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Parentheticals, root phenomena, and V2 in German[[1]](#footnote-1)\*

Hubert Truckenbrodt and Frank Sode

**Abstract**

The parentheticals that Ross (1973) analyzed in English in terms of *slifting* have the finite verb in C in German (V1-parentheticals). In English and German, they require a host clause that is a root clause. We review and extend the evidence for this here, in a comparison with German *wie*-parentheticals (and the corresponding English *as*-parentheticals). We then develop an analysis of this restriction.

In the analysis of Sode and Truckenbrodt (2018), which we extend here, root clauses are characterized by a silent attitudinal Force-head (building on the analysis of root-clauses by Haegeman 2003, 2004a,b). These Force-heads play a central role in the analysis of verbal mood and of V-to-C movement. The current extension formalizes the distinction between root-clauses that have V-to-C movement (V2 or V1) and V-final root clauses. We embed our analysis of the two parentheticals in this extended analysis. Core elements of the analysis are as follows.

(a) The Force-head of a V2/V1 clause gets the value for its attitudinal anchor and for its features through grammatical interactions. These include V-to-C movement. In V1-parentheticals, they also include the attraction of an attitudinal operator to Spec,ForceP. This operator requires a host clause that is a root clause. (b) The Force-head of V-final root clauses are pronominal and get their attitudinal values from (not necessarily local) antecedents, not by grammatical interactions. Therefore they do not attract V-to-C movement. In *wie*-parentheticals, there is furthermore no reason for attracting the attitudinal operator that requires a root clause host.

**Terminology and overview**

We refer to *as Mary said* with the established name *as*-parentheticals and we refer to a parenthetical of the form *Mary said* (e.g. *It's raining, Mary said*) with the non-established name *bare parenthetical*, since we are not aware of a different name for this specific kind of parenthetical. We discuss these side by side with German examples. In German, *as*-parentheticals are introduced by *wie* instead of *as* (e.g. *wie Mary sagte* 'as Mary said') and bare parentheticals, as in English, lack a complementizer. In German, they are also called *V1-parentheticals* since they have the finite verb in C in V1 word-order (e.g. *sagte Mary*, 'Mary said').

This paper first reviews and extends a comparison of bare parentheticals with *as*-parentheticals. The distinction of particular interest here is that the host clause of bare parentheticals must be a root clause (Hooper and Thompson 1973, Steinbach 2007), which is not the case with *as*-parentheticals (Potts 2002). We develop an account of this distinction that builds on the analysis of root clauses in Haegeman (2003, 2004a,b) and our development of this in Sode and Truckenbrodt (2018). In the account, there is a connection between the form of the two parenthetical (with vs. without movement of the finite verb to C) and their different host clause requirements. Like the account of Sode and Truckenbrodt (2018), the current extensions are programmatic in nature.

In section 1, we review basics of the analysis of bare parentheticals and *as*-parentheticals and their German counterparts, including the different host clause requirements. In section 2, we discuss restrictions on the parenthetical predicates and show how they are related to restrictions on embedded V2. In section 3, we extend the account of Sode and Truckenbrodt (2018) to the distinction between V-final root clauses and V2 root clauses. Section 4 analyzes the two parentheticals in this extended account. Section 5 sums up the central elements of the account.

**1. The hosts of bare parentheticals in comparison with *as*-parentheticals**

This section reviews central elements of the analysis of bare parentheticals and *as*-parentheticals and their German counterparts.

**1.1 Core elements of Potts' analysis of *as*-parentheticals**

We begin by introducing central elements of the analysis of *as*-parentheticals of Potts (2002). They will serve as a point of comparison for the analysis of bare parentheticals below.

Strengthening a point made earlier by Ross (1967):6.1.1.4, Potts (2002) argues in detail for movement of an empty operator in *as*-parentheticals. (1) shows a long-distance dependency. (2) illustrates the sensitivity to a relative-clause island, and (3) shows the sensitivity to an adjunct island.

(1) a. "... even though people were crabby and snappish ... she DID, mostly, love them as she knew she ought to" (Jane Smiley, *Moo*, p. 26)

b. as Op1 she knew she ought to t1

(2) \* Durians are delicious, exactly as Op1 Nina spoke with [a grocer who claimed t1]

(3) \* Jim Durrow is a blackjack ace, just as Op1 they smiled politely [when he reported t1].

Potts suggests that this movement is semantically interpreted by lambda-abstraction. Thus, the syntactic structure in (4a) is assigned the meaning in (4b).

(4) a. as Ø**1** Mary claims t1

b. p claim(m, p) (here m is Mary)

Potts (2002) argued that *as*-parentheticals are syntactically regular adjuncts that have untypical semantics. What we are used to is that an element in a certain position of the syntactic structure is in the semantic scope of higher elements and that it itself has semantic scope over its syntactic sister. In Potts' analysis, *as*-parentheticals share that they scope over their syntactic sister but they are different insofar their meaning is not in the scope of higher elements. This is elaborated in the following, with the help of the example in (5).

(5) a. It is not true that Ames stole the documents, *as Mary claims*.

b. *As*-parenthetical: Mary claims that Ames stole the documents.

The *as*-parenthetical scopes over its syntactic sister, underlined in (5a). This is informally so because the *as*-parenthetical receives the meaning in (5b), where its underlined sister from (5a) is now in the scope of the parenthetical verb. More formally, the "p" in (4b) applies to the meaning of the syntactic sister of the parenthetical (the underlined clause in (5a)), and converts it into the scope of the parenthetical verb, deriving (5b). The underlined element is thus interpreted twice, once as part of the main clause and in addition as part of the parenthetical.

The *as*-clause is not in the semantic scope of higher elements insofar the meaning it adds, (5b), is not added in the scope of the negated main clause in (5a). It is, more generally, not added as an extension of the meaning of the main clause but as separate information attributed to the speaker. In (5), the parenthetical allows the speaker to add the information that Mary claims that Ames stole the documents. The meaning of the main clause remains untouched by the parenthetical.

(6) schematically shows the meaning contribution of the *as*-parenthetical in (5). The meaning of its syntactic sister, underlined in (5), remains unchanged (p<s,t> p), and the meaning of the *as*-parenthetical is added as a separate conventional implicature that combines the words of the parenthetical (claim(m, ...)) with the meaning p of its syntactic sister (claim(m,p)).

(6) ⟦as Mary claims⟧ = p<s,t> p,

conventionally implicating: claim(m, p)

In the remainder of section 1, we develop a first understanding of some similarities and differences between bare parentheticals and *as*-parentheticals in several steps.

**1.2 Syntactic movement in bare parentheticals**

Ross (1973) argued for parenthetical-internal movement in bare parentheticals. We illustrate this with his examples in (7) – (9), to which we add empty operators and their traces. (7) shows a long-distance dependency, (8) a violation of the Complex NP Constraint and (9) a violation of the Coordinate Structure Constraint (with reference to the well-known constraints from Ross 1967).

(7) Max has a tuba, Op1 I believe that Pete pointed out t1 .

(8) \* Max has a tuba, Op1 I believe [your claim that Pete pointed out t1 ].

(9) \* Max has a tuba, Op1 Ted [is reading a book] and [will find out t1 ].

Thus both kinds of parentheticals involve parenthetical-internal movement.

**1.3 No clause-internal scope for bare parentheticals**

In this section, we show that *as*-parentheticals, but not bare parentheticals, can take clause-internal scope.

Consider the example in (10) from Potts (2002). It has two readings, depending on the scope of the *as*-parenthetical relative to the negation. In the reading in (10b/b') the *as*-clause crucially scopes below negation: The senators claimed he stole the documents. The negation is not included in what the senators claimed, because the scope of the *as*-parenthetical is below the negation, as shown in (10b). The *as*-parenthetical may also scope above negation as in (10c). Here the negation is part of what the senators claimed, as shown in (10c').

(10) a. Ames did not steal the documents, *as the senators claimed*.

b. Ames1 did not [[t1 steal the documents], as the senators claimed].

b'. → the senators claimed he stole the documents

c. [Ames1 did not t1 steal the documents], as the senators claimed.

c'. → the senators claimed Ames did not steal the documents

Pittner (1995) has observed clause-internal scope with German *as*-parentheticals. (11a) allows the salient reading (11c), which is a clause-internal scope reading: Only the material below the clause-internal negation is here in the scope of the parenthetical. This reading is not available to (11b), where the parenthetical is above the negation. (11b) only has the reading in (11d).[[2]](#footnote-2)

(11) a. Kohl wird nicht, *wie die Opposition vorschlug*, die Steuern erhöhen.

Kohl will not as the opposition suggested the taxes raise

'Kohl will not, as the opposition suggested, raise taxes.'

b. Kohl wird, *wie die Opposition vorschlug*, nicht die Steuern erhöhen.

Kohl will as the opposition suggested, not the taxes raise

'Kohl will, as the opposition suggested, not raise taxes.'

c. The opposition suggested to raise the taxes.

d. The opposition suggested not to raise the taxes.

Pittner mentions that no evidence for (clause-internal) scope-taking of this kind can be found for bare parentheticals. We illustrate this with (12) in English and with (13) in German.

(12) Ames did not steal the documents, *the senators claimed*.

-> the senators claimed that Ames did not steal the documents

not a possible reading: they claimed that Ames stole the documents

(13) a. Kohl wird nicht, *sagte die Opposition*, die Steuern erhöhen.

Kohl will not said the opposition the taxes raise.

'Kohl will not, the opposition said, raise taxes.'

b. Kohl wird, s*agte die Opposition*, nicht die Steuern erhöhen.

Kohl will said the opposition not the taxes raise.

'Kohl will, the opposition said, not raise taxes.'

both: -> The opposition said that Kohl will not raise the taxes.

not a possible reading of either: The opposition said that Kohl will raise the taxes.

Ross (1973) formulated a rule of *slifting* (short for *sentence lifting*) that derives a bare parenthetical and its host clause from a matrix clause and an object clause. The idea of the rule is sketched in (14).

(14) *Slifting*

a. The senators claimed [that Ames did not steal the documents]. ->

b. [Ames did not steal the documents,] the senators claimed.

A condition on *slifting* was that the constituent that is turned into the host clause is a finite *that*-clause before *slifting*. (*Slifting* also includes the deletion of the complementizer *that*.) This restriction captures the limitation of bare parentheticals to CP-scope that we saw in this section.

**1.4 Bare parentheticals as root phenomena**

Bare parentheticals are not only restricted to scope over their host clause. Only certain host clauses will do. This is discussed in the current section and in the following section.

Hooper and Thompson (1973) discussed a range of English root transformations – transformations that may occur only in what they classify as asserted clauses in a wider sense. The clauses in which these transformations may occur have later come to be called *root clauses*; see Heycock (2006) for more recent review and discussion. One of the root transformations of Hooper and Thompson (1973) is *complement preposing*, which is, in its essence, the *slifting* transformation of Ross (1973) that derives bare parentheticals from main clauses. Steinbach (2007) makes a related observation for German V1-parentheticals: They are root phenomena. Their host clause must be a root clause. This is the formulation we will employ in the following.

We turn to some examples. Hooper and Thompson (1973) distinguish restrictive relative clauses (not root clauses) from non-restrictive ones (root clauses). Their examples in (15) (p.489) show how the bare parenthetical is allowed only with a non-restrictive relative, i.e. a root clause, as its host.

(15) a. The captain, [who is (*I think*) our best player,] will graduate next year.

b. The boy [that is (\**I think*) our best player] will graduate next year.

(\* in a restrictive reading of the relative clause)

Hooper and Thompson similarly distinguish restrictive, presupposed, adjunct clauses (not root clauses) from non-restrictive, non-presupposed, adjunct clauses (root clauses). Bare parentheticals are allowed in the root clauses, as in (16a) but not in the restrictive adjunct clauses as in (16b) (see pp. 493ff).

(16) a. It's been raining, [because there are puddles outside] (*I am afraid*).

b. The customer stomped out [after the clerk (\**I guess*) insulted her].

Steinbach (2007) makes a similar case for German V1-paretheticals. His examples with the relative clause contrast are shown in (17). Here (17b) employs a relative clause within a quantified expression that enforces a restrictive reading.

(17) a. Hans beweist ein Theorem, [das (*glaube ich*) Martin aufgestellt hat].

Hans proves a theorem that believe I Martin put.up has

'Hans is proving a theorem that (I believe) Martin has put up.'

b. Hans beweist kein Theorem, das (\**glaube ich*) Martin aufgestellt hat.

Hans proves no theorem that believe I Martin put.up has

'Hans is proving a theorem that (I believe) Martin has put up.'

Steinbach's discussion of the German adjunct clauses employs an adjunct in the scope of negation in the main clause, which cannot be a root clause, a test employed by Hooper and Thompson (1973) for other root transformation. We show Steinbach's argument with related examples in (18).

(18) a. Hans hat die Mixtur [nicht getrunken], [weil er sie (*glaube ich*)

Hans has the mixture not drunk because he it believe I

nicht bekommen hat].

not received has

'Hans did not drink the mixture since he has not (I believe) received it.'

b. Hans hat die Mixtur nicht [getrunken, weil sie (\**glaube ich*) gut

Hans has the mixture not drunk because it believe I good

schmeckt], sondern weil sie gesund ist.

tastes but because it healthy is.

'Hans did not drink the mixture because it tastes good (I believe), but because it is healthy.

**1.5 Parentheticals in conditionals**

Conditionals allow for another striking comparison between *as*-parentheticals and bare parentheticals. By way of background, note first that a standard conditional as a whole is a single assertion. The conditional in (19a) asserts that under circumstances like the known ones but with it raining, "they" will come back early.[[3]](#footnote-3) The antecedent of the conditional is an embedded clause; its content is not asserted in any sense and it is thus not a root clause. The consequent is a declarative, and the assertion that it makes is complete only with the *if*-clause: the proposition of the consequent is asserted to hold only under the circumstances described in the *if*-clause. In that sense the antecedent has scope within the assertion. We could thus represent the assertive impact as in (19b).

(19) a. If it rains, they will come back early.

b. ASS [if it rains, they will come back early]

The flexibility of *as*-parentheticals allows them to operate on the antecedent separately, as in (20) and the corresponding German example (21):

(20) If [it rains], *as Mary said*, they will come back early.

→ Mary said that it will rain.

(21) Wenn [es regnet], *wie Maria gesagt hat*, werden sie früher zurückkommen.

→ Maria said that it will rain.

Likewise, the *as*-parenthetical can operate on the consequent separately, as in (22) and the corresponding German example (23):

(22) [Mary predicted that they will come back early.]

If it rains, [they will come back early,] *as Mary predicted*.

→ Mary predicted that they will come back early.

(23) Wenn es regnet, [werden sie früher zurückkommen], *wie Maria vorhersagte*.

→ Mary predicted that they will come back early.

A bare parenthetical does not have either of these readings:

(24) a. If it rains, *Mary said*, they will come back early.

b. If it rains, they will come back early, *Mary said*.

(25) a. Wenn es regnet, *sagte Maria*, werden sie früher zurückkommen.

b. Wenn es regnet, werden sie früher zurückkommen, *sagte Maria*.

Instead, both (24a) and (24b) (and (25a,b)) only have a reading in which the scope of the bare parenthetical is the entire conditional, i.e. the smallest asserted clause and thus the smallest root clause. This smallest root clause is bracketed in (26). The scope of the bare parenthetical is this root clause.

(26) [If it rains, they will come back early] Mary said.

Thus, conditionals provide further striking testimony to the following two points. First, Potts' analysis of *as*-parentheticals correctly captures their nature as operating on their syntactic sister and adding the parenthetical meaning in an additional dimension. Second, bare parentheticals do not share this property; instead, they obey the restriction that their host clause is a root clause.

**1.6 Bare parentheticals and perspective**

Reinhart (1983) was interested in declarative host clauses with 3rd person parenthetical subjects. She argues that two cases need to be distinguished. In the first case, the main clause is asserted by the speaker and the parenthetical provides the source of, or evidence for, the speaker's assertion. We will call this an *evidential bare parenthetical*.

(27) Evidential bare parenthetical

Speaker-oriented main clause, parenthetical providing source or evidence

John will be late, *he said*.

(28) Hans wird zu spät kommen – *sagte er*.

Hans will.ind too late come said he

In the second case of Reinhart's distinction, the main clause is not a speaker assertion but is reported from someone else's perspective and the parenthetical describes this other person's perspective. In German, this reading can be forced by German subjunctive in the host clause (the subjunctive excludes the actual speaker perspective); however, it seems to also be possible with indicative in both English and German. We will call this the *shifting bare parenthetical*. Note that the *would* in (29) is the past tense of *will* that arises under tense-agreement with the past tense in the parenthetical, according to Reinhart.

(29) Shifting bare parenthetical

Main clause from the perspective of the parenthetical’s subject

He would be late, *John said*.

(30) Er werde/wird zu spät kommen, *sagte Hans*.

he will.KonjI/ind too late come, said Hans.

Reinhart distinguishes the two cases in terms of a range of criteria, including pronominalization (the distinction can be seen in (27) vs. (29)), whose words are used (the ones of the perspective holder: the speaker in the evidential case, the parenthetical subject in the shifted case), tense agreement in (29) but not (27), the possibility of inversion in the English parenthetical, the possibility of *or so* in the parenthetical, the embeddability of the parenthetical, and the intonation.

We think that in German, the evidential reading in (27) is quite marginal. It seems to us that it is possible only where the V1-parenthetical occurs after its host clause, is separated from it by a longer pause and is destressed like an afterthought. This intonation is different from the intonation that separates the two readings in English, according to Reinhart. In German, the by far most prominent reading of V1-parentheticals is the shifting reading in (29). The near-absence of the evidential reading that we postulate converges with the judgments about pronominalization as they are assessed in terms of Condition C effects by Pittner (1995). They reflect the situation of English parentheticals in the shifting reading as in (29) as assessed by Reinhart. We will from now on talk about German V1-parentheticals in this prominent, shifting reading.

Reinhart (1983) argues against Ross’ *slifting* derivation: There are host clauses that allow bare parentheticals without being a possible complement to the parenthetical predicate. This is also true for German, see Pittner (1995), Reis (1996) and references there. We will therefore develop an analysis using operator movement instead of *slifting*.

**2 Parenthetical verbs and the relation to embedded V2**

We turn to restrictions on the parenthetical predicates. This will lead us to a parallel to embedded V2.

**2.1 Bare parentheticals and predicates embedding V2**

Hooper and Thompson (1973) relate *complement preposing* (the formation of our bare parentheticals) to root transformations in two ways. First, complement preposing is a root transformation. Applied to (31), this means in our terms that *Mary thinks that it's raining* must be a root clause before the transformation applies. In (31) it is a root clause because it is unembedded and asserted. Since *Mary thinks that it's raining* is in an assertive environment before the transformation applies, *It's raining* (the host clause of the parenthetical) is in an assertive environment after the transformation. This restriction will block complement preposing in a restrictive relative like *why Mary thinks that it's raining* or in a central adverbial clause like *when Mary thinks that it's raining*. It is, in different terms, the restriction we discussed above that the host of the bare parenthetical must be a root clause.

(31) Mary thinks that it's raining. → It's raining, Mary thinks.

root clause

root clause

The second restriction is that complement preposing is only allowed with matrix verbs in whose complements root transformations can apply. Applied to (31), this means that complement preposing can only apply to *that it's raining*, since *that it's raining* is embedded under the verb *think* which is one of the assertive-like verbs in whose complement root transformations can apply. In terms of root clauses, we can formulate this restriction as follows: *that it's raining* must also be a root clause for complement preposing to apply. In more detail: Hooper and Thompson (1973) relate their verb classes A, B, and E to *assertion* of their complement clauses while their verb classes C and D do not have this assertional relation. The assertional predicates share two properties: (a) such predicates allow root transformations to apply in their complement clauses, and (b) such predicates occur in *complement preposing*, which is a separate observation. In our terms, this means that assertive predicates (a) allow their complement clauses to be root clauses and (b) occur in bare parentheticals. Conversely, non-assertional predicates allow neither (a) nor (b).

Here we allow that English and German differ in the delineation of these predicates (and perhaps also in the details of the mechanism restricting them). However, we think that this parallel is also relevant for German, in the following way. Following Heycock (2006) and others, we classify V2 as a root phenomenon, insofar it occurs in unembedded position and embedded in the complement clause of broadly assertion-related verbs (Reis 1997). With that, the combination of the two generalizations of Hooper and Thompson amounts to this for V2: the verbs that embed V2 (i.e. embed root-phenomena) should be the same as the ones that occur in V1-parentheticals (i.e. German bare parentheticals).

Reis (1997) describes the verbs that embed V2-clauses as mediated assertions ('vermittelte Assertionen'). Furthermore, Reis (1996):64ff describes the classes of verbs embedding V2 and those occurring in V1-parentheticals as "largely coextensive". She discusses certain preference predicates as an exception; we briefly return to this class in section 3.1.

In (32) – (37), we demonstrate this parallel with a range of predicates, drawing on Sode and Truckenbrodt (2018). As will be seen in section 3, the verbs we employ are ones for which we have some analysis of their meaning. The a-examples show an embedded V-final complement clause introduced by *dass* 'that' (underlined), which is acceptable in all these cases. The b-examples show the replacement of the complement clause by a finite V2 complement (here the finite verb in C is boldfaced). The verbs that allow this in (32) – (35), *glauben* 'believe', *sagen* 'say', and *träumen* 'dream', are among those characterized as broadly assertive by Reis (1997), see also Gärtner (2000, 2002), Featherston (2004), Meinunger (2004), Heycock (2006), Truckenbrodt (2006a, b), Antomo and Steinbach (2010), Reis (2013), and Lohnstein (to appear) on V2 complement clauses.[[4]](#footnote-4) The c-examples show that (in this sample), only the verbs that embed V2 also occur in V1-parentheticals.

(32) a. Maria glaubt, dass Peter nach Wuppertal kommt/komme.

Maria believes that Peter to Wuppertal come.ind/konjI

‘Maria believes that Peter is coming to Wuppertal.’

b. Maria glaubt, Peter **kommt/komme** nach Wuppertal.

Maria believes Peter comes.ind/KonjI to Wuppertal

‘Maria believes that Peter is coming to Wuppertal.’

c. Peter **kommt/komme** nach Wuppertal, *glaubt Maria*.

Peter comes.ind/KonjI to Wuppertal, believes Maria.

‘Peter is coming to Wuppertal, Maria believes.’

(33) a. Maria sagt, dass Peter nach Wuppertal kommt/komme.

says

b. Maria sagt, Peter **kommt/komme** nach Wuppertal.

(a) and (b): ‘Maria says that Peter is coming to Wuppertal.’

c. Peter **kommt/komme** nach Wuppertal, *sagt Maria*.

'Peter is coming to Wuppertal, Maria says.’

(34) a. Maria träumt, dass Peter nach Wuppertal kommt/komme.

dreams

b. Maria träumt, Peter **kommt/komme** nach Wuppertal.

(a) and (b): ‘Maria is dreaming that Peter was coming to Wuppertal.’

c. Peter **kommt/komme** nach Wuppertal, *träumt Maria*.

‘Peter is coming to Wuppertal, Maria is dreaming.’

(35) a. Maria leugnet, dass Peter nach Wuppertal kommt/komme.

denies

‘Maria denies that Peter is coming to Wuppertal.’

b. \*Maria leugnet, Peter **kommt/komme** nach Wuppertal.

c. \*Peter **kommt/komme** nach Wuppertal, *leugnet Maria*.

(36) a. Maria will, dass Peter nach Wuppertal kommt/komme.

wants

‘Maria wants Peter to come to Wuppertal.’

b. \*Maria will, Peter **kommt/komme** nach Wuppertal.

c. \*Peter **kommt/komme** nach Wuppertal, *will Maria*.

(37) a. Es ist möglich, dass Peter nach Wuppertal kommt.

it is possible

‘It is possible that Peter is coming to Wuppertal.’

b. \*Es ist möglich, Peter **kommt** nach Wuppertal.

c. \*Peter **kommt** nach Wuppertal, *ist (es) möglich*.

Why does the generalization of Hooper and Thompson hold, that the verbs embedding root transformations (here: verbs embedding V2) are the same as the verbs allowing complement preposing (here: verbs occurring in bare parentheticals)? We turn to Bolinger (1968) for a first interesting idea.

**2.2 Bolinger's idea of the modulation of an element in the left periphery**

The point of departure of Bolinger (1968) was similar to Ross' later *slifting* transformation and the *complement preposing* of Hooper and Thompson: Bolinger compared (38a) and (38b).

(38) a. I believe [they're ready].

b. [They're ready], I believe.

Bolinger discussed predicates that don't allow the "postposed main phrases (PMPs)" in (38b). These include predicates of doubting and denying as in (39), in parallel to our German cases in (35).

(39) a. I doubt [that it's relevant].

b. \* [It's relevant] I doubt.

They further include what Bolinger called "predicates of causing" (p. 5), which we could also classify as predicates establishing a preference or an obligation.

(40) a. I insist that it stop immediately.

b. \* [It stop immediately], I insist.

These are comparable to our German examples with *wollen* 'want' in (36).

Bolinger arrives at the suggestion to characterize the verbs that allow parentheticals

"in terms of a mental picture or representation to the mind. If we think of every declarative sentence as carrying some such element as *I represent that*, e.g.,

[...] (I represent that) John has the money.

we equip the sentence with a slot in which PMPs and other sentence adverbs fit, as a way of tempering the representation: expressing varying degrees of firmness in relation to any participant in the situation." (Bolinger 1968: 16)

Semantically, this leads to an interesting model for the understanding of bare parentheticals: The parenthetical interacts with a silent element in the left periphery of the main clause, as informally represented in (41). The arrow indicates this interaction.

(41) (~~I represent that~~) It's all right, *I guess*.

Bolinger's modulating interaction captures the restriction illustrated in (39) and (40): Doubt and denial, but also preferences and obligations are not modulations of representing content in an assertive-like fashion.

This appealing idea becomes even more interesting when it is combined with a suggestion of Liliane Haegeman. Building on the structure of the left periphery of Rizzi (1997) in (42), Haegeman (2003, 2004a, b) argued that the Force-projection is specific to root clauses and she suggested in Haegeman (2004a, b) that it involves speaker-anchoring, which we highlight in (43).

(42) Force > (\*Top) > (Foc) > (\*Top) > Fin (brackets: optional; \*: iterative)

(43) Haegeman (2004a, b): Root clauses have a ForceP that involves speaker-anchoring.

If root clauses, and only these, have an assertion-related representation in the left periphery that a bare parenthetical can modulate, then we have, here, a conceivable reason why bare parentheticals require a root clause host: They might operate on this assertion-related representation in the left periphery.

We find this to be an appealing picture. In the following section 2.3, we will further strengthen it. However, in the section 2.4 after that, we will move on to make an additional point that requires us to let it go again, and to employ its pieces for putting together a modified version of it.

**2.3 A contribution of bare parentheticals in unembedded reported speech**

In this section, we add a piece of support for the view shown in the preceding section. Our observation comes from unembedded reported speech, which is possible in German, unlike in English. In this sentence-form, the markers of reported speech (reportative subjunctive, morphologically Konjunktiv I or II), mark an unembedded clause. The unembedded clause is then interpreted as a report of what a third person said. On the analysis of reported speech in German, see Jäger (1971), Lohnstein (2000), Fabricius-Hansen and Sæbø (2004), Schlenker (2003), and Sode (2014).[[5]](#footnote-5) Sode (2014) argued that the contribution of the V2 sentence form (here Bolinger's "x represents that") is shifted to the third person attitude holder, i.e. if V2 normally marks an assertion by the speaker, then V2 in unembedded reported speech marks an assertion of that third person. An example of unembedded reported speech is shown in (44).

(44) Peter war zufrieden. Maria habe seinen Vorschlag angenommen.

Peter was content. Maria have.KonjI his suggestion accepted

'Peter was content. *He said that* Maria accepted his suggestion.'

Unembedded reported speech requires an antecedent for the implicit third person attitude holder. In the absence of a cue about this attitude holder, infelicity results, as in (45),.

(45) [Wir saßen im Kreis.]

'We sat around in a circle.'

#Maria komme später.

Maria come.KonjI later.

Instead of an antecedent, a V1-parenthetical can supply the identity of the attitude holder, as in (46).

(46) [Wir saßen im Kreis.]

'We sat around in a circle.'

Maria komme später, sagte Peter.

Maria come.KonjI later said Peter.

'Maria would come later, Peter said.'

Importantly, a parenthetical with *wie* 'as' cannot take on that function as readily, as shown in (47).

(47) [Wir saßen im Kreis.]

'We sat around in a circle.'

#Maria komme später, wie Peter sagte.

Maria come.KonjI later as Peter said.

'Maria would come later, as Peter said.'

Bolinger's approach allows us to think of (45) – (47) as shown in (48). An unknown identity of the attitude-holder in (45) is not allowed, as shown in (48a). The V1-parenthetical supplies this identity in (46), since it directly interacts with this slot in the left clausal periphery, as shown in (48b). The *wie*-parenthetical in (47) does not operate on this slot but on the propositional content of the host clause (or a part of it), following Potts. This is indicated in (48c). It can therefore not (or not as readily) supply a value for the attitude-holder.

(48) a. (~~?? represents that~~) Maria komme später.

Maria come.KonjI later

b. (~~Peter represents that~~) Maria komme später, sagte Peter.

Maria come.KonjI later said Peter

c. (~~?? represents that~~) [Maria komme später], wie Peter sagte.

Maria come.KonjI later as Peter said

These observations strengthen the case that bare parentheticals (in German: V1-parentheticals) directly operate on a representation of a silent attitude-holder in the left periphery of root clauses.

In the following section, we turn to an observation that is problematic for this account in the simple form in which it was pursued up to here.

**2.4 *As*-parentheticals obey the same restriction on the parenthetical predicates**

It turns out that *as*-parentheticals also obey the predicate restriction that we just discussed for bare parentheticals. We illustrate this with extensions of Bolinger's examples in (49c) and (50c).

(49) a. I doubt [that it's relevant].

b. \* [It's relevant] I doubt.

c. \* [It's relevant] as Mary doubts.

(50) a. I insist that it stop immediately.

b. \* [It stop immediately], I insist.

c. \* [It stop immediately], as Mary (also) insists.

Given the account of Potts (2002), we would expect at least (49c) to be acceptable, with the following readings. The speaker maintains that it's relevant, and adds the conventional implicature that Mary doubts that.

The following German examples are extensions of the paradigms in (32) – (37). They make the same point.

(51) Peter **kommt** nach Wuppertal, *wie Maria glaubte / sagte / träumte*.

Peter comes.ind to Wuppertal, as Maria believes / says / träumt.

‘Peter is coming to Wuppertal, as Maria believed / said / dreamed.’

(52) \*Peter **kommt/komme** nach Wuppertal, *wie Maria leugnete*.

as Maria denied

(53) ?? Peter **kommt/komme** nach Wuppertal, *wie Maria will*.

as Maria wants

(54) \*Peter **kommt** nach Wuppertal, *wie (es) möglich ist*.

as it possible is

This restriction requires an amendment to Potts' account. Furthermore, it casts doubt on the simple but interesting account that Bolinger formulated. This is because Bolinger's suggestion does not carry over to the analysis of *as*-parentheticals. We saw throughout that *as*-parentheticals do not require a root clause host. Therefore, they cannot require an element characteristic of root clauses in the left periphery of their host clause. Therefore, their predicate restriction cannot be explained in terms of them representing a modulation of such an element in the left periphery of their host clause.

**2.5 Towards an analysis of the predicate restriction**

The fact that both kinds of parentheticals obey the predicate restriction suggests to us that the issue is related to the trace position of movement in both kinds of parentheticals. Our analysis is illustrated in (55) and (56). In both bare parentheticals and *as*-parentheticals, the complement of the parenthetical verb is an empty root clause, i.e. a complex operator that is formally a ForceP: [Force Op]. This enforces the predicate restriction to root clause embedding predicates in both kinds of parentheticals. With bare parentheticals, the moving operator is then [Force Op]. After having moved to the left periphery of the parenthetical, it requires, by assumption, a matching antecedent that is likewise a ForceP: the root clause host of bare parentheticals. With *as*-parentheticals, only *Op* moves, as shown in (56). Since Op is not a ForceP, it does not require a ForceP antecedent as its host constituent.

(55) Host clause bare parenthetical

[**Force** it's raining] [ ~~[~~**~~Force~~** ~~Op~~]1 Mary said ~~[~~**~~Force~~** ~~Op~~]1 ]

(56) Host clause *as*-parenthetical

... it's raining [ as Op1 Mary said [**Force** Op1] ]

Assuming these representations, the question why bare parentheticals require a root clause host now takes a more specific form. With both parentheticals being ForcePs, as we will argue, this question now takes the following form: What is it about the Force head of bare parentheticals that attracts [Force Op], and why does the Force head of *as*-parentheticals not require the same? In German, bare parentheticals involve V-to-C movement (“V1-parentheticals”), while *as*-parentheticals (*wie*-parentheticals) have the finite verb in clause-final position, i.e. no V-to-C movement. In the following, we are therefore interested more generally in differences between the Force-heads of root clauses with V-to-C and the Force-heads of V-final root clauses.

**3 The analysis of V-final root clauses and root clauses with V in C**

In this section, we develop an extension of the suggestions of Sode and Truckenbrodt (2018). This is groundwork for the analysis of the two kinds of parentheticals in the later section 4. Central issues in the current section are the representation of root clauses with V-to-C, the representation of V-final root clauses, and their distinctions. However, we begin with some more general issues.

**3.1 Different motivations for V-to-C**

We assume that V-to-C movement can be connected to different features in C. We think that there are at least three such features. We correlate one of them with broadly assertion-related occurrences in the sense of Hooper and Thompson (1973). This class includes declaratives like (57a) and V2 complement clauses like (57b). A second class is correlated with requests like the imperative in (57c). A third class seems to allow replacing clauses introduced by *wenn* 'if' by V1- or V2-clauses. Next to conditional V1-clauses like (57d), we also place V2-clauses like (57e) into this class. See Sode (2018) for semantic arguments for putting (57c) in this class.

(57) a. Die Sonne **hat** geschienen.

the sun has shone

'The sun has shone.'

b. Maria sagt, [die Sonne **hat** geschienen].

Maria says the sun has shone

'Maria says the sun was shining.'

c. **Gib** mir bitte den Computer.

give me please the computer

'Please give me the computer.'

d. [**Dreht** sie sich nochmal um], wird alles gut.

turns she herself again around becomes all well

'If she turns around again, all will be well.'

e. Es ist besser, [du **kündigst** ihm]. (Reis 1997)

it is better you give.notice him

'It is better if you give him notice.'

Note that (57e) exemplifies V2 under certain preference-predicates, for which Reis (1996) noted that the matrix clause can not be converted into a V1-parenthetical. Semantically, the embedded V2-clause here replaces a *wenn*-clause (‘if’-clause), while the V2-clauses in the category in (57b) replace *dass*-clause (‘that’-clauses). Given this classification, Hooper and Thompson's generalization applies to the first class in (57a/b) of our classification: All and only the assertive-like predicates like *Maria sagt* 'Mary said' in (57b) that can occur in a matrix clause with a V2 complement can also occur in a V1-parenthetical.

The account of Sode and Truckenbrodt (2018), which we extend here, maintains that V-to-C movement entails root clause status in the first two classes of our division, i.e. in (57a-c).

**3.2 The representation of root clauses and embedded V2**

In Sode and Truckenbrodt (2018), we suggest an account of a range of German verbal mood forms, of German V-to-C movement of the kind in (57a-c) and of its interaction with verbal mood. A pivotal role in that account is played by a way of making the speaker anchoring of Haegeman (2004a, b) more concrete. Recall that this occurs in Force in root clauses. We suggest the two Force heads in (58). Here BELx,t,w relates to the beliefs of individual x a time t in world x. It is crucial for the analysis of the first class of V-in-C-clauses in (57), i.e. to (57a,b). It semantically expresses that the proposition of the clause is believed by x at t in w. Further, WANTx,t,w is crucial for the analysis of the cases of V-to-C movement related to (57c). It expresses, broadly, that x wants the proposition of the clause at t in w. We call the triple <x,t,w> the anchor in the following.[[6]](#footnote-6)

(58) Syntactic representations of speaker anchoring in Force:

BELx,t,w: The proposition of the clause is believed by x at time t in world w

WANTx,t,w: Futures in which the proposition of the clause comes true are preferred by x at t in w to those in which it does not come true.

In this section, we review the suggestion for embedded V2 in Sode and Truckenbrodt (2018), which will play a crucial role in our account of parentheticals.

Schematic meanings of the verbs that allow a V2 complement-clauses are shown in (59). These conform to the following generalization. Let p be the meaning of the embedded clause. Then these predicates always embed p immediately under a belief-component of the verb's meaning. In other words, verbal meaning and complement clause together include a meaning component 'x believes p', as highlighted by underlining in (59). We employ a decomposition of saying that follows the analysis of assertive speech acts by Searle (1975): asserting p (here: saying p) is expressing the belief that p. We also adopt the decomposition of dreaming as believing in one's sleep from Heim (1998).[[7]](#footnote-7)

(59) a. x believes p

b. x says p ≈ x expresses that x believes p (after Searle 1975)

c. x dreams p ≈ in x's sleep, x believes p (Heim 1998)

The predicates in our sample that do not allow embedded V2-complements are shown in (60). A simple decomposition of denying (also used in Schlenker 2005) is employed in (60a). Further, (60b) is a simplification[[8]](#footnote-8) (for the purposes of giving an intuitive idea) of the analysis of wanting in Heim (1992), based on an observation of Stalnaker (1984). While the verbs in (60a) and (60b) contain belief-components, these do not directly embed p, the meaning of the complement clause. The belief-component and p are separated by 'it is not the case that' in (60a) and by other modal meaning components in (60b).

(60) a. x denies p ≈ x expresses that x believes that it is not the case that p

b. x wants p ≈ x believes that x is better off if p than if not p.

(based on Stalnaker 1984 and Heim 1992)

c. it is possible that p

We can now separate the two classes in terms of a requirement of the embedded V2-clause. This is formulated in (61), on the assumption that an embedded V2-clause is represented as a ForceP headed by BELx,t,w.

(61) An argument clause ForceP headed by BELx,t,w requires embedding immediately under belief.

Thus, we schematically connect the speaker-anchoring in Force in terms of BELx,t,w to the meaning structure of the higher verb as shown in (62) for the verb *sagen* 'say'. For demonstration purposes, we here project the decomposition of the verbal meanings into the syntax, assuming that the verb's belief-component heads a separate VP in a VP-shell-structure. The arrow highlights the connection between the BEL specification in the Force head and the belief-component at the lower end of the verb's meaning, which is required by BELx,t,w in Force.

(62) VP

V VP

|

express V ForceP

|

**believex,t,w** Spec Force'

Force FocP

|

**BELx,t,w**

While the formal nature of this connection is ultimately important, it is left open here. The relation is discussed (without the specific belief-components) in terms of *absorption* by Gärtner (2002). It is approached (also not yet using beliefs specifically) in terms of a presupposition in Truckenbrodt (2006a, b). A presuppositional analysis that uses beliefs specifically is sketched in Sode and Truckenbrodt (2018).

Other possible formal approaches to this relation could involve an uninterpreted BELx,t,w in Force that depends on an interpreted counterpart in the matrix verb, leaning on suggestions involving the agree-relation (Chomsky 2000, 2001, 2008, Adger 2003, Pesetsky and Torrego 2007, Zeijlstra 2012, Wurmbrand 2014, and many others) or on feature-transmission under binding (Heim (2008)).

Further conceivable analyses are opened up by the neo-Davidsonian approaches of Kratzer (2006), Moulton (2009, 2015), and Elliott (2017), which represent complement clauses as semantic modifiers of verbs and of nouns. In analyses of this kind, the doxastic (belief-related) interpretation could primarily rest on BELx,t,w in (62) and not be part of the meaning of the matrix verb to begin with.

In summary, Sode and Truckenbrodt (2018) represent Haegeman's speaker-anchoring in typical root clauses in terms of BELx,t,w in Force. Embedded V2-clauses in complement position provide evidence for an element like BELx,t,w that requires (semantic or syntactic) embedding directly underneath belief.

**3.3 The distinction between root clauses with V2 and verb-final root clauses**

We now turn to the distinction between root clauses with V-to-C movement and V-final root clauses in German.

V-final root-clauses in German include appositive relatives and peripheral adverbial clauses. The peripheral adverbial clauses are investigated in detail in Haegeman (2003, 2004a, b) and, for German, Frey (2011, 2012); see also Reis (2006). For appositive relatives, see Hooper and Thompson (1973), Safir (1986), Stowell (2005), and Schlenker (2015).

V2 root clauses include regular declaratives as well as V2 clauses in complement position to assertive-like verbs. However, there are also adjunct V2 clauses: causal adverbial clauses introduced by *denn*, or (colloquially) by *weil*, and V2 relative clauses. The adverbial clauses were discussed early on by Wechsler (1991) for Swedish and for German by Wegener (1993), Uhmann (1998), Scheffler (2005), Heycock (2006), Holler (2008), Antomo and Steinbach (2010), and Reis (2013). V2 relative clauses were investigated in detail in Gärtner (2000).

The distinction of interest here occurs in adjunct clauses. V-final root clauses can occur initially or medially inside of their host clause. V2 root clauses, on the other hand, must follow their host clause. Thus, as shown by Frey (2011), German peripheral adverbial clauses can occur initially in their host clause as in (63a). This contrasts with the inability of V2 adjunct clauses to occur initially in the host clause, as in (63b) (Uhmann 1998, Gärtner 2000). Such a V2 adjunct clause needs to follow its host clause, as in (63c).

(63) a. [Obwohl Hans lange im Urlaub war], wirkt er nicht erholt.

although Hans long on holiday was appears he not recovered

‘Although Hans has been on holiday for a long time, his appearance does not suggest that he recovered.’

b. \* [Denn [sie **hatte** Zeit]], nahm sie den Vorschlag an.

since she had time accepted she the suggestion prt

c. Sie nahm den Vorschlag an, [denn [sie **hatte** Zeit]].

she accepted the suggestion prt since she had time

'See accepted the suggestion, since he had time.'

Similarly, V-final appositive relatives regularly occur without extraposition, as in (64a). By contrast, a V2 relative clause does not have the clause-internal option, as was shown by Gärtner (2000) and as is illustrated in (64b). The V2 relative clause must occur following the main clause, as in (64c).[[9]](#footnote-9)

(64) a. Gestern habe ich Peter, [der aus Rosenheim kommt,] getroffen.

yesterday have I Peter who from Rosenheim comes met

'Yesterday I met Peter, who comes from Rosenheim.'

b. \* Gestern habe ich jemanden, [der **kommt** aus Rosenheim,] getroffen.

yesterday have I someone who comes from Rosenheim met

c. Gestern habe ich jemanden getroffen, [der **kommt** aus Rosenheim].

yesterday have I someone met who comes from Rosenheim

'Yesterday I met someone who comes from Rosenheim.'

We account for this in terms of extensions of Sode and Truckenbrodt (2018), developed in the following.

In Sode and Truckenbrodt (2018), the Force-head BELx,t,w is syntactically represented as an index with features. The value of the index is the anchor <x,t,w>. What we here write BEL is the value of a feature on this index. An additional feature relates the anchor to the context of speech (Kaplan 1989). We will continue to use the notation BELx,t,w here, but (reflecting the underlying assumptions of Sode and Truckenbrodt) we will speak of it as an index with features.

We postulate two versions of the earlier BELx,t,w. First, belx,t,w (in small-caps) is formally an index with features that has the properties of a personal pronoun: It can find a value in the context and is not subject to strict locality restrictions. It thus requires a contextual antecedent, but once it has that, the value of the anchor is identified and the feature values are set. We now distinguish this from BELx,t,w. For this, we postulate that it needs to have its features and its anchor value identified by local grammatical interactions.

(65) a. belx,t,w is pronominal: it gets its anchor and feature values from an antecedent in the (linguistic or extra-linguistic) context.

b. BELx,t,w must get its feature values and anchor identification from local grammatical interactions.

The first relevant grammatical interaction is the attraction of V-to-C movement.

(66) a. belx,t,w does not agree with, or attract, a finite verb.

b. BELx,t,w agrees with, and attracts, a finite verb. The effect of this is the valuation of the features of BELx,t,w, as described in Sode and Truckenbrodt (2018).

Thus belx,t,w is our representation of the Force-head of V-final root clauses. BELx,t,w is our representation of the Force-head of root-clauses that attract V-to-C. BELx,t,w in Force attracts the finite verb to Force. As spelled out in detail in Sode and Truckenbrodt 2018, this featural relation can be filled with substance: The features also cross-classify central verbal mood distinctions, which are interpreted in Fore when attracted to Force but are subject to other licensing mechanisms when not moved to Force. The reader is referred to Sode and Truckenbrodt (2018) for details.

The second relevant grammatical interaction relates to the identification of the anchor.

(67) a. The anchor of belx,t,w is identified in the context.

b. The anchor of BELx,t,w must be identified by a local grammatical interaction.

Consider first V-final root clauses. Harris and Potts (2009) studied the attributions of appositive relative clauses, nominal appositions, and epithets. Of particular interest to us are the appositive relative clauses, which are root clauses. Harris and Potts (2009) argue for all three kinds of supplements that they can be attributed to the speaker or to the referent of a c-commanding DP in the structure or to a different salient individual. Harris and Potts (2009) view this as the attribution of a *commitment* by this attitude holder.

We think that this carries over to appositive relatives and other V-final root clauses in German. We illustrate this in (68) with appositive relatives, using verbal mood and sentence adverbs for cueing different relevant readings.

(68) a. Maria sagte, dass Saskia, die übrigens aus Rosenheim kommt,

Maria said that Saskia who by.the.way from Rosenheim comes.ind

sehr nett sei.

very nice be.Konj.

‘Maria said that Saskia, who is from Rosenheim, by the way, is very nice.’

(Salient reading: the speaker maintains that Saskia is from Rosenheim.)

b. Maria sagte, dass Saskia, die aus Rosenheim komme,

Maria said that Saskia who from Rosenheim comes.KonjI

sehr nett sei.

very nice be.KonjI

‘Maria1 said that Saskia, who is from Rosenheim (she1 said), is very nice.’

(Maria said that Saskia is from Rosenheim.)

c. Maria sagte, dass Saskia, die angeblich aus Rosenheim kommt,

Maria said that Saskia who allegedly from Rosenheim comes.ind

sehr nett sei.

very nice be.KonjI

‘Maria said that Saskia, who is allegedly from Rosenheim, is very nice.’

(Others than the speaker or Maria claim that Saskia is from Rosenheim.)

This flexibility is now captured by (67a): V-final root clauses, like the appositive relatives, have a head belx,t,w, which finds the value for its anchor in the context.

We address the effects of (67b) in the following section.

**3.4 ASS and the analysis of declarative and adjunct V2 root clauses**

Our (67b) builds on an idea in the architecture of Krifka (2015): the identification of the anchor of elements like our BELx,t,w can play a grammatical role.

We maintain that local identification of the anchor of BELx,t,w is possible in the configuration (62), where the matrix clause contains the information relevant to this anchor: x is the referent of the matrix subject and t and w are coordinates of the belief component of the matrix verb. Putting details aside, we suggest:

(69) The anchor of BELx,t,w can be locally identified in the configuration in (62).

Here our analysis of the anchor of BELx,t,w, has parallels to the analysis of PRO in von Stechow (2004). It is locally bound (here: identified) by a structurally adjacent attitude verb.

We turn to the identification of the anchor of V2 clauses that are declaratives or V2 adjunct clauses. For these, we adopt additional elements of the theory of Krifka (2015). Krifka employs a commitment phrase CmP in the left periphery, which we see as close to our Force-projection headed by BELx,t,w (see footnote 5). Krifka employs an additional higher projection, the speech act projection ActP. For Krifka, the ActP distinguishes between assertions and questions and supplies a value to the anchor of the lower CmP. These are properties that we adopt, in a specific form discussed below.

Since we follow Haegeman (2003, 2004a,b) in assuming that ForceP is in principle optional (present only in root-clauses), we also take ActP to be in principle optional. Differing from Krifka, we take the target of V-to-C to be Force, rather than Act. This is because complement V2-clauses have a ForceP but no ActP in our analysis, as in (62). However, we postulate that ActP can be added when necessary. We take it to be necessary when there is no other way of identifying the anchor of ForceP. We postulate an assertive head of ActP: assx,t,w. We take this to be pronominal like belx,t,w, picking up its anchor in the context. As the head of an ActP, assx,t,w can thus be added on top of the ForceP. This is shown for a declarative in (70).

(70) assS,t,w [Die Sonne [BELS,t,w]-**hat** geschienen.]

the sun has shone

‘The sun shone.’

In this configuration, assS,t,w is in the same local relation to BELx,t,w as "believe" is to BEL in (62). We thus assume that the anchor of BELx,t,w can also be locally identified as the anchor of assx,t,w.

(71) assx,t,w can be added on top of ForceP as the head of an ActP. The anchor of a BELx,t,w-head of the ForceP can then be locally identified with the anchor of assx,t,w.

Support for the presence of a pronominal element like assx,t,w in declaratives comes from the cases of unembedded reported speech in V2-clauses like (44), repeated here as (72) with annotations added.

(72) Peter war zufrieden. assx,t,w Maria BELP,t,w-habe seinen Vorschlag angenommen.

Peter was content. Maria have.KonjI his suggestion accepted

'Peter was content. *He said that* Maria accepted his suggestion.'

The pronominal assx,t,w here needs to be bound to a contextual antecedent, which in (72) is the perspective of Peter. Where it finds one, as in (72), it is fine. Where it does not, as in (45), infelicity results.

We now attribute the property of interest that crucially distinguishes V2 root clauses from V-final root clauses to assx,t,w as in (73).[[10]](#footnote-10)

(73) An ActP headed by assx,t,w must follow its host clause, where it has one.

We illustrate the account. A representation with a V2 host clause and an appositive relative clause is shown in (74). belx,t,w in the appositive has its anchor identified by its being a pronoun, thus does not require assx,t,w for this identification, and thus need not follow its host-clause.

(74) assx,t,w Gestern BELS,t,w-**habe** ich Peter,

yesterday have I Peter

[der belx,t,w aus Rosenheim kommt], getroffen.

who from Rosenheim comes met

A representation of an adjunct V2-clause is shown in (75). assx,t,w is required for the identification of the anchor of BELx,t,w, and this forces the adjunct V2-clause to follow its host clause.

(75) Sie nahm den Vorschlag an, [assx,t,w-denn sie BELS,t,w-**hatte** Zeit].

she accepted the suggestion prt since she had time

'She accepted the suggestion, since she had time.'

The account here converges with the analysis of Antomo and Steinbach (2010), in which declaratives and adverbial V2 clauses (for them, *weil*-V2 clauses) share the same epistemic speech-act related elements in the left periphery (here: assx,t,w and BELx,t,w).

In the specific account here, the conjunction *denn* ‘since’, which precedes V2-clauses, can be taken to be an overt lexical head of ActP:

(76) Lexical head of category Act: [assx,t,w, *denn*]

Some further support for assx,t,w is that it seems to add an assertive meaning that goes beyond belief. Recall first that the restrictions on embedded V2, which led us to (62), are a good reason to attribute a *belief*-related meaning (BELx,t,w) to the Force-head, rather than the meaning of *saying*. This is because belief, but not saying, seems to be contained in the root-clause embedding verbs (here: *say*, *believe*, *dream*) in the relevant way. However, assx,t,w seems to have the slightly stronger meaning of *saying*, i.e. expressing a belief. As observed by Reis (1997), unembedded V2-declaratives which are attributed to another person due to their Konjunktiv morphology, have to resume what someone *said*, as in (77). They cannot resume what someone *believes*, as shown in (78). See also Fabricius-Hansen and Sæbø (2004).

(77) Peter sagt, er **sei** unfair behandelt worden. Er **habe**

Peter says, he be.KonjI unfairly treated been he have.KonjI

nichts bekommen.

nothing got

'Peter says, that he was treated unfairly. *He says that* he didn’t get anything.'

(78) Peter glaubt, er **sei** unfair behandelt worden. ?Er **habe**

Peter believes, he be.KonjI unfairly treated been he have.KonjI

nichts bekommen.

nothing got

'Peter believes, that he was treated unfairly. *He ?says/\*believes that* he didn’t get anything.’

In Sode (2014), this effect is attributed to the sentence form, rather than to the licensing of Konjunktiv in indirect speech (for which belief is likewise sufficient). This attribution is refined here. Since it is arguably not an effect of BELx,t,w in C, it is plausibly attributed to assx,t,w. The analysis of the second sentence of (78) is shown in (79). assx,t,w is added for the identification of the anchor of BELx,t,w. We interpret assx,t,w as in (80) in terms of saying, i.e. expressed beliefs. With this, the interpretation of (79) is that Peter *says* that he did not get anything.

(79) assx,t,w [ForceP er [BELPeter,t,w]-**habe** nichts bekommen]

he have.KonjI nothing got

(80) assx,t,w(p): x expresses at t in w that x believes p.[[11]](#footnote-11)

Summing up this section, we adopt the ActP of Krifka (2015), for us on top of the ForceP and in principle optional like the ForceP. The relevant Act head for our discussion is assx,t,w. It can be required by V-to-C-triggering BELx,t,w in Force for identifying the anchor of BELx,t,w. There is motivation for its pronominal nature and motivation for an assertive interpretation that goes beyond what comes from BELx,t,w. We hold the presence of assx,t,w responsible for the requirement of V2 adjunct clauses to follow their host clause.

**4 The account of parentheticals**

In this section, we develop an account of the two kinds of parentheticals in terms of the analytical devices developed in section 3. We begin with a first analysis in section 4.1, which is extended in section 4.2. In the end, we reach a partial rationale for why V-final parentheticals (*as*-parentheticals) do not require a root clause host, while German V-in-C parentheticals (bare parentheticals) do.

**4.1 A first analysis**

We begin by updating the representations in (55) and (56). The operator of the parenthetical is defined in terms of BELx,t,w.

(81) host clause bare parenthetical

[ForceP BELM,t,w it's raining] [ [ForceP BELM,t,w Op]1 Mary said [ForceP BELM,t,w Op]1 ]

(82) host clause *as*-parenthetical

... it's raining [ Op1 as Mary said [ForceP BELM,t,w Op1] ]

We turn to the left periphery of the parentheticals. Both kinds of parentheticals are themselves root clauses. For example, they can themselves host a bare parenthetical:

(83) a. Frogs have souls, Osbert feels, I realize. (Ross 1973: 136)

b. Es regnet, wie Maria (glaube ich) weiß.

it rains as Maria believe I knows

‘It is raining, as Maria knows (I think).’

For *as*-parentheticals, which are V-final in German, we thus employ a complementizer that includes belx,t,w in (84a). We assume that this complementizer agrees with, and attracts, an empty operator that need not be a ForceP. Somewhat informally, we write this as agree with, and attraction of a propositional operator Op in (84a). This leads to the structure shown in (84b), where “\_\_\_” marks the required landing-site of the operator Op. The moving operator is shown before movement and underlined.

(84) a. Lexical head of *wie*-parenthetical

[Force wie, belx,t,w], agreeing with, and attracting to its specifier, a propositional operator Op.

b. [ForceP \_\_\_ wie-belx,t,w Maria sagt [ForceP BELx,t,w Op]]

as Maria says

We turn to the analysis of bare parentheticals, i.e. V1-parentheticals in German. Our starting point for the analysis is shown in (85). Here BELx,t,w in the Force-head of the V1-parenthetical attracts the finite verb. In addition, a ForceP operator is attracted to the specifier position. A structure is shown in (85b), again before operator movement and with the operator that will move underlined.

(85) a. Lexical head of bare parentheticals (preliminary)

[Force BELx,t,w], agreeing with, and attracting to its specifier, [ForceP Force Op]

b. [ForceP \_\_\_ BELS,t,w-hat Maria gesagt [ForceP BELM,t',w' Op]]

has Maria said

We put the issue of the identification of the anchor of BEL (and the possible presence of assx,t,w) aside for the moment. We return to it in the following section. For now, we complete our first analysis by postulating a matching process relating the operator of the bare parenthetical and the host clause, which is illustrated in (86). We assume that matching includes matching the Force heads of the matching constituents, i.e. matching the BELEd,t,w of the operator with the BELEd,t,w of the host clause. We assume that BELEd,t,w of the operator can be matched either with BELx,t,w or with belEd,t,w, i.e. both V-in-C root clauses and V-final root clauses can host a bare parenthetical (see sections 1.4 and 1.5). We further allow that (in standard cases) the matching process identifies the propositional Op in the complex operator with the content of the host clause – in the example, with the content of *he will be late*. In this way, the parenthetical adds *Ed said he will be late*.

(86) host clause bare parenthetical

[BELEd,t,w he will be late] [[BELEd,t,w Op]1 [BELS,t’,w’] Ed said [ BELEd,t,w Op]1]

matching

With this, consider the arrow in (86) that connects the parenthetical verb to BELEd,t,w. This is parallel to the interaction in (62): The parenthetical verb plays a crucial role in the interpretation of BELEd,t,w. At the same time, the arrow also resumes our rendition of Bolinger’s idea in (41): The parenthetical restricts a silent representation in the left periphery of the host clause. In (86), this interaction is indirect. Thus, as the arrow in (86) indicates, the parenthetical locally interacts with BELEd,t,w in the embedded copy of the host clause. This BELEd,t,w, however, is now related to the BELx,t,w in the left periphery of the host clause on the left in (86). The relation is mediated by movement of the operator [BELEd,t,w Op] inside of the parenthetical and by matching of this operator to the host clause. In this way, an important part of Bolinger’s idea is preserved in the current account. Bolinger's formulation of "modulation" is refined in terms of the belief-related representations. Further, the contrast between (46) and (47) is still captured in the way that was sketched in (48): Bare parentheticals identify the anchor of the Force head BELx,t,w of their host clause by the mechanisms assumed here, while *as*-parentheticals do not.

**4.2 The anchors of BELx,t,w in bare parentheticals: a refined analysis**

We now turn to the issue of the identification of the anchor of BELS,t’,w’, the head of the bare parenthetical, in (86). How is it identified? We expect the addition of assx,t,w on top of the parenthetical for this purpose. Interestingly, however, bare parentheticals are untypical V-in-C adjunct clauses. They show evidence for the absence of assx,t,w. Bare parentheticals do not need to follow their host clause. Instead, they can, and often will, occur inside of their host clause. This is clear where they occur medially following C as in (87). In addition, Reis (1995a, b) and Pittner (1995) argued that sentences of the form in (88) also involve V1-parentheticals (rather than a matrix clause and long-distance extraction).

(87) Sie hatte damals, *sagte sie*, keine Zeit für solche Dinge.

she had.ind then said she no time for such things

‘Back then she did not have time for things like that, she said.’

(88) Am Dienstag, *sagte Peter*, habe er keine Zeit.

on Tuesday said Peter has.KonjI he no time

‘On Tuesday he wouldn’t have time, said Peter.’

Given the account above, this suggests that bare parentheticals have a different way of identifying the anchor of their Force-head BELx,t,w. They do not require assx,t,w for this. The obvious place to look for this different mechanism is in connection with their specifier, since this contains an empty ForceP that is also headed by BEL. However, these two instances of BEL will often carry different anchors.[[12]](#footnote-12) This is illustrated in (89), where assx,t,w is omitted for the main clause and the anchors on BEL are simplified to either S (for speaker) or M (for Maria). The initial main clause is here a clause in Konjunktiv from the perspective of Maria. It is matched to the operator [BELM Op]1 in Spec,ForceP of the following parenthetical (underlined). We are interested in formal relations of this operator to the following Force head of the bare parenthetical (likewise underlined). In (89), this second underlined instance of BEL is a semantically different one. It represents that the content of the parenthetical is attributed to the speaker.

(89) [es BELM-habe geregnet]

it has.KonjI rained

[[BEL**M** Op]1 BEL**S**-hat Maria gesagt [BELM Op]1]

has.ind Maria said

However, it is possible to construe a connection with semantic content between the two. For explaining this, we first back up a bit.

If we represent a shifted interpretation of a clause, like the initial main clause in (89), there are two relevant ways of representing the shift. First, it could be that only the local perspective is represented, here the perspective of Maria. This is the assumption made in Sode and Truckenbrodt (2018) and in the current paper up to here. In (89), this is represented by BELM. The second candidate contains more information: It would also represent that Maria's perspective is as seen from the perspective of the speaker. Instead of BELM we would have a stacked representation like belS[BELM], intuitively 'what the speaker believes that Maria believes'. The more informative version would be a grammatical representation of the notion of a *derived context* in Stalnaker (1988). An empirical argument for the presence of such a more informative representation is given in Trinh and Truckenbrodt (2018). In the following, we show that the more informative representation also leads to a more interesting analysis of bare parentheticals. We thus assume:

(90) Legitimate Force heads using BEL/bel, where “S” is here short for the context of Kaplan (1989), i.e. <speaker, time of speech, world of the utterance>, and X and Y are other anchors:

BELS belS

belS[BELX] belS[belX]

belS[belX[BELY] belS[belX[belY]]

etc.

Thus, each head must begin with anchoring to the speech context, and pronominal bel occurs except possibly for the lowest segment, which may be BEL. If it is BEL, we still have the requirements on it defined for BEL above.

With that, we have (91) instead of (89).

(91) [es belS[BELM]-habe geregnet]

it has.KonjI rained

[ [bel**S**[BEL**M**] Op]1 BEL**S**-hat Maria gesagt [belS[BELM] Op]1]

has.ind Maria said

As highlighted by the added line in (91), there is now co-anchoring among the operator in the specifier of the bare parenthetical and the head of the parenthetical.

An improved lexical entry of the head of bare parentheticals is then as in (92), revised from (85a).

(92) Lexical head of bare parentheticals (final)

[Force BELx,t,w], agreeing with, and attracting to its specifier, a projection headed by belx,t,w([...]) (anchors identical, where belx,t,w([...]) stands for belx,t,w[...] or BELx,t,w).

The crucial part of the derivation of the parenthetical in (91) is shown separately in (93). Before agree and attraction, the representation is as in (93a), with an un-identified anchor of BELX, the head of the bare parenthetical. Agree and attraction of the empty ForceP specifier via (92) then allow the identification of the anchor of this BELX with the upper segment of the parenthetical operator head [[bel**S**[BEL**M**] Op]1, as shown in (93b).

(93) a. \_\_\_\_ BEL**X**-hat Maria gesagt [belS[BELM] Op]

has.ind Maria said

b. [bel**S**[BELM] Op]1 BEL**S**-hat Maria gesagt [belS[BELM] Op]1

has.ind Maria said

This, then, is the core of our analysis of bare parentheticals: The lexical head of the bare parenthetical in (92) is an instance of BELx,t,w with a special lexical provision for the identification of its anchor: It attracts an operator headed by another belx,t,w[...]/BELx,t,w to its specifier and identifies its anchor with a bel/BEL-segment of this operator head. This is why it requires a root-clause host. The operator headed by bel/BEL must then be matched against a root clause host, i.e. a host clause that is likewise headed by bel/BEL. Evidence for this special way of anchor-identification in (92) is that bare parentheticals need not carry assx,t,w, i.e. need not follow their host clause.

With this, we have arrived at an account in which the form of the two parenthetical is at related to their different host-clause requirements. The V1-parentheticals are headed by BELx,t,w, which requires grammatical mechanisms for identifying its features and its anchor. Its features are identified by V-to-C movement. The requirement of anchor-identification underlies the attraction of a bel/BEL-headed specifier, which leads to the requirement of a root clause host. By contrast, the *wie*-parentheticals are V-final, and are thus headed by the pronominal belx,t,w. It has its anchor and features identified in connection with its (not necessarily local) antecedent. It therefore does not induce V-to-C movement and it does not require identification by its anchor by a grammatical mechanism. It thus has no motivation for attracting a specifier headed by bel/BEL, and thus for having a root clause host.

**5 Summary**

Bare parentheticals (in German: V1-parentheticals) require a host clause that is a root clause (Hooper and Thompson 1973, Steinbach 2007). *As*-parentheticals (in German introduced by *wie* ‘as’) do not require a root clause host, and can even have subclausal constituents as their host (Pittner 1995, Potts 2002).

Haegeman (2003, 2004a,b) analyzes root clauses as ForcePs with speaker-anchoring in Force. The speaker-anchoring is analyzed in Sode and Truckenbrodt (2018) in terms of the Force-heads BELx,t,w and WANTx,t,w. These are building blocks of our analysis, with the following suggestions.

Both parentheticals have an empty root clause [BELx,t,w Op] as the complement of the parenthetical verb. This has the correct consequence that both kinds of parentheticals allow only root-clause embedding verbs as parenthetical verbs.

In bare parentheticals, the parenthetical head attracts the operator [BELx,t,w Op] to its specifier, which requires a matching root clause host with an identical BELx,t,w head. In *as*-parentheticals, the parenthetical head attracts only Op. Its host constituent therefore does not need to be a root clause.

A more detailed analysis employs an extension of Sode and Truckenbrodt (2018). V-final root clauses are headed by belx,t,w, while root clauses with V-to-C are headed by BELx,t,w. The latter requires that its anchor and its features are identified by local grammatical interactions. V-to-C movement occurs for valuation of its features (Sode and Truckenbrodt 2018). In V1-parentheticals, the anchor of the parenthetical head BELx,t,w is identified by attraction of [BELx,t,w Op] to its specifier. On the other hand, belx,t,w is pronominal, receives its values from its antecedent in the context, and does not induce such grammatical interactions. It does not attract V-to-C. As the head of V-final *wie*-parentheticals, belx,t,w does not attract [BELx,t,w Op] but only Op, since its anchor need not be identified by a grammatical interaction.

The account employs an additional element assx,t,w that can be added as the head of an ActP (Krifka 2015) on top of the ForceP. It is deployed to identify the anchor of BELx,t,w where necessary (in V2 declaratives, V2 adverbial clauses and V2 relative clauses) and has the consequence that the ActP must follow its host clause if it has one.

The account of bare parentheticals also supports a more complex representation of Force-heads (Trinh and Truckenbrodt 2018). A Force-head that represents Maria’s perspective is not just BELM but [belS[BELM]], intuitively ‘what the speaker takes to be Maria’s beliefs’ (Stalnaker 1988).

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2. (11a) also allows the reading in (11d). Though Potts (2002) discusses other cases of complex scope-taking in section 4 of his paper, it is not clear to us how his theory would analyze this reading. However, the issue does not affect the point that there is a clause-internal scope reading: the reading with parethetical scope below negation in (11c) is only available if the *as*-parenthetical is below negation on the surface. [↑](#footnote-ref-2)
3. See e.g. Lewis (1973), Stalnaker (1975) and much later literature for accounts along these lines. Stalnaker also gives arguments against an analysis of conditionals in terms of the material implication. [↑](#footnote-ref-3)
4. Restrictions on V2 need to be distinguished from restrictions on V2 with indicative. See Sode and Truckenbrodt (2018) on the additional contribution of the indicative. [↑](#footnote-ref-4)
5. Note that unembedded reported speech (German: "berichtete Rede", see Fabricius-Hansen 2016) is different from free indirect discourse (German: "erlebte Rede"), a style of narration studied in Sharvit (2004), Schlenker (2004), and Eckardt (2015). The latter retains indicative morphology but also shows some traits of perspective shifting, e.g. in the interpretation of indexical temporal adverbs. [↑](#footnote-ref-5)
6. The characterization of standard root clauses in terms of BELx,t,w builds on characterizations of root clauses as broadly related to assertions (see e.g. Hooper and Thompson 1973, Stowell 2005, Reis 1997, 2006), and on the characterization of the supplements of Potts (2005) as involving a commitment by someone in Harris and Potts (2009); we take commitments to be public beliefs (Gunlogson 2003, 2008, Krifka 2015) or equivalently expressed beliefs in the sense of Searle (1975). The characterization of standard root clauses in terms of BELx,t,w also rests on suggestions to represent declaratives with a belief- or saying-related meaning. Next to Bolinger (1968), this includes Ross (1970), Gärtner (2002), Gunlogson (2003, 2008), Poschmann (2008), Cinque (1999), Speas (2004), Hacquard (2006), Truckenbrodt (2006a, b), Giorigi (2010), and Krifka (2015), among others. See also Sauerland and Yatsushiro (2017) for support of the representation of such attitudinal speech-act related elements in the left periphery of the clause from remind-me presuppositions: *What is your name again?* ≈ Bring it about that (again (we/I know (what your name is))). A closely related approach is pursued in Lohnstein (to appear). The idea there is that the C-system connects temporal and situation variables from the propositional meaning of the clause to the parameters of the speech situation or shifted situations. [↑](#footnote-ref-6)
7. Heim employed this decomposition for modelling *de re* and *de se* readings of dream reports in terms of the self-ascription of certain acquaintance relations in ones sleep. Our adopting Heim's decomposition is tentative and the suggestion itself may also have been tentative. See also Anand (2007), Yanovich (2011), Ninan (2012), Kauf (2017), and Pearson (2018) on the complexities of this predicate. [↑](#footnote-ref-7)
8. This formulation is slightly different from the formalization in Heim (1992) insofar as Heim's formulation also computes a subjective p and a subjective not-p relative to the beliefs of the speaker, but does not embed the preference under the belief. The formulations seem to have the same effect so long as what a person wants is not hidden from that person. [↑](#footnote-ref-8)
9. While we think that the adjunct V2-clauses support our point nicely, we are not sure how strong the argument from V2 relative clauses is. Gärtner (2000) gives good reasons for his analysis in which these V2 relative clauses, though showing interactions with the indefinite DPs that they can modify, do not originate in (or next to) these DP. Thus, they might simply be banned from clause-internal position because they have no reason to be there. Assuming that, the examples nevertheless show that V2 relative clauses conform to the generalization that the V2 adjunct clauses give rise to. [↑](#footnote-ref-9)
10. Complement V2 clauses have also been argued to follow their host clause (Reis 1997). In the current account, this does not fall under (73). We point out that these might be separate but related issues, related to precedence-restrictions of assx,t,w and BELx,t,w (though not belx,t,w). [↑](#footnote-ref-10)
11. It seems sensible to us to conceptualize the highest grammatical elements of such a speech-act related representation as conventional implicatures, as argued by Gutzmann (2015). We agree with Gutzmann that they cannot be regular content. An alternative we would currently not rule out is that they are presupposition that are accommodated; see Schlenker (2007) and Truckenbrodt (2012) in this connection. [↑](#footnote-ref-11)
12. They will carry the same anchor only in 1st person parentheticals like *glaube ich* ‚I believe’ and in the evidential reading (27), which we take to marginal in German. [↑](#footnote-ref-12)