

Breaking Chains: A Parenthetical Analysis of the German w...w-Copy Construction

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Abstract

The w...w-copy construction has long been viewed as evidence for the successive-cyclic nature of long distance wh-movement. I will show that the claim that wh-copying involves long distance wh-movement faces a number of empirical problems and will instead argue that it is derived from the insertion of a V1-parenthetical (as argued for cases of putative V2-extraction by Reis 1995, 1996a,b). Furthermore, I will argue that this parenthetical is adjoined counter-cyclically to the structure and thus ‘breaks’ the link to the upper-most wh-copy, thereby creating two chains and resulting in multiple Spell-Out of the wh-phrase.

1 Introduction

There has been a long-standing interest in the so-called w...w-copy construction (CC). This is a construction in which a wh-phrase is overtly realized more than once in an interrogative:

- (1) a. Wen denkst du, wen Maria liebt?
Who think you who Maria loves
‘Who do you think Maria loves?’
- b. Wer glaubst du, wer du bist?
who believe you who you are
‘Who do you think you are?’
- c. Wo meint Peter wo er gestern war?
where means Peter where he yesterday was
‘Where did Peter say he was yesterday?’

Although this construction is attested in a number of languages: (Afrikaans, Frisian, Romani and Passamaquoddy), I will focus solely on German in the following discussion.¹ Since Chomsky (1973), so-called long distance wh-movement has been argued to proceed successive cyclically (i.e. in steps):

- (2) Who did John say <who> that Peter said <who> that Sarah insulted <who>?

One crucial piece of evidence for this property of movement is the fact these intermediate copies can sometimes be overtly realized in cases such as (1). Accordingly, a movement analysis of (1a) would be as follows:

- (3) [CP wen denkst du [CP wen Maria <wen> liebt]]?

The wh-phrase *wen* ('who') is moved to the specifier of the embedded CP and then further to the matrix CP. What is special about the w...w-construction is that the intermediate copy is also pronounced. This is not normally an option for ordinary long distance wh-movement:

- (4) [CP Was glaubt Hans [CP (*was) dass Maria [vP ihm <was> schenkt]]]?
 what believes Hans what that Maria him what gives
 'What does Hans think that Maria is going to give him?'

I will go into more detail on possible extraction analyses in the following section, where I will argue that analyses of the w...w-copy construction assuming movement face a number of empirical problems. Instead, I will follow up on work by Reis (1995 *et seq.*) arguing for the existence of verb initial (V1) parentheticals such as *glaubst du* ('do you believe') which can be inserted as parentheticals into clauses. I will argue that the w...w-copy construction (such as (1a)) in German is better analysed as follows:

- (5) [CP Wen ↑ [FocP WEN [TP Maria ~~wen~~ liebt]]]
 [glaubst du]

This analysis requires the assumption that wh-movement has two landing sites in the Left Periphery (Rizzi 1997). Furthermore, I will argue that parenthetical insertion is counter-cyclic adjunction in syntax proper. I will present a mechanism, which will sufficiently restrict counter-cyclic adjunction to a Last Resort mechanism occurring only when embedding an interrogative would violate the c-selectional restrictions of the predicate in question. This will allow us to explain the predicate restrictions observed for the CC. The paper is structured as

¹ It is, however, possible that the arguments presented here for German can be applied to other Germanic languages such as Dutch or Frisian, particularly if it can be shown that V1-parentheticals exist in these languages (see Reis 1995 for argumentation this direction).

follows: Section 2 will provide arguments against an extraction analysis of the CC showing the derivational problems associated with it, Section 3 will explore an alternative reviewing the evidence for the existence of V1 parentheticals in German and Section 4 will present an analysis of the CC using V1 and offer an explanation of some previously puzzling facts associated with the construction. Here, it will be shown in more detail that the properties of the CC seem to have little in common with parallel long-distance extractions.

2 Against an extraction analysis of the CC

Until now, prominent analyses of the CC (Fanselow & Mahajan 2000, Fanselow & Cavar 2001, Felser 2004, McDaniel 1989, Rett 2006, Schippers 2012), while differing from each other in certain details, assume that the derivation of the CC involves extraction, i.e. long distance wh-movement. This section will show that this basic assumption does not hold up to closer scrutiny, as there are number of problems associated with the derivations required by this analysis. In order to derive an example such as (1a) with extraction, we have two options with regards to a base structure:

- (6) a. The CC is derived by extraction from an embedded wh-question.
 b. The CC is derived by extraction from an embedded V2 clause.

I will show that neither of these assumptions is tenable and why it is therefore necessary to dispense with a movement account altogether.

2.1 Extraction from an embedded wh-question

First, consider the fact that embedded wh-questions (7) in German are verb-final compared to their matrix counterparts (8):

- (7) a. Ich weiß, wen [TP du <wen> magst].
 I know who you like
 ‘I know who you like.’
 b. Ich frage mich, was [TP er damit <was> meinte].
 I ask myself what he with.that meant
 ‘I wonder what he meant by that.’
- (8) a. Wen magst_i [TP du <wen> t_i]?
 who like you
 ‘Who do you like?’
 b. Was meinte_i [TP er damit <was> t_i]?
 what meant he with.that
 ‘What did he mean by that?’

We also observe that CC is verb-final just like embedded wh-questions, thereby opening up the possibility for analysing the CC as derived from an embedded question:

- (9) Wen denkst du wen ich meine?
 who think you who I mean
 ‘Who do you think I mean?’

[_{CP} Wen denkst du [_{CP} wen [_{TP} ich <wen> meine]]?
 ↑

The wh-phrase *wen* (‘who’) is moved to Spec-CP of the embedded clause to derive the structure of an embedded wh-interrogative as in (7). We could then assume that the wh-phrase is moved further to the matrix CP. Aside from the problem of why the intermediate copy of *wen* is pronounced in these cases, there is another problem with this analysis. There are restrictions on the kinds of predicate which can embed wh-questions in German. Predicates like those in (10a) embed questions, whereas those in (10b) (so-called *bridge verbs*) cannot:

- (10) a. Peter fragt sich/ weiß/ ist überrascht, wen Maria liebt.
 Peter asks REFL knows is surprised who Maria loves
 ‘Peter is wondering/knows/is surprised (about) who Maria loves.’
 b. *Peter glaubt/ meint/ denkt, wen Maria liebt.
 Peter believes/ says/ thinks who Mary loves


Crucially, we observe that only the predicates in (10b) – the ones which do not ordinarily embed wh-questions – can occur in the copy construction (11b), whereas those which do embed wh-questions (10a) cannot (11a):

- (11) a. *Wen {fragt sich/ weiß Peter / ist Peter überrascht}, wen
 who asks REFL knows Peter is Peter surprised who
 Maria liebt.
 Maria loves
 b. Wen {glaubt/ meint/ denkt} Peter, wen Maria liebt.
 who believes/ says/ thinks Peter who Mary loves

These facts contradict the analysis in (9) because, in order to derive the CC in this way, the predicates in the CC (11b) would first have to embed a wh-question. (10b) clearly shows that this is not possible.

- (15) Du glaubst, Ted wird Victoria heiraten.
 you believe Ted wird Victoria marry
 ‘You think Ted will marry Victoria.’

Compared to the embedded V2 structure in (15) from which it has been argued that this structure is derived, the finite verb *wird* (‘will’) precedes the subject of the embedded clause after extraction has taken place. Therefore wh-movement from an embedded V2 clause triggers subject-verb inversion (T-to-C movement) as shown in the analysis of (14) given in (16):

- (16) [_{CP} Wen glaubst du, [_{CP} <wen> wird [_{TP} Ted [_{VP} <wen> heiraten] <wird>]]]?


The structure in (16) would then be the structure that we assume that the CC is derived from, albeit with the intermediate copy of *wen* pronounced. The major problem with this assumption is that, as we have seen, subject-verb inversion is not possible in the CC; these structures are strictly verb-final:

- (17) a. Wen glaubst du wen Ted heiraten *wird*?
 who believe you who Ted marry will
 ‘Who do you think Ted will marry?’
 b. *Wen glaubst du wen *wird* Ted heiraten?²

The lack of subject-verb inversion means that we cannot claim that the CC is derived from extraction from embedded V2. This is ruled out by the verb-final structure of the CC. It therefore seems that we cannot appeal to either of these derivations to account for the CC and the analysis of the CC remains an entirely unresolved issue. In the following section, we will see that apart from a number of theoretical problems, an extraction analysis of the CC also faces empirical problems as the CC shows a number of difference to long-distance extraction.

2.3 Empirical problems for an extraction account

If the extraction analysis were correct, we would expect the CC to behave identically to *bona fide* long-distance extraction structures (extraction from *dass*-clauses). In the following, I present some new empirical evidence showing this is not the case as there are a number of tests which show that the two construction show a number of important differences:

Quantifier Scope:

² An anonymous reviewer has pointed out that this is grammatical in his/her dialect (Viennese Austrian German). I am not aware of such examples in the literature but this would have interesting implications for all theories of the CC. As such, I will leave this empirical point aside for now.

The CC differs from long-distance extraction with regard to the scope-taking possibilities of quantifiers (Pafel 2000, Felser 2003). In long-distance *wh*-movement structures such as (18a), the *wh*-phrase can take wide scope over the universal quantifier *jeder* ('everybody'). In the CC (18b), on the other hand, this does not seem to be possible (according to judgements from Pafel 2000 and Felser 2003), i.e. the reading 'What is the place *x* such that everyone believes the best wines grow in *x*?' is out in the CC (18b) but not in long-distance extraction (18a):

- (18) a. Wo glaubt jeder, dass die besten Weine wachsen?
 where believe everybody that the best wines grow
 'Where does everyone think the best wines grow?' ($wh > \forall, \forall > wh$)
- b. Wo glaubt jeder, wo die besten Weine wachsen?
 where believe everybody where the best wines grow
 'Where does everyone think the best wines grow?' ($*wh > \forall, \forall > wh$)

Negated predicates:

The CC also differs from genuine long-distance extraction structures with regard to its ability to host negated predicates. Negated predicates are ruled out in the CC (19a), whereas they are entirely unproblematic with extraction from a *dass*-clause (19b):

- (19) a. Wo denkt Peter nicht, dass Maria hingefahren ist?
 where thinks Peter not that Maria gone.to is
 'Where does Peter not think that Maria has gone?'
- b. *Wo denkt Peter nicht wo Maria hingefahren ist?
 where thinks Peter not where Maria gone.to is

If the CC were derived from long-distance extraction (just with an intermediate copy spelled out), it would be puzzling as to why this difference exists.

Binding:

There are also interesting, hitherto unnoticed, differences with regard to binding between genuine long-distance extraction structures and the CC. Consider the examples in (46):

- (20) a. ?*Wo glaubt jeder_i Fußballspieler wo er_i nächstes Jahr
 where believe every footballer where he next year
 spielen wird?
 play will

- b. Wo glaubt jeder_i Fußballspieler, dass er_i nächstes Jahr
 where believe every footballer that he next year
 spielen wird?
 play will

‘Where does every footballer think (that) he will be playing next year?’

It seems that variable binding in the CC is not possible (21a), whereas it is completely fine with long-distance extraction (21b). First and foremost, this hints at a structural difference between the two constructions. It is perhaps tempting to attribute the ungrammaticality of (21b) to an intervention effect (as with negated predicates), however (22) shows that *jeder* can, in general, intervene between wh-phrases in the CC if no binding is involved:

- (21) Wo glaubt jeder Fußballspieler wo Messi nächstes Jahr
 where believe every footballer where Messi next year
 spielen wird?
 play will

‘Where does every footballer think Messi will play next season?’

In sum, there are a number of theoretical and empirical problems regarding the extraction analysis of the CC. In the remainder of this article, I will propose a parenthetical analysis, which will avoid not only the theoretical problems regarding the structure from which the CC is derived, but will also capture the aforementioned empirical differences between long-distance extraction structures and the CC.


3 A parenthetical analysis of the CC

In the previous section, we have seen a number of problems associated with the standard assumption that the CC is derived by long distance wh-movement. In this section, I propose an alternative: namely, that the CC is derived by insertion of a V1-parenthetical into a (non-matrix) wh-question. A number of arguments for this analysis are parallel to those proposed by Reis (1995, *et seq.*) for the extractions from V2. For this reason, the next section will review some of her arguments for the existence of V1-parentheticals in German.

3.1 V1-Parentheticals

In section 2.2, we discussed extractions from embedded V2 clauses such as (14) and its analysis repeated here below as (22) and (23):

- (22) Wen glaubst du, wird Ted <wen> heiraten?
 who believe you will Ted marry
 ‘Who do you think Ted will marry?’

- (23) [_{CP} Wen glaubst du, [_{CP} <wen> wird [_{TP} Ted [_{VP} <wen> heiraten] <wird>]]]?


Reis (1995, 1996a, 1996b, 2000) has presented a number of arguments against this analysis. She argues that examples such as (22) are not derived by extraction from an embedded V2 clause, but rather by insertion of a V1-parenthetical *glaubst du* ('do you think') into the wh-question *wen wird Ted heiraten?* ('Who will Ted marry?'):

- (24) Wen ↑ wird Ted heiraten?
 [glaubst du]

Reis dubs these parentheticals *VIPs* (verb-first integrated parentheticals) as they are prosodically integrated into the host clause. Below, I review some supporting arguments.

Fronting of a non-constituent:

(25a) shows the embedded V2 structure from which (25b) is supposedly derived. The problem here is that the supposedly fronted material in (25b) does not form a constituent as in (26b).

- (25) a. Sie glaubt, dort liege ein gewaltiges Problem.
 she believes there lies a serious problem
 b. Dort liege glaubt sie, ein gewaltiges Problem.
 there lies believes she a serious problem
 'She thinks that there is a serious problem.'

- (26) a. Sie glaubt, [_{CP} dort [_{C'} liege [_{TP} ein gewaltiges Problem]]].
 b. [_{CP} dort liege [_{TP} glaubt sie [_{CP} dort [_{C'} liege [_{TP} ein gewaltiges Problem]]]]]
 c. [_{CP} Dort [_{C'} liege ein gewaltiges Problem.



[glaubt sie]

The alternative analysis in (26c) assumes that only *dort* ('there') is fronted and a parenthetical constituent *glaubt sie* is then inserted into the structure to derive (26a). Since only a constituent is fronted here, we do not run into the same problems as an extraction analysis.

V2 and dass-clauses:

There is somewhat puzzling restriction on putative extractions from embedded V2: extraction only seems to be possible if it passes through the same type of CP (i.e. embedded V2 or *dass*-clause). In (27a), we see that it is possible to 'mix' V2 and *dass*-clauses, i.e. V2 can embed

predicates which can embed both V2 and *dass*-clauses (30a, b). If extraction from V2 were possible, it remains puzzling as to why extraction in this case is impossible (31b).

- (30) a. Es wäre mir lieber, du entlässt ihn.
 it would.be me preferable you fire him
- b. Es wäre mir lieber, dass du ihn entlässt.
 it would.be me preferable that you him fire
 ‘I would prefer for you to fire him.’
- (31) a. Wen wäre dir lieber, dass ich t_{wen} entlasse?
 who were you preferable that I fire
 ‘Who would you prefer me to fire?’
- b. *Wen wäre dir lieber, entlasse ich t_{wen} ?
 who were you preferable fire I

(31a) is a case of *bona fide* long distance extraction from a *dass*-clause. Under a parenthetical analysis, the structure in (31b) requires that the V1 parenthetical *wäre dir lieber* is inserted into the grammatical question *wen entlasse ich?* (‘who do I fire?’). The reason why (31b) is not possible comes from the fact that preference predicates are not possible as parentheticals:

- (32) ?*Du gehst wäre mir lieber nicht alleine dahin.
 you go would.be me preferable not alone there
 Int. ‘I would prefer you not to go there alone.’

3.2 Theoretical assumptions

Now that we have seen some of the motivations for proposing V1-parentheticals to explain putative extraction from embedded V2, I will go on to show how this can be applied to the CC. Before I go into the mechanism in detail, I will first outline some important theoretical assumptions needed for the analysis.

3.2.1 wh-movement

I will assume that wh-movement involves both morphosyntactic [focus] and [wh]-features. This has been proposed at several points in the literature (e.g. Sabel 2000, Haida 2007, Grewendorf 2002) and will mean that a wh-phrase will have both focus and wh features to be checked. I assume that these features are checked in two distinct projections in the Left Periphery (CP and FocP). An ordinary embedded question would be analysed as follows:

- (33) Ich weiß, wen Maria liebt.
 I know who Maria loves
 [CP Wen C_[uwh] [FocP wen Foc_[ufoc] [TP Maria wen liebt]]]

3.2.2 Chain Reduction

Assuming the Copy Theory of Movement (Chomsky 1995), all movement operations leave full copies behind. Since we know that all copies are eventually pronounced, it is necessary to assume some kind of a mechanism for the non-realization of lower copies. Nunes (2004) provides an in-depth discussion of a mechanism for *Chain Reduction*, i.e. reducing the Spell-Out of a chain to (in most cases) the highest copy or head of the chain. I will adopt a simplified version of *Chain Reduction*:

- (34) *Chain Reduction*

At PF, delete all copies of a given chain except the highest.

If we apply this to the structure in (33), we then arrive at the following structure:

- (35) [CP Wen₁ C_[uwh] [FocP ~~wen~~₁ Foc_[ufoc] [TP Maria ~~wen~~₁ liebt]]]

3.2.3 Counter-cyclic adjunction

The following analysis also requires the assumption that adjunction can – under certain circumstances – be counter-cyclic. This was originally proposed by Lebeaux (1988) to deal with supposed Condition C violations such as the following:

- (36) Which picture of John_i does he_i hate <which picture of John_i>?

Assuming reconstruction at LF, *John* would be bound by *he* and therefore violate Condition C of Binding Theory, which bans just that. In a nutshell, the idea behind counter-cyclic adjunction is that certain elements (in this case of the PP *of John*) can be adjoined after wh-movement has taken place. The idea that it is possible to violate the *Extension Condition* (Chomsky 1995) under certain circumstances will be utilised in the analysis to follow.

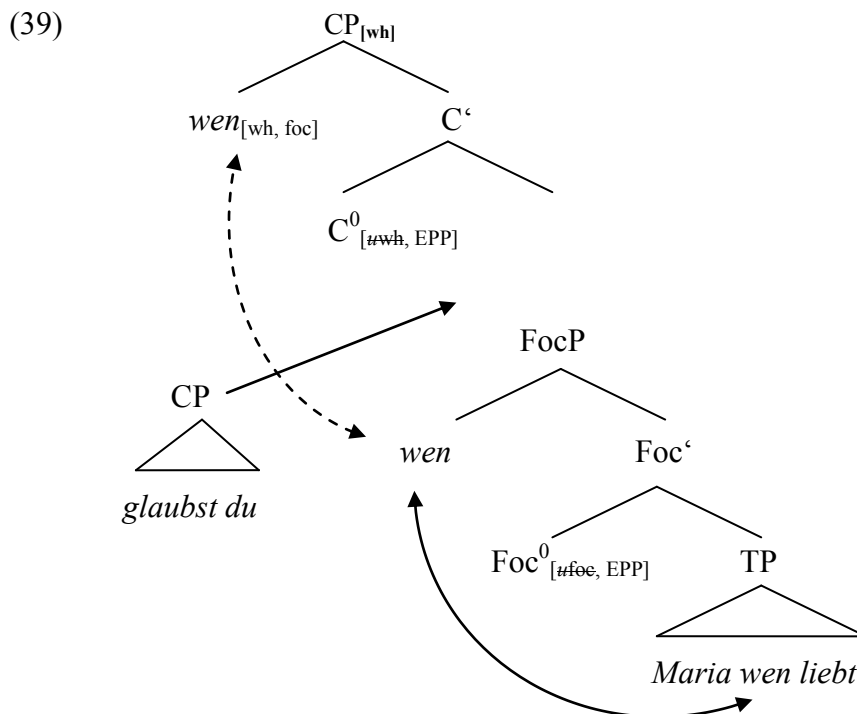
4 The analysis

Recall, that the CC predicates in the CC are restricted to those which do not embed wh-questions. This observation forms an important part of the analysis to follow. If we take an example such as (37), I will assume that the V1-parenthetical *glaubst du* is inserted into the structure corresponding embedded wh-question (*wen Maria liebt*):

- (37) Wen glaubst du wen Maria liebt?
 who believe you who Maria loves
 ‘Who do you think Maria loves?’

- (38) [CP Wen C_[uwh] ↑ [FocP wen Foc_[ufoc] [TP Maria wen liebt]]
 [CP glaubst du]

The question to be answered at this point is how we derive the doubling of *wen* in the CC. This is where the concept of counter cyclic adjunction comes into play. If we counter-cyclically adjoin *glaubst du* (i.e. after the CP has been merged) then the structure will have to ‘ripped open’ below the CP in order for the parenthetical to be adjoined to FocP, for example.³ This ‘ripping open’ of the tree (i.e. counter-cyclic adjunction) is generally avoided in modern theorizing and I will attempt to explain why. Despite assuming them to be permissible in certain cases, applying operations in a counter-cyclic fashion must have drastic consequences for say long-distance dependencies. If we consider the *wen* chain in (38), I will propose that accessing structure below the root node (in order to insert a parenthetical) will ‘break off’ this link in the chain. This comes from the fact that this portion of the tree is (at least for that moment) necessarily separated from the rest of the syntactic structure:



Opening the structure in this way leads to *wen* in Spec-CP constituting a singleton chain after the adjunction has taken place:

³ Note that this is how adjunction works in TAG (Tree Adjoining Grammar).

$$(40) \quad \left[\text{CP } \underbrace{\text{Wen}_{[\text{wh}, \text{foc}]}}_{\text{Chain 1}} \text{C}_{[\#\text{wh}]} \left[\text{FocP } \left[\text{CP}_2 \text{ glaubst du} \right] \left[\text{FocP } \underbrace{\text{wen Foc}_{[\#\text{foc}]} \left[\text{TP } \text{Maria } \cancel{\text{wen}} \right.} \right. \right. \right. \right. \\ \left. \left. \left. \left. \text{liebt} \right] \right] \right] \right]$$

If *Chain Reduction* applies to Chain 1, it will delete all copies apart from the highest. Since this chain contains only one member, there is no lower copy to delete. For Chain 2, the lowest copy is not realized. In this way, we can account for the double Spell-Out of wh-phrases in the CC as counter-cyclic adjunction ‘breaks the chain’. Although this mechanism derives the correct result, how is motivated and when can it occur?

4.1 Counter-cyclic adjunction as a Last Resort operation

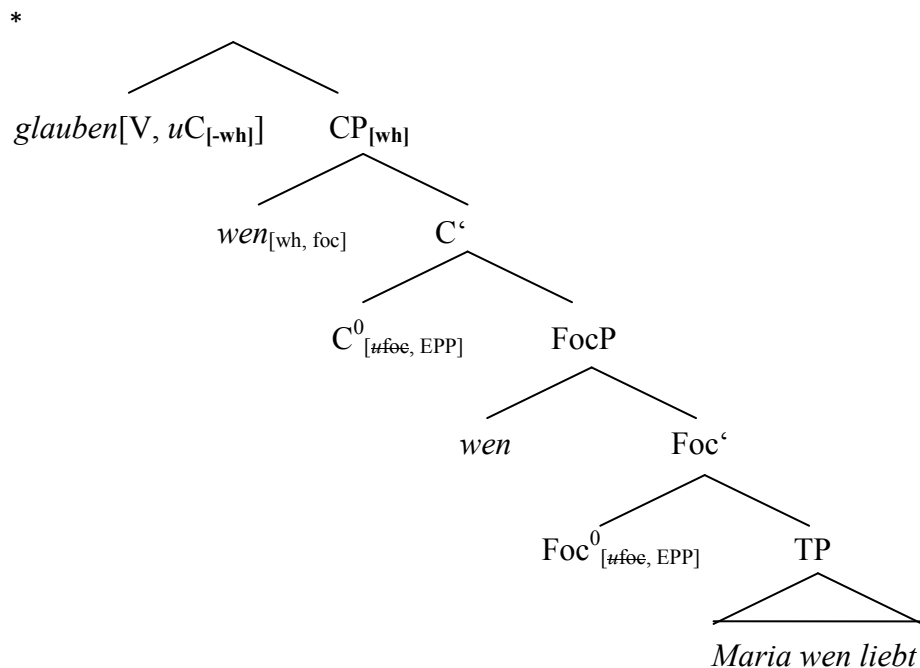
I will propose that counter-cyclic adjunction is only available as a Last Resort operation to save a derivation that would otherwise crash. In this way, we will be able to account for predicate restrictions in the CC. Recall, that the predicates able to occur in the CC are exactly those which do not embed wh-questions: *meinen*, *sagen*, *denken* etc. Let us imagine that the derivation of (37), *Wen glaubst du wen Maria liebt*, is at the following point in the derivation where we have built up the embedded wh-interrogative:

$$(41) \quad \left[\text{CP } \text{Wen } \text{C}_{[\text{uwh}]} \left[\text{FocP } \text{wen Foc}_{[\text{ufoc}]} \left[\text{TP } \text{Maria wen liebt} \right] \right] \right]$$

Let us assume that the predicate in the numeration of the would-be matrix clause is something like *glauben* (‘to believe’), which does not embed a wh-question. The structure in (41) will be marked somehow as being [wh], whereas the c-selectional restrictions of *glauben* will only allow it to embed a non-interrogative [-wh]. Therefore, it is not possible to merge *glauben* with the CP. At this point the derivation will crash:⁴

⁴ An anonymous reviewer pointed out that this is ‘only fatal if you assume local selection between the predicate and a +/-[wh] complement CP’ and wonders if it would not be possible to assume that selection can proceed in syntax but lead to a semantic mismatch. I defend the idea of very local selection (under c-command) in the framework I am adopting here where c-selection is also feature driven (cf. Adger 2003, Chomsky 1995) and the difference between Agree and Merge is simply the locality of feature-checking (under sisterhood vs. c-command). I nevertheless acknowledge that there may be implementations in other frameworks avoiding this problem.

(42) Numeration: {*glauben*, *du*, *v*, *T*, *C*}



If this situation arises, it is possible to assume that a Last Resort operation steps in to allow us to salvage something from the derivation. I will propose the following: The numeration of the would-be matrix clause is taken to form its own CP in another workspace. In order to make this possible, an empty operator is inserted into the numeration. This operator has been independently assumed to be part of the syntax of V1-parentheticals (e.g. by Steinbach 2007) and this *Operator Insertion* can be seen as a variation of the Edge Feature Insertion operation Heck & Müller (2000). Following the insertion of *Op*, we have the following numeration, from which we can create the V1-parenthetical structure in (43).

(43) **Numeration:**

{*glauben*, *du*, *v*, *T*, *C*, *Op*} → [CP *Op glaubst* [TP *du* [VP ...] *t_{glaubst}*]]

Now we have formed the parenthetical, it needs to be integrated into the structure. I will follow de Vries (2007) and similar work and assume that parentheticals are adjuncts. If we consider the possible ‘niches’ for VIPs, we see that initial position is not possible:

(44) (**glaube ich*) Hans (*glaube ich*) wird (*glaube ich*) heute (*glaube ich*)
 believe I Hans will today
 kommen (*glaube ich*).
 come

‘Hans (I think) will (I think) come (I think) today.’

The fact that adjunction to the root node is not possible, forces the adjunction in (42) to be counter-cyclic, i.e. it must be lower the highest projection (CP).

4.2 Consequences of this analysis

This analysis has a number of welcome consequences and allows us to explain the empirical differences between the CC and long-distance extraction in 2.3, which remain otherwise puzzling under an extraction analysis. The first is predicate restrictions on the CC.

Since the CC is only derived via a Last Resort operation where a non-question embedding predicate occurs in the numeration of a derivation with a wh-question, this predicts that it is only ever possible to form the CC with these kinds of predicates. If we had a question embedding predicate such as *sich fragen* ('to wonder'), then this would not create the necessary conditions for the Last Resort operation to occur. This explains why these predicates are ruled out of the CC:

- (45) *Wen fragst du dich wen Maria liebt
 who ask you REFL who Maria loves

Furthermore, the fact that supposed multiple copies of a single chain are spelled out is accounted for by the fact that counter-cyclic adjunction destroys any long-distance dependencies across the adjunction site. Since the derivation of the CC is radically different from, say, long-distance extraction, it is not longer puzzling as to why we cannot realize intermediate copies of wh-movement chains (cf. (4)).

Furthermore, recall the discussion of quantifier scope, where it was shown that wide scope of a quantifier in what we now analyze as a parenthetical was not possible.

- (46) a. [CP Wo glaubt jeder, [CP dass die besten Weine wachsen]]?
 where believe everybody that the best wines grow
 'Where does everyone think the best wines grow?' (wh > ∀, ∀ > wh)
- b. [CP Wo [glaubt jeder], wo die besten Weine wachsen]?
 where believe everybody where the best wines grow
 'Where does everyone think the best wines grow?' (*wh > ∀, ∀ > wh)

Under a parenthetical analysis, in (46b), the highest copy of the wh-chain has been separated from the rest syntactically and semantically. It is therefore no longer linked to the base position of the adjunct (let us assume this is adjoined to vP). Accordingly, only the lower copy of *wo* can take scope and since it is structurally lower than *jeder*, the universal quantifier takes scope over it.

Recall that the fact that negated predicates are impossible in the CC was a problem for the extraction analysis since these are possible with long-distance extraction from *dass*-clauses but not in the CC:

- (47) a. Wo denkt Peter nicht, dass Maria hingefahren ist?
 where thinks Peter not that Maria gone.to is
 ‘Where does Peter not think that Maria has gone?’
- b. *Wo denkt Peter nicht wo Maria hingefahren ist?
 where thinks Peter not where Maria gone.to is

It is possible to attribute the ungrammaticality of (47b) to an intervention effect (Beck 1996), however, a parenthetical analysis provides an equally satisfying (if not more straightforward) answer. As Reis (1995, 1996) shows, negated predicates are not possible parentheticals to start with:

- (48) *Wo [glaubt Peter nicht] ist Maria hingefahren?
 where believes Peter not is Maria gone.to

Lastly, recall the puzzling fact that variable binding is not possible in the CC unlike in long-distance extraction:

- (49) ?*Wo glaubt jeder_i Fußballspieler wo er_i nächstes Jahr
 where believe every footballer where he next year
 spielen wird?
 play will

The impossibility of binding in (49) follows from a parenthetical analysis quite easily, since *jeder* (‘every’) is inside the parenthetical CP and therefore does not c-command *he*:

- (50) [_{CP} wo [_{CP} glaubt jeder_i Fußballspieler] [_{FocP} wo er_i nächstes Jahr spielen wird]]

5 Conclusion

This paper has proposed a new analysis of the copy construction in German. Whereas all previous analyses assume that the CC constitutes the Spell-Out of an intermediate copy created via successive-cyclic long-distance wh-movement, this paper has shown that such an analysis is untenable due to both empirical and theoretical problems. Although this analysis may avoid many of the problems associated with extraction analyses, it has some drawbacks of its own requiring further research. For instance, the most salient fact that this analysis in its present form cannot straightforwardly explain is how multiple insertion of parentheticals can result in structures such as the following:

- (51) Wen glaubst du, wen sie meint, wen sie gesehen hat?
 who believe you who she said who she seen has
 ‘Who do you think she said that she has seen?’ (Haider 2010:107)

Under the present account, one would not expect subsequent insertions of parentheticals to result in extra copies of *wh* in each parenthetical (since we are only splitting up copies in Spec-CP and Spec-FocP). Nevertheless, it may be possible to view these other *wh*-copies as the Spellout of the silent operator in Spec-CP in VIPs (recall the structure in (43)). I will not pursue this issue further here, but it leave it to future research. To sum up, the present analysis builds on the analysis of apparent V2-extraction by Reis (1995 *et seq.*) and proposes that the CC is derived by insertion of a V1-parenthetical into an embedded *wh*-question. In adopting this kind of analysis, we can account for a number of other previously puzzling facts about the CC such as predicate restrictions, multiple Spell-Out, quantifier scope and binding data.

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