

A Conjunction Conspiracy at the West Germanic Left Periphery

John R. te Velde

Department of Foreign Languages and Literatures
Oklahoma State University
309 Gundersen
Stillwater, OK 74078-1054
john.te_velde@okstate.edu

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In this analysis I consider one rather common coordinate construction and two less common ones from West Germanic that have two distinguishing properties in common: (i) all consist of conjoined verb-second (V2) clauses, and (ii) there is an ellipse at the left edge of the second conjunct. I propose that the conjunction *c*-commands the ellipse and that it is recovered in the semantic component through matching with a semantically parallel antecedent in a parallel syntactic position. This analysis utilizes Phase Theory to provide a derivational framework: each V2 clause must, as a phase, complete derivation before the next one is assembled. In this approach the Coordinate Structure Constraint is understood purely as a description of the semantic parallelisms required, and across-the-board movement is unnecessary; it is in fact incompatible with a phase-based approach. Finally, this approach requires three V2 positions in the functional domain of West Germanic; thus, the V2 phenomenon results from feature-checking requirements only (not positions available). Furthermore, it conspires with phase-based conjunction to create a position licensable for “deletion” (non-phonetic realization), thereby economizing the spoken form.

1. Introduction *

In the following I present an analysis of conjoined verb-second (V2) clauses in Dutch and German that occur with an elided element at the left periphery of the second (and all subsequent) clauses. Constructions of this type with an elided subject are very common:

- (1) a. *Willie_i heeft dit boek gelezen en e_i zal het zijn vrienden aanbevelen*
W has this book read and will it his friends recommend
'Willie has read this book and will recommend it to his friends.'
- b. *Hans_i zeigt seinem Onkel die Briefmarken und e_i verkauft sie seiner Tante*
H shows his.DAT uncle the stamps and sells them his.DAT aunt
'Hans is showing his uncle the stamps and will sell them to his aunt.'

Much less common, but equally grammatical, are variants of (1a,b) with an elided direct object instead of an elided subject, which must be fronted by an additional Internal Merge operation (Chomsky 2005):

- (2) a. *Dit boek_i heeft Willie t_i gelezen en e_i zal hij (he) zijn vrienden t_i aanbevelen*
- b. *Die Briefmarken_i zeigt Hans seinem Onkel t_i und e_i verkauft er (he) seiner Tante t_i*

The same kind of construction is also possible, not surprisingly, with an elided indirect or prepositional object as in (3a) and (3b) respectively:

- (3) a. *Seinem Onkel_i schenkt Hans t_i die Fotos und e_i verkauft er t_i die Münzen*
 his.DAT uncle gives H the photos and sells he the coins
 ‘To his uncle, Hans is giving the photos and selling the coins.’
- b. *[Für seine Schwester]_i kauft Hans nichts t_i und e_i tut er nie etwas t_i*
 for his sister buys H nothing and does he never something
 ‘For his sister Hans doesn’t buy anything nor does he ever do anything.’

A number of proposals have been made to account for the elided subject in constructions like (1a,b); these will be reviewed in §2. No minimalist proposal can be found in the literature for constructions like those in (2) and (3). The objective here is to propose a unified account of all these constructions using an approach that combines Phase Theory, as outlined in Chomsky (2000) and (2001), with elements of a proposal for coordinate ellipsis outlined in te Velde (2005a). I argue that all such constructions have a gap at the left edge of all but the first conjunct; I call this form of coordinate ellipsis Left-Edge Ellipsis (LEE).¹ The constructions in (1) differ structurally and thus derivationally from those in (2) and (3): the latter require one additional Internal Merge operation for the fronting of the verbal complement, whether a direct, indirect or prepositional object. The structural and derivational differences do not affect the ellipsis operation LEE, however, because in all of these constructions the ellipse can be licensed by [&] c-commanding the empty position, and the recovery of the ellipse, which lies outside of the narrow syntax, utilizes Match in LF in all cases.

A central argument of this proposal, presented in §3, is that clausal conjuncts are phases and thus must complete syntactic derivation before a second conjunct is selected, merged and derived. In this way the first conjunct provides a Copy template for the derivation of the remaining conjuncts and determines, both structurally and semantically, what element can be licensed for deletion in the next conjunct. I argue that the licensing requirement on ellipsis in these constructions manifests itself as a left-edge requirement because the coordinating conjunction must license the ellipse in a c-command relation. Recovery of the ellipse does not necessarily require the antecedent to be at the left edge, but rather that antecedent and ellipse are in parallel syntactic positions: [_{C-1} XP₁ ... [& [_{C-2} e₁ ...]]] (C = conjunct).

The result of this licensing requirement in V2 languages like Dutch and German has the form of a syntactic conspiracy: the left-edge requirement on licensing conspires with the syntax of V2 such that any argument (including prepositional objects) fronted to the left edge of the second (and all subsequent) conjunct(s) is eligible for ellipsis so long as a matching argument occurs in a parallel position in the first conjunct. Scopal elements such as adverbs do not need to be fronted and licensed for deletion in this way, since a scopal element in the first conjunct can satisfy the requirements of LF for parallel interpretation without the presence of an elided element in the following conjunct. By contrast, the elided elements in (1) – (3) have all the properties of the spoken equivalent except its phonetic features.

A central claim of my proposal is that coordinate constructions of the type in (1) – (3) have to meet the Parallelism Requirement (cf. Chomsky 1995: 125-126, 203; Hornstein and Nunes 2002: 41) that has been noted to exist in all coordinate structures; it is particularly inviolable in certain respects when ellipsis occurs in ways that will be made more precise here. The

explanation for this striking property of elliptical conjoined clauses, I argue, has both a syntactic and a semantic basis: the former is the c-command requirement for the licensing of the ellipse, and the latter is the requirement of Match in LF. The details of this part of the proposal are outlined in §3. In §4 some extensions of the proposal are outlined, and in §5 there is a brief discussion of a scope-based approach to the data. A conclusion follows in §6. In the next section I outline and comment on three other accounts of LEE with subject gaps.

2. Earlier accounts of LEE

As stated earlier, the following accounts of LEE all have one major limitation: their empirical coverage is limited because for one reason or another none of them considers any type of gap other than a subject gap. Furthermore, none of them is fully compatible with assumptions of the Minimalist Program. For these two reasons an alternate account is presented in §3.

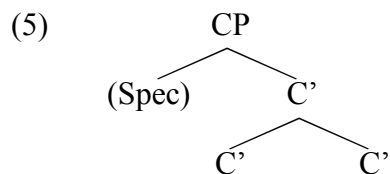
2.1 Heycock & Kroch (1994)

Heycock and Kroch's (1994) (H&K) analysis of subject gaps in LEE, as evident in (4), presupposes that 1) intermediate categories can be conjoined, and 2) that there really is no gap in LEE; rather, the subject of the second conjunct is interpreted on the basis of a sharing relation with the first conjunct:

(4) [_{CP} *Hans* [_{C'} *zeigt seinem Onkel die Briefmarken*] und [_{C'} *verkauft sie seiner Tante*]]
 Hans shows his.DAT uncle the stamps and sells them his.DAT aunt

I will not discuss any problems involved with the conjunction of intermediate projections, as they are not problems of conjunction per se, but of the role of intermediate projections in minimalist theory.

The implications of subject sharing in LEE as required in the H&K analysis must be addressed here. One is that, along with subject sharing, we must assume that the V2 requirement of Dutch and German can also be satisfied by sharing. This is possible only if non-binary phrase structure is employed for these constructions so that the Spec position containing the subject somehow dominates both conjuncts equally; in other words, the phrase structure of (4) is not binary but rather looks like (5):



Phrase structures like (5) are incompatible with the minimalist assumption that all syntactic relations are asymmetric. Whether an exception can or should be made for coordinate structures in order to account for their parallelisms is a question that will be left to further research. In the remainder of the present analysis I will argue that a more unified approach is possible if no such exception is made in the way that structures are built up in syntactic derivation.

2.2 Buring & Hartmann (1998)

Buring & Hartmann (1998) (B&H) modify the H&K analysis using an adjunction account that requires an empty operator in the CP projection of the second conjunct:

(6) [_{CP} *Hans zeigt seinem Onkel die Briefmarken* und [_{CP} OP *verkauft sie seiner Tante*]]

In this analysis B&H avoid the problem with the H&K analysis just discussed, as the second conjunct is adjoined rather than conjoined and thus stands in an asymmetric relation to the first conjunct. This phrase structure takes us one step closer to the present proposal: coordinate structures are syntactically (phrase-structurally) asymmetric like all other syntactic structures.

A question that the B&H proposal raises is: What is the relation of a second OP to the first OP and the controller antecedent when there are three conjuncts in a LEE construction? An example of this would be:²

(7) [_{CP} *Hans zeigt seinem Onkel die Briefmarken*
[_{CP} OP *verkauft manche seiner Tante* und [_{CP} OP *schenkt einige seiner Oma*]]]
sells some his.DAT aunt and gives a-few his.DAT grandma

In coordinate structures of this sort, the Parallelism Requirement demands that all conjuncts be equal in certain crucial ways. This kind of parallelism is not obtainable under the analysis in (7) because the relation of the controller-antecedent *Hans* to the two OPs is different than the relation of the first OP to the second, or vice versa. This kind of asymmetry is expected in an analysis that involves adjunction because with the adjunction of a conjunct, an asymmetric relation is established between the conjuncts.

A further concern for a minimalist account is the use of an empty operator in the B&H analysis. Current minimalist approaches have done away with operators in favor of Copy-movement.³ My own proposal does not require an operator, and it rules out as a violation of the Phase Impenetrability Condition (PIC, Chomsky 2000: 108) movement of the sort that has traditionally been assumed necessary for coordinate structures, namely across-the-board (ATB) movement. Another concern with the B&H analysis is the uniform V-to-C movement that it requires for the derivation of V2 clauses. This analysis of V2, I will argue, is too rigid for the asymmetries between subject-initial and other V2 clauses. These points will be outlined in more detail in §3.

2.3 Johnson (2002)

Johnson identifies two problems with the H&K analysis:⁴ 1) There is a violation of the Coordinate Structure Constraint (CSC) (see §3). 2) The scope of the subject *Hans* does not extend into the second conjunct, if defined syntactically, as indicated by the phrase markers in (4). He proposes a verb projection raising (VPR) account as a way to meet the CSC, using a construction with a fronted direct object in the first clause and a subject gap in the second clause to illustrate his approach:

(8) Johnson's VPR account of LEE in:

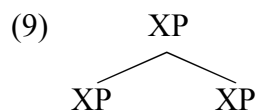
Den Hund hat einer gefüttert und hat ihn geschlagen (from Höhle 1983)
the.ACC dog has one.NOM fed and has him beaten

‘Someone fed the dog and (then) beat him.’

- a. initial structure with coordinate F'-projections:
 [IP *einer* [FP[F' [VP *den Hund gefüttert hat*]]] und [F' [VP *ihn geschlagen hat*]]]]
- b. raising of *hat* to F° in second conjunct:
 [IP *einer* [FP[F' [VP *den Hund gefüttert hat*]]] und [F' *hat*₁ [VP *ihn geschlagen t*₁]]]]
- c. VP-raising out of first conjunct into Spec,FP:
 [IP *einer* [FP[VP *den Hund gefüttert hat*]₂ [F' *t*₂]] und [F' *hat*₁ [VP *ihn geschlagen t*₁]]]]
- d. verb-raising to C from the raised VP in Spec,FP:
 [CP *hat*₃ [IP *einer* [FP[VP *den Hund gefüttert t*₃]₂ [F' *t*₂]]] und [F' *hat*₁ [VP *ihn geschlagen t*₁]]]]
- e. DP-fronting to Spec,CP from the raised VP
 [CP *den H*₄ *hat*₃ [IP *einer* [FP[VP *t*₄ *gefüttert t*₃]₂ [F' *t*₂]]] und [F' *hat*₁ [VP *ihn geschlagen t*₁]]]]

In evaluating Johnson's derivation, we note that even though it is motivated by the need to satisfy the CSC, two exceptions are allowed. One exception is the asymmetric movement of the finite verb: in conjunct 1 it raises completely out of the first conjunct but in conjunct 2 only to the edge (not ATB), in violation of the CSC.⁵ The second CSC violation occurs with subject raising: it is also asymmetric because only the subject in conjunct 1 raises to a Spec position in the functional domain. This kind of non-ATB raising also violates the CSC; it is justified, argues Johnson, because it is A-movement.⁶ No subject is generated in the second conjunct as the coordinate structure is assumed to be a conjunction of F'-projections in a non-binary phrase structure that is dominated by IP whose Spec position the subject occupies, cf. (5). With this structure and derivation Johnson assumes that subject scope eliminates the need for a left-edge subject gap.

It is important to note that the phrase structure of the conjunction in (8) requires branching of the sort in (9):



This kind of structure is incompatible with the minimalist assumption that all relations in phrase structure are asymmetric. (9) could possibly be allowable if sufficient justification could be provided for making an exception to asymmetric phrase structure in the case of coordinate structures. My proposal in §3 rejects the need for this kind of exception.

A second problem with Johnson's proposal is the assumption that VPR occurs in Standard German. The empirical support that Johnson presents for VPR comes from West Flemish, which has been shown in e.g. Haegeman (1991; 1998) to have word order parameters not attested in Standard German that pertain to clause-final verb clusters, with the possible exception of double-infinitive constructions in perfective tense embedded clauses. Thus, a VPR approach to German is empirically weak.⁷

The most serious problem with Johnson's approach, because it is an empirical one, is that it cannot account for left-edge object gaps of the kind in (10):

- (10) *Die Briefmarken_i zeigt Karl der Tante t_i und e_i verkauft er dem Onkel t_i*
the stamps shows K the.DAT aunt and sells he the.DAT uncle

Johnson argues that left-edge object gaps are ungrammatical, using the example in (11):

- (11) **Den Hund_i [_C hat keiner t_i gefüttert] und [_C hat er t_i geschlagen]*
the.ACC dog has no-one fed and has he beaten

The ungrammaticality of this construction is due to the scopal properties of the negative quantifier *keiner*. We note the grammatical (12), identical to (11) except for the subjects:

- (12) *Den Hund hat Heinz gefüttert und hat Karl geschlagen*

In sum, we can list the following reasons for seeking an alternative to Johnson's proposal: 1) The methods used to satisfy the CSC are either incompatible with minimalist assumptions or lacking in empirical support; they are: a non-binary, "symmetric" phrase structure and a derivation that allows exceptions to the CSC. Furthermore, the proposal cannot account for all of the data, e.g. those with left-edge object gaps.

2.4 Section summary and conclusion

The above overview of the proposals available in the generative literature on LEE constructions has shown that no account can be found of these constructions with gaps other than subject gaps. This inadequate empirical coverage is the most serious problem with investigations to date. Secondly, the accounts of subject gaps we have seen are not compatible with minimalist assumptions and for that reason (among others) do not offer a good basis for a phase-based account of other types of left-edge gaps.

In the next section we turn to a proposal that combines Phase Theory with an approach to coordinate structures that does not require making exceptions with regard to the CSC or asymmetric phrase structure in order to accommodate the symmetry or parallelism requirements of conjunction. The CSC will be redefined as a semantic requirement on parallelism in coordination, a revision resulting from the elimination of ATB movement, as traditionally assumed, because of its incompatibility with Phase Theory.

3. LEE and Phase Theory

As an introduction to this section, we consider in §3.1 the implications of Phase Theory for conjunction. Then in §3.2 I outline my proposal for LEE that utilizes Phase Theory. In §3.3 the advantages of this proposal over earlier ones are outlined, followed in §3.4 by a discussion of some key assumptions regarding coordination, Copy and coordinate ellipsis.

Chomsky (2000, 2001) makes no direct statements about conjunction in his proposals for phase-based derivation; thus, what is proposed here is an extension of the principles and

concepts of his proposals to coordinate structures as I understand them. Of direct relevance here is the PIC.

3.1. Conjunction and Phase Theory

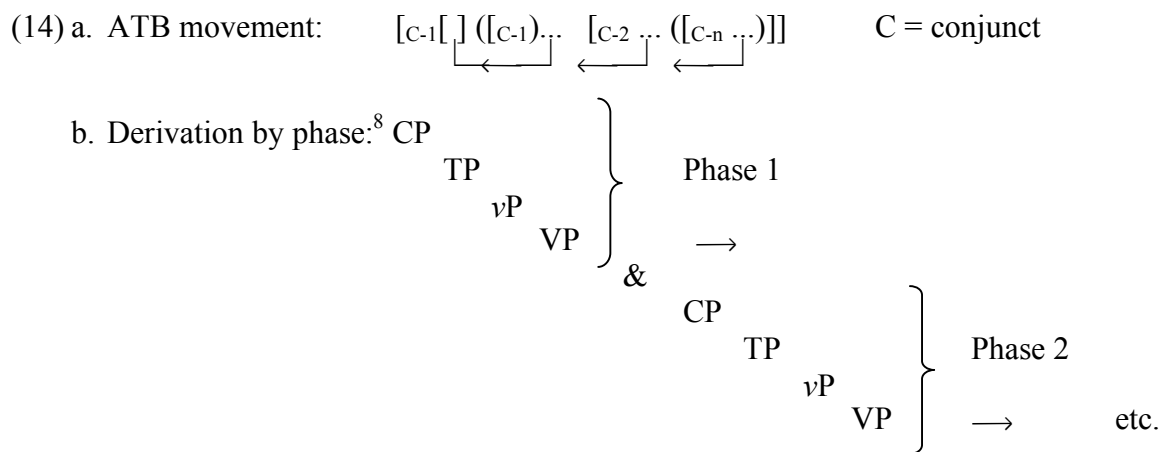
Chomsky (2000: 108) formulates the PIC as follows:

- (13) In phase α with head H, the domain of H is not accessible to operations outside α , but only H and its edge.

In applying this condition to conjunction, we note that a clausal conjunct has undergone at least one phase. Therefore the PIC disallows any syntactic operation that extends from one clausal conjunct to another, unless it has a left-edge element of a conjunct or its head as a goal. What is not stated in (13) because it is part of movement theory in general in the Minimalist Program is that the target of movement must be the edge of the phase. We will return to this point in connection with the analysis in §3.2.

It is useful at this point to consider why Chomsky proposes derivation by phase. As this notion is understood here, a phase is intended for managing the derivation of sentences in a way that meets the requirements of the semantic and phonetic components of sentence generation (or as often stated: to meet the interface conditions). The same reasoning applies directly to coordinate structures: their computation in narrow syntax must proceed in a way that is manageable – a particularly significant point for LEE constructions, since they are made up of conjoined clauses, each one a phase – and this computational sequence must be so arranged as to explain how ellipses are handled semantically and phonetically, in particular how the left-edge gaps in LEE constructions are recovered on the perceptual side without phonetic realization.

I see two consequences of the PIC for coordinate ellipsis: One, ATB movement is ruled out because it has a non-head, non-edge element as its goal and thus does not meet the requirements of the PIC. In effect, it requires both look-ahead and look-back, cf. (14a) and the related discussion. In (14b) is illustrated the manner in which the derivation of a coordinate structure proceeds, if it is phase-based:



(14) illustrates that ATB movement does not have an element at the edge of a phase as the goal of movement; rather, this goal is within the domain of each conjunct, each of which is a phase. In

a phase-based approach, each conjunct is derived independently, and no movement from one to another is assumed. (14b) thus requires some other syntactic or semantic means to achieve the results of ATB movement in LEE constructions. The next subsection will outline what these are.

The second implication is that the Coordinate Structure Constraint (CSC) is unnecessary in narrow syntax as a constraint on movement, its original intent. The CSC is formulated by Ross (1967:161) as follows:

- (15) In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

In the literature on conjunction it is assumed that ATB movement, because it has an element in all of the conjuncts as a goal and a single position as a target, is allowable by the CSC. The CSC is intended by Ross as a condition on parallelism across conjoined clauses in which ellipsis occurs. Because the constraint is formulated in terms of movement from one conjunct to another, it overlaps with Phase Theory, which formulates constraints on movement in terms of the PIC. A central question that must be addressed is: Can Phase Theory account for the same properties of coordinate ellipsis – the parallelisms – that the CSC accounts for? In the next subsection we turn to this question in the context of the application of Phase Theory to LEE.

3.2 LEE and Phase Theory

In a phase-based derivation of LEE, the leading conjunct (clause) completes syntactic derivation before the second conjunct is selected, merged and derived. In (16) we consider the derivation of a LEE construction with a fronted direct object in the first conjunct, and a left-edge subject gap in the second conjunct (assumptions underlying TopP are discussed in §3.4):

- (16) Phase-based derivation of:⁹

Die Briefmarken zeigt Karl_i dem Onkel und e_i bietet sie ihm zum Verkauf an
 the stamps shows K the.DAT uncle and offers them him.DAT for sale PART
 ‘The stamps Karl is showing his uncle and offering them to him for sale.’

- a. Select and merge lexical items for the first conjunct:

$[_{VP} \text{Karl } [_{V'} [_{DP} \text{dem Onkel}] [_{V'} [_{DP} \text{die Briefmarken}] \text{zeigt}]]]$

- b. vP phase:

$[_{TP} \text{Karl } [_{T'} \text{zeigt}_i [_{vP} [_{v'} [_{DP} \text{dem Onkel}]_j [_{v'} [_{DP} \text{die Briefmarken}]_k [_{VP} \text{t}_j \text{t}_k \text{t}_i]]]]]]]$

- c. CP phase: DP-object fronting, $V \rightarrow C$:

$[_{TopP} [_{DP} \text{die B-marken}]_k [_{Top'} \text{zeigt}_i [_{TP} \text{K t}_i [_{vP} [_{v'} [_{DP} \text{dem O}]_j [_{V'} \text{t}_k [_{VP} \text{t}_j \text{t}_k \text{t}_i]]]]]]]]]$

(conjunct 1 is held in active memory while the derivation of conjunct 2 proceeds:)

- d. Select and merge LA for the second conjunct, cf. (a):

$[_{VP} \text{Karl } [_{V'} [_{DP} \text{ihm}]] [_{V'} [_{DP} \text{sie}]] [_{V'} [_{Adv} \text{zum Verkauf}] [_{VP} \text{anbietet}]]]]]$

- e. vP Phase in conjunct 2:

next clause is completed up to the point where the derivation of the first conjunct was put on hold. At this point the derivation would need to look back into the first conjunct to see if a target is available. A general assumption of Phase Theory is that look-back of this sort is not allowed.¹⁰ The other option is for the derivation of all clauses to proceed simultaneously. This violates the basic principle of derivation by phase, as discussed earlier. I make the assumption here for coordinate structures that neither option should be allowed as a necessary exception to account for LEE constructions. This kind of exception would be no improvement over the exceptions to the CSC and phase structure allowed in Johnson (2002).

So we see, as stated earlier, that the challenge for a phased-based approach is to find a substitute for ATB movement, required for (18). The solution I will propose involves dividing the task between narrow syntax and LF: in narrow syntax each conjunct is derived in the manner outlined in (16); when the derivation involves the fronting of a DP to the left edge, i.e. to within the c-command domain of [&], then this element becomes eligible for avoiding phonetic realization (“deletion”), if at the interface with LF it is determined that this DP is redundant in such a way that its lack of phonetic realization does not present a problem for the perceptual side, i.e. the gap can be recovered.

The recovery of a left-edge gap occurs in my proposal via Match at the LF interface: I assume that structural parallelism combined with lexical redundancy (as reflected in phonetic identity) are the requirements of LF-Match by which a left-edge gap is recovered.¹¹ That structural parallelism is a requirement can easily be proven. In (19) we note that an antecedent in any position other than the same position as the one occupied by the gap is not a good antecedent for recovery of the gap:

- (19) a. [_{TopP} *Die Briefmarken*_i *zeigt Hans seinem Onkel* *t_i und*
the stamps shows H his.DAT uncle and
[_{TopP} *e_i verkauft er seiner Tante* *t_i]]*
sells he his.DAT aunt
- a' **Hans zeigt seinem Onkel* [_{vP} *die Briefmarken*_i *und* [_{TopP} *e_i verkauft er seiner Tante* *t_i]]]*
- b. [_{TopP} *Dit boek*_i *heeft Willie* *t_i gelezen en* [_{TopP} *e_i zal hij zijn vrienden* *t_i aanbevelen*]]
this book has W read and will he his friends recommend
- b' **Willie heeft* [_{vP} *dit boek*_i *gelezen en* [_{CP} *e_i zal hij zijn vrienden* *t_i aanbevelen*]]]
- c. [_{TopP} *Seinem Onkel*_i *schenkt Hans* *t_i die Fotos und* [_{CP} *e_i verkauft er* *t_i die Münzen*]]
his.DAT uncle gives H the photos and sells he the coins
- c' **Hans schenkt* [_{vP} *seinem Onkel*_i *die Fotos und* [_{CP} *e_i verkauft er* *t_i die Münzen*]]]

The operations Copy and Match minimize the derivation of LEE constructions; Copy utilizes the working space of active memory for “transferring” formal features from a derived conjunct to the derivation of a second (and all subsequent) matching conjuncts. Whether a conjunct matches a preceding one or not is determined largely at Select; Match at the LF interface is the interpretive

mechanism that guarantees the recovery of those elements that have been licensed for deletion, according to the requirements outlined earlier.¹²

In this approach, the CSC is stated as a condition on parallelism in coordinate ellipsis (only), not as a condition on movement. The Parallelism Requirement, earlier formalized as an ATB requirement on movement (Williams 1977, 1978), has more recently been understood as a requirement on interpretation in coordination (e.g. Chomsky 1995: 125-126, 203¹³) or as a condition on Copy applying locally (Hornstein and Nunes 2002: 41). The present proposal combines interpretation (recovery of gaps) and syntactic local licensing of a parallel position for ellipsis, for defining the specifics of the Parallelism Requirement. Thus, while Phase Theory eliminates ATB movement, it predicts the key properties of coordinate ellipsis, Edgeness and Parallelism. In the next section we consider these claims more closely.

3.3 Advantages of a phase-based approach

The central claim of my proposal is that the CSC is captured as a condition on parallelism (symmetry) in coordinate ellipsis that results from the interaction between the fronting of a DP to a Spec position at the edge of the second (or later) conjunct (cf. §3.4 for specifics) and the syntactic licensing for the “deletion” of this DP, accomplished by [&] at the right edge of the leading conjunct (cf. previous section). A key aspect of the present analysis is that the perceived violations of the CSC in LEE-constructions described in Johnson (2002) are not CSC violations but rather the result of stylistic fronting to a Spec position left of the initial conjunct, cf. (8) and (16):

- (20) $[_{\text{TopP}} [_{\text{Den Hund}}]_i \text{ hat}_j [_{\text{TP}} \text{ einer}_k \text{ t}_j \text{ t}_i \text{ gefüttert und}$ (phase one)
 $[_{\text{TP}} \text{ e}_k \text{ hat ihn}_i \text{ geschlagen}]]$ (phase two)

The fronting of *den Hund* is not a CSC violation because it occurs *within the domain of a single conjunct*, which requires the CP phase for this operation and in that sense is asymmetric to the second conjunct. The resulting structure nevertheless satisfies the Parallelism Requirement because it does not alter the coordinate symmetry (required for licensing and recovery of the gap), which is TP-based. Such cases of stylistic fronting are predicted in a phase-based approach to coordinate structures because movement is not ATB, but is limited rather to a given phase, thus lacking a look-ahead capability.

We can therefore restate the CSC in terms of Phase Theory as follows:

- (21) The CSC is an LF-interface condition on symmetry across conjoined clauses in which coordinate ellipsis can be syntactically licensed.

There are several types of coordinate ellipsis, all of which have their own symmetry requirements.¹⁴ In LEE constructions coordinate symmetry is required in the antecedent-gap relation. As we have seen, this symmetry has both a syntactic and a semantic aspect: the syntactic is seen in the requirement that the antecedent and gap occupy the same syntactic position, and the semantic that the antecedent and gap be identically interpretable, i.e. have the same referent, semantic content, etc. Stated in these terms, the CSC is not a condition on movement in coordinate structures, if this movement is independent of these requirements and creates an asymmetry that is unrelated to the required coordinate symmetry.

Because *wh*-fronting targets the farthest Spec available at the left periphery of WGmc., no other element may be fronted to its left, unlike constructions with DP-fronting to the left of a subject that is the antecedent of a gap in the second conjunct, as in (20). Thus, only in constructions like (20), but never in LEE-constructions with a *wh*-element as an antecedent, can the kind of asymmetry caused by DP-fronting over the antecedent occur, since even nominative (subject) *wh*-elements must target this position at the very left edge of the WGmc. left periphery.¹⁹

To sum up the findings of (23) – (25), we have seen that an analysis of Dutch and German in which subject, object and *wh*-fronting all target different positions accounts for the data and supports the assumption about the CSC formulated in (21). Furthermore, it supports a phase-based approach to LEE constructions. An approach to fronting that proceeds by phase and has multiple targets predicts that some conjuncts will have a different structure than others, that absolute symmetry is not required. Another construction with asymmetries similar to those in (24a,b) is given in (26); this one involves a fronted adverbial (PP) and a subject gap:

(26) [TopP [PP *In den Wald*] ging [TP *der Jäger_i und* [TP *e_i fing einen Hasen*]]]
 into the wood went the hunter and caught a rabbit

Asymmetries apparent in (26) are: 1) Conjunct 1 has an intransitive verb and a TopP projection with a PP in its Spec position; conjunct 2 has a transitive verb and a left-edge subject gap with no TopP projection. The fronting of the adverbial *in den Wald* occurs in the same manner as the fronting of the DP-object in (24a,b); it is not ATB. Support for this assumption comes from the fact that the PP *in den Wald* cannot be associated with the verb *fangen* ‘to catch’ from which comes *fing* in (26). The problem is the use of the accusative *den*; only the dative determiner *dem*, indicating location rather than the destination indicated with *den*, is grammatical.²⁰

(27) *Der Jäger fing einen Hasen in *den / dem Wald*
 the hunter caught a rabbit in the.ACC / the.DAT wood

In the next section we turn to [&] as a licensing element for LEE as further justification for this assumption about the CSC and a phase-based approach to LEE. We recall the claim that a c-command relation from [&] to the gap at the edge of the next conjunct is required in LEE constructions for the licensing of this left-edge gap. A phase-based approach to LEE predicts that this relation is the only syntactic requirement on LEE, since ATB movement is no longer possible and therefore no requirement such as Ross’s formulation of the CSC in (15) is necessary. Rather, the CSC is an LF-interface condition on parallelism as stated in (21). This restated CSC hinges on properties of [&] and assumptions about Copy and coordinate ellipsis.

3.3 Assumptions about [&], Copy and coordinate ellipsis

For [&] to license the gap in LEE constructions, it must be a functional element, or at the very least have properties of a functional element. I assume that its primary syntactic functions are: 1) inducing the operation Conjunction (a right-edge merge operation), and 2) licensing a redundant element in its minimal c-command domain for ellipsis.²¹ Arguments and evidence supporting the first function are presented in te Velde (2005a). Evidence supporting a minimal c-command relation for the licensing of LEE gaps comes from constructions like those in (28):

- (28) a. *Hans_i zeigt seinem Onkel die Briefmarken und dann verkauft er/*e_i sie seiner Tante*
 H shows his.DAT uncle the stamps and then sells he them his.DAT aunt
- a' *Hans_i zeigt seinem Onkel die Briefmarken und er/e_i verkauft sie seiner Tante*
- b. *Hans zeigt seinem Onkel die Briefmarken_i und er verkauft sie/*e_i seiner Tante*
- b' *Die Briefmarken_i zeigt Hans seinem Onkel t_i und e_i verkauft er seiner Tante t_i*
- c. Bill_i has shown his uncle the stamps_j and he/e_i will now sell them/*e_j to his aunt
- c' The stamps_i Bill_j has shown to his uncle and e_i e_j will sell t_i to his aunt
- c'' **Die Briefmarken_i zeigt Hans_j seinem Onkel t_i und e_i verkauft e_j seiner Tante t_i*

In (28a) a subject gap is ungrammatical because it cannot be licensed by [&] in a c-command relation; *dann* blocks this relation, whereas in (28a') no blocking occurs. The same blocking occurs in (28b), this time with the gap of a direct object, because the subject intervenes. If the direct object is fronted as in (28b'), the c-command relation can be established. The same facts are obtainable from the English data in (28c,c') with (28c') indicating that *two* gaps can be licensed at the left periphery in English because there is no V2 requirement (but note the restriction in English illustrated in (30)). The closest equivalent to (28c') in German is ungrammatical because the second gap, which must be in a post-verbal position because of V2, cannot be licensed. The same is true, of course, for the Dutch equivalent.

A supporting argument for the assumption that [&] licenses the gap in LEE is the following: Conjunction is an operation that is associated with two syntactic properties: 1) redundancy (that occurs through reiteration resulting from conjunction) to maintain nonambiguity, and 2) the elimination of unnecessary and ungrammatical redundancy to achieve minimality and avoid ambiguity. A construction in which both properties are evident is (29):

- (29) Sam gave his money to Sally and George (gave) his (money) *(to) Jane

The syntactic operation Copy functions in coordinate structures for economizing the derivation and is exploited by Select and Merge in the derivation of coordinate clauses, resulting in a *redundancy* (selection of matching lexical items) and *ellipsis* (elimination of a redundancy through movement of an element to the left edge where it can be licensed for deletion). In (29) Copy supplies the formal features needed for the interpretation of the elements that can be licensed for deletion (no phonetic realization). The finite verb 'gave' can be licensed prosodically and matched at the LF-interface with the identical element in the first conjunct for interpretation. The element 'money' can be licensed anaphorically by 'his' and matched at the LF-interface in the same way as 'gave'. The preposition 'to' cannot be deleted (it must have phonetic realization) even though there is a match for it. I will not go into the details of the reasons why it cannot be licensed for deletion, as this would take us too far afield, but in brief the reasons are directly related to the impoverishment of English Case morphology and the lack of V2 in most declarative constructions.²²

The last assumption that must be addressed in this subsection that relates to properties of [&] and coordinate ellipsis is a standard one in the literature that bears repeating here because of its significance to the present account. This assumption is that ellipsis is manifested phonetically only (resulting in unspoken elements), but all other features of the deleted element occur in the derivation and are part of the recovery/interpretation process. Under this assumption the V2 requirement of Dutch and German is manifested in LEE in parallel with other V2 constructions (no sharing relation requiring non-binary phrase structure is required, cf. discussion in §2.3). Furthermore, because of the V2 property the leftmost Spec-position (‘edge’) of a V2 clause is an ideal ellipsis site in coordinate structures with the proper redundancy, i.e. the presence of an antecedent in the preceding conjunct. It is an ideal ellipsis site for three reasons: 1) this position can be licensed by [&], 2) it’s a target of Internal Merge in WGmc., and 3) the ellipse can be recovered without any ambiguity in symmetric coordinate structures. The same construction is not possible in English declarative clauses lacking the V2 requirement; the closest equivalent is ungrammatical, while the variant in (30b) with V2 is grammatical.²³

- (30) a. *The stamps showed John his uncle and sold he his aunt
 b. These stamps John has never shown his uncle nor would he consider selling to his aunt

Thus, in a rather particular way conjunction conspires with WGmc. fronting and V2 to minimize phonetic realization. [&] is able to license this phonetic minimization, with the results evident in LEE, because it is a functional element that induces conjunction, and conjunction is associated with two properties, redundancy and ellipsis.

4. Related coordinate constructions without ellipsis

In this section we consider two other constructions that Johnson accounts for using his VPR proposal. I will show that a phase-based approach again provides a better account; in this case the improvement occurs not only in the avoidance of the CSC issue – no CSC violation must be accounted for and therefore no ATB movement is necessary – but also in the over-all simplification of the derivations.

4.1 Conjoined vPs without subject ellipsis

Johnson’s (2002) analysis of the following construction again utilizes VPR and the projection FP for meeting the CSC. His analysis again requires non-binary phrase structure, cf. (9), and movement out of both conjuncts, but not always in ATB fashion:

(31) Johnson’s derivation of:

Die Suppe wird der Hans essen und sich hinlegen
 the soup will the H eat and REFL down-lay
 ‘Hans will eat the soup and (then) lie down.’

- a. [IP *der Hans* [I’[FP[F’[F’[VP *die Suppe essen wird*]]] und [F’[VP *sich hinlegen wird*]]]]]]]]
 b. [IP *der H* [I’[FP[F’[F’ *wird_i* [VP *die Suppe essen t_i*]]] und [F’ *wird_i* [VP *sich hinlegen t_i*]]]]]]]]

- c. $[IP\ der\ H\ [I'\ [FP\ [VP_2\ [VP\ die\ S\ essen\ t_i]\ [F'\ [F'\ wird_i\ t_j]\ und\ [F'\ wird_i\ [VP\ sich\ hinlegen\ t_i]]]]]]]$
- d. $[CP\ wird_i\ [IP\ der\ H\ [I'\ [FP\ [VP_2\ [VP\ die\ S\ essen\ t_i]\ [F'\ [F'\ t_i\ t_j]\]\ und\ [F'\ t_i\ [VP\ sich\ hinlegen\ t_i]]]]]]]$
- e. $[CP\ die\ S_k\ wird_i\ [IP\ der\ H\ [I'\ [FP\ [VP\ t_k\ essen\ t_i]\ [F'\ [F'\ t_i\ t_j]\]\ und\ [F'\ t_i\ [VP\ sich\ hinlegen\ t_i]]]]]]]$

In summary, Johnson's derivation of this construction comes closer than his derivation in (9) to what one expects in an approach that seeks to preserve the CSC using ATB movement. Here *wird* moves ATB (whereas the finite verb *hat* in (9) does not).

The derivation leaves at least two questions open, however (besides justification for this kind of phrase structure): First, how do the two occurrences of *wird* become one in step d? Second, what is the goal of VP-raising in step c? It appears to include the VP dominating the VP *die Suppe essen* and the trace of *wird* as follows: $[VP\ [VP\ die\ Suppe\ essen]\ [v\ t_{wird}]]$, as is necessary for the trace to be raised along with the sister VP. However, this upper VP must remain intact so that the trace of VP-raising has a projection. Therefore, a new VP, labeled VP_2 , must be generated at the target, a position dominated directly by FP. It appears to be an ad hoc solution to a problem created by Johnson's VPR approach and the exceptions to the CSC that he allows: the VP can be raised separately from *wird* in just the second conjunct (in non-ATB fashion) while *wird* in both conjuncts is raised ATB in accordance with the CSC. The formal details of these operations are not all clear and the exceptions to the CSC not convincing.

A phase-based derivation following the assumptions about phrase structure already outlined would proceed as in (32):

(32) Phase-based derivation of (1a) from Johnson (2002):

Die Suppe_i wird der Hans t_i essen und sich hinlegen
 the soup will the H eat and REFL down-lay

- a. Select lexical array: *Hans_i die Suppe essen Hans_i hinlegen*
- b. Merge lexical items for the first conjunct:
 $[VP\ Hans\ [V'\ [DP\ die\ Suppe]\ essen]]$
- c. vP phase generating a TP (with merger of AUX-FUT in T°)
 $[TP\ Hans\ [T'\ wird\ [vP\ [v'\ [DP\ die\ Suppe]\]\ [VP\ t_i\ essen]]]]]$
- d. CP phase with fronting of the DP-object and merger of *der*:
 $[CP\ [DP\ die\ Suppe]\]\ wird\ [TP\ der\ Hans\ [vP\ t_i\ [VP\ t_i\ essen]]]]]$
- e. Extract and merge lexical items for C-2 (subarray):
 $[vP\ [v'\ [DP\ Hans]\ hinlegen]]$ (Note: *Hans* is DO in C-2)
- f. Derive conjunct 2 (as subphase of the vP Phase in c):
 $[vP\ [v'\ [DP\ Hans_i]\]\ [VP\ t_j\ hinlegen]]]$
- g. Merge conjuncts (with merger of *und* and reflexivization of *Hans*).²⁴

$$[_{CP} d S_i w_k [_{TP} d H t_k [_{vP} [_{v'} t_i [_{VP} t_i essen]]]]] \text{ (die Suppe wird der Hans essen)}$$

$$\uparrow$$

$$[_{vP} und \leftarrow [_{vP} [_{v'} [_{DP} sich_i] [_{VP} t_i hinlegen]]]]$$

I assume that conjoined vPs do not require subject ellipsis since the subject in Spec,TP dominates both vPs. This phrase structure, although it requires a type of sharing, stands in contrast to the structure in (4), here as (33), for which the sharing relation assumed requires intermediate projections as conjuncts and non-binary phrase structure:

(33) $[_{CP} Hans [_{C'} zeigt seinem Onkel die Briefmarken] und [_{C'} verkauft sie seiner Tante]]$

In (32) there is no violation of the CSC because the fronting of *die Suppe* does nothing to make the construction asymmetric in a way that violates the Parallelism Requirement. The derivation is more minimalistic in that only one movement operation is required. To reduce movement, I follow Chomsky (2001) where assumptions about the extraction of subarrays are outlined. I apply these here to the derivation of the conjunct *sich hinlegen*, a vP, which quite clearly does not have the status of a “full” phase.

4.2 Conjoined, split DPs

In this subsection we turn to (34) and (35), (1b) and (47) from Johnson (2002) respectively, that have conjoined DPs in which one has its NP extracted and fronted:

(34) *Äpfel_i isst der Hans drei t_i und zwei Bananen*
 apples eats the H three and two bananas
 ‘Of the apples Hans is eating three, and two bananas.’

Johnson points out that (35), identical to (34) except for the tense, is ungrammatical:

(35) **Äpfel_i wird der Hans drei t_i und zwei Bananen essen*
 apples will the H three and two bananas eat

Johnson proposes the derivation in (36) for (35), again using VPR, in which the fronting operation in step d violates the CSC, the reason he gives for its ungrammaticality:

- (36) a. $[_{IP} der Hans [_{I'} [_{FP} [_{F'} [_{VP} [_{VP} [_{DP} [drei \ddot{A}pfel] und [zwei Bananen]]] essen] wird]]]]]]]$
 b. $[_{IP} der Hans [_{I'} [_{FP} [_{VP} [_{DP} [drei \ddot{A}pfel] und [zwei Bananen]]] essen]_i] [_{F'} [_{F'} [_{VP} [_{VP} t_i] wird]]]]]]]$
 c. $[_{CP} wird_j [_{IP} der H [_{I'} [_{FP} [_{VP} [_{DP} [drei \ddot{A}pfel] und [zwei Bananen]]] essen]_i] [_{F'} [_{F'} [_{VP} t_i] t_j]]]]]]]$
 d. $[_{CP} [drei \ddot{A}pfel]_k wird_j [_{IP} der H [_{I'} [_{FP} [_{VP} essen [_{DP} t_k und [zwei B]]]_i] [_{F'} [_{F'} [_{VP} t_i] t_j]]]]]]]$

The argument that a CSC violation occurs in (35) but not in (34) seems weak, given that the operation is the same in both derivations, with the only difference between the two the use of the

future auxiliary in (35), a difference that should be unrelated to DP-fronting. We recall the very similar construction in (32) in which a future auxiliary is used and DP-fronting is grammatical. In other construction pairs of this sort, no prohibition against fronting occurs in the construction with a future auxiliary. We take (37a,b) as one example:

- (37) a. *Die Briefmarken wird Hans dem Onkel zeigen und der Tante verkaufen*
 the stamps will H the.DAT uncle show and the.DAT aunt sell
- b. *Die Briefmarken zeigt Hans dem Onkel und verkauft er (he) der Tante*

Furthermore, the variant of (35) in (38) is perfectly grammatical, just stylistically a bit odd:

- (38) *Äpfel_i wird der Hans drei t_i essen, und zwei Bananen*

Again, we have reason to doubt the argument that fronting causes the ungrammaticality in (35).

Let's compare (35) and (38). In a phase-based derivation of (35), no CSC violation occurs when *Äpfel* is fronted, for reasons already outlined. The ungrammaticality of the construction is due to the unlicensed trace of *Äpfel*; this NP-trace after *drei* cannot be licensed by [&], even if it were a LEE-type gap. Another key difference is that this trace, in contrast to a gap in a LEE-construction, cannot be recovered by Match. Because the trace is in a conjunct-final position, the type of licensing required is the kind used in Right Node Raising (RNR) constructions. RNR is characterized by a gap in the clause-final position of all but the last conjunct. Hartmann (2000) shows convincingly that RNR requires prosodic licensing. The appropriate prosody needed for licensing the gap after *drei* is not felicitous in this construction, however, following the arguments of Féry and Hartmann (2005).

In contrast to (35) the trace in (38) can be licensed anaphorically and prosodically. The derivation of (38) using a phase-based approach is outlined in (39):

- (39) Phase-based derivation of (38):

- a. select lexical array; merge the VP with first DP-conjunct only:

[_{VP} *Hans* [_V *drei Äpfel essen*]]

- b. *vP*-phase; merge *wird*:

[_{TP} *Hans wird* [_{vP} [_{DP} *drei Äpfel*]_i [_{VP} *t_i essen*]]]

- c. front the NP *Äpfel*, with V-to-Top°; merge *der*:

[_{TopP} *Äpfel_j wird* [_{TP} *der Hans* [_{vP} [_{DP} *drei t_j*]_i [_{VP} *t_i essen*]]]

- d. extract second DP-conjunct and conjoin/merge with first DP-conjunct:

[_{TopP} *Äpfel_j wird* [_{TP} *der Hans* [_{vP} [_{DP} *drei t_j*]_i [_{VP} *t_i essen*]]]]

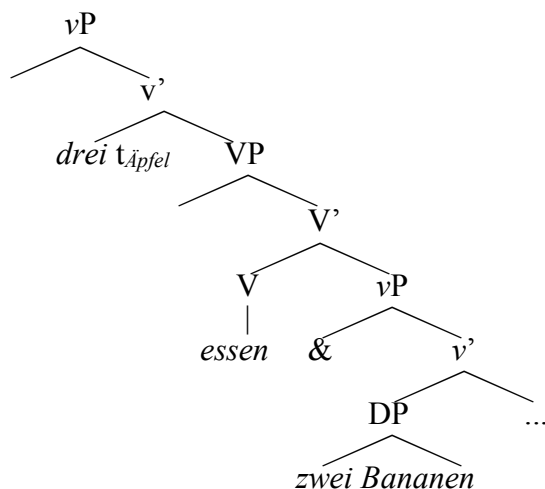
↑
 [_{DP} *und* ← [_{DP} *zwei Bananen*]]

The licensing of the trace in (39) proceeds much as in VP Ellipsis, which has been shown by Merchant (2001) and others to utilize an anaphor, in this case *drei*; it also requires a certain

prosody. Space considerations do not allow a discussion of anaphoric licensing outlined by Merchant.

As with the derivation in (32), I follow the assumption that a subarray, in this case a DP conjunct, can be extracted later from the lexical array after it has completed its derivation in narrow syntax. At this point the subarray is extracted, merged and derived as necessary. The merge position is on the right branch of V' , thus having the structure in (40).²⁵

(40) structure of the conjoined DPs in (38/39) (ignoring traces in the VP):



It is readily apparent from (40) that conjunction in my proposal, as a right merge operation, can apply rather freely as the phrase structure permits, and according to where features provided by Copy can be inserted in the merged conjunct. Whether the result is grammatical is determined at the LF-interface where Match applies. The structure in (40) meets the requirements of Match because the DP *drei Äpfel* preceding it has many features in common with it. Copy applies at conjunction for transferring the formal features to the second DP conjunct, thus simplifying the syntactic derivation and assuring a structure that will Match with the first conjunct at the LF-interface. The semantic symmetries of the two DP-conjuncts are obvious.

In the next section we consider an alternate way to account for LEE that has not to my knowledge been explored in the literature.²⁶

5. LEE and scope in asymmetric phrase structure

It has been suggested that in an approach to coordinate structures with asymmetric phrase structure throughout, scopal relations should account for the “missing” lexical items that in my proposal occur in the form of gaps representing unspoken words. A possible advantage of a scopal approach is that no gaps are necessary, and thus the derivation is minimized in certain respects.

A problem with this approach is that there is evidence that DPs behave differently than adverbs w.r.t. to scope. Thus, in (41a) it is not possible to have a subject gap, even though *Hans*, the matching element, is in a position where it should have scope over the gap, if it had the same

scopal properties as *heute* in (41b). A subject gap is permitted in (41a') for reasons explored earlier:

- (41) a. *Hans kauft den Wagen im Stadtzentrum und dann fährt er/*e damit in die Berge*
 H buys the car in-the city-center and then drives he it-with into the mountains
 a' *Hans_i kauft den Wagen im Stadtzentrum und er/e_i fährt dann damit in die Berge*
- b. *Heute kauft* [_{TP} *Hans_i den Wagen und* [_{TP} *Karl/e_i fährt (heute) damit in die Berge*]]
- b' *Hans_i kauft den Wagen heute und Karl/e_i fährt (heute) damit in die Berge*
- c. *Heute kauft* [_{TP} *Hans_i den Wagen und* [_{TP} *Karl/e_i fährt morgen damit in die Berge*]]
- c' *Hans_i kauft den Wagen heute und Karl/e_i fährt morgen damit in die Berge*

Objects do not behave any differently than subjects; both can be licensed for deletion when they occur at the left edge – but only at the left edge – and both can be recovered:

- (42) a. *Den neuen (new) Wagen kauft Hans im Stadtzentrum und e_i fährt er in die Berge*
 a' *Den neuen Wagen kauft Hans im Stadtzentrum und Karl fährt ihn/*e_i in die Berge*
 a'' *Hans kauft den Wagen_i im Stadtzentrum und Karl fährt *e_i/ihn in die Berge*
- b. *Den Wagen kauft* [_{TP} *Hans_i heute und* [_{TP} *Karl/e_i fährt ihn (heute) in die Berge*]]
- b' *Heute kauft* [_{TP} *Hans_i den Wagen und* [_{TP} *Karl/e_i fährt ihn (heute) in die Berge*]]
- b'' *Hans_i kauft den Wagen heute und Karl/e_i fährt ihn (heute) in die Berge*
- c. *Den Wagen kauft* [_{TP} *Hans_i heute und* [_{TP} *Karl/e_i fährt ihn morgen in die Berge*]]
- c' *Heute kauft* [_{TP} *Hans_i den Wagen und* [_{TP} *Karl/e_i fährt ihn morgen in die Berge*]]
- c'' *Hans_i kauft den Wagen heute und Karl/e_i fährt ihn morgen in die Berge*

As the data indicate, an adverb in a first conjunct has scope over the entire coordinate structure regardless of position, as long as another adverb is not introduced in the second conjunct. A DP, on the other hand, must be in a position parallel to that of the gap in order to be interpretable in the second conjunct. The reason for this, as maintained in my analysis, is that a DP is an antecedent, does not have scopal properties like an adverb(ial), and can be matched at the LF-interface with a gap in a parallel position for rendering the interpretation. A DP can appear to have scopal properties because of its dominance over other positions in asymmetric phrase structure, but in no case is this dominance relation equatable with adverbial scope.

6. Summary and Conclusion

The phase-based approach to elliptical V2 coordinate structures in Dutch and German proposed here accounts for the asymmetries of certain of these structures without resort to ad hoc solutions for CSC violations that result from other analyses. In this analysis the CSC is understood as a statement on the parallelism required on the semantic side, not as a syntactic constraint, since no ATB movement occurs (prohibited by the PIC). This phase-based approach derives coordinate symmetries using Select, Merge and Copy, and recovers elliptical elements with Match. It predicts the edge requirement on gaps in LEE-constructions, if it is assumed that the PIC has validity for semantic interpretation. This constraint can be unified with the syntax of conjunction, a merge operation, for the analysis of LEE-constructions by positing a licensing requirement on left-edge gaps, satisfied by the c-command relation of [&] to the gap. When the edge of a V2 clause is defined according to the well-documented asymmetries between subject-initial, *wh*-, and all other V2 structures, and at least two head positions are used to the left of T°, many of the problems that the derivation of these coordinate structures have caused in previous accounts can be eliminated.

Notes

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¹ The other two common forms of coordinate ellipsis are Gapping, involving a finite verb (and optionally its complement), and Right Node Raising, which always involves a gap at the right edge of the first (and all but the last) conjunct. These are discussed in detail in te Velde (2005a), Chapter Four, and in literature cited there.

² The relation of the traces to the fronted *wh*-element in (i) is similar to the relations in (7):

(i) *Wer_i (who) zeigt seinem Onkel die Briefmarken*

t_i verkauft seiner Tante manche (some) und t_i schenkt seiner Oma andere (others)?

A difference, however, is that (7) does not presuppose any movement but instead requires a controller antecedent, i.e. one is a head-foot relation in a *wh*-chain and the other an antecedent-operator relation. Which one better captures the symmetries of the constructions under investigation will be left to other research. The assumption here is that a phase-based approach rules out a movement analysis such as (i) cf. §3; see above for further comments on the B&H analysis and why a phase-based approach is preferred.

³ Empty operators, like empty categories of any sort, are a representational, rather than a derivational, tool for explaining ellipsis. In the minimalist framework the attempt is made to keep syntactic theory as free from representational elements like ECs as much as possible, as they reduce the degree of deductiveness in grammar.

⁴ Because Johnson assumes that the B&H analysis does not involve ATB movement in SLF (*Subjektücke in finiten*) sentences (Höhle 1983), he considers their solution inappropriate for the “exotic coordinations” that he analyzes. See also Schwarz (1998) and Zwart (1991) for earlier accounts.

⁵ The CSC is essentially a Parallelism Requirement applying to movements out of coordinate structures (cf. Chomsky 1995: 125-126, 203; Hornstein & Nunes 2002 for other types of parallelism requirements). In the generative literature it has often been expressed as an ATB requirement on movement: the same element must be moved from all conjuncts. Johnson justifies this violation, arguing that the strong features of the raised finite verb must be checked before Spell-Out. I will leave for further research whether this kind of feature checking adequately motivates the movement that Johnson proposes, specifically whether the parallelism requirement underlying this construction should be violated in this way and for this reason. In my proposal no such violation is necessary.

⁶ The second conjunct has a subject via a sharing relation with the first conjunct. W.r.t. to the CSC violation, Johnson states, “But secure demonstrations of the [CSC] holding of A-movement, or of other forms of movement, are not available...I am also going to follow Ross (1967) in taking the [CSC] to be a purely geometrical condition, one that defines the configurations that block extractions in terms of the graphs that phrase markers are.”

⁷ An example of a double-infinitive construction in a perfective tense embedded clause that could be considered support for using VPR is:

- (i) (?) ... *dass Hans noch ein Bier hat wirklich trinken wollen*
that H yet a beer has really drink.INF want.INF
'that Hans really wanted to drink another beer'

Given the rarity of such constructions and the availability of an alternate analysis, they do not offer a good basis for the analysis of the relatively common constructions that Johnson considers.

⁸ The assumption here is that the derivation of a coordinate structure consisting of conjoined clauses proceeds in a linear fashion, i.e. it starts with the linearly left-most conjunct and proceeds to the next one on the right, etc. I am assuming that this linear procedure manifests a computational limitation: narrow syntax is limited to the computation of one clause at a time; furthermore, the first clause generated is used as a template (for Copy) for the derivation of the next conjunct to whatever extent is possible (the more this occurs, the more symmetry results).

⁹ A close look at this and several of the derivations that follow will reveal that I assume German and Dutch have head-initial phrases in the functional domain (IP and higher), while in the lexical domain phrases are head-final. This apparently peculiar arrangement can be justified on the basis of some simple observations about German (and Dutch): non-finite phrases such as found in indirect commands (*Bitte herkommen!*) or in notes found in calendars or shopping lists (*um zwei den Aufsatz mit P besprechen; Kartoffeln fürs Abendessen einkaufen*) are head-final, while any finite version of these are head-initial (*Kommen Sie bitte her! Ich bespreche den Aufsatz um zwei mit P; Mein Mann kauft Kartoffeln fürs Abendessen ein*). It is a standard assumption that all finite clauses involve a verb position in the functional domain. Assuming that the verb is internally merged from a clause-final position where it is the head of the VP – which is head-final – into a position in the functional domain where it sits in a head-initial phrase creates a structure of West Germanic syntax that allows a simpler account of many of its properties, and a one that is more easily unifiable with the syntax of all Germanic languages.

¹⁰ Stopping the derivation of the first conjunct at the necessary point – before DP fronting – requires the inverse: looking ahead into the next conjunct. Both look-ahead and look-back of this sort are, in my interpretation of Phase Theory, not allowed.

¹¹ Phonetic identity is of course not a guarantee of lexical redundancy in languages like English which has a relatively large number of homonyms. However, phonetic identity is nevertheless always a requirement of Match.

¹² See te Velde (2005a) Chapter Four for further details.

¹³ Chomsky (1995: 203) illustrates the Parallelism Requirement with (i):

- (i) John said that he was looking for a cat, and so did Bill

He states the following: “In the elliptical case [i], a parallelism requirement of some kind (call it *PR*) requires that the second conjunct must be interpreted the same way – in this case, with *he* referring to Tom and *a cat* understood nonspecifically.... *PR* surely applies at LF.... There would be no need, then, for special mechanisms to account for the parallelism properties of [i].” Following this assumption, I do not propose any specific mechanism for either the licensing or recovery of ellipsis in the constructions discussed here, since c-command and Match are also used in non-coordinate structures of many kinds.

¹⁴ In the literature it is generally assumed that coordinate ellipsis comes in three forms: LEE (discussed here), Gapping (of the finite verb) and “Right Node Raising” which affects the right edge of all but the last conjunct.

¹⁵ Although some speakers of both Dutch and German find constructions like (23a) somewhat degraded as compared to the same construction without the object fronted, or with an object gap instead of a subject gap, all speakers find constructions like (23b) ungrammatical in both languages. Interestingly, as pointed out by Manuela Schönenberger, (i) is not any better than (23b):

- (i) **Diese Frau liebt Hans vor allem, heiratet Marie und ignoriert Ute*

It is curious that (i) is out, even though it is structurally the same in fundamental ways to (16) and (20): all three have a fronted DP in the first conjunct and a subject gap in the second conjunct. However, (i) is different in at least two crucial ways: it has three conjuncts, each with a subject gap and therefore a bit more complex. Most critical to the ungrammaticality, however, is that it has a certain ambiguity due to inadequate Case morphology combined with the fact that the objects are animate like the subject. There is a tendency to interpret *Hans* as the subject of the verbs *heiratet* and *ignoriert* because both have a female as an object. But another possible interpretation of the first conjunct exists in which *diese Frau* is the subject and therefore the antecedent of the subject gaps in the other conjuncts, but this leads to an unexpected interpretation in the second and third conjuncts.

¹⁶ Another asymmetry exists between object-gap constructions as in (24) and subject-gap constructions as in (1): the difference in the prosody required for each. A subject-gap construction requires no “prosodic support” establishing the required symmetries, while object-gap constructions depend crucially on prosody of this kind.

¹⁷ Peter Schneider, *Paarungen*, p. 135 (Rowohlt Taschenbuch Verlag, Reinbek bei Hamburg, 1994).

¹⁸ “Illegalen vertrekken vaker vrijwillig”, *De Volkskrant* (10 januari 2005, www.volkskrant.nl)

¹⁹ For further discussion see te Velde (2005b). In this approach to V2, the “constraint” that positions the finite verb in second position only is driven by feature checking, not by a limitation on the positions available. This is in keeping with the minimalist strategy in which Merge is always triggered by the need to check a feature.

²⁰ The fact that adverbial scope can sometimes extend over an entire coordinate structure is not related to movement, but only to the fact that scopal elements in coordinate structures typically have scope over the entire structure, regardless of syntactic position, i.e. fronting to the edge of the first conjunct is not a requirement. This property of adverbial scope is apparent in (i):

(i) *Der Jäger fing einen Hasen im Wald und sah auch viele Hirsche*
the hunter caught a rabbit in the wood and saw also many deer

It is impossible to assume any location for the second conjunct other than *im Wald*. This interpretation is possible, and, given the lack of any other adverbial, essentially required because of adverbial scope.

²¹ Minimal (asymmetric) c-command is generally defined as follows:

α minimally c-commands β iff

(i) α c-commands β and

(ii) there is no γ such that

α asymmetrically c-commands γ and

γ asymmetrically c-commands β

²² In German it is possible to have Gapping in a construction with both a direct and an indirect object, whereas the equivalent in English is ungrammatical:

(i) *Hans gab_i Marie Blumen und Karl e_i Erika eine CD*

(ii) *John gave Mary flowers and Carl Erica a CD

Even though the German DPs do not have unambiguous Case morphology, the structure of German, characterized by the V2 requirement, combined with the default positions or sequence associated with DPs, i.e. Subject – IO – DO, renders this kind of construction unambiguously interpretable. The same construction is fine in English if the marker for IO is added:

(iii) John gave Mary flowers and Carl a CD to Erica

For this reason, the IO-marker in (29) cannot be licensed for deletion.

²³ A similar construction without ellipsis is grammatical:

(i) [_{TOPP} The stamps [_{TP} John [_{VP} showed his uncle and [_{VP} sold his aunt]]]]

I assume there is no need for ellipsis in this analysis in which the conjuncts are vPs that are both dominated by the TP in whose Spec the subject for both conjuncts is located. In this phrase structure the asymmetric relations establish the necessary syntactic agreement and the basis for interpretation in LF. Much more that goes beyond the scope of the immediate analysis must be said about the derivation of this structure and the assumptions behind it for this analysis to be convincing. I refer the reader to te Velde (2005a).

²⁴ An alternate analysis would be to assume that *sich* is part of the lexical array instead of *Hans*, and that there is no operation ‘reflexivization’. I leave this question to further research, as it doesn’t bear on the present analysis.

²⁵ An analysis could be constructed in which there is a VP on the right branch of the lowest v’ (where ... occurs) and that this VP has an elliptical form of *essen*. I will leave this possibility to further research.

²⁶ This alternate analysis was suggested to me by an anonymous reviewer, and it is inherent in Johnson’s (2002) analysis.

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