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# REVISITING CONTINUATIVE RELATIVE CLAUSES: TOWARDS A UNIFIED ACCOUNT

## ABSTRACT

*In this paper, a new syntactic analysis of continuative relative clauses in German is proposed that unifies them with the syntax of appositive relative clauses in general. The analysis is based on the idea that continuative relative clauses are contained in a cleft-like main clause  $CP_2$ , which is structurally disintegrated from the host clause  $CP_1$ . Except for the continuative relative clause, all material in  $CP_2$  undergoes phonological deletion. We show that such an analysis sheds light on certain idiosyncrasies of continuative relative clauses, like the choice of relative pronouns and Principle C effects, and that it successfully captures a number of their basic properties. Moreover, the analysis gives a new twist to recent arguments in favor of an integration approach to appositive relative clauses based on ellipsis.*

## KEYWORDS

*appositive relative clause; continuative relative clause; German; ellipsis*

## 1. Introduction

This paper pursues a twin goal: On the one hand, it tentatively proposes a new syntactic analysis of so-called continuative relative clauses (henceforth CRCs) in German, like in (1), thereby unifying them with run-of-the-mill headed appositive relative clauses (henceforth ARCs), like in (2).\*

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- (1) *Maria hat die Prüfung bestanden* [<sub>CRC</sub> *was Jens gefreut hat*].  
 Mary has the exam passed <sub>WH</sub> Jens pleased has  
 ‘Mary passed the exam, which pleased Jens.’
- (2) *Maria hat diese Prüfung bestanden* [<sub>ARC</sub> *die (übrigens) dieses Mal sehr schwer war*].  
 Mary has this exam passed <sub>D</sub> (by-the-way) this time very hard was  
 ‘Mary passed this exam, which was very hard this time.’

On the other hand, it shows that the approach has the potential to invalidate recent arguments against an orphan approach to ARCs (cf. ARNOLD – BORSLEY 2008, GRIFFITHS – DE VRIES 2013), which the authors claim speak in favor of the syntactic integration of ARCs.

This article is structured as follows. Section 2 provides some general background on the syntax of CRCs and ARCs in general; it also summarizes the argumentation in GRIFFITHS – DE VRIES (2013), which we will pick up again in section 4. In section 3, we will detail our unified analysis of German CRCs and show that it displays the empirical coverage we believe any analysis of CRCs should minimally shoulder. Based on this analysis, we show in the subsequent section that ellipsis phenomena do not conclusively favor an integrated approach (*pace* GRIFFITHS – DE VRIES 2013). Section 5 addresses some remaining issues and concludes the paper.

## 2. A word of motivation

### 2.1 Some background on CRCs and ARCs in general

This paper is concerned with the syntax of CRCs, illustrated below by an English specimen, cf. JESPERSEN (1927, 105f.).

- (3) *John dropped all the milk, which aggravated Mary.*

CRCs typically feature a proposition as antecedent, for which reason they are commonly referred to as “sentence relative clauses.” However, other types of antecedents (like events/states, amounts, facts etc.) are also possible. The antecedent of the CRC in (3), for example, is the specific fact that John dropped all the milk.

At least for English, CRCs are syntactically commonly subsumed under ARCs (cf. ARNOLD 2007), differing from “headed” ARCs only in that they are adjoined at some sentential projection (or analogous structures as in DE VRIES 2006). In other words, CRCs are ARCs which are sufficiently high adjoined to an XP within the host clause, and it is that XP that serves as the antecedent of the relative clause (in (4b), for instance, XP = CP):

- (4) a. [<sub>DP</sub> [<sub>DP</sub> *John*] *who surprised everyone*] *went out the door.*  
 b. [<sub>CP</sub> [<sub>CP</sub> *John slept*] [*which surprised everyone*]].

This view is expressed e.g. in ARNOLD – BORSLEY (2008, 329): “[Non-restrictive relative clauses] normally form a syntactic constituent with their heads, which can be of essentially any category.”<sup>1</sup>

The view that CRCs in English are basically ARCs *modulo* adjunction site seems to be established wisdom, but there is no consensus with respect to the degree of syntactic integration of ARCs. We can roughly distinguish the following three major approaches to their syntax, where only the first one corresponds to the view from above that headed ARCs adjoin to the DP. ARCs are

- I. syntactically integrated – adjuncts of DP (JACKENDOFF 1977, among others).
- II. adjoined at the sentence level (non-radical orphanage; ROSS 1969, among others).
- III. not part of the host clause at all (radical orphanage; FABB 1990, among others).

Needless to say, the last two approaches need to make provisos to account for the fact that ARCs are linearly adjacent to the DP they are associated with, i.e. for these cases there needs to be some process of interpolating them clause-medially. The discussion regarding the right syntactic treatment (embedded in a larger debate on semantic and pragmatic issues) has recently come to the fore mainly due to the work by POTTS (2005) and SCHLENKER (2007).

For German, there is reason to believe that CRCs and ARCs must be distinguished syntactically in more respects than their adjunction site. For instance, HOLLER (2005, 2007) identifies numerous asymmetries between these two types of relative clauses and argues that a syntactic integration approach is not right for German CRCs. In addition to the distinction between ARCs and CRCs, she descriptively distinguishes two subtypes of CRCs, namely headed CRCs like in (5a) and non-headed ones like in (5b). Headed CRCs feature an antecedent DP and are semantically characterized as continuing the event of the host clause, which is usually indicated by adverbs like *schließlich* ‘finally’.

- (5) a. *Emma suchte Katzen, die sie schließlich auch fand.*  
Emma sought cats D she finally also found  
‘Emma sought cats, which she found finally.’
- b. *Emma suchte Katzen, was ungewöhnlich war.*  
Emma sought cats WH unusual was  
‘Emma sought cats, which was unusual.’

<sup>1</sup> Notice that the quote takes for granted that the CRC antecedent needs to be a syntactic unit. HOLLER (2005) argues against this.

There are certain differences between these kinds of relative clauses: German non-headed CRCs obligatorily feature WH-relative pronouns, unlike headed ones, which may display a WH- or a D-relative pronoun. Moreover, CRCs do not exhibit Principle C effects, unlike what has been claimed is the case for ARCs, an issue we will return to below. While a differentiation among non-restrictive relative clauses might be empirically necessary, a unified treatment is to be preferred on principled theoretical grounds. We propose to analyze German CRCs as subcases of ARCs by making use of non-constituent ellipsis. We suggest that the orphan-properties of German CRCs stem from the fact that they are syntactically integrated in a separate main clause (which itself is not embedded in the host clause).

Furthermore, we would like to make two provisos: First, we will confine ourselves to an analysis of German ARCs/CRCs; their counterparts in other languages might very well require a different approach. Secondly, we wish to point out that this paper does not provide a discussion of whether or not an orphanage approach is superior to an integrated approach *per se*.

## 2.2 Griffiths & de Vries (2013)

This section brings to bear a recent argument for an integration analysis and against an orphanage analysis of ARCs that comes from ellipsis phenomena, and in particular from fragment answers. We touch on that approach already at this point to lay the ground for our discussion in section 4, where we will show that our analysis is relevant for the integration vs. orphanage debate and might call into question the conclusions the authors draw from their observations.

Based on previous observations and arguments by ARNOLD – BORSLEY (2008), GRIFFITHS – DE VRIES (2013) use dialog facts like (6) to show that ARCs are syntactically integrated into their host clause, i.e. instantiate an analysis of the type I above:

- (6) a. A: *What did John steal?*  
 b. B: *Mary's computer, which crashes all the time.*  
 c. B': *Mary's computer, which got him arrested.*

GRIFFITHS – DE VRIES' (2013, henceforth G&V) argument rests on the premises that ellipsis i) involves syntactic structure and PF-deletion (cf. ROSS 1969, MERCHANT 2001, 2004, *inter alia*) and ii) targets constituents only. Using a simpler example than (6) above, G&V assume that B's fragmental response in (7b) receives an analysis like in (7c), where the object DP undergoes focus movement to SPEC-CP, followed by ellipsis of C-bar, a phonological deletion process that targets given material, which is recoverable from the context.

- (7) a. A: *John stole something.*  
 b. B: *Yes, Mary's computer.*  
 c. *Yes, [CP [DP Mary's computer]<sub>i</sub> [C° [TP John stole t<sub>i</sub>]]].*

Let us return to (6). In the fragment response by B in (6b), the object DP is pronounced and the subsequent ARC associates with it. In B's response in (6c), the object DP is likewise part of the fragment answer, but this time it is followed by a CRC.

The acceptability changes once an ARC relates to an elided constituent:

- (8) a. A: *Who stole Mary's computer?*  
 b. B: *#John, which crashes all the time.*  
 c. B': *John, which got him arrested.*

B's response in (8b) is infelicitous. It involves a spelled-out subject DP, while the object DP is elided along with other material. The ARC wrongly associates with the subject DP. G&V claim that the deviance of B's reply in (8b) supports an integration approach of ARCs and is problematic for an orphan approach: Assuming that ellipsis involves underlying syntactic structure and that ellipsis targets constituents only, an integration approach would,<sup>2</sup> if anything, only provide an analysis like in (9) and, therefore, predict that the ARC is inevitably elided along with the associated head:

- (9) [<sub>CP</sub> [<sub>DP</sub> John]<sub>i</sub> C<sup>o</sup> [<sub>TP</sub> t<sub>i</sub> stole [<sub>DP</sub> Mary's computer [*which crashes all the time*]]]]].

An integration approach thus cannot generate (8b) – as desired. An orphan approach, by contrast, predicts that the ARC is structurally disintegrated from the host clause, and thus the elision of material of the host clause is independent of the presence of an ARC. This is sketched in (10).

- (10) [<sub>CP</sub> [<sub>DP</sub> John]<sub>i</sub> C<sup>o</sup> [<sub>TP</sub> t<sub>i</sub> stole [<sub>DP</sub> Mary's computer]]] [*which crashes all the time*].

An orphan approach is thus insufficiently restrictive to exclude (8b) – or so G&V claim.

In this paper, we address some issues with G&V's line of argumentation and refer the reader to OTT (2016) for independent points of criticism. We return to the relevance of ellipsis for the proper analysis of ARCs/CRCs in section 4, after laying out our own proposal.

2 As a reviewer remarks, this situation does not actually arise, as the ARC is not recoverable from the context. We use (9) for the purposes of illustration.

### 3. An analytical option

#### 3.1 Background and analysis

For our analysis of CRCs, we follow a line of research that treats appositions as elliptical sentences (OTT – ONEA 2015). The guiding intuition here is that a sentence like in (11a) may be paraphrased as the two-sentence discourse in (11b). More specifically, OTT – ONEA (2015) analyze a sentence containing a nominal apposition (here *an old friend* in (11a)) as an underlyingly bisentential structure like in (11b) that consists of two main clause CPs: the host clause CP<sub>1</sub> followed by a CP<sub>2</sub> that contains the apposition:

- (11) a. *I met John Smith, an old friend, at the pub today.*  
 b. [<sub>CP1</sub> *I met John Smith at the pub today*][<sub>CP2</sub> *John Smith is an old friend*].

To account for the surface and linearization facts, the crossed-out part of CP<sub>2</sub> in (11b) undergoes ellipsis. Here and in the following, this PF-deletion is marked by ~~strike through~~. CP<sub>2</sub> then gets linearly interpolated in the host clause, a process that, according to the authors, is governed by extra-syntactic discourse principles. Assuming that such a “bisentential ellipsis analysis” is feasible for nominal appositions, we propose to extend it to clausal appositions – including (some) non-restrictive relative clauses – as well.

Regarding CRCs, we propose that their overall structure likewise comprises two main clause CPs. More specifically, we suggest that a sentence containing a CRC like in (12a) may be paraphrased as the two-sentence discourse in (12b), where the host clause CP<sub>1</sub> has been juxtaposed by a cleft-like CP<sub>2</sub> *Das ist es ...* (‘it is that...’):

- (12) a. *Max spielt gerade Orgel, was Maria freut.*  
 Max plays just-now organ WH Mary pleases  
 ‘Max is playing the organ, which pleases Mary.’  
 b. [<sub>CP1</sub> *Max spielt gerade Orgel*][<sub>CP2</sub> [<sub>DP</sub> ~~Das~~] *ist es* [<sub>was</sub> *Maria t<sub>was</sub> freut*]].  
 Max plays just-now organ that is it WH Mary pleases  
 ‘Max is playing the organ, which pleases Mary.’

While CP<sub>1</sub> is fully pronounced, CP<sub>2</sub> undergoes ellipsis except for the relative clause. This assumption is sufficient to account for the basic linearization facts in (12a).

The underlying structure of a CRC thus looks like in (13):

- (13) [<sub>CP2</sub> [<sub>DP</sub> *das*] *ist es* ARC]

CP<sub>2</sub> is a fixed cleft-like structure that contains a D-pronominal DP and an ARC. The D-pronoun (for instance, *das* in (13)) functions as what we call an anaphoric anchor.

It is this anchor – not the relative pronoun – that discourse-anaphorically refers back to some (abstract) semantic entity in  $CP_1$ . CRCs thus have no special properties: They emerge as syntactically subordinate ARCs instead of exceptionally having root and subordinate properties simultaneously. Note, however, that, underlyingly, the CRC is not part of the host clause  $CP_1$ . Hence, CRCs are effectively radical orphans according to the definition of type III-analysis in the previous section.

In the following, we will bring to bear benefits of this approach by highlighting parallels between CRCs and cleft-like constructions.<sup>3</sup>

### 3.2 Some consequences of the analysis

As (14) demonstrates, non-headed CRCs cannot be introduced by means of a  $D$ -pronoun:

- (14) *Max spielt gerade Orgel, was/\*das Maria freut.*  
Max plays just-now organ  $WH/D$  Mary pleases  
'Max is playing the organ, which pleases Mary.'

According to our analysis, (14) needs to be analyzed as in (15):

- (15) *Max spielt gerade Orgel. Das ist es, was/\*das Maria freut.*  
Max plays just-now organ that is it  $WH/D$  Mary pleases  
'Max is playing the organ. That is what pleases Mary.'

The impossibility of the  $D$ -pronoun in (14) simply reduces to the parallel pattern in fully pronounced cleft-like clauses (where there is no nominal antecedent in the first clause), as in (15). Hence, the choice of the relative pronoun can be accounted for under the present perspective.

It has been repeatedly observed that ARCs – including CRCs – display certain root clause properties. In the following, we briefly discuss two types of these properties: illocutionary force and the occurrence of certain discourse particles. As (16) shows,

<sup>3</sup> While we do concede that there are limitations to the reformulability of one in terms of the other, we disagree with the sharpness and the degree of grammaticality of some of the examples that were provided by an anonymous reviewer – and some examples were plainly not pertinent. Some putative counterexamples involve a full  $DP$ -anchor as the head of the cleft-like clause. Thus we would like to reiterate and emphasize that the cleft-like clause involves a fixed expression with a  $D$ -pronominal head, never a full  $DP$ .

The mentioned limitations involve the choice of 'why'-words in German, which are more readily available in cleft-like clauses than in CRCs:

- (i) *Maria singt wie ein Engel. Das ist es, weswegen/wieso/warum ich weinen muss.*  
Mary sings like an angel that is it  $WESWEGEN/WIESO/WARUM$  I cry must  
'Mary sings like an angel, for which reason I must cry.'
- (ii) *Maria singt wie ein Engel, weswegen/\*wieso/\*warum ich weinen muss.*



CRCs (as well as ARCs) are independent with respect to their illocutionary force (BRANDT 1990, 9; HOLLER 2007, 255)

- (16) *Ist Fritz jetzt eigentlich mit Maria verheiratet, was er ja schon immer wollte?*  
 is Fritz now actually with Mary married WH he PTCL already always wanted  
 ‘Is Fritz now actually married to Mary (which he had always wanted after all)?’

The CRC in (16) is asserted and, hence, cannot be in the scope of the question operator. Under the current perspective, this is expected, since, in the underlying structure, the CRC is not part of the host clause CP<sub>1</sub>, which has the force of a question, but is part of CP<sub>2</sub>, which has assertoric force (witnessed e.g. by verb-second), as in (17).

- (17) [<sub>CP<sub>2</sub></sub> *Das ist es, was er ja schon immer wollte*].  
 that is it WH he PTCL yet always wanted  
 ‘That is what he always wanted.’

Analogous reasoning applies in the case of certain types of sentence adverbs and particles (like *übrigens* ‘by the way’ in (18)), which are usually assumed to be restricted to occur in root contexts (modified example from HOLLER 2007):

- (18) *Die Jury hat dem Maler Müller einen Preis verliehen, was übrigens alle gewundert hat.*  
 the jury has the painter Müller a prize granted WH by-the-way all puzzled has  
 ‘The jury granted painter Müller a prize, which puzzled everyone by the way.’

Given the analysis, the occurrence of such particles in CRCs, again, is not too surprising since these particles are contained in a separate main clause CP<sub>2</sub>, and this CP<sub>2</sub>, certainly qualifies as a root clause.

Incidentally, HOLLER (2007) noticed that there are also free-standing occurrences of CRCs, as in (19).

- (19) *Bringst du Vater nach Hause? Wofür ich dankbar wäre.*  
 bring you father to home what-for I grateful would-be  
 ‘Would you bring father home? I’d be grateful for that.’

(19) is also straightforwardly explained by means of the present analysis: It is the (elliptical) main clause CP<sub>2</sub> that embeds the CRC and introduces the new sentence. As before, the main clause that (we claim) underlies the CRC in (19) is independently available, see (20).

- (20) *Bringst du Vater nach Hause?* [<sub>CP<sub>2</sub></sub> *Das ist es, wofür ich dankbar wäre*].  
bring you father to home that is it what-for I thankful would-be  
'Would you bring father home? I'd be grateful for that.'

To summarize: It is the underlying CP<sub>2</sub> (not just the CRC) that forms a root clause. Being verb-final, CRCs are formally dependent sentence types. In the current approach, this, too, is captured naturally, since they are subordinated to CP<sub>2</sub>. Hence, one is not forced to stipulate that CRCs (exceptionally) display root and subordinate properties simultaneously. Rather, those properties simply stem from distinct structural sources.

### 3.2.1 Principle C

HOLLER (2005) argues that CRCs do not show Principle C effects, as in (21a), whereas ARCs do show them, as in (21b).

- (21) a. *Er<sub>i</sub> mag diese Krawatte, was Emil<sub>i</sub> nicht davon abhält, sie wegzuschmeißen.*  
he likes this tie WH Emil not thereof prevents her to-dump  
'He likes this tie, which does not keep Emil from dumping it.'
- b. \**Er<sub>i</sub> mag diese Krawatte, die übrigens Emil<sub>i</sub> gehört.*  
he likes this tie D by-the-way Emil belongs-to  
'He likes this tie, which belongs to Emil, by the way.'

Let us first tackle (21a), which is analyzed as in (22):

- (22) [<sub>CP<sub>1</sub></sub> *Er<sub>i</sub> mag diese Krawatte*] [<sub>CP<sub>2</sub></sub> *Das ist es, was Emil<sub>i</sub> nicht davon abhält sie wegzuschmeißen*].  
he likes this tie that is it WH Emil not thereof prevents her to-dump,  
'He likes this tie, which does not keep Emil from dumping it.'

Recall that the standard Binding Theory imposes restrictions on intra-sentential binding, not on inter-sentential binding. In (22), the CRC (including the proper name *Emil*) is embedded in a sentence, namely CP<sub>2</sub>, which simply does not contain a binder, i.e. a coindexed antecedent c-commanding the R-expression. This automatically obviates Principle C. Hence, the current analysis effectively derives the absence of Principle C effects in CRCs in line with other orphan analyses.

Let us now turn to cases like (21b). First note that the judgments with respect to Principle C in ARCs are not unanimously shared. For instance, HAIDER (1993, 175) gives (23), contrasting with (21b).

- (23) *Man hat ihr<sub>i</sub> das Haus, das Maria<sub>j</sub> ja bekanntlich geerbt hat, nicht gegönnt.*  
one has her the house D Mary PTCL as-is-known inherited has not begrudged  
'People didn't begrudge her the house, which Mary has inherited, after all.'

Be that as it may, the current perspective provides an opportunity of reconciliation: If the contrast with respect to the appositives and Principle C exists, the current analysis can account for it in terms of a straightforward structural ambiguity:

- (24) a. [[<sub>CP<sub>1</sub></sub> *Man hat ihr<sub>i</sub> das Haus nicht gegönnt*][<sub>CP<sub>2</sub></sub> *Das ist es, das Maria<sub>j</sub> ja bekanntlich geerbt hat*]].  
one has her the house not begrudged that is it D Mary PTCL as-is-known inherited has  
'People didn't begrudge her the house, which Mary has inherited, after all.'
- b. *Er<sub>i</sub> mag* [<sub>DP</sub> [<sub>DP</sub> *diese Krawatte*][*die übrigens Emil<sub>i</sub> gehört*]].  
he likes this tie D by-the-way Emil belongs-to  
'He likes this tie, which belongs to Emil, by the way.'

Cases of obviation involve radical orphanage, i.e. the ARC is embedded in a separate main clause CP<sub>2</sub>, as in (24a). Cases of principle C violation involve an ARC adjoined to the DP "head" like in the "classical" ARC-analyses, as in (24b).

### 3.2.2 Three more phenomena

Let us add three more types of phenomena that need to be captured by any analysis of CRCs, namely their special distribution, sloppy readings and multiple anchors of CRCs. We will show that our analysis is indeed able to derive these phenomena, thus lending more empirical credence to our analysis.

First, HOLLER (2007) argues that there is a condition according to which (even headed) CRCs (in contrast to ARCs) are confined to the rightmost periphery of the host clause.<sup>4</sup> She gives the example in (25a):

- (25) a. #*Otto gab gestern Abend das Buch, das sie dann in die Bibliothek brachte, seiner besten Mitarbeiterin.*  
Otto gave yesterday evening the book D she then into the library brought his best co-worker  
'Yesterday evening, Otto gave the book to his best co-worker, which she then brought to the library.'

4 We assume that apparent counterexamples like in (iii) involve parenthesis (note the parenthetical intonation), for which the rightmost condition does not hold:

(iii) *Paula kam - was mich wirklich überrascht hat - zu spät.*  
Paula came WH me really surprised has too late  
'Paula was late, which really surprised me.'

- b. *Otto gab gestern Abend das Buch seiner besten Mitarbeiterin, das sie dann in die Bibliothek brachte.*  
Otto gave yesterday evening the book his best co-worker  $\text{D}$  she then into the library brought  
'Yesterday evening, Otto gave the book to his best co-worker, which she then brought to the library.'
- c. [<sub>CP<sub>1</sub></sub> *Otto gab gestern Abend das Buch seiner besten Mitarbeiterin.*][<sub>CP<sub>2</sub></sub> *Das ist es, das sie dann in die Bibliothek brachte.*]  
Otto gave yesterday evening the book his best co-worker that is it  $\text{D}$  she then into the library brought  
'Yesterday evening, Otto gave the book to his best co-worker, which she then brought to the library.'

In (25a), the headed CRC is not located in the rightmost periphery, thus violating HOLLER's rightmost condition. As a result, (25a) is slightly deviant. Without additional stipulations, our analysis is only able to derive the grammatical rightmost-variant of (25a), namely (25b). Our analysis of (25b), which is given in (25c), generates the CRC as part of CP<sub>2</sub> and hence predicts that – assuming the simplest syntax-phonology mapping possible, namely that successively generated sentences are (usually) pronounced in the order of their generation – the CRC completely follows the host clause CP<sub>1</sub>.

Second, HOLLER (2007, 257) observes that CRCs allow for sloppy readings:

- (26) *Hans will sich ein neues Auto kaufen, was Max auch will.*  
Hans wants REFL a new car buy WH Max also wants  
'John wants to buy a new car, which is also what Max wants.'

The understood reflexive *sich* within the CRC gets bound by *Max*, and not by *Hans*. (The latter would be the strict reading.) This parallels the situation in the paraphrase that, we assume, underlies (26):

- (27) *Hans will sich ein neues Auto kaufen. Das ist es, was Max auch will.*  
Hans wants REFL a new car buy that is it WH Max also wants  
'John wants to buy a new car, which is also what Max wants.'

Our paraphrase preserves the availability of sloppy readings.

Third, BRANDT (1990) observes that a CRC may pick up multiple anchors that are contained in a sequence of *independent* host clauses, as in (28) with its English translation below.

(28) *In den Jahren vor 1789 türmten sich die Probleme in Frankreich. Die keimende Manufakturindustrie wurde von einer Depression heimgesucht, und für die wachsende Bevölkerung gab es nicht genügend Arbeit, die Staatsschuld war zu unfassbaren Beträgen angewachsen [...], und die Getreideernte schlug mehrere Jahre hintereinander fehl, was alles zu einer äußerst brisanten Situation im Lande beitrug.*

‘In the years before 1789 problems in France mounted. The germinating manufacture industry was plagued by a depression and for the growing population there was not enough labor, the national debt had grown up to inconceivable amounts [...], and the grain harvest failed for a couple of consecutive years, all of which contributed to an utterly explosive situation in the country.’

Intuitively, the CRC in (28) is able to anaphorically pick up a whole range (or, slightly more technically speaking, an entire mereological sum) of reasons for the described problematic situation in France (industrial depression + unemployment + debt + famine).

(29) [<sub>CP<sub>2</sub></sub> *Das ist es, was alles zu einer äußerst brisanten Situation im Lande beitrug*].  
 that is it WH all to a utterly explosive situation in-the country contributed  
 ‘That is what contributed to an utterly explosive situation in the country.’

As (29) shows, a fully pronounced reformulation along the lines of our analysis is available. Hence, the current analysis effectively derives the reference of CRCs to multiple anchors in independent host clauses in line with other orphan analyses. Note that an analysis of (28) along the lines of (4b) is not readily available if one assumes that the relative clause needs to adjoin to the syntactic XP that serves as the antecedent of the relative clause, since there simply is no XP within the host clause that could plausibly function as the antecedent of the relative clause.

## 4. Applying the analysis

Having described our current account of German CRCs in the previous section, we would like to briefly highlight its potential to undermine an argument that has been advanced in favor of the syntactic integration of ARCs into their *bona fide* host clause (type I-analysis in section 2). Recall G&V’s argumentation from section 2.2: Ellipsis phenomena involve underlying syntactic structure and PF-deletion, the latter of which applies to constituents only. If ARCs were orphans, they should survive ellipsis of *any* material in the host clause. Given that, factually, the antecedent of an

ARC needs to be pronounced and cannot undergo ellipsis, it seems that an orphan approach is problematic and an integration approach is to be preferred.

Examples of the relevant sort are replicable in German:

- (30) a. A: *Wer hat Marias Auto geklaut?*  
who has Mary's car stolen  
'Who stole Mary's car?'
- b. B: #*Peter, das nie anspringt.*  
Peter, D never starts-up
- c. B': *Peter, wodurch er in den Knast gekommen ist.*  
Peter, whereby he in the jail come is  
'Peter, which got him incarcerated.'
- d. B'': *Peter, was niemand erwartet hätte.*  
Peter, WH noone expected would-have  
'Peter, which noone expected.'

Remember that our approach is an orphan approach, since the ARC is structurally not part of the host clause (it is merely part of a separate main clause). What does it have to say about the infelicity of (30b)? It predicts that reformulations of the relevant discourse with a cleft-like sentence have the same grammaticality status as the corresponding ARCs. In other words, we predict that (30b) is just as bad as what we suggest is its underlying source, namely (31b):

- (31) a. A: *Wer hat Marias Auto geklaut?*  
who has Mary's car stolen  
'Who stole Mary's car?'
- b. B: #*Peter. Das ist es, das nie anspringt.*  
Peter that is it D never starts-up
- (32) a. Peter [*Das ist es, das nie anspringt*].
- b. Peter<sub>i</sub> [*hat t<sub>i</sub> Marias Auto geklaut*]. [*Das ist es, das nie anspringt*].

The discourse in (31b) is strikingly deviant, just as the current approach predicts. (32a) illustrates a partial and (32b) a fuller exposition of the current treatment of (30b).

A tentative conclusion to draw from these observations is that facts from ellipsis do not unequivocally provide an argument for an integration approach but are equally compatible with a variant of a radical orphan approach such as the one proposed here. This concludes our counterargument.

## 5. Conclusion and further issues

Let us wrap up the proposal in this paper: We have outlined a novel analysis of German CRCs, which treats them structurally as ARCs within a separate main clause CP<sub>2</sub> that in turn undergoes ellipsis – a process of which the ARC/CRC itself is spared. Our proposal accounts for numerous asymmetries between German CRCs and ARCs, such as the choice of relative pronouns, a potential complication with Principle C effects, and it captures a number of other properties any treatment of CRCs has to cope with. We have argued that the approach is restrictive enough to exclude phenomena in which ARCs take a phonologically elided antecedent.

There are, however, questions the account raises. One concerns limits in the reformulability of CRCs in terms of corresponding cleft-like sentences. An example like (33a) is not easily paraphrased as the fully pronounced clause (33b):

- (33) a. *Maria hat nur dreimal neu anfangen müssen, was nicht so oft ist.*  
Mary had only three-times newly start must which not so often is  
'Mary had to start over only three times, which is not much.'
- b. *Maria hat nur dreimal neu anfangen müssen. \*?Das ist es, was nicht so oft ist.*

Here the antecedent is arguably the VP [*nur dreimal neu anfangen*] 'start over only three times' and the cleft-like reformulation (33b) sounds unnatural. The problem seems to have to do with the cleft-like sentence. Thus, it is fine to have a copular clause like (34):

- (34) *Speaking of the times Mary had to start over again... Nur dreimal neu anfangen ist nicht so oft.*  
only three times newly start is not so often  
'To start over only three times is not that often.'

To the extent that a contrast with respect to the judgments exists, it is at present unclear how to capture it within the proposed analysis, and it must be left as a challenge.

Another potential problem comes from head-internal relatives, i.e. instances in which a nominal head is part of the phrase of the relative pronoun:

- (35) *Gestern fing die Heizung an zu lecken, welchen Fall der Klempner schon*  
yesterday began the heater PTCL to leak, which case the plumber already  
*vorhergesehen hatte.*  
foreseen had  
'Yesterday the heater began to leak, which case the plumber had already foreseen.'

These head-internal relatives have somewhat of an archaic flavor and are available for ARCs and CRCs alike. Moreover, in German they occur only with WH-elements, never with D-elements. What is clear is that (35) cannot be rephrased as *Das ist es, welchen Fall...* At this point, we are not sure how to treat (35). Does the fact that (35) is fine pose a problem for our analysis of CRCs or is it a problem for ARCs more generally? We believe both of the above-mentioned problems are related to the cleft-like nature of CP<sub>2</sub>, which must not be pronounced. This, in turn, suggests that a single solution might be able to kill two birds with one stone.<sup>5</sup>

Concluding, we have suggested a syntactic analysis of ARCs which synthesizes, as it were, headed ARCs and CRCs. We hope that this approach contributes a fresh perspective to the overall discussion concerning orphanage and integration.

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5 Examples where the syntax appears to generate ungrammatical structures which subsequently are subject to PF-deletion and thereby turn grammatical are not unheard of if we think of so-called “island repair by ellipsis” phenomena. Of course, this description presupposes a specific analysis; the matter by far exceeds the limits of this paper.



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