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Zwart, Jan-Wouter

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JAN-WOUTER ZWART

University of Groningen

Basing his argumentation on an analysis of condition C effects, Bruening (2014) proposes to replace the familiar notion of c-command underlying dependency relations with a precede-and-command condition, which defines dependency relations as precedence relations within a local domain (phase). In this reply I argue that condition C effects cannot be used to show the relevance of phases for the definition of syntactic dependency, and I question the conceptual necessity of the notion phase as currently defined.*

Keywords: condition C effects, c-command, phases, dependency relations, precedence, discourse, R-expressions

1. INTRODUCTION. In a recent article in *Language*, Benjamin Bruening (2014; henceforth B14) 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: clause (CP), verb phrase (vP), noun phrase (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 coindexed.
(5) CONDITION C (B14)
    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 coindexed.

At issue is the question of how syntactic dependency relations are defined. B14 starts from the assumption that syntactic structures break down into a particular type of local domains (phases), and argues that within phases, dependency is defined by precedence alone.[1]

Condition C of the binding theory concerns the dependency between an R-expression (a nonpronominal noun phrase) and some antecedent, such that the R-expression and the antecedent cannot be interpreted as coreferential, as in 6.[2]

(6) a. *He_i loves John_i.
    b. *I met him_i in Ben_i's office.
    c. *He_i said that John_i is an idiot.

[1] The definition of phases follows Chomsky 2001, except that Chomsky does not discuss the phase status of noun phrases. Note that the definition of phase-command in B14 (see 2) does not block dependency relations across phase boundaries per se, but only in the specific situation where the antecedent is contained in a phase that does not also contain (a phase that contains) the dependent.

[2] In the examples, elements intended to be coreferential are coindexed, and the grammaticality judgment refers to that interpretation only.

In this reply, I argue (contra B14) that the condition C facts of English cannot be used to demonstrate the relevance of phases for defining dependency relations. If so, evidence supporting the replacement of c-command with phase-command would have to be found in other domains of the grammar.

This reply first discusses the relevance of phases for condition C effects (§§2–5) and closes with observations on the conceptual necessity of the phase-command relation and the postulate 'phase' on which it relies.

2. CONDITION C EFFECTS IN B14.

2.1. THE RELEVANCE OF PHASES. The relevance of phases for the interpretation of R-expressions can be illustrated by the minimal pair of 6a and 7.[3]

(7) [$_{DP}$ His$_i$ mother] loves John$_i$.

In B14, the fact that *John* and *his* may be coreferential in 7 is explained since the DP *his mother* is a phase containing *his* but not *John*. As a result, no dependency relation exists, forcing an obviative interpretation of *John* with respect to *his*. The phase-command analysis here obtains the same result as the c-command analysis. Under the c-command analysis, *his* in 7 does not c-command *John* (is not merged with a constituent that contains *John*), and therefore no dependency relation between *John* and *his* exists.

The relevance of the vP-phase for condition C effects is illustrated by the minimal pair of 6b, repeated here as 8a, and 8b, where 6b/8a involves a VP-adjunct *in Ben's office* and 8b an IP-adjunct *in Kissinger's native country*.[4]

(8) a. *I [$_{vP}$ met him$_i$ in Ben$_i$'s office].
    b.   People [$_{vP}$ worship him$_i$] in Kissinger$_i$'s native country.

In 6b/8a, *him* precedes *Ben* within the same phase vP, creating a dependency relation that forces an obviative reading of *Ben*. But in 8b, *Kissinger* is not contained in the same phase vP as *him*, blocking a dependency relation between the two, and making a coreferential interpretation possible.

The relevance of the CP-phase is illustrated by examples like 9, where 9a involves coordination of IPs and 9b of CPs.[5]

(9) a. *[$_{IP}$ He$_i$ has a lot of talent] and [$_{IP}$ 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].

In 9b, *he* is contained in a phase (CP) that does not contain *Peter*, so there is no dependency relation and no obviation. In 9a, there is no phase node that shields *he* from *Peter* (IP is not a phase; see 3), and since *he* precedes *Peter*, there is a dependency relation forcing obviation.

2.2. THE RELEVANCE OF DISCOURSE. B14 argues (pp. 372–73) that effects of coreference and obviation arise as the grammar keeps track of discourse referents during (left-to-right) processing. Condition C, on this view, essentially says that if you could have

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[3] B14 is careful to illustrate the relevance of phases for the interpretation of R-expressions using slightly more complicated structures (of the type *He/his mother loves John's friends*), in order to avoid interference from conditions on reflexivity. We return to examples like 7 in §3, and the observations made there extend to these more complicated cases as well (see n. 7), so that we can abstract away from the distinction here.

[4] Example 6b/8a is B14's 10, from Reinhart 1976:155, and 8b is B14's 31b, from Reinhart 1976:69.

[5] Example 9a is B14's 39a, from Langacker 1969:162, and 9b is B14's 40b. Several native speakers I have consulted say they cannot accept coreference in examples like 9b, but I find a similar, if slight, effect when trying to replicate it in Dutch. So I assume that the effect is real and in need of an explanation. Note that if the analysis in B14 is correct, and if the judgments hold up, subject-initial main clauses in Dutch must be IPs, as argued in Travis 1984 and Zwart 1993, not CPs, as often assumed.

used a pronoun to refer to an active discourse referent, you cannot use an R-expression.[6] An 'active discourse referent' is a discourse referent represented by a noun phrase in the sentence currently being processed. The set of active discourse referents ('set C') is distinguished from the set of all referents in the current discourse ('set D', also called 'background discourse set' below), and discourse referents may be moved from set C to set D during sentence processing.

Coreference, then, is not possible with an antecedent representing an active discourse referent, but is allowed with an antecedent representing a discourse referent from the background discourse set D. The main contention of B14 is that discourse referents are moved into the background discourse set D at the RIGHT EDGE OF A PHASE.

The next sections show that there is no reason to believe that this crucial claim should be maintained.

3. TWO TYPES OF CONDITION C EFFECTS. The condition C effects discussed by B14 often evoke somewhat mixed native-speaker responses (e.g. examples of the type in 9). My point here is not to question the reliability of the data, which I do not take issue with (likewise with the sometimes subtle contrasts in §4 below). However, I do think it is relevant that not all condition C effects are of this subtle, discourse-sensitive type.

As for the data in B14 (and in §4 below), argumentation can proceed only if the examples are approached charitably, that is, considered in the right discourse context and under prosodic conditions that help bring out the relevant contrast. For example, 7 is grammatical only under the marked intonation of 10b.[7]

(10) a. *$[_{DP}$ His$_i$ mother] loves JOHN$_i$.
    b. $[_{DP}$ His$_i$ mother] LOVES John$_i$.

The reason 10b is marked is that in English the nuclear pitch accent falls on the (most deeply embedded) complement. Similarly, 8a can be improved under the proper discourse conditions (see 11), and 8b requires that *in Kissinger's native country* be backgrounded.

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

Given the right discourse setting, 9a also seems not as robust.

(12) [Context: We spent all afternoon discussing draft picks, and no one 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 short-
    stop?]

What B14 claims is that such discourse-sensitive condition C effects can be accounted for in purely configurational terms, as the crucial operation transferring discourse referents from the active to the background discourse set takes place at the phase edge. Since 'phase' is defined in terms of syntactic category (see 3), B14's proposal amounts to a highly specific connection of discourse organization with syntactic structure.

Before we subject this proposed connection to further investigation, it is important to note that the condition C effects in 6a and 6c are not similarly sensitive to discourse or-

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[6] B14, p. 372: 'Principle C (Minimize restrictors): A definite description of the form *the A* may not refer to a discourse referent in active set C if A could be dropped without affecting either (i) the denotation of the description or (ii) its various pragmatic effects.' See Levinson 2000:289 for an earlier, similar proposal.

[7] In these and further examples, small capitals indicate relatively high pitch. See Wasow 1972:52 on how native speakers' judgments of sentences like 7 may vary. In English, the nuclear pitch accent falls on the most deeply embedded complement. In *His mother loves John's friends*, the pitch accent falls on *friends*, and *John* is automatically deaccented (but stress on *John* would once again incur a condition C effect).

ganization and/or prosody. Thus, in contrast to 7/10b, backgrounding *John* in 6a does not help to lift the condition C effect.

> (13) *He$_i$ LOVES John$_i$.

Arguably, this is because the intended reading (indicated by the coindexation) is RE-FLEXIVE, that is, describes a 'self-loving' rather than a 'John-loving' situation.[8] Languages differ widely in how reflexivity (self-orientation) is morphologically realized (see Schladt 2000), but the required form of expression is typically robust. Since English uses reflexive pronouns rather than R-expressions to express reflexivity, the condition C effects in 6a/13 turn out to be more robust than the discourse-sensitive effects of B14.

The condition C effect in 6c is equally resilient, though for a different reason. 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 (see Bolinger 1977:37, Tancredi 1997).[9]

> (14) a. John$_i$ said: '{I$_i$ am/*John$_i$ is} such an idiot.'
> b. John$_i$ felt bad. {He$_i$/*John$_i$} was such an idiot. [represented thought]

If 6c should be aligned with 14, as seems reasonable, we have another class of robust condition C effects that are independent of discourse manipulation.

What all examples used to illustrate condition C effects seem to have in common is a preference mechanism, also identified by B14 (see n. 6), disfavoring R-expressions in situations where a pronoun could be used. With reflexivity and speech act participants, this preference mechanism is absolute, while with other condition C effects, such as the ones central to the argumentation in B14, the preference mechanism may be overruled. We now turn to the crucial contention of B14 that phase theory tells us exactly when this preference mechanism that yields condition C effects may be overruled.

4. PRONOUNS AND REPEATED NOUNS. Bolinger (1977) discusses many examples of minimal pairs where condition C effects can be evoked or avoided by subtle manipulation. A representative example is 15 (Bolinger 1977:23; intonation added).

> (15) a. *He$_i$ lost the money and John$_i$ found it again.
> b. He$_i$ LOST the money and THEN John$_i$ FOUND it again.

Bolinger's explanation for the effect we see in 15 is partly in line with the analysis of B14, in the sense that (i) a pronoun is ordinarily preferred over an R-expression (Bolinger 1977:4), and (ii) the variation has something to do with the need to keep track of discourse referents. But for Bolinger, the mechanism underlying noun phrase repetition is the need to REIDENTIFY THE DISCOURSE REFERENT, for example, by reintroducing the referent as a topic (Bolinger 1977:32). In many situations, repeating the noun phrase is unnecessary or 'unserviceable' (Bolinger 1977:5), but in other situations, the sentence may contain a 'distractor' (Bolinger 1977:3) increasing the need to be clear about the identity of a discourse referent. In those situations, using an R-expression instead of a pronoun is allowed, or even preferred.

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[8] As discussed in Evans 1980, *he* and *John* in 6a/13 can perfectly well be coreferential as long as no reflexivity is intended.

> (i) [Obviously, if everybody here loves John, then surely it must also be true that] {he$_i$/John$_i$} loves John$_i$.

What (i) expresses is that *he/John* is a 'John lover', and what it cannot express is the reflexive reading, in which *he/John* is a self-lover.

[9] I am abstracting away from the well-known deviations from this pattern, in which speakers refer to themselves or the addressee in the third person.

In 15b, the distractor is the adverb *then*, introducing a new event. In contrast to 15a, where the conjoined clauses are more naturally interpreted as belonging to a single event, in 15b the use of the adverb suggests a separation between the two events (Bolinger 1977:23). Since we are now faced with the task of identifying discourse referents across events, the need to be explicit about a discourse referent's identity impresses itself more, apparently enough to overcome the default strategy to avoid noun phrase repetition.

Importantly for our purpose, the addition of the adverb in 15b does not affect syntactic structure. In particular, 15b does not have any phases that 15a lacks, which might explain the grammaticality of 15b under the analysis of B14. In both cases, and just like in 9a, the coordinated clauses are IPs, that is, not phases, so that the only factor determining obviation should be linear precedence.

The example shows that the intuition expressed in B14, that apparent violations of condition C reveal the importance of mechanisms for tracking discourse referents, is correct. But it also shows the irrelevance of phases for the workings of these mechanisms.

Bolinger presents a range of examples like 15, some of which are listed below.[10]

(16) a.   *He$_i$ flunked when John$_i$ cheated.
      b.   %He$_i$ usually flunks when John$_i$ tries to cheat.
(17) a.   *He$_i$ was just a little boy when I saw John$_i$.
      b.   %He$_i$ was just a little boy when I first saw John$_i$.
(18) a.   *I bought him$_i$ the house that John$_i$ wanted.
      b.   %I bought him$_i$ the house that John$_i$ always wanted.
(19) a.   *He$_i$ looks at the wall and John$_i$ throws the ball at it.
      b.   %He$_i$ looks at me and John$_i$ goes out of his mind.
(20) a.   *Either he$_i$ eats or John$_i$ sleeps.
      b.   %Either he$_i$ does what I say or John$_i$ loses his job.
(21) a.   *He$_i$ is not to be believed when John$_i$ tells a story.
      b.   %He$_i$ is not to be believed when John$_i$ tells a crazy story like that.
(22) a.   *He$_i$ didn't mind, when I blamed John$_i$ for it.
      b.   %He$_i$ didn't seem to mind, when I blamed John$_i$ for it.
(23) a.   *He$_i$'s going to be flunked, if John$_i$ cheats.
      b.   %He$_i$'s going to get flunked, if John$_i$ cheats.
(24) a.   *It surprises him$_i$ that John$_i$ is so well liked.
      b.   %It surprised him$_i$ that John$_i$ was so well liked.

As before, speakers vary in how strongly the condition C effects are felt in these cases, and sensitivity to the discourse setting and prosodic characteristics of the examples is required. I would like to proceed on the generalization that in these examples, as in 9, some improvement is typically in evidence.

The crucial question, then, is whether judgments improve only where the presence of a phase edge sets the members of a minimal pair apart. And, clearly, this is not the case.

In 16, for example, the sentence as a whole is an IP, not a phase, and so only precedence should be relevant (on B14's account). This predicts, correctly, that *John* and *he* cannot be coreferential in 16a, but 16b has the same phase structure, and the observation that *John* and *he* can now be more easily interpreted as coreferential is not pre-

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[10] All examples from Bolinger 1977, pp. 16–17, 17, 21, 22, 23, 30, 36, 36, and 52, respectively. See also Lakoff 1976:282f. I have marked the (b) sentences with the percentage sign to indicate improvement to a varying extent for a range of native speakers (Bolinger 1977 presents them as unqualifiedly acceptable). This is intended to reflect the status of these examples as belonging to the same class of flexible condition C effects as examples 7–9, taken from B14 (as opposed to the resilient condition C effects discussed in §3).

dicted. In Bolinger's analysis, the sentences differ in punctual vs. habitual aspect, and the connection between two punctual events is much tighter, making it unnecessary to reidentify the discourse referents in 16a. In 17, the only difference between the two sentences is the introduction of *first* in 17b, not affecting phase structure in any way. The sentences in 18 differ only in the addition of the aspectual adverb *always* in 18b, again without any consequences for phase organization. Examples 19–21 involve clausal coordination, where the (b) sentences are asymmetric in the sense of Kehler 2002, indicating a causal or a temporal sequence. Again, the sentences do not differ in phase structure, since the conjoined clauses, like 9a and 15, are invariably IPs. Similarly, the pairs in 22–24 differ too subtly to reduce the differences in coreference judgments to a difference in phase organization. As these examples suggest, the need to keep track of discourse referents sometimes indeed favors the use of an R-expression where a pronoun would be expected (lifting the condition C effect), but the idea that phases are relevant in this domain seems simply wrong.

In fact, it would seem that the difference between 9a and 9b, where the CP phase did seem to be relevant, also lends itself to a Bolinger-type explanation. First of all, *he* in 9a is a subject pronoun, which Bolinger (1977:32) argues is 'probably already topic', making it unnecessary to reidentify *Peter* as the topic. But in 9b, the same sentence is presented as being uttered by Mary, and during processing we have to keep track of who the speaker has in mind, as well as of who the speaker thinks Mary has in mind— enough reason to be allowed to reidentify the topic by repeating the R-expression. Conversely, 9a can be shown to be felicitous (with coreference) in the right context, as we have already seen in 12, where coreference of *he* and *Peter* seems more acceptable. Again, the improvement of 12 over 9a cannot be accounted for by the phase-sensitive processing principle of B14, as 9a and the relevant part of 12 are identical.

Likewise, if the processing principle that allows the condition C effect to be lifted is sensitive to phases, we predict that 6b/8a, showing the relevance of the vP phase, cannot be improved. But again, this seems too strong, given the possibility of coreference of *him* and *Ben* in 11. Since *him* and *Ben* are contained within the same phase vP, *Ben* is processed before the discourse referent of *him* can be moved to the background discourse set D (on the analysis of B14) , and precedence should rule out coreference as in 6b/8a.[11]

To summarize, subtle manipulation or proper contextualization of a sentence may lift certain condition C effects, explaining away patterns that B14 argues show the relevance of phases in this domain, as well as many others discussed as early as Bolinger 1977, where phases can be shown not to be relevant.

5. PHASE-COMMAND VS. C-COMMAND. I mentioned earlier that the condition C effect in 6a and 7 falls out from both the phase-command and the c-command analyses.

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[11] We may also call into question the conclusion of B14 that coreference in 8b is allowed because the antecedent *him* and the dependent *Kissinger* are in separate phases, blocking phase command. This can be tested in any language in which the object moves out of vP via A-movement (such as Dutch; Zwart 2011b:226 and Vanden Wyngaerd 1989); since the antecedent and the R-expression are no longer separated by a phase boundary, coreference should be blocked as in 6b/8a. But as (i) shows, sentences like 8b have the same status in English and Dutch, in spite of the crucially different position of the object pronoun (the sentential negation marker *niet* is taken to signal the vP-boundary).

(i) ... dat ze   hem$_i$ niet [$_{vP}$ op handen dragen] in Kissinger$_i$'s geboortestreek
       that they him not   on hands   carry   in Kissinger's region.of.birth
       '… that they do not adore him in Kissinger's native region.' (*op handen dragen* 'adore')

However, the phase-command analysis seems to fall short of a true explanation here as well. As we saw in §3, 7 is grammatical only under the marked intonation of 10b, repeated here.

(10) a. *[$_{DP}$ His$_i$ mother] loves JOHN$_i$.
      b.   [$_{DP}$ His$_i$ mother] LOVES John$_i$.

On the analysis of B14, the referent of *his* is moved to the background discourse set D at the point where left-to-right processing encounters the right edge of the DP-phase, and once the referent of *his* has been moved to set D, *John* may refer to it. But 10 shows that *John* may refer to the referent of *his* only when *John* is itself deaccented, an observation that is unaccounted for in the system proposed in B14.

In the analysis of Bolinger 1977, *John* can be repeated if there is a need for reidentifying the topic. That is, the R-expression is used resumptively (cf. Bolinger 1977:3), and this resumptive use is arguably incompatible with pitch accent, explaining the contrast between 10a and 10b.

These observations suggest (once again) that examples like 7 are not relevant to the discussion of phase-command vs. c-command. With neutral intonation (cf. 10a), *his* and *John* cannot be coreferential, a fact that is not predicted by either type of analysis. With the marked intonation of 10b, both the phase-command and the c-command analysis need to be supplemented by a theory like Bolinger's to explain the obligatory resumptive character of *John*.

Moving on to the resilient condition C effects discussed in §3, where no amount of discourse manipulation suffices to lift the condition C effect, it is not clear that they support the argumentation of B14. The observation that speech act participants must be represented by pronouns rather than R-expressions (cf. 6c/14) has no bearing on the issue of c-command vs. phase command, since the relevant dependency relation is not configurational. There is, however, a sizable research tradition going back to Chomsky 1981 explaining the distribution of reflexive pronouns in terms of a dependency relation defined by c-command.

To pursue this point a little further, note that it would be a mistake to think that reflexive pronouns (anaphors) are the only reflexivizing device available for expressing reflexivity. As noted in §3 above, languages differ widely in the way they express reflexivity. Sometimes the devices used are in direct violation of the binding theory of Chomsky 1981, 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 binding theory of Chomsky 1981, as well as much work in its wake, including Reinhart & Reuland 1993 and B14, pursues an account of reflexivity that is narrowly concerned with the distribution of noun phrase types. Consequently, this work is not in a position to generalize over the range of devices used across languages to express reflexivity. A more encompassing theory would ask, not what the distribution of reflexives, pronouns, and R-expressions is, but what devices a language may use to express reflexivity, and what the nature of the dependency relation underlying reflexivity is.

For the discussion at hand, the question would be whether that dependency relation underlying reflexivity is to be defined in terms of phase-command or c-command. I submit that the one generalization that potentially ties the various reflexivization strategies together is that reflexive marking affects the sister of the antecedent, and can be spelled out

on the terms of the antecedent's sister in various language-specific ways. While the system of B14 is able to capture this generalization (since the antecedent is not contained within a phase that excludes the antecedent's sister), this cannot be taken to support the phase-command analysis, since the phase-command analysis simply reduces to the c-command analysis for this domain of phenomena. Put differently, where reflexivity is concerned, the phase-command analysis has nothing to add to existing analyses.

6. The argument from conceptual necessity. This final section argues that c-command relations are conceptually necessary as soon as a structure-building operation like Merge is assumed, whereas phase-command relations crucially rely on the theoretically more questionable concept of a phase. Dependency relations defined in terms of c-command, then, are arguably rooted in more central theoretical concepts than dependency relations defined in terms of phase-command.

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, 2005 proposed that Merge is actually asymmetric, such that α is merged to γ, yielding an ordered pair $\langle \alpha, \gamma \rangle$, which is spelled out as the string $\alpha\gamma$, reducing precedence to Merge (see also Fortuny 2008, Zwart 2011a, and in fact B14:384). 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), and it is not a priori clear that a division in syntactic categories, as in 3, is necessary.[12]

An alternative to phases, argued in Zwart 2009, is readily available, since (as is universally agreed) any element α merged in the context of derivation D1 may be the output of a separate (prior) derivation D2; if so, every derivation is potentially LAYERED, that is, a network of subderivations. Derivation layering is inevitable if we want all types of structured entities (words, compounds, items resulting from incorporation, idioms and other 'constructions' (in the sense of construction grammar), phrases, clauses) to be derived by a single structure-building device (like Merge). At the same time, it is clear that the elements merged in D2 (such as the morphemes of a complex word, put together in a subderivation) cannot be individually merged again in the course of D1.

Locality, then, is a direct result of derivation layering if we assume a principle like 25, a generalization of the lexical integrity hypothesis of Lapointe (1981:230).

(25) Generalized integrity: Given two derivations D1 and D2, such that α is the output of D2 and α is merged in D1, no part of α may be merged in D1 independently from α.

To show the effects of 25 would take us too far afield here, but a moment's reflection will show that it severely restricts the scope of movement (internal Merge), and as such covers much the same ground as do phases. But phases lack the virtual conceptual necessity of derivation layers, and the definition of phases in 3, in terms of particular syntactic categories, has never been fundamentally argued.

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[12] See Epstein et al. 2014 for a critical discussion of the considerations leading Chomsky (2001) to propose the phase concept.

Given the unclear theoretical status of phases, the sweeping scope of B14's phase-command relation is surprising. One might even consider that B14, more than any other work in the current literature, presents a compelling argument in support of the postulate 'phase'. But the argument is compelling only to the extent that its empirical basis is solid.

As I have tried to argue here, the empirical basis of the analysis in B14 and its proposed phase-command relation is undermined by a misunderstanding of the nature of condition C effects. To the extent that discourse considerations are relevant, condition C effects are not conditioned by phase structure, and the more resilient condition C effects turn out to be side effects of language-particular requirements on the expression of reflexivity, a form of dependency best described in terms of c-command, that is, a structural asymmetry created by Merge.

REFERENCES

BAKER, MARK C. 1996. *The polysynthesis parameter*. New York: Oxford University Press.
BOLINGER, DWIGHT. 1977. *Pronouns and repeated nouns*. Bloomington: Indiana University Linguistics Club.
BRUENING, BENJAMIN. 2014. Precede-and-command revisited. *Language* 90.2.342–88.
CHOMSKY, NOAM. 1981. *Lectures on government and binding*. Dordrecht: Foris.
CHOMSKY, NOAM. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
CHOMSKY, NOAM. 2001. Derivation by phase. *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
DE VRIES, MARK. 2012. Unconventional mergers. *Ways of structure building*, ed. by Myriam Uribe-Etxebarria and Vidal Valmala, 143–66. Oxford: Oxford University Press.
EPSTEIN, SAMUEL D. 1999. Un-principled syntax: The derivation of syntactic relations. *Working minimalism*, ed. by Samuel D. Epstein and Norbert Hornstein, 317–45. Cambridge, MA: MIT Press.
EPSTEIN, SAMUEL D.; HISATSUGU KITAHARA; and T. DANIEL SEELY. 2014. Labeling by minimal search: Implications for successive-cyclic A-movement and the conception of the postulate 'phase'. *Linguistic Inquiry* 45.463–81.
EVANS, GARETH. 1980. Pronouns. *Linguistic Inquiry* 11.337–62.
FORTUNY, JORDI. 2008. *The emergence of order in syntax*. Amsterdam: John Benjamins.
KEHLER, ANDREW. 2002. *Coherence, reference, and the theory of grammar*. Stanford, CA: CSLI Publications.
LAKOFF, GEORGE. 1976. Pronouns and reference. *Syntax and semantics, vol. 7: Notes from the linguistic underground*, ed. by James D. McCawley, 275–335. New York: Academic Press.
LANGACKER, RONALD W. 1969. On pronominalization and the chain of command. *Modern studies in English: Readings in transformational grammar*, ed. by David A. Reibel and Sanford A. Schane, 160–86. Englewood Cliffs, NJ: Prentice-Hall.
LAPOINTE, STEVEN G. 1981. A lexical analysis of the English auxiliary verb system. *Lexical grammar*, ed. by Teun Hoekstra, Harry van der Hulst, and Michael Moortgat, 215–54. Dordrecht: Foris.
LEVINSON, STEPHEN C. 2000. *Presumptive meanings: The theory of generalized conversational implicature*. Cambridge, MA: MIT Press.
MORTENSEN, DAVID R. 2004. Two types of variable elements in Hmong anaphora. Berkeley: University of California, Berkeley, MS.
REINHART, TANYA. 1976. *The syntactic domain of anaphora*. Cambridge, MA: MIT dissertation. [Distributed by MIT Working Papers in Linguistics.]
REINHART, TANYA, and ERIC REULAND. 1993. Reflexivity. *Linguistic Inquiry* 24.657–720.
SCHLADT, MATHIAS. 2000. The typology and grammaticalization of reflexives. *Reflexives: Form and functions*, ed. by Zygmunt Frajzyngier and Traci S. Curl, 103–24. Amsterdam: John Benjamins.
TANCREDI, CHRIS. 1997. Pronouns and perspectives. *Atomism and binding*, ed. by Hans Bennis, Pierre Pica, and Johan Rooryck, 381–407. Dordrecht: Foris.
TIERSMA, PIETER MEIJES. 1985. *Frisian reference grammar*. Dordrecht: Foris.

Travis, Lisa DeMena. 1984. *Parameters and effects of word order variation*. Cambridge, MA: MIT dissertation.

Uriagereka, Juan. 1999. Multiple spell-out. *Working minimalism*, ed. by Samuel D. Epstein and Norbert Hornstein, 251–82. Cambridge, MA: MIT Press.

Vanden Wyngaerd, Guido. 1989. Object shift as an A-movement rule. *MIT Working Papers in Linguistics* 11.256–71.

Wasow, Thomas. 1972. *Anaphoric relations in English*. Cambridge, MA: MIT dissertation.

Zwart, Jan-Wouter. 1993. *Dutch syntax: A minimalist approach*. Groningen: University of Groningen dissertation.

Zwart, Jan-Wouter. 2004. The format of dependency relations. Indiana University SyntaxFest lectures, June 22–July 1. Online: http://www.let.rug.nl/~zwart/college/docs/indiana/zwart1.pdf.

Zwart, Jan-Wouter. 2005. Verb-second as a function of Merge. *The function of function words and functional categories*, ed. by Marcel den Dikken and Christina M. Tortora, 11–40. Amsterdam: John Benjamins.

Zwart, Jan-Wouter. 2006. Baker's generalization in a derivational theory of binding. Groningen: University of Groningen, ms. Online: http://www.let.rug.nl/zwart/docs/bindingproc.pdf.

Zwart, Jan-Wouter. 2009. Prospects for top-down derivation. *Catalan Journal of Linguistics* 8.161–87.

Zwart, Jan-Wouter. 2011a. Structure and order: Asymmetric Merge. *The Oxford handbook of linguistic minimalism*, ed. by Cedric Boeckx, 96–118. Oxford: Oxford University Press.

Zwart, Jan-Wouter. 2011b. *The syntax of Dutch*. Cambridge: Cambridge University Press.

[c.j.w.zwart@rug.nl]