Precede-and-command revisited revisited

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May 14, 2014

Bruening (2014) proposes to replace the familiar notion of c-command (1) by phase-command (2), where phases are the categories in (3), and to rephrase Condition C of the Binding Theory of Chomsky (1981), (4), in terms of the precede-and-command condition in (5).

(1) *c-command*
α c-commands δ iff α is merged with (a constituent dominating) δ

(2) *phase-command*
α phase-commands δ iff there is no phasal node γ such that γ dominates α but not δ

(3) *phases*
CP, vP, DP

(4) *Condition C (Chomsky 1981)*
a. An R-expression is free
b. *x* is free if there is no *y* such that *y* c-commands *x* and *x* and *y* are co-indexed

(5) *Condition C (Bruening 2014)*
a. An R-expression is free
b. *x* is free if there is no *y* such that *y* precedes and phase-commands *x* and *x* and *y* are co-indexed

Epstein (1999) showed that c-command (1) reduces to the structure-building operation Merge of Chomsky (1995), in the sense that at the point in the derivation where α and its sister γ (dominating δ) merge, α c-commands γ and all its terms. Zwart (2004)

proposed that merge is actually asymmetric, such that α is merged *to* γ, yielding an ordered pair ⟨α,γ⟩, which is spelled out as the string αγ, reducing precedence to merge (see also Fortuny 2008, Zwart 2011a). As Merge is a necessary component of syntax, c-command and precedence are arguably conceptual necessities in a structural analysis of any linear string.

The conceptual necessity of phases is much less clear. Many have argued that in order to achieve a maximally simple derivation D of any linear string, we must allow D to involve subderivations, which Chomsky (2001) calls phases. But subderivations can be organized in many different ways (Uriagereka 1999, Zwart 2009, De Vries 2012, McFadden 2014), and the identification of the subderivational domains as in (3) has never been fundamentally argued.

An alternative to phases, argued in Zwart (2009), is readily available, since (as is universally agreed) an element α merged in the context of derivation D1 may be the output of a separate derivation D2, so that every derivation is potentially layered, i.e. a network of subderivations. This proposal entails that α may show idiosyncratic sound-meaning properties (as in idioms and other 'constructions', but also incorporation structures, including the *v*-V complex), and, more importantly here, that terms of α cannot be manipulated in the context of D1 (yielding opacity effects).

Analyses based on c-command, phases, or layered derivations all account for the contrast in (6), central to the definition of Condition C.

(6) a. He_{i} loves John_{*i}
b. His_{i} mother loves John_{i}

He and *John* cannot be co-indexed (i.e. refer to the same person) in (6a), where *he* is merged with *loves John*, but *his* and *John* in (6b) can. In the c-command analysis, this is because *his* is not merged with *loves John*; in the phase analysis, this is because *his mother* is a DP (i.e. a phasal node) dominating *his* but not *John*; and in the layered derivation analysis, this is because *his mother* is the output of a separate derivation, and hence there can be no interaction between *his*, a term of *his mother*, and any other element in the derivation.

The phase-command proposal makes unique predictions when the antecedent α is contained in a PP (not a phasal node), as in (7), or when the dependent element δ is

contained in an adjunct, as in (8).

(7) Sue spoke to him_i about $Bill_{*i}$'s mother

(8) a. *VP-adjunct*
I [$_{vP}$ met him_i in Ben_{*i}'s office]

b. *IP-adjunct*
People [$_{vP}$ adore him_i] in $Kissinger_i$'s home country

In (7), α *him* is contained in a PP and hence does not c-command δ *Bill*, making the Condition C-effect unexpected. In (8a), δ *Ben* is contained in a VP-adjunct, so that α and δ are in the same phase, while in (8b), δ *Kissinger* is contained in an IP-adjunct, hence in a different phase than the α *him*; the difference in grammaticality between (8a) and (8b) demonstrates the relevance of phases.

As Bruening is well aware, many if not all Condition C effects can be explained by reference to pragmatics (cf. Levinson 2000), assuming a principle that prefers the use of pronouns over R-expressions when referring to entities already in the active discourse (cf. also Schlenker 2005). Coreference of an R-expression with another element α, such as *his* in (6a), is possible when the referent of α is moved out of the active discourse into the discourse background, and the gist of Bruening's proposal is that this happens only at the edge of a phase.

I think Bruening is right in three important respects, namely where he assumes that precedence is a function of merge, that derivations have a punctuated nature, affecting the range of syntactic dependencies, and that (some) Condition C-effects can be explained away by reference to information structure. These assumptions are well represented in existing literature. Where I think he is wrong is in the assumption that subderivations are defined in terms of phases, and in the idea that precisely these phases are relevant to the explanation of Condition C-effects.

First, the data in (8), showing the relevance of the phasal node vP for Condition C, are replicated in Dutch, where we know the object pronoun has moved to a (non-reconstructing) A-position outside vP (Vanden Wyngaerd 1989):

(9) a. *VP-adjunct, object outside vP* (Dutch)

Ik	heb	hem$_i$	in Ben$_{*i}$-s	kantoor	gesproken	
1SG.NOM	AUX.1SG	3SG.M:ACC	in Ben-POSS	office	speak:PART	

'I saw him in Ben's office.'

b. *IP-adjunct, object outside vP*

... dat	ze	hem$_i$	[$_{vP}$	op	handen	dragen]	in Kissinger$_i$-s	
that	3PL	3SG.M:ACC		on	hand:PL	carry:INF	in Kissinger-POSS	
geboorteland								
native.country								

'...that they adore him in Kissinger's home country.'

(*op handen dragen* 'adore')

In (9a), there is no phasal node that dominates *hem* 'him' but not *Ben*, regardless of the position of the adjunct *in Bens kantoor* 'in Ben's office'; the Condition C-effect is predicted on Bruening's analysis. But in (9b), where both *hem* 'him' and *in Kissingers geboorteland* 'in Kissinger's home country' are outside vP (i.e. no phasal node separating them), Bruening's analysis predicts a Condition C-effect, which is absent. It is not immediately clear, then, that the effect in (8)/(9) requires reference to phases, and the relevance of vP in this regard needs to be substantiated by considerably more data analysis from a larger sample of languages and constructions.

Secondly, it is not clear that there is (or should be) a single explanation for all Condition C-effects. In particular (6a) may be explained by a separate principle having to do with the morphosyntactic expression of reflexivity. Such an explanation would generalize over (6a) and the equally unacceptable (10).

(10) He$_i$ loves him$_{*i}$

Both (6a) and (10) are arguably ungrammatical because English has a different device for expressing self-orientation in predicates, namely reflexive pronouns. If reflexive marking is a function of merge, as argued in Zwart (2006), a large subset of Condition

C-effect phenomena falls outside the scope of Bruening's analysis.

In Bruening's analysis (in section 8 of the article), reflexivity is narrowly interpreted as a set of felicity conditions on the use of anaphoric pronouns, in the tradition of the binding theory of Chomsky (1981). However, languages may use various devices for expressing reflexivity, sometimes in apparent violation of the binding theory, as in the case of Frisian (Tiersma 1985) or Hmong (Mortensen 2004), where reflexivity is expressed by nonreflexive pronouns and R-expressions, respectively. Many languages express reflexivity through verbal morphology (cf. Baker 1996) or body part noun phrases (Schladt 2000), but other devices are also found, including clitics, secondary predicates, focus markers, adverbs, intensifiers, special auxiliaries, and locative PPs (Zwart 2006). The one generalization that potentially ties these strategies together is that reflexive marking affects the sister of the subject, and can be spelled out on the terms of the subject's sister in various language-specific ways. Using an anaphoric pronoun as the object is just one of these devices, but formulating 'binding principles' as conditions on the distribution of noun phrase types clearly misses the point. The correct generalization describes anaphoricity as a function of the relation between a subject and its sister, signaling self-orientation of the event.

As is well-known (since Evans 1980), expressions like (6a) and (10) are acceptable if no self-orientation is intended, as in (11):

(11) [Obviously, if everybody here loves John, then surely it must also be true that]
John$_i$ loves John$_i$

In (11), we are not saying that John is a self-lover, merely that he is a 'John-lover.' In that situation, there is nothing wrong with using a co-indexed R-expression (where indexation is used to refer to extralinguistic entities).

A plausible analysis of the phenomenon in (11), referring to discourse properties, would be to take *loves John* to be construed in a separate derivation layer, fixing the morphosyntactic realization of the nominal expression contained in it, and creating a predicate that can be merged with *John* when no self-orientation is intended. But since (11) can be replicated in Dutch, where both the verb and the object are outside vP on standard analyses of the language (cf. Zwart 2011b), such an explanation can make no reference to phasal nodes.

Other Condition C-effects may reduce to other independently needed rules of the grammar. Languages have special rules for Speech Act Participant reference, such as reference to the ego, which in English requires the use of a first or third person pronoun, but not an R-expression (Bolinger 1977:37, Tancredi 1997). Compare:

(12) a. John said: "{I am/*John is} such an idiot."
b. John felt bad. {He/*John} was such an idiot. [represented thought]
c. John said {he/*John} was such an idiot.

It is not immediately clear that (12c) must be aligned with other Condition C-effects and not with (12a/b). If we are allowed to generalize (12c), where the antecedent *John* is the speaker, to examples like (13), where *John* is not the speaker but in some other sense the 'owner' (thinker, hearer) of the embedded expression, another sizeable subset of Condition C-effects falls outside the scope of Bruening's analysis.

(13) a. It seemed to John that {he/*John} was an idiot.
b. I told John that {he/*John} was an idiot.

So far we have seen that some Condition C-effects can be explained away as falling out from rules regulating the morphosyntactic expression of self-orientation (reflexivity) and speaker-orientation. These Condition C-effects cannot be accommodated under any manipulation of the discourse structure. With other Condition C-effects, such discourse accommodation seems more relevant.

Example (6b), for instance, is only felicitous under a marked intonation (cf. Lakoff 1976: 288 and Bolinger 1977: 3-4; size indicating pitch):

(14) a. His_i mother LOVES John_i (=(6b))
b. His_i mother loves JOHN_{*i}

As is well-known, the nuclear pitch accent in English falls on the most deeply embedded complement, as in (14b), but this intonation appears to generate a Condition C-effect. I agree with Bruening that *his* in (14a) may refer to an element in the discourse background, but this is true for (14b) as well. What appears to be crucial is that the R-

expression must refer to a backgrounded (given) entity as well.

One way to understand the required intonation in (14a) would be to say that in order to arrive at an interpretation in which *his* and *John* refer to the same entity, we must accommodate the reference of *his* on the basis of the information that *John* refers to a discourse backgrounded element as well, and the accommodation would entail that *his* and *John* refer to the same discourse backgrounded element. Arguably, this accommodation is impossible without the marked intonation pattern.

If this is correct, then what seems like the regular outcome of a binding-theoretic principle (be it on the basis of c-command or phase-command) is in fact an accommodation to ameliorate an otherwise unacceptable configuration. I suspect that every intonation-sensitive Condition C-effect is either the result of successful accommodation, or, in case of ungrammaticality, of failure to accommodate.

Native speakers (including linguists) I have consulted agree that the ungrammaticality of the examples in (7)-(8) under the indexing indicated is not as absolute as the ungrammaticality of examples like (6a) or (13c). In particular when *him* in these examples clearly refers to an entity in the backgrounded discourse (something given), it appears that an R-expression can be used to refer to that entity further down the road, as in examples like (15).

(15) a. [Ben$_i$ can be so persuasive. At the end of the day,]
Sue told him$_i$ everything Ben$_i$ wanted her to

b. [Ben$_i$ is such a private person that he$_i$ won't let anyone in his$_i$ office]
So it was quite a thrill to actually meet him$_i$ in Ben$_i$'s office

Similar observations are made by Bolinger (1977), who identifies in these cases a need to reidentify a (distant) prior referent, or to reidentify a referent as a topic.

I think it is striking that some Condition C-effects can be made to disappear under the right discourse conditions, and others, like (6a) or (13c) cannot. This suggests that Condition C-effects do not constitute a uniform body of phenomena requiring a single unified explanation. Moreover, it should be noted that the more robust Condition C-effects (having to do with self-orientation) do fall out from a condition referring to c-command (Zwart 2006).

It remains to discuss whether manipulation of the discourse status of referents takes place at the phase edge, as Bruening crucially contends. And clearly this cannot be right, because, according to Bruening's phrase structural analysis, *him* and *Ben* are in the same phase in (15b), so *Ben* is employed before the referent of *him* has been moved to the background discourse set.

Consider also the examples in (16) ((16a) from Langacker 1969:162).

(16) a. He_i has a lot of talent and $Peter_{*i}$ should go far

b. Mary said [$_{CP}$ that he_i has a lot of talent] and [$_{CP}$ that $Peter_i$ should go far]

Several of my informants say they cannot accept (16b), but I find a similar, if slight, effect when trying to replicate it in Dutch;[1] the vagueness of the judgments suggests, once more, that this is not a core Condition C-effect like (6a). The (relative) acceptability of (16b) is consistent with Bruening's analysis, as the embedding introduces a phasal node CP. But it is also striking that *he* in (16a), being the subject, is the center of attentional focus (Tomlin 1997), and as such harder to move to the background discourse set.[2] But it can be done:

(17) [We spent all afternoon discussing draft picks, and noone generated more heated discussion than the shortstop from Kansas, Peter. But in the end we reached a consensus.]
He_i has a lot of talent and $Peter_i$ should go far.
[But who needs another shortstop?]

In this context, (17) seems to have about the same quality as (16b).

It would be interesting to pursue a line of research that explicates under what

[1] Note that if Bruening's explanation were correct, it would imply that subject-initial main clauses in Dutch, which show a Condition C-effect like (16a), cannot be CPs.

[2] In Bolinger's (1977:32f) analysis of subject-object asymmetries with backwards pronominalization, he suggests that the referent of a subject pronoun is most likely already a well-established topic, and reidentifying the referent as a topic by using an R-expression later on is uncalled for. I take this to be consistent with Tomlin's analysis.

conditions apparent Condition C-effects like (16a) can be accommodated, but the claim that phases are relevant here needs considerably more substantiation. Bolinger (1977) discusses many examples of minimal pairs where Condition C-effects are evoked or avoided by subtle manipulation. Some examples are given in (18).

(18) a. He$_i$ flunked when John$_{*i}$ cheated (Bolinger 1977:16-17)
He$_i$ usually flunks when John$_i$ tries to cheat

b. He$_i$ was just a little boy when I saw John$_{*i}$ (Bolinger 1977:17)
He$_i$ was just a little boy when I first saw John$_i$

c. I bought him$_i$ the house that John$_{*i}$ wanted (Bolinger 1977:21)
I bought him$_i$ the house that John$_i$ always wanted

d. He$_i$ looks at the wall and John$_{*i}$ throws the ball at it (Bolinger 1977:22)
He$_i$ looks at me and John$_i$ goes out of his mind

e. Either he$_i$ eats or John$_{i*}$ sleeps (Bolinger 1977:23)
Either he$_i$ does what I say or John$_i$ loses his job

f. He$_i$ lost the money and John$_{*i}$ found it again (Bolinger 1977:23)
He$_i$ lost the money and then John$_i$ found it again

g. He$_i$ is not to be believed when John$_{*i}$ tells a story (Bolinger 1977:30)
He$_i$ is not to be believed when John$_i$ tells a crazy story like that

h. He$_i$ didn't mind, when I blamed John$_{*i}$ for it (Bolinger 1977:36)
He$_i$ didn't seem to mind, when I blamed John$_i$ for it

i. He$_i$'s going to be flunked, if John$_{*i}$ cheats (Bolinger 1977:36)
He$_i$'s going to get flunked, if John$_i$ cheats

j. It surprises him$_i$ that John$_{*i}$ is so well liked (Bolinger 1977:52)

It surprised him_i that $John_i$ was so well liked

It is not clear that phasal nodes are of any relevance to the shifting judgments in these minimal pairs. Recall that Bruening's analysis involves a processing principle that tells us to move a discourse referent (in this case, denoted by *he*) from the active discourse set to the background discourse set, and that this operation takes place at the right edge of the phase containing *he*.

To account for the observations, one would have to argue either that the examples differ minimally in phase structure, or that the processing principle applies optionally. Of these, only the second option seems viable. But then the factor conditioning whether or not the processing principle applies is (typically) introduced only when the second clause, containing *John*, is processed. For example, in (18b) it is only when *first* is processed that the decision to move the referent of *he* to the discourse background can be made. So even if we allow the processing principle to apply optionally, reference to the phase edge is unnecessary, articifial, or plainly wrong.

Returning to (16b), then, it seems that what is relevant here is not that the embedding introduces a phasal node CP, but that the quotative context increases referential complexity (as now we need to interpret *he* by taking into account what we think Mary has in mind), potentially calling for the reidentification of a particular referent as the topic.

Importantly, Condition C-effects that reduce to the principles governing the expression of self-orientation (6a) or speaker orientation (12c) are not subject to subtle discourse manipulation. As we saw in (11), replacing an anaphor by an R-expression irreparably damages the self-orientation. In (19), it can be seen that no amount of ambiguity will lead to a violation of the rule that speaker orientation requires a pronoun.

(19) Mary said that she heard him_i say to Bill that $\{he_i/John_{*i}\}$ was such an idiot

Of these more robust Condition C-effects, the type reducing to self-orientation is clearly a function of the relation between the subject and its sister (the predicate), hence of Merge and c-command. The type reducing to speaker orientation in many cases involves a similar configuration, with the exception of cases like (13a) which I tentatively grouped under the same rubric, but where the effect may not be configurational.

In conclusion, I think it is very doubtful that Condition C-effects constitute a uniform body of facts calling out for a single, unified explanation with potentially far-reaching consequences. Bruening's stimulating attempt to rethink the relevance of c-command would be better served by focusing on other grammatical dependencies that seem to be more clearly a function of Merge, such as agreement, reflexivity, or movement.

Acknowledgments

Thanks to Craig Sailor and the participants of the University of Groningen syntax seminar.

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