against associating *not* and *many* when the latter is within a "specific" NP, whether definite or specific indefinite. Consider (212):

- (212) a. *we didn't see the pictures of many of the children*
 b. *we didn't see certain pictures of many of the children*

In all such cases, association of *not, many* seems difficult or impossible. Perhaps, then, the problem with (210b) is simply that the possessive NP *John's* is definite.⁵⁵ Thus what appeared to be a case of SSC fails under a different principle.

Analogous questions arise in the case of the quantifier *any*, often held to be subject to island conditions on scope determination. Fauconnier (1975) argues that (213b) is prevented by CNPC from having scope outside of NP, as compared with (213a).⁵⁶

- (213) a. *I didn't see anyone's husband at the meeting*
 b. **I didn't see the man anyone is married to at the meeting*

However, a further look suggests that specificity of the NP, not CNPC, may be what is involved. Consider (214):⁵⁷

- (214) a. *we can't find books that have any missing pages*
 b. **we can't find the books that have any missing pages*
 c. **we can't find certain books that have any missing pages*

The cases differ just as (210)–(212) do. One may interpret (214a) with wide scope for *any*, as for example, in despair after a search for certain missing pages has failed, even though *any* is within a complex NP.

Some discussions purporting to show that island constraints hold without movement seem to me to be based on rather questionable data. For example, Bresnan (1975) argues that CNPC applies in nonmovement rules on the grounds of such examples as (215):

- (215) a. *who was planning to buy what*
 b. *who was arguing about a plan to buy what*

As she notes, we must exclude the interpretation as echo questions. We can do this, for example, by embedding (215), as in (216):

- (216) *I wonder (don't remember)* a. *who was planning to buy what*
 b. *who was arguing about a plan to buy what*

To demonstrate that CNPC holds in these cases, where there is plainly no movement rule applying, we must argue that (216b) is starred but not (216a).

I do not myself perceive any significant difference in acceptability between (216a) and (216b). But even if there is such a difference, it does not suffice to show that CNPC holds in this case. To establish that CNPC holds it is necessary to show that structures of equivalent complexity with a cyclic node \bar{S} in place of NP are acceptable, while the structures with NP are not. Thus to establish that CNPC holds of direct questions does not suffice to compare (217) with (218), where brackets bound cyclic categories:

- (217) *who do you believe [that John saw]*
 (218) **who do you believe [the claim [that John saw]]*

These examples suffice only to establish the weaker "complex phrase condition."

To show that the relevant condition is, rather, CNPC, it is necessary to contrast (218) with (219):

(219) *who do you believe [that Bill claimed [that John saw]]*

Noting that (219) is grammatical while (218) is not, we establish that the "complex phrase condition" does not suffice and that in fact CNPC is operative. This is the course we have followed in the foregoing discussion.

Returning now to (216), to establish that CNPC holds we must consider such cases as (220):

- (220) *I wonder (don't remember)* (a) *who was arguing [that Bill planned [to buy what]]*
 (b) *who was arguing about [a plan [to buy what]]*

Only if (a) and (b) differ crucially in grammaticalness is there an argument for CNPC from these cases. But I see no difference, certainly nothing comparable to the distinction between (219), (218), which is the relevant analogue. It seems to me that double-*wh* structures are fairly free, in violation even of such constraints as the coordinate structure condition (cf. (221), subject to some qualifications about increasing complexity and its effect on naturalness, which may very well hold quite generally (e.g., in such cases as (219)), and therefore belong to an independent component of the full system of language and language use.

(221) *I wonder (don't remember) who went to the store to buy wine and what*

(222) *I don't remember who wondered how to do what to whom*

Similarly, Bresnan argues on the basis of (223) that the rule in question observes CNPC, but a satisfactory argument would require a basic difference between (223b) and (224):

- (223) a. *who saw pictures of whom*
 b. *who heard claims about pictures of whom*

(224) *who heard that Bill saw pictures of whom*

I am not at all convinced that there is a relevant difference. My judgments on these examples are not at all firm, but I would tend to take them as evidence that non-movement rules do not observe the constraints in question.

Bresnan's most interesting and important argument, however, deals with another matter, namely the rule she calls "comparative subdeletion" (C-Sub), which yields such sentences as (225), from Bresnan (1975):

- (225) a. *they have many more enemies than we have **friends***
 b. *she seems as happy now as she seemed **sad** before*
 c. *my sister drives as carelessly as I drive **carefully***

Elimination of the boldfaced word in (225) gives the corresponding comparatives, which Bresnan takes to be derived by a deletion rule falling together under a single generalization with C-Sub.

Bresnan argues further that C-Sub observes CNPC, as illustrated in (226)-(228):

- (226) a. *this policy has been as harmful to our interests as people believed it would be **beneficial***
 b. **this policy has been as harmful to our interests as people believed the claim that it would be **beneficial***
- (227) a. *I'll have to give as many Fs as you've proposed to give **As***
 b. **I'll have to give as many Fs as you've discussed a proposal to give **As***
- (228) a. *it has done no less harm than you say it has done **good***
 b. **it has done no less harm than you have the opinion that it has done **good***

To show that CNPC is involved, rather than just a "complex phrase constraint," we must compare not the (a) and (b) cases of (226)-(228), but rather the (b) cases and such examples as (229)-(231):

(229) *this policy has been as harmful to our interests as people believed that Tom claimed that it would be **beneficial***

(230) *I'll have to give as many Fs as you've mentioned that Bill proposed to give **As***

(231) *it has done no less harm than you informed me that it has **done good***

Certainly (229)-(231) are much less acceptable than the corresponding comparatives, with the boldface phrases removed. This is characteristic. To take another, simpler case, consider (232):

- (232) a. *the desk is as high as it is **wide***
 b. **the desk is as high as they believe the claim that it is **wide***
 c. *?the desk is as high as they believe that Bill claims that it is **wide***
 d. *the desk is as high as they believe that Bill claims that it is*

In (232), the basic judgments seem to me to be that (a) and (d) are fully acceptable, whereas (b) and (c) are not. Case (232a) is C-Sub; case (232d) is comparative formation, which I have argued is *wh*-movement. If there is no further difference between (232b) and (232c), then we may simply say that a "complex phrase constraint" applies to C-Sub. If we take the difference to be significant, with (232c) considerably more acceptable than (232b) (and comparably in the examples (226)-(231), then we might decide to accept (232c) as grammatical, explaining its relative unacceptability in some other terms, say, in terms of some performance factor—though why such a factor should apply in C-Sub but not in comparatives is unclear.

Bresnan notes that "acceptability of sentences involving Subdeletion seems to decay more rapidly as length and complexity increase than with [Comparative Deletion]." She also notes that "natural contrasts" or "foci" are required in C-Sub to a much greater extent than in comparatives, citing Akmajian. But these considerations raise some doubt as to whether in fact C-Sub observes CNPC and whether it can be coalesced with comparative deletion or regarded as a rule operating over a

variable. The "variable" in question must be subject to some condition indicating that it is not too complex, in some sense, and that the appropriate parallelism holds. This notion of "complexity" is qualitatively different, it seems, than the performance factors that may apply in cases of *wh*-movement (comparatives in particular). It may well be that the conditions of complexity and parallelism, when properly formulated, will simply rule out such cases as the (b) examples of (226)-(228) and (232) as being particularly bad. If so, we do not have a case of CNPC, just as (210) does not illustrate SSC, though superficially it appears to do so.

It seems, in fact, that very slight modifications suffice to cause decay of acceptability of C-Sub. Consider such cases as the following:

- (233) a. *the desk is wider than it is high*
 b. *the desk is wider than it used to be high*
 c. *the desk was wider than it seems to me to be high now*
- (234) a. *she seems as happy now as she seemed sad before*
 (= (225b); Bresnan's (83))
 b. *she seems as happy now as she* $\left\{ \begin{array}{l} \text{was sad before} \\ \text{has ever been sad} \\ \text{will ever be sad} \end{array} \right\}$
- (235) a. *John is happier today than he usually is sad*
 b. *John is happier than he looks healthy*
 c. *John looks more satisfied than he is happy*
 d. *John is more healthy now than he has been happy for many years*

It seems to me that (233b,c), (234b), and (235) are very low in acceptability, hardly better than (232b) (if at all), although the comparatives formed by removing the italicized word in these examples are perfectly acceptable and the modification that gives the unacceptable C-Sub forms is rather slight. Thus it seems to me difficult to establish that C-Sub meets CNPC, that it falls under the same generalization as comparative formation, or that it is a rule operating over a variable.

To summarize so far, I have argued that comparatives are formed by *wh*-movement, and that there seems no reason to postulate a second rule of comparative deletion that is extensionally identical (as a function) to *wh*-movement over a sub-domain of the latter. I see no reason to believe that C-Sub constructions challenge that conclusion. However, it remains to determine how C-Sub relates to the general thesis (50). Specifically, is C-Sub a rule of deletion over a variable meeting the conditions (49)? If the answer is positive, we must permit a new category of rules, deletion over a variable, thus expanding the class of permitted grammars. Furthermore, we must abandon the thesis (50) and with it the explanation for CNPC, *wh*-island constraints, and cross-over.⁵⁸ But the crucial data seem to me relatively unconvincing. Until some formulation of the relevant notion of "complexity" or "parallelism" is advanced, we really have no way of knowing whether the restrictions on C-Sub bear on the thesis (50) at all.

But in fact further analysis shows, I think, that little hinges on the question of whether C-Sub is taken to observe the conditions (49). We can see why by considering more carefully the applicability of Bresnan's relativized A-over-A condition (RAOAC) to the case of C-Sub.

Recall that RAOAC guarantees that application of *wh*-movement to (236) will give (237), not (238):

- (236) a. *John read* [[*how many*] *books*]
 b. *John is* [[*how (much)*] *tall*]
- (237) a. *how many books did John read*
 b. *how tall is John*
- (238) a. **how many did John read books*
 b. **how (much) is John tall*

The condition guarantees that the larger bracketed phrase of (236) is extracted, in these cases. Bresnan argues that the same condition is applicable in the case of C-Sub. Given (239) we form (240) by C-Sub, deleting *X*:

- (239) *the desk is as high as it is* [[*X*] *wide*]
 (240) *the desk is as high as it is wide*

Bresnan takes *X* to be a QP, say, *that much*. Why doesn't RAOAC apply, deleting (241a), as it moves (241b) in (236b) or (according to Bresnan's analysis) as it deletes (241a) in (242):

- (241) a. [[*X*] *wide*]
 b. [[*how (much)*] *tall*]
- (242) a. *this desk is as wide as that one is* [[*X*] *wide*]
 b. *this desk is as wide as that one is*

The reason, Bresnan argues, lies in the principle of recoverability of deletion. Thus RAOAC requires that we apply the rule to the maximal appropriate phrase that is not distinct from its antecedent; (241a) is distinct from its antecedent in (239) but not (242a); therefore only *X* is deleted in (239). It is this assumption that permits Bresnan to take comparative deletion and C-Sub to be the same rule.

But the assumption seems to me questionable. Notice in the first place that on this approach, we must take (243) to be analogous to (244) rather than (245):⁵⁹

- (243) a. *John is taller than Bill is tall*
 b. *John is taller than he is tall* (take *he* to refer to John)
- (244) *how is John tall* (= (238b))
- (245) a. *John's height exceeds Bill's height*
 b. *John's height exceeds his height* (take *he* to refer to John)

The reason is that under this analysis, (243a,b) derive by the same violation of RAOAC that gives (244). But this conclusion seems to me highly counterintuitive. Rather, it seems to me that (243a,b) are quite analogous to (245a,b) and very

different from (244); specifically, (243b) seems to be simply a logical contradiction, like (245b).

But in fact there is additional evidence that Bresnan's analysis of C-Sub is defective. A crucial requirement of this analysis is that (243) must be marked ungrammatical, as a violation of RAOAC. But in fact, neither (243a) or (245a) (nor, for that matter, (243b) and (245b), which I take to be just contradictory) is ungrammatical, as we can see readily by constructing an appropriate context. If this is correct, then we can understand why (243) seem analogous to (245) rather than (244), which really is ungrammatical. As relevant contexts, consider the following:⁶⁰

- (246) Speaker A: *John is more courageous than Bill is intelligent*
 Speaker B: *No, you've got it all wrong; John is more courageous than Bill is courageous*
- (247) Speaker A: *this desk is higher than that one is wide*
 Speaker B: *What is more, this desk is higher than that one is high*
- (248) Speaker A: *this desk's height exceeds that desk's width*
 Speaker B: *In fact, this desk's height exceeds that desk's height, too*

Similar examples can be constructed for (243), (245), apart from the difficulty of finding a natural contrast to "tall":

- (249) Speaker A: *John is taller than Bill is heavy*
 Speaker B: *What is more, (243a)*
- (250) Speaker A: *John's height exceeds Bill's weight*
 Speaker B: *Furthermore, (245a)*

In short, when context supplies an adequate reason for placement of the required stress on the compared form in C-Sub constructions, examples such as (243), (245) (but never (244)) are quite all right. The simplest explanation for this fact, avoiding any elaborate complication of rules to distinguish somehow between cases of phonetically identical stress, is that C-Sub simply removes *X* in (239), etc., and is not subject to RAOAC. The remaining element is stressed, but for reasons having nothing to do with C-Sub; cf. (245). If the remaining element happens to be identical with the paired phrase that is its "antecedent," then the sentence is either contradictory (as in (243b) and (245b)), or else must be understood as in the discourses cited. All of this will form part of the rules of interpretation for foci in C-Sub constructions.

Notice now that there is no basis at all for generalizing C-Sub and comparatives, which is just as well in the present framework, for reasons already discussed. But we can go further. Consider the choice of the element *X* eliminated in C-Sub, as in (239) or more generally, (251):

- (251) ... *than (as) NP is* [[_{QP} *X*] ...]

There are several kinds of familiar deletion phenomena. Typical examples are VP-deletion, as in (252); *wh*-deletion, as in (253); and *for*-deletion, as in (254):

- (252) *John left early but Bill didn't (leave early)*
- (253) a. *the man (who) you met left early*
 b. *John is taller than (what) Bill is*
- (254) *John wants (for) to leave*

In such examples as (252), there is typically a variant with the deleted phrase unstressed. It may well be that this is the only kind of deletion that involves lexical items; namely, deletion "under identity" (cf. p. 81, above) of a phrase that can appear unstressed.⁶¹ Examples (253)–(254) illustrate another major class of deletions—perhaps the only other case—namely, deletion of designated terminals, sharply restricted, and often with optional or dialectal variants without deletion.

Let us now return to C-Sub and ask where deletion of *X* in (251) fits into this pattern. Plainly, it is not a case like (252); there is no variant with an unstressed expression. Nor are there optional or dialectal variants. The deleted element *X* must simply be absent; period. The rule of C-Sub, as we have seen must refer specifically to *X*; it does not fall under RAOAC, as in (237). Assuming Bresnan's analysis, *X* is simply some representative of QP that is obligatorily eliminated.

We do have an element that is obligatorily deleted under some conditions, namely, *wh*-. Suppose, then, that we were to take *X* = *wh*- or to take *wh*- to be a feature of *X*. This choice allows us to express the relation between comparatives and C-Sub constructions in terms of presence of *wh*-. Furthermore, the obligatory deletion might fall under a broader generalization or might require no rule at all, given that *wh*- in isolation has no phonetic content. And we can easily formulate RAOAC so that it does not apply to "bare" *wh*- but only to phrases *wh*-*Y* (*Y* some terminal string) of the form *X*-bar (with the right number of bars; three in Bresnan's theory). We might, for example, limit RAOAC to cases where *wh*- is a specifier, in the sense of *X*-bar theory, of some lexical category, as it is in all the cases where RAOAC applies but not in (251), where it does not.⁶²

Pursuing this approach, we will have *wh*-movement followed by the familiar *wh*-deletion in C-Sub constructions.⁶³ It will follow, then, that C-Sub has the properties (49).

Bresnan gives a number of arguments against the assumption that a movement rule such as *wh*-movement applies in C-Sub. There are two basic points. The first is that there are no dialectal variants with *wh*-words in the case of C-Sub; i.e., no examples such as (255) analogous to (256):

- (255) *John is more courageous than what Bill is intelligent*
- (256) *John is more courageous than what Bill is*

But this argument does not apply to the analysis just suggested. Under this analysis, there is no form such as (255) for the reason that no *wh*-word was moved, but only *wh*-, which cannot be phonetically realized. The second argument is that where there is a lexical string in place of *X* in (251), extraction of QP is impossible, as illustrated by (238). That is, "certain kinds of left-branch modifiers cannot be moved away from the constituents they modify." Bresnan explains this fact in

terms of RAOAC, and we have been relying on her explanation in the case of questions and relatives. But we have already seen that RAOAC does not account for C-Sub; rather, we must reformulate either RAOAC or C-Sub, perhaps along the lines just sketched, so that C-Sub does not fall under RAOAC. Therefore, this class of arguments against a movement rule no longer applies. Whether we have deletion or movement, the left-branch modifier involved in C-Sub is not subject to the general left-branch condition, which Bresnan convincingly explains in terms of RAOAC. In short, it does not matter whether we assume that the designated element *X* of (251) is deleted in place, or is moved by *wh*-movement and then deleted by an obligatory rule; in either case, either because it has no phonetic content in principle (and therefore, strictly speaking is not deleted) or as a subcase of the familiar rule illustrated in (253).

We can now see that C-Sub, though an extremely interesting phenomenon, does not seem to be relevant to our current discussion or to the thesis (50). If we decide to rule such "complex" examples as (232c) ungrammatical, then it follows that CNPC, etc., simply do not apply to C-Sub. In accordance with this decision as to the facts, we will formulate C-Sub as a rule deleting *X* of (251) in place; whatever conditions are established regarding complexity and parallelism will form part of the associated rule of interpretation. The rule is no longer "deletion over a variable"; we therefore do not have to admit this new category of rules into the grammar, and nothing follows concerning the general thesis (50). Or, if we decide, with Bresnan, that (232c), etc., are grammatical, then we will conclude that C-Sub does observe our general conditions subject to some extragrammatical factors that account for the rapid decline in acceptability with complexity and for the focus and parallelism requirements. In accordance with this interpretation of such constructions as (232c), we will stipulate that *X* of (251) is (or has the feature) *wh*-; We now have just another bit of evidence corroborating the general thesis (50), though very weak evidence because of the ambiguous status of (232c), etc.

The choice between these two alternatives will have to await a better understanding of the conditions on complexity and parallelism involved in C-Sub constructions. As far as the general thesis (50) is concerned, nothing seems to follow, either way.

If this line of argument is correct, we have then a very welcome outcome. Namely, there seem to be no clear counterexamples to the general thesis (50). The consequences have already been noted several times. We have an explanation for a variety of otherwise unexplained constraints in terms of rather simple conditions on rules, conditions that seem entirely natural as limitations on procedures of mental computation. Furthermore, we can reduce drastically the set of available rules. There will be no asymmetry between rightward- and leftward-movement rules; all are upward-bounded, in Ross's sense. There is no distinction between bounded and unbounded rules. All movement rules are simply subject to subjacency, if they are part of the cycle. There is no clause-mate constraint applicable to certain rules but not others. The only deletion rules are those of the type (252)–(254), and of these, only (252) are non-trivial. Rules of construal and no others are subject to the basic conditions

(4), (5); we thus have a rather natural formulation of an autonomy thesis for formal grammar, as noted earlier. More important still, we have some reason to believe that for the core grammar at least, the expressive power of transformational rules can be vastly reduced so that very few possibilities are available at all. Thus the class of possible grammars is significantly reduced and we have a natural and rather far-reaching explanation for phenomena of the sort under discussion here. Of course, these conclusions will only hold if the problems noted along the way and many others, no doubt, can be overcome.

Reduction of the class of available grammars is the major goal of linguistic theory. To account for the fact that language is acquired as it is, we must find ways to restrict the "space" of potential grammars to be searched by the language learner. Note that reduction of the class of grammars is not in itself an essential goal, nor is restriction of the class of generable languages; it is the class of "available" grammars that is important. We might in principle achieve a very high degree of explanatory adequacy and a far-reaching psychological theory of language growth even with a theory that permitted a grammar for every recursively enumerable language. The reasons are those outlined in Chomsky (1965), chapter 1, section 9. What is important is the cardinality of the class of grammars that are compatible with reasonably limited data and that are sufficiently highly valued. We achieve explanatory adequacy and approach a successful "learning theory" for language to the extent that this class is small, irrespective of the generative capacity of the class of potential grammars. We can try to keep this class "small" by restrictive conditions on the various components of the grammar (e.g., the X-bar theory for the categorial component of the base). The preceding discussion suggests other ways in which the variety of highly valued grammars can be reduced—quite significantly, if the suggestions developed here prove tenable.

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Notes

1. As noted in Chomsky (1973), the principle of strict cyclicity as there formulated implies that *wh*-movement is cyclic. Bach and Horn (1976) state that they do not see why this principle implies that *wh*-movement is successive cyclic. The problem they perceive arises from their conclusion that when I wrote that the principle implies "cyclicity," I really meant "successive cyclicity"; cf. their note 23. But I did mean "cyclicity," and the problem they see does not arise.
2. Kayne suggests a possible deep structure for this case, but it seems rather artificial.

3. Note that there is no way to explain these facts in terms of a "clause-mate" constraint and a rule of raising to object. In the first place, reciprocal interpretation is not subject to a "clause-mate" constraint. cf. (7), (8); in fact, I think there is no credible evidence that any transformational rule or rule of construal is subject to such a constraint, i.e., that there is any reason to permit this option within linguistic theory. Furthermore, in many dialects we have such sentences as "they want very much for each other (themselves) to win," completely ruling out any such analysis. In general, even if there is a rule of raising to object position, which I doubt, it will not apply to *want*-type verbs, for reasons discussed in Bresnan (1970, 1972, 1976c); Lightfoot (1976a). See the latter for a general review of the matter.
4. Cf. note 3. Note that in all dialects, "they want very much for *them* to win" requires disjoint reference between the italicized positions. I will assume here that EQUI is correctly analyzed as deletion of "X's self" (X a pronoun) in the context *for* - VP, optionally in some dialects, obligatorily in others, yielding the dialectal "they want for to do it" and the standard "they want to do it" with *for*-deletion before *-to*, under conditions that are moderately complex and somewhat variable across dialects. For discussion, cf. Chomsky (1975c), and for an independent argument, cf. Fodor (1975), pp. 141ff.
5. Bach and Horn (1976), in a criticism of Chomsky (1973), argue that "the total effect of the Specified Subject Condition . . . (etc.) . . . is to block extraction from" noun phrases. This is a rather selective reading. Examples of reciprocal interpretation and disjoint reference, not to speak of many others discussed in Chomsky (1973), have nothing to do with extraction from noun phrases. Thus even if they were correct in their proposals concerning noun phrases, to which I return below, the consequences for the analysis presented in Chomsky (1973) would be slight, it seems to me.
6. The point of these examples is that by reliance on PIC and SSC, which are independently motivated for interpretive rules, we can significantly reduce the expressive power of the theory of transformations, perhaps even to such a level that basic rules can be formulated as in (1). For discussion, cf. Chomsky (1975b,c). Even if this reduction is unattainable, the effect of the conditions discussed is considerable. This is important, since naturally we are concerned to reduce the class of grammars potentially available.
7. These examples are from Kayne (1975), as reanalyzed by Quicoli (forthcoming a,b,c).
8. Such examples as (i) have been suggested as counterexamples:
(i) *los hombres parece [que t estan cansados]*
But as Quicoli observes, this appears to be a case of topicalization with subsequent deletion of the subject pronoun rather than a case of raising. Under the analysis of topicalization presented below, PIC is irrelevant here. This is another example of the irrelevance of unanalyzed examples to confirmation of conditions on rules.
9. Cf. Kayne (1975), Quicoli (forthcoming b), Pollock (1976). The English examples are cited in Chomsky (1973) from Fauconnier (1971), who gives the French equivalents.
10. One crucial assumption in this analysis is that in English COMP cannot be doubly filled. It follows that no more than one element can be extracted to the matrix sentence from a complement clause. Postal (1976a) argues that this assumption is incorrect, as shown by (i) and (ii):
(i) *under those conditions, what do you think I should do*
(ii) *if he comes, what do you think I ought to do*
He argues that "both of the italicized phrases have been extracted from the complement of *think*." Postal does not formulate the rules that he believes to be operative here, but presumably he is assuming that certain phrases X are preposable to sentence initial position in the context (iii):
(iii) *what you* VP [_S NP V . . . X]

Assuming that some such rule is what he has in mind, we see at once that it is incorrect. Cf. (iv), (v):

- (iv) **under those conditions, what did you tell Mary [that I should do t]*
(v) **if he comes, what did you tell Mary [that I should do t]*

To be precise, (iv) and (v) are not starred, but rather cannot be interpreted as extraction from the position marked with *t*, but only as preposing from the matrix clause. Thus the rule that seems to be presupposed by Postal's discussion is wrong. This leaves us with the problem of explaining (i), (ii). Whatever the explanation may be, notice that the phenomena cited have no direct bearing on the conditions on rules that Postal is discussing, for reasons already elaborated several times. Postal's discussion of alleged counterexamples to SSC is a good example of the fallacy that I have noted several times: phenomena do not bear directly on conditions on rules; only rules do. In no case does he propose a rule that violates (or confirms) these or any other conditions. Similar criticisms with regard to Postal (1974a) appear in Lightfoot (1976a); Bresnan (1976c).

As far as (i) and (ii) are concerned, perhaps the explanation is that such phrases as "you think" are subject to a reanalysis as adverbials, so that none of the relevant conditions apply, just as we have "violations" of CNPC under the reanalysis indicated in (vi) and (vii):

- (vi) *what did he [make a claim] that John saw* (acceptable, for many speakers)
(vii) *what did he [have an opportunity] to do*

Such reanalysis is motivated by the familiar analysis of tags; e.g., (viii), (ix):

- (viii) *I think that John will come, won't he*
(ix) **I told Mary that John will come, won't he*

Whether or not this suggestion is correct, I stress again that such examples as (i) and (ii) have no relevance to the question of the adequacy of conditions on rules *in themselves*, but only indirectly, insofar as they indicate what the rules of grammar might be.

11. Compare **"what did they hear some funny stories about pictures of,"* blocked because of subadjacency. Cf. Chomsky (1973) for discussion of some complications.
12. A more familiar assumption is that relativization in these languages leaves a copy. I am assuming that pronouns are base-generated, and that the power of transformations is so restricted that pronouns (or, for that matter, lexical items in general) cannot be introduced by transformation. For discussion, see Wasow (1972), Lasnik (forthcoming). Perhaps the most convincing argument against a pronominalization transformation, in my opinion, is the one given by Dougherty (1969). He points out that *in positions where nouns and non-anaphoric pronouns can freely occur*, pronouns that can be understood anaphorically can also be understood nonanaphorically, a fact unexplained under a transformational analysis but immediately explicable on the assumption that pronouns are base-generated (his "anaporn relation"). Thus a transformational analysis is missing an important and obviously nonaccidental generalization. Postal (1972) argues that Dougherty's observation is false, on the basis of examples in which pronouns occur in positions where nouns and nonanaphoric pronouns do not freely occur. Since the proviso italicized above is perfectly explicit in Dougherty's discussion (cf. his note 13) Postal's rejoinder is completely beside the point.
13. It has been noted that English speakers sometimes use a construction with a pronoun where an island constraint would block relativization, as in (23ii); cf. Andrews (1975a) for some discussion. I suppose that this is an ancillary process, not to be incorporated, strictly speaking, within the grammar.
14. On the significance of erasure of trace, as in NP-preposing in (29), cf. Fiengo (1974), Chomsky (1974, 1975b). Note that trace theory introduces no "globality" in any unwanted sense, contrary to what is sometimes assumed. Cf. Chomsky (1975b) for discussion.
15. We may take *who*, *what* to be, in effect, *wh-person*, *wh-thing*, respectively. Thus *who* is analogous to "what student." Relations between interrogatives and indefinite pronouns, discussed in Chomsky (1964), Postal (1965), will be expressed, within this framework, as conditions on variables in LF, along the lines of Chomsky (1975c).

16. In Chomsky (1973), section 17, it is suggested that the rule of *wh*-movement might be replaced by an interpretive rule for *wh*-phrases generated in COMP position. The rule of interpretation would then be something like (38). I think that this is entirely possible, but I am not convinced that it is a meaningful alternative to the transformational analysis as a movement rule, for reasons discussed in Chomsky (1975c). The same may be said about the proposal to replace NP-movement rules by interpretive rules. It seems to me that we have three types of rules, each with their separate properties: NP-movement, *wh*-movement, rules of construal (and, of course, others: e.g., extraposition, quantifier-movement or interpretation, FOCUS, predication, etc.). If all are regarded as interpretive rules, we still have the same three collections of properties, which can, in fact, be explained (rather than stipulated) if we take the NP-movement and *wh*-movement rules to be movement transformations meeting the conditions discussed here.
17. Direct application of *wh*-movement to give (41) is blocked by PIC and SSC. Application of *wh*-movement in the embedded clause will give "you told Mary [who she should meet]." Extraction of *who* on the next cycle is blocked by PIC, since the bracketed phrase is a tensed clause, and by SSC, under the present formulation (but not that of Chomsky, 1973), since it contains a specified subject. Cf. notes 37, 38. Bach and Horn (1976) state that in Chomsky (1973) a "special clause" is required "allowing extraction over a specified subject by movement into a COMP node." That is incorrect. Movement to the COMP node in the first cycle does not fall under (11), as explained in Chomsky (1973), because there is no internal cyclic node.
18. Examples (a) and (b) are from Dean (1967). Example (c) is from Erteschik (1973), who gives a detailed discussion of the topic. The oddity of *wh*-movement from certain factives is noted in Kiparsky and Kiparsky (1970).
19. In Chomsky (1973), note 22, I remarked that none of the arguments in the literature appear to apply to the formulation of cyclicity of *wh*-movement proposed. Bach and Horn (1976) dispute this observation, claiming that these arguments do apply. They present one example, which, as they note, is based crucially on the assumption that *wh*-movement is obligatory in the embedded clause. They fail to note, however, that I explicitly assumed the rule to be optional; cf. section 13. Thus the statement to which they object seems to me accurate. They assert that optionality of *wh*-movement undermines arguments for successive-cyclicity, but they present no grounds for this conclusion (they do offer arguments purporting to show that strict cyclicity is untenable, but whatever the merits of these may be, the question is a quite different one). In fact, optionality of *wh*-movement is irrelevant to the arguments for successive cyclicity. My assumption is that all rules of the "core grammar" (excluding what Bach, 1965, calls "housekeeping rules") are optional, the apparent obligatoriness deriving from filters and principles of interpretation, along the lines discussed in Chomsky (1973). Cf. Lasnik and Kupin (forthcoming), Chomsky and Lasnik (forthcoming).
20. Note again that we also must presuppose the "superiority condition" of Chomsky (1973), independently motivated by "I don't remember who saw what," *"I don't remember what who saw."
21. Note that if a language has no transformations, this "escape hatch" is unavailable in principle. Therefore it follows that for such languages, extraction of *wh*-phrases from embedded clauses is impossible. Cf. Hale (1976) for an argument along these lines for Walbiri. Note that the sufficient condition cannot be strengthened to necessary and sufficient.
22. Bach and Horn (1976) suggest a different explanation for CNPC, to which I will return.
23. Bresnan notes that there is no convincing evidence for cross-over in the case of comparative subdeletion, and that some of the cross-over phenomena do not seem to hold for subdeletion. Reanalysis of subdeletion along the lines discussed below has as a consequence that these structures should differ from comparatives in this respect.
24. The analysis that follows is essentially that of Chomsky (1974). It was suggested by material presented in Emonds (1976) based on ideas of Ann Banfield. I am indebted to Ivan Sag for emendations, as noted below.

25. How seriously one should take this last remark I am not sure. There is no particular reason to take the *wh*-phrase of the COMP in relatives to be a quantifier binding the variable, and it may be that a natural semantic interpretation of relatives, along the lines previously discussed, will regard the variable introduced as free whether or not the *wh*-phrase in the COMP is deleted. Cf. discussion following (24) and Vergnaud (1974).
26. E.g., subjects, extraposed clauses, pseudoclefts. Also such structures as *"I'm sad he left" (cf. "I'm glad he left"), *"I muttered he'd better leave," etc.
27. After writing this sentence, I noticed that it illustrates the property of left-dislocation discussed earlier without clear examples, namely, that the proposition need not be "open" but can be about the focused element of the TOPIC in some more vague way.
28. This is ungrammatical, but for independent reasons; namely, free relatives with *who* are excluded in general by a special restriction. Thus "this book is what I want Bill to tell Mary to read" is fine.
29. The last example is from Pinkham and Hankamer (1975). We should have also "pea green is what Tom ordered us to paint our boat"; "pea green, Tom ordered us to paint our boat"; "it was pea green that Tom ordered us to paint our boat." But the last two of these seem to me very questionable. The (d) cases also seem marginal, suggesting that PP might be excluded from subject or TOPIC. I am assuming here that the TOPIC is construed with the embedded clause.
30. With obligatory auxiliary inversion.
31. Pinkham and Hankamer, in their very interesting study of clefts, state that their analysis, which postulates two independent rules that form clefts (one of them structure-building), is intended "as a challenge to any analysis" that is not structure-building. But I think that the data they cite, where judgments are clear, is just as well handled by postulating the underlying structure (85) and no rule of cleft-formation at all, apart from the interpretive rules. Note that this analysis covers two cases, but these do not coincide exactly with their two cases. I am not convinced by some of the crucial data that they offer to demonstrate that the examples divide as they propose, but will not pursue the matter here. They note a parallel between PP-preposing and clefting (p. 438), but it is not exactly the parallel noted here. I am suggesting, in effect, that the parallel is far broader and not limited to extraction from the scope of a negative as they propose.
32. Note that we cannot have *believe* in this position as in (94b). The reason has to do with general properties of infinitives. Nonagentive constructions would be equally odd in "I ordered Bill to believe that Mary left," "John is hard to believe to have left," etc.
33. On the status of embedded finite clauses in these constructions, see below.
34. For discussion of infinitival relatives from a somewhat different point of view, see Emonds (1976).
35. Judgments vary, as is generally the case when *each other* is in subject position: cf. "they wanted each other to win," "they prefer for each other to win," "they would hate it for each other to win," "they would hate it for each other's pictures to be on sale," etc.: see Chomsky (1973) for some discussion. However, there seems no question that (103b) is incomparably more acceptable than (103c). Note that *books* must be plural in (103b); as is generally the case in reciprocal constructions for reasons that remain obscure: cf. "we saw pictures (*a picture) of each other," "we turned the arguments (*the argument) against each other," etc. Cf. Chomsky (1973) for discussion.
36. Similarly, *"who₂ did you find a book (which₁) for us to give t₁ to t₂," *"[to whom]₂ did you find a book (which₁) for us to give t₁t₂," *[what book]₂ did you find a person (who₁ for) to give t₂ to t₁," *[what book]₂ did you find a person [to whom]₁ (for) to give t₂t₁."
37. The proviso (46) permits escape from COMP in a tensed sentence. If the notion "subject" is so defined that the subject of S is also the subject of \bar{S} , then (46) is required to permit escape from COMP in infinitives as well. If the subject of S is not the subject of \bar{S} , then nothing will prevent movement from COMP in infinitives. In Chomsky (1973) I made the

- latter assumption, in the foregoing discussion, the former, largely for expository reasons. If bridge conditions are limited to finite clauses, as appears to be the case, then "subject of" should be defined only for S, not \bar{S} , so that SSC is inapplicable to COMP-COMP movement.
38. The basic observation is due to Ross (1967). He notes that some restriction must be formulated to rule out "this rock is too heavy for us (to try) to claim that we picked up." Cf. also Ross (1973): "Gravel pizza is tough for me to prove that she thought of." Ross stars these examples. Lasnik and Fiengo (1974) note that the restrictions follow from PIC, according to their analysis. In our terms, they follow by withdrawing (46) in these cases. Consider the corresponding infinitivals: "this rock is too heavy for us (to try) to order her to pick up," "Gravel pizza is tough for me to prove her to have thought of." Lasnik and Fiengo block these by SSC. If, in fact, the finite and infinitival embedded clauses give approximately the same degree of "strangeness," then in the present framework we must accept the formulation of "subject of" assumed here rather than in Chomsky (1973) (cf. note 37), and relax the language-specific proviso (46) for all these cases. If the tensed S's are indeed of a different category, then the formulation of Chomsky (1973) must be accepted, and the language-specific proviso (46) relaxed. If there is some independent reason for the "strangeness" in all of these cases, then nothing follows with regard to subject of \bar{S} and nothing need be said about (46). Judgments are sufficiently obscure, to me at least, so that I hesitate to make a definite proposal. Note that all that seems to be involved is a language-specific proviso and the precise formulation of a general principle for a domain of facts that are rather marginal.
 39. The following discussion draws heavily on Lasnik and Fiengo (1974), though a somewhat different analysis is proposed.
 40. I have been assuming throughout that VP is introduced only under S; thus, that infinitival subjectless complements of *promise-persuade*, etc., are \bar{S} , with NP = PRO. Deletion of *for X-self*, as in EQU1, will leave VP under S (cf. note 4). Arguments in support of distinguishing VP infinitival complements in this way appear in Quicoli (forthcoming a,b,c); cf. Chomsky (1975c). There is a similar distinction in Kayne (1975).
 41. For discussion of various adjectival constructions, cf. Lees (1960b) and much later work. That the *for*-phrase is within the embedded sentence in both cases of (123c) is argued by Bach and Horn (1976). We will return to this question.
 42. These examples suggest that the phenomena that Bresnan discusses under the rubric of the "fixed subject constraint" might preferably be handled by a surface filter (a suggestion that she rejects, but on grounds that can be overcome in terms of trace theory, it seems) rather than as a condition on rule application, since in these cases *wh*-movement takes place after *for*, which then deletes before *to* in standard dialects.
 43. A rather similar analysis, but without *wh*-movement, is suggested in Ross (1967), but he later rejected it on grounds that were later shown to be inadequate by Akmajian. Cf. Lasnik and Fiengo (1974) for a review.
 44. Cited in Grimshaw (1975) from Berman (1974). Grimshaw attributes the original observation to Huddleston (1971).
 45. They do not cite (f), (g), but these are implicit in their analysis. Similarities between *easy-to-please* constructions and others that we have discussed here are noted in the literature. Cf., e.g. Evers (1975).
 46. I am indebted to Alan Prince for pointing out this consequence.
 47. Postal (1974) argues to the contrary on the basis of such examples as "John's tendency to talk too much," which he takes to be derived by raising to subject followed by nominalization. But he overlooks the fact that the noun *tendency* must have a different source, as in "John's tendency towards violence," where there can be no raising. In fact, it seems that there is an NP of the form "NP's tendency . . ." wherever there is a structure "NP has a tendency . . ." suggesting either a transformational analysis or a redundancy rule, in

- either case, relying on base-generated *tendency*, as implied by the lexicalist hypothesis. For discussion, see Chomsky (1974), Lightfoot (1976a).
48. Perhaps the latter approach will provide a principled explanation for the other major property of *easy*-as distinct from *eager*-constructions, namely, the fact that we have "an easy man to please" but not "an eager man to please." Again, various explanations have been proposed since the basic properties of these constructions were noted (cf. Chomsky, 1962), and the investigation has clearly been a very fruitful one in terms of insights attained along the way, though the original problem remains a challenging one.
 49. But see notes 37, 38.
 50. Note that the Sentential Subject Constraint of Ross (1967) is a consequence of subjacency whether or not S is cyclic, but the Subject Condition is not.
 51. Of course we have "of the students in the class, how many got As" by PP-extraction after *wh*-movement.
 52. In their concluding remarks, Bach and Horn note that there are many rules that extract phrases from NP, violating the NP Constraint as they formulated it. They do not consider this a problem for their analysis, apparently because NP is explicitly mentioned in the structural description of these rules. I do not fully understand their point, however, and may have misstated it.
 53. Compare "we read stories about each other," "they read stories about them" (cf. Chomsky (1973) for some discussion of the latter as compared with "they read stories about themselves"). Note that SSC is required for NPs quite apart from the reanalysis that Bach and Horn suggest. Cf. note 5.
 54. Examples of this sort are difficult to evaluate, since they might arise from passivization of "John - wrote - a book about Nixon" followed by extraposition from subject NP and (perhaps) interchange of PPs. The same is true of *wh*-question; see below. It has sometimes been suggested that (i) is not so deviant as (ii):
 - (i) *of whom was [a picture t] standing on the mantelpiece*
 - (ii) *who was [a picture of t] standing on the mantelpiece*
 One might attribute this difference, if it is systematic, to extraposition from NP yielding (iii) and then (i):
 - (iii) *[a picture t] was standing on the mantelpiece of NP*
 To me, (iii) seems to have approximately the status of (i). Alternatively, one might argue that (i) derives by *wh*-movement directly while (ii) is blocked, appealing to the absolute interpretation of the A-over-A condition to make the distinction. If so, then S need not be taken as a cyclic node for subjacency, and (181) will be modified accordingly. Unfortunately, the examples that seem crucial to selecting among these alternatives seem rather marginal.
 55. Similar questions arise in connection with (209), as noted in Chomsky (1973). See Oehrle (1974) for some relevant discussion.
 56. Fauconnier refers to Postal (1974b) for a possible explanation of why quantifier scope should be constrained by islands, but the basic data that Postal assumed seem to be incorrect. Cf. Jackendoff (1975a). That is, the cases he considered seem not to be governed by such conditions as CNPC (as would be expected in the present framework).
 57. Cf. Hornstein (1975), note 33, citing observations by G. Horn.
 58. Recall that cross-over conditions are in part inapplicable, in part violated by C-Sub, as Bresnan notes. See note 23.
 59. Note that the italicized phrases in (243)-(245) must be stressed. However, this is no special property of C-Sub, as we can see from (245).
 60. I owe this point to Ivan Sag, who cites the following sentence suggested by Larry Horn:
 - (i) *John drinks more Scotch than Bill does Scotch*

As Horn observes, (i) is quite appropriate in the following discourse:

Speaker A: *John drinks more Scotch than Bill does Bourbon*

Speaker B: *No, you've got it all wrong, (i)*

Boldface type indicates stress throughout these examples.

61. One might consider the possibility that such rules as VP deletion do not belong to sentence grammar at all, but rather to a theory of discourse. Cf. Sag and Hankamer (1976), Sag (forthcoming, 1976), who do not draw this conclusion but provide arguments on which it might be based. If so, then deletions can be narrowly restricted in sentence grammar, perhaps just to deletion of certain grammatical formatives and pronouns. Other deletions, where a variant appears with the deleted string unstressed and the deletion is conditional on discourse factors (hence, in special cases, sentence-internal discourse factors), would then be regarded as on a par with the rules that generate bare NPs, say, as answers to questions. If this proves to be a reasonable course, there will be certain consequences with regard to the effect of deletion rules on generative capacity. Grammars must allow some deletion of designated elements; at least this is true of any grammar that derives "the man I saw" from "the man who I saw," etc. If no constraints are placed on such deletion, then for most classes of grammars it will follow that all recursively enumerable sets can be generated, not a particularly important fact, for reasons discussed in Chomsky (1965) and below. E.g., phrase structure grammars have the weak generative capacity of unrestricted rewriting systems (arbitrary Turing Machines) if one terminal symbol is taken to be "blank." Peters and Ritchie (1973) observe that the same is true of transformational grammars, and state some general properties of grammars with cyclic rules that would suffice to reduce weak generative capacity to recursive sets. Peters (1973) suggests a rather plausible general property of transformational grammars that would suffice for this purpose, namely, his "survivor property." A number of people have observed that there is no algorithm for determining whether an arbitrary transformational grammar has this property, again, neither a surprising nor particularly interesting fact; there is also no algorithm for determining whether an arbitrary rewriting system generates finite sets, but that would not lead us to conclude that a class of "grammars" generating only finite sets cannot be specified. Peters's suggestion poses the problem of finding decidable conditions for grammars that guarantee that the survivor property (or some other sufficient property) is met, if indeed it is true that natural languages are recursive, which is by no means obvious (or, again, particularly important, in itself). Perhaps an approach to deletions of the sort just briefly discussed might provide an answer to this problem, if worked out in detail.
62. As noted by Woisetschläger (1976), Bresnan's RAOAC might be modified so that it applies to all and only "mixed terms" with a designated specifier. Then her analysis would apply at once to such examples as "so tall a man, I have never before seen," "so tall, I have never before seen a man," where the specifier is *so* rather than *wh-*; etc.
63. Note that *wh*-deletion is vacuous in this case, perhaps, since there may be no terminal string in the first place.

COMMENTS ON THE PAPER BY CHOMSKY

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Introduction

In a paper published in 1972, Chomsky characterized the state of our field as follows:

There is an appearance of considerable diversity of points of view—and to some extent, the appearance is correct. However, I think that the dust is beginning to settle, and that it is now possible to identify a number of real, empirically significant theoretical questions that have been raised, if not settled, in this work. I also think much of the apparent controversy is notational and terminological—including many issues that appear to be fundamental and have been the subject of heated, even acrimonious dispute. This is unfortunate, because it sidetracks serious work, and because occasionally certain questions of some interest are embedded, sometimes buried in these terminological debates. (Chomsky, 1972b, 63 ff.)

I think this characterization holds today as well, and I would like to make my remarks in the same spirit. I will first list what I think are uncontroversial general areas of agreement. Then I will look at some specific points of agreement across various current (and not so current) frameworks that emerge from Chomsky's latest paper(s), trying to sort out what are differences of substance and what merely terminological. I have a number of questions about the interpretation of various aspects of Chomsky's current position and some criticisms. Finally, I will try to identify a very broad issue that needs to be worked on in the future.¹

I am not going to talk much about the parts of Chomsky's paper addressed to the question of comparative deletion since I think they have been adequately treated in the discussion of Bresnan's paper.