

Movement Issues in Left Dislocation Constructions

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1 Introduction

The following will show that German has two types of left dislocation, one in which the left-peripheral element is adjoined to CP and one in which it is the specifier of CP, derived by movement. In the former case, the resumptive pronoun is the originally merged element, in the latter it is the spelled out copy of the left-dislocated phrase. In a broader context, I suggest a principled approach to the syntax underlying these types of left dislocation as well as a framework for clause structure that provides an account for copy spell-outs.

2 Two Types of Left Dislocation

Left dislocation (LD) in German comes in (at least) two variants, also known as Contrastive Left Dislocation (CLD) and Hanging Topic Left Dislocation (HTLD). I first go through some very basic characteristics of the two and present the analysis I am going to motivate in the remainder.

2.1 CLD: Case-Matching and High *d*-RP

CLD is characterized by obligatory Case-matching between the LDed XP and the resumptive pronoun (RP); the RP occurs in high position only (the 'topic' position) and only comes in the guise of a *d(emonstrative)*-pronoun.

- (1) a. *Diese Konstruktion, die* sagt uns echt viel.
this.NOM construction RP.NOM says to-us really much
'This construction [, it] really tells us a lot.'
- b. *Diesen Satz, den* mag ich besonders.
this.ACC sentence RP.ACC like I especially
'This sentence, I like [it] especially.'
- c. *Diesem Satz, dem* füge ich eine Linksversetzung hinzu.
this.DAT sentence RP.DAT add I a left-dislocation there-to
'This sentence, I add a left dislocation to [it].'

(1a) illustrates with a subject, (1b) with a direct object and (1c) with an indirect object; for reasons of space, I will not discuss argument-PPs or adjuncts in LDed position. I indicate the LDed XP and the RP in italics and put the RP in boldface throughout for expository purposes.

2.2 HTLD: XP and RP with Different Properties

In contrast to CLD, Case-matching between the LDed XP and the RP is not obligatory in HTLD, and the hanging topic preferably occurs in nominative Case; it may appear in high, mid or low position (like any other argument) and may show up in the form of a *d*- or a *p(ersonal)*-pronoun.

- (2) a. *Diese-r/-n Satz, den/ihn* mag ich besonders.
 this.NOM/ACC sentence RP.ACC/him like I especially
 ‘This sentence, it, I like especially.’
 b. *Diese-r/-n Satz, ich* mag *den/ihn* besonders.
 this.NOM/ACC sentence I like RP.ACC/him especially
 ‘This sentence, I like it especially.’

There is a rich literature on the properties of LD in Germanic which I will partly draw from (e.g., van Riemsdijk and Zwarts 1974, Thráinsson 1979, Zaenen 1980, Vat 1981, van Haaften et al. 1983). For more references concerning the cross-linguistic status of LD in general and some pointers regarding their discourse-relevant properties, see Grohmann (1997, 2000a,b).

2.3 Analysis: XP-Movement plus Copy-Spell Out

The fact that CLD comes with obligatory Case-matching (cf. (1)) and that it shows clear connectedness effects related to this property (section 3) point to a close relation between LDed XP, RP and original merging site—in the case of arguments, the VP-internal position.

The connectedness effects presented below strongly suggest that the CLDed XP may be interpreted in a position lower than both its surface position in the left periphery and the position of the RP, which sits in the topic position (TopP, licensing the Verb Second requirement of German matrix clauses); in other words, it can reconstruct, a property which we take to indicate that it is derived from a lower position by movement and the lower copy may be used for LF-interpretation (Fox 1999 and references). These effects are absent in HTLD, suggesting that the RP is the originally merged argument and the hanging topic base-generated up high. In section 4, we will see some further classical movement diagnostics which reinforce the movement analysis for CLD and the base-generation approach to HTLD. Lastly, the structural differences in section 5 support the following analysis:

- (3) a. $[_{CP} \text{CLDed XP } C^0 [_{TopP} \text{XP} \rightarrow d\text{-RP V } [_{TP} \dots \text{XP} \dots [_{VP} \dots \text{XP} \dots]]]]$
 b. $[_{CP} [\text{HTLDed XP}] [_{CP} C^0 [_{TopP} \text{RP V } [_{TP} \dots \text{RP} \dots [_{VP} \dots \text{RP} \dots]]]]]]$
 c. $[_{CP} [\text{HTLDed XP}] [_{CP} C^0 [_{TP} \text{subject V } \dots \text{RP} \dots [_{VP} \dots \text{RP} \dots]]]]]]$

3 The Relevance of Case-Matching: Connectedness Effects

The connectedness effects here undoubtedly arise from the difference in Case-matching between CLD and HTLD. I illustrate with three types of reconstruction, which themselves strongly suggest movement (Fox 1999). For earlier discussion of connectivity in Dutch and German LD structures, see e.g. van Riemsdijk and Zwarts 1974, Vat 1981, van Haaften et al 1983.

3.1 Reconstruction and Weak Crossover (WCO)

CLD, that is Case-matching between the LDed XP and the high *d*-RP, allows bound variable readings between a quantificational element inside the matrix clause and a pronominal element inside the LDed phrase, illustrated here with a strong quantifier in subject position. In other words, CLD does not give rise to a WCO effect, strongly suggesting that the LDed XP may reconstruct at LF to a position from where it is c-commanded by the quantifier.

- (4) a. Seinen Vater, den mag jeder.
 his father RP likes everyone
 ‘His father, everyone likes.’
 b. Seinen Vater mag jeder.

(4) shows that this behaviour mirrors topicalization constructions, well-known to obviate WCO effects in German. (Here and in the following, intended binding relations are indicated by underlining; as all CLD structures find a well-formed equivalent in English through topicalization, I continue translating these as such, a practice supported by the fact that all properties ascribed to CLD here also pertain to topicalization in German.)

HTLD, regardless of the nature and position of the RP, do not allow the bound variable reading; as this is the only reading we are interested in, we can ignore the fact that the structures in (5) are grammatical, just in case the LDed XP refers to one specific person (indicated by the hash mark). (All instances of HTLD illustrated here disregard Case-matching and feature a high *d*-pronoun and a low *p*-pronoun for maximal effect, disregarding their individual appropriateness in given contexts (see Altmann 1981); in the remainder, CLD is given in a-, HTLD in b- and c-examples, respectively.)

- (5) a. #Sein Vater, den mag jeder.
 b. #Sein Vater, jeder mag ihn.
 *‘His father, everyone likes him.’

This observation also holds across clauses, where the relevant element is extracted and must be interpreted inside the embedded clause:

- (6) a. *Seinen* Vater, *den* glaubt *jeder*, kann *er* nachahmen.
 his father RP believes everyone can he emulate
 ‘His father, everyone believes he can emulate.’
 b. **Sein* Vater, *den* glaubt *jeder*, kann *er* nachahmen.
 b'. **Sein* Vater, *jeder* glaubt, *den* kann *er* nachahmen.
 c. **Sein* Vater, *jeder* glaubt, *er* kann *ihn* nachahmen.
 *‘His father, everyone believes he can emulate him.’

The absence of WCO effects in these contexts can be captured if it is the LDed XP itself that undergoes movement from lower down in the structure in CLD, but not in HTLD, pointing to a derivational difference between CLDed XPs and hanging topics as well as the relevant RPs.

3.2 Reconstruction and Principle A (BT A)

Similarly, only an anaphor inside a CLDed XP may be coreferent with a lower pronoun and/or an R-expression. This absence of a BT A effect points to movement of the CLDed XP, as opposed to the HT, on the same grounds.

- (7) a. *Den* Wagen von *sich*, *den* sagte *Peter*, hat *er* verkauft.
 the car of himself RP said Peter has he sold
 ‘The car of himself, Peter said he sold.’
 b. **Der* Wagen von *sich*, *den* sagte *Peter*, hat *er* verkauft.
 c. **Der* Wagen von *sich*, *Peter* sagte, *er* hat *ihn* verkauft
 *‘The car of himself, Peter said he sold it.’

For those speakers who don't like the reflexive *sich* in this context, reciprocal *einander* serves to illustrate the same purpose:

- (8) a. *Freunden* von *einander*, *denen* erzählen *Herforder* selten Lügen.
 friends of each-other RP tell Herfordians rarely lies
 ‘Friends of each other, good people rarely tell lies (to).’
 b. **Freunde* von *einander*, *denen* erzählen *Herforder* selten Lügen.
 c. **Freunde* von *einander*, *Herforder* erzählen *ihnen* selten Lügen.
 *‘Friends of each other, Herfordians rarely tell them lies.’

The absence of BT A effects can also be captured if it is the CLDed XP that undergoes movement, parallel to the argument of WCO seen above.

3.3 Reconstruction and Principle C (BT C)

We would now expect that an R-expression inside the LDed XP coreferent with a lower pronoun leads to ungrammaticality in CLD, but not in HTLD.

- (9) a. *Der Tatsache, daß Jo kein Geld hat, **der** mißt
 the fact that Jo no money has RP measures
 er keine Bedeutung bei.
 he no meaning PRT
 ‘*The fact that Jo has no money, he doesn’t attach significance to.’
 b. Die Tatsache, daß Jo kein Geld hat, **der** mißt er keine Bedeutung bei.
 c. Die Tatsache, daß Jo kein Geld hat, er mißt **ihr** keine Bedeutung bei.
 ‘The fact that Peter has no money, he doesn’t attach significance to it.’

This prediction is borne out. Again, if the CLDed XP is derived by movement, (9a) is ruled out as a straightforward BT C effect; if the HTLDed XP is base-generated in its surface position, this effect should not hold, as can be witnessed in (9b,c). We can summarize the results so far as in (10):

- (10) a. pronominal anaphor ... RP verb ... R-expression ... [_{DP} COPY] ...
 [DP] *R-expression pronoun
- b. pronominal anaphor ... RP verb ... R-expression ... RP ...
 [DP] *R-expression pronoun
- c. pronominal anaphor ... R-expression verb RP ... RP ...
 [DP] *R-expression pronoun

What (10) intends to show is that in CLD, (10a), the LDed XP originates in the initial argument position, moves to topic position and then to the left-peripheral landing site, spelling out the intermediate copy as the RP (indicated by the dashed line). At LF, the LDed XP may then reconstruct into its original position (indicated by 'copy') and the relevant element inside may or may not be bound by the relevant element in between. In HTLD with a high RP, (10b), the hanging topic is base-generated in its left-peripheral position, while the RP is the originally merged argument undergoing topicalization. We then need some mechanism that links RP and XP (indicated by the dashed line). Lastly, HTLD with a low RP, (10c), differs from the previous one by moving the RP only to its surface position, presumably the Case position, below the C-domain (a step excluded from the representations in (10a,b) for space considerations only). (I assume German to be head-initial; see Zwart 1993 and others.) I am not concerned with the linking between HT and RP, but rather provide further arguments for (non)movement and the structural analysis I propose, as well as some bigger issues relevant here.

4 Further Diagnostics for Movement

Now that we have gone through the analysis and seen initial empirical motivation for it, let us turn to other diagnostics for movement that hold for CLD but not for HTLD, suggesting movement of the LDed XP only in one.

4.1 Islands

A classic argument for movement is island-sensitivity (Ross 1967). If a dependency may span across an island, it is unlikely that it is the result of movement. In turn, if it is sensitive to islands, it may have arisen from movement, especially if we find minimal pairs where one structure is sensitive to islands, the other one not. CLD constructions are indeed sensitive to islands, illustrated with a strong island, the complex noun phrase constraint:

- (11) a. **Seinen Vater, den* haßt Maria *die Tatsache*, daß jeder Junge mag.
 his father RP hates Maria the fact that every boy likes
 ‘*His father, Maria hates the fact that every boy likes.’
 b. **Sein Vater, den* haßt Maria *die Tatsache*, daß jeder Junge mag.
 b'. #*Sein Vater*, Maria haßt *die Tatsache*, daß *den* jeder Junge mag.
 c. #*Sein Vater*, Maria haßt *die Tatsache*, daß jeder Junge *ihn* mag.
 ‘His father, Maria hates the fact that every boy likes him.’

The CLD structure in (11a) is strictly ungrammatical; the corresponding HTLD structures in (11b',c) are not—these simply do not allow for a bound variable reading, as already established above (extending to other cases from above). (11b) shows that in HTLD, the only element undergoing movement is the RP, which may not be extracted out of the island (contrast with (11b')).

If CLD disallows movement across an island, there is good reason to believe that movement is involved; likewise, if the XP-RP dependency in HTLD may span across an island, there is good reason to believe that the HT is base-generated where it surfaces, disallowing reconstruction of any sort.

4.2 Idioms

Another classic argument that shows that it really is the LDed XP that moves in CLD comes from displacing idiomatic chunks; as shown by Marantz (1984) and others, these must be the result of movement, where the idiomatic interpretation is yielded by a strictly local (base-generated) configuration.

- (12) a. Der Aaron hat der Berta gestern den Kopf verdreht.
 the Aaron has the Berta yesterday the head twisted
 ‘Aaron turned Berta’s head yesterday.’

The idiom in (12) may be manipulated structurally with retaining of its interpretation. (This may not hold for the English equivalent, but for the purpose of illustration, I gloss over this; see Schenk 1995 for discussion of syntactic properties of English idioms), including the relevant chunk *den Kopf* 'the head'; as it turns out, those speakers that judge (13) grammatical, especially (13c), also accept (14a), CLDing the idiomatic chunk, but not (14b,c):

- (13)a. Der Berta hat der Aaron gestern den Kopf verdreht.
 b. Gestern hat der Aaron der Berta den Kopf verdreht.
 c. Den Kopf hat der Aaron der Berta gestern verdreht.
- (14)a. *Den Kopf, den* hat der Aaron der Berta gestern *den-Kopf* verdreht.
 b. **Der Kopf, den* hat der Aaron der Berta gestern *der-Kopf* verdreht.
 c. **Der Kopf*, der Aaron hat *ihn* gestern der Berta verdreht.
 'Berta's head, Aaron turned (*it) yesterday.'

Again, under an analysis where the CLDed XP is derived by movement, as laid out above, the result as evidenced by (14) is nothing but expected.

5 Structural Differences

Now that we have seen empirical support to derive Case-matching between CLDed XP and RP by them being one and the same element with two different copies, or in a weaker version, that the CLDed XP is derived by movement, unlike the HTLDed XP, let us consider whether we can make out structural differences in the final position of CLDed and HTLDed XPs.

5.1 Embedding

Interestingly, only the CLDed XP may be embedded; this can only be shown in the context of so-called "bridge verbs" which allow for a verb second clause as their complement (as LD is contingent on a matrix environment). This suggests that only one is a root phenomenon (cf. Emonds 1970; also Chomsky 1977). We can express the difference by analysing the CLDed XP to target SpecCP, while the HTLDed XP is generated as an adjunct to CP.

- (15)a. Ich glaube, *diesen Satz, den* haben wir nun alle satt.
I believe this sentence_{RP} have we now all enough
 'I believe this sentence, we've all had enough of by now.'
- b. *Ich glaube, *dieser Satz, den* haben wir nun alle satt.
 c. *Ich glaube, *dieser Satz*, wir haben *ihn* nun alle satt.
 '*I believe this sentence, we've all had enough of it by now.'

5.2 Multiple LDed Phrases

The hypothesis that one LDed element is an adjunct, while the other one is a specifier can be tested further. Assuming a phrase-structural version of X-bar theory which allows for multiple adjunction but requires unique specifiers (see Grohmann 2000b for relevant justification, discussion and references), this hypothesis can be tested and verified as follows.

First of all, CLDed XPs are restricted to one occurrence only, in contrast to HTLDed XPs (cf. Cinque 1977, 1990 and others). Secondly, the two may co-occur, but only if the hanging topic precedes the CLDed XP. Admittedly, the good structures below are far from perfect, but the contrasts are clear.

- (16) a. [*Der Junge*]_i, [*der Wagen*]_j, [*die Mutter*]_k,
gestern hat *sie_k* *ihm_i* *den_j* geschenkt.
b. [*Der Junge*]_i, [*die Mutter*]_k, [*den Wagen*]_j,
the boy the mother the car
den_j hat *sie_k* *ihm_i* gestern geschenkt.
RP has she him yesterday given
'The boy, the mother, the car, yesterday she gave (it) to him.'
- (17) a. *[*Der Junge*]_i, [*den Wagen*]_j, [*die Mutter*]_k,
den_j hat *sie_k* *ihm_i* gestern geschenkt.
b. *[*Dem Jungen*]_i, [*der Wagen*]_j, [*die Mutter*]_k,
dem_i hat *sie_k* *ihn_j* gestern geschenkt.
- (18) a. *[*Dem Jungen*]_i, [*den Wagen*]_j, [*die Mutter*]_k,
dem_i hat *den_j* *sie_k* gestern geschenkt.
b. *[*Die Mutter*]_k, [*dem Jungen*]_i, [*den Wagen*]_j,
dem_i hat *den_j* *sie_k* gestern geschenkt.

We can now express these restrictions, given that specifiers, but not adjuncts, are unique, as follows, where the CLDed XP is italicized:

- (19) [_{CP} [*der Junge*] [_{CP} [*die Mutter*] [_{CP} *den Wagen* C⁰ [_{TopP} *den* hat ...]]]

We now have seen evidence in favour of movement of the CLDed XP and base-generation of the HTLDed XP, realized representationally as in (10); we also have good evidence for (19), or the representations in (3), where the CLDed XP sits in SpecCP, while any number of HTLDed XPs are adjoined to that position. What is unsolved, and shall remain so here, is how the HTLDed XP and the RP are connected, and how optional Case-marking on the XP is derived; what is also unclear yet, and shall be resolved in the next section, is how the RP is derived in CLD.

6 A Very Rough Sketch of Prolific Domains

I propose that the RP in CLD constructions is the spelled out copy of the CLDed XP, originally merged as argument, in topic position, while it is the originally merged argument itself in HTLD constructions. I now want to motivate this spelling out very briefly (see Grohmann 2000b for more).

6.1 Tripartite Clause Structure

Despite empirical and theoretical justification of a great number of functional projections in clause structure, an old intuition seems to get lost, namely that clauses express roughly three types of information, formerly expressed structurally by VP, INFL (S) and COMP (S'). I would like to return to this intuition and propose a tripartition of clause structure into three prolific domains, areas that themselves consist of more articulate structure:

- (20) a. V-domain (at least vP , VP): licensing thematic relations
- b. T-domain (TP, ModP, AspP ...): licensing grammatical properties
- c. C-domain (CP, TopP, FocP ...): licensing discursial dependencies

One condition that holds on all prolific domains and which can plausibly be derived from first principles rather than being a stipulated principle, is the CDE, an extended version of the observation that maximal phrases tend to occur only once per prolific domain (see Grohmann 2000b, in press):

(21) *Condition on Domain-Exclusivity (CDE)*

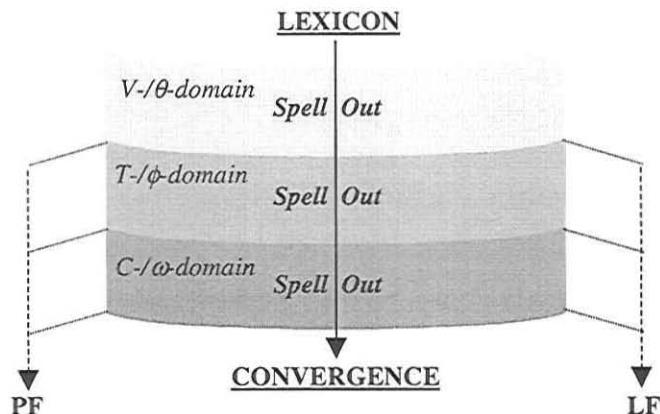
No maximal phrase XP may have more than one address identification AI per prolific domain $\Pi\Delta$, unless it has a drastic effect on the output, i.e. the relevant copy of XP has a different form at PF.

The copy-spell out in CLD is driven by the CDE, namely by repairing an otherwise illegitimate move: the CLDed XP would have to move not only to TopP (licit) but also from TopP to CP, both within the C-domain (illicit)—this step forces spelling out a copy under a different name. The *d*-pronoun is a default element in such cases and the derivation may converge. Moreover, Case-matching and identity are immediately accounted for.

6.2 Dynamic Derivations

The concept of prolific domains is also motivated by a very dynamic conception not only of the syntactic computation, but also of the interpretive interfaces. Independently of LD, I suggest the following modified T-model:

(22)



A model like this (Grohmann 2000a,b, in press) adopts the concept of multiple Spell Out (Uriagereka 1999) and applies it to each prolific domain, much in the sense Chomsky's (1998, 1999) phases, yet over three such areas of monoclausal structures (cf. also Uriagereka and Martin 1999). Each time a part of the derivation is spelled out, it gets shipped to the interfaces (PF, LF) which, in turn, are thus also derived representations, not static evaluations.

Unique address identification can then be understood as the requirement at the interfaces to assign one function of the set of thematic ('agent', 'theme' and the like), grammatical (e.g. Case and agreement) and discursual properties (topic, focus, clause-typing etc.) for each XP (where heads arguably extend the tree by successive-cyclic movement).

Further evidence for spelling out copies comes from reflexivization understood derivationally (e.g. Lidz and Idsardi 1998, Hornstein, in press). In concurrent work I also deal with apparent counterexamples and other problematic constructions which we cannot delve into here (Grohmann 2000b). In other words, the tripartite clause structure with its conditions sketched here is not simply a gizmo to deal with movement variants of LD, but is independently motivated and desired, leaving aside further discussion.

On a related note, the analysis advanced here regarding LD in German suggests that cross-linguistically, LD constructions are not split along the lines Cinque (1990) proposes, where languages either use CL(itic)LD or (other) LD, but rather the way he suggested earlier (Cinque 1977), namely whether a particular LD construction is derived by movement or by base-generation; the latter is also argued, at least implicitly, by Aoun and Benmamoun (1998) and Cechetto and Chierchia (1998). This begs the question, left for future research, whether movement-derived CLLD in Romance, Greek or Arabic could also be analysed as involving copy-spell outs.

In sum, CLD is the result of topicalizing an element and then raising it further to create an LD structure, holding fast to both the similarity between the two constructions as well as the difference (with LD being "topicalization plus some extra;" cf. Gundel 1974, Altmann 1981, Birner and Ward 1998, Prince 1998 for more thorough discussion of pragmatic properties). A necessary consequence of moving an XP within the same prolific domain is a further PF-legible address for interpretation, achieved by spelling the copy in topic position. This yields all the empirical results observed as well as the theoretical proposal advanced here, in contrast to HTLD constructions.

Regarding the bigger picture, many issues remain to be addressed, but I hope to have brought across the general gist of the framework and its usefulness beyond instances of LD in German.

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