## Verb position, verbal mood, and root phenomena in German[[1]](#footnote-1)\*

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Abstract

In this programmatic paper, we show a way of integrating the analyses of German V-to-C movement, verbal mood and root phenomena at the syntax-semantics interface. Central to the analysis are two silent elements in C, informally WANT<x,t,w>[±origo] and BEL<x,t,w>[±origo], where <x,t,w> is an anchor, WANT vs. BEL have bouletic vs. doxastic modal interpretation, and [±origo] specifies whether the anchor is identical to the context of Kaplan, which is close to Bühler's origo. Refining a suggestion of Haegeman, we argue that every root clause is specified with one of these elements. We show how these elements largely control the verbal mood on the finite verb. Further, we argue that an agree relation between these elements and the verbal mood on the finite verb accompanies V-to-C movement. The discussion includes suggestions about embedded V2-clauses, the structure and interpretation of V1-parentheticals as a root phenomenon, the licensing of reportative Konjunktiv, the interaction of indicative verbal mood with V-to-C movement, as well as the analysis of independent V-final clauses.

1 Introduction

The primary concern of this paper is the syntax-semantics interface of a range of phenomena connected to sentence types, finiteness, and sentence mood (Altmann 1987, 1993) in German: V-to-C movement, root phenomena, and verbal mood. The paper draws on many suggestions, but it also builds on work by the first author on verbal mood (Sode 2014) and by the second author on sentence types (Truckenbrodt 2004, 2006a, b, 2013). The paper is programmatic, but it also leads to an empirically motivated new vision for structuring this complex terrain.

Towards the end of the paper, we show, in the context of the current volume, how this raises new issues for V-final clauses when they are used as main clauses.

Throughout, we take it for granted that the features specific to interrogative sentences – the interrogative Q-marker in C (Baker 1970) and the features on wh-phrases – are also important for structuring this terrain; see Brandt et al. (1992). However, our purposes here are largely orthogonal to specifics of interrogatives, and we will mostly put them aside here (but see footnote 10).

Kaufmann (2012), Condoravdi and Lauer (2012), and Oikonomou (2016) have argued for a modally-interpreted operator in the left periphery of imperatives. In this paper we demonstrate the usefulness of assuming that there is also a modal operator in the left periphery of declaratives and, more generally, root clauses (Heycock 2006). This is an extension of the suggestion of Haegeman (2004) that root clauses involve speaker anchoring in the head of ForceP. We suggest that the modal root clause operator presents the content of the clause as the *belief* of an individual.

In this paper we explore this claim in connection with the grammatical contributions of V2 word-order in German and of German subjunctive (Konjunktiv) and indicative, and with the docking points of V1-parentheticals in German. As will be seen, all these phenomena are root phenomena (or closely related to root phenomena) in a sense envisaged by Sode (2014), namely phenomena that depend on such a representation of modality in the left clausal periphery.

To give some illustrative examples, we suggest that in the indicative V2-clause in (1a), there is a syntactic representation of the speaker's belief that the proposition is true, and we connect this to the indicative verb form and to the movement of the finite verb to the C-position; in the V2-clause with Konjunktiv in (1b), there is a similar syntactic representation of Maria's belief that the proposition is true, likewise connected to V-to-C movement, and, here, to the Konjunktiv form of the finite verb. In (1c), the V1-parenthetical *sagte Maria* ‘Maria said’ is a root phenomenon insofar it is connected to the host clause in part through this silent syntactic representation of the host clause being Maria's belief.[[2]](#footnote-2)

(1) a. Die Sonne wird scheinen.

the sun will.ind shine

‘The sun will shine.’

b. [Maria sprach über das Wetter.]

‘Maria talked about the weather.’

Die Sonne werde scheinen.

the sun will.konjI shine

‘(She said that) the sun would shine.’

c. Die Sonne werde scheinen, insistierte Maria.  
the sun will.konjI shine insisted Maria

‘The sun would shine, Maria insisted.’

Section 2 discusses the belief-related modality in V2-declaratives and in embedded V2-clauses. Section 3 shows support for generalizing this belief-related modality to all root clauses in connection with the root phenomenon of V1-parentheticals. Section 4 shows how verbal mood in German can be related to the modal elements in the left clausal periphery. Section 5 offers elements of a formalization. Section 6 addresses independent V-final clauses and the issues raised for them by the suggestions in this paper. Section 7 provides a summary.

2 German clauses with the finite verb in C

1. 2.1 Three classes of V-to-C movement

We assume that there are at least three semantically distinct abstract C-elements that motivate movement of the German verb to C, which we illustrate in (2) with prototypical examples: (a) imperatives and imperative-like structures with a silent bouletic (desire-related) interpretation (Condoravdi and Lauer 2012, Oikonomou 2016, building on Kaufmann 2012); (b) a class with an assertive-like interpretation, which includes declarative V2-clauses[[3]](#footnote-3) (Reis 1997); (c) structures alternating with *wenn*-clauses (‘if’-clauses), like the V1-conditional in (2c). See Jacobs (2015) for more conditional-like cases. See Grosz (2012) for optative cases.

(2) a. Hilf bitte der Saskia.

help please the Saskia

‘Please help Saskia.’

b. Du hilfst also der Saskia.

you help then the Saskia

‘You are helping Saskia, then.’

c. *Hilfst du der Saskia*, geht alles viel schneller.

help you the Saskia goes everything much faster

‘If you help Saskia, things will advance much faster.’

We are primarily concerned with the second class here, and its connection to the first class. To make this connection to the first class, we begin by briefly addressing the imperative.

1. 2.2 Modality in imperatives and Kaplan's notion of the context of utterance

Platzack and Rosengren (1994), Rivero (1995), Han (1998), and others have argued for a syntactic imperative operator. Kaufmann (2012) suggested a modal interpretation for it that allows a range of modal flavours, including deontic and bouletic, under different conditions. Condoravdi and Lauer (2012), Oikonomou (2016) and others have developed a bouletic modal semantics for the imperative operator, i.e. broadly related to the meaning of ‘want’. We informally render the syntactic operator and its semantic interpretation as WANTx,t,w: a bouletic attitude (towards the proposition) of an individual x at a time t in a world w (see Condoravdi and Lauer 2012 and Oikonomou 2016 for suggestions for the actual bouletic semantics).

The imperative cannot shift, i.e. the only interpretation of the request in (2a) is as a request of the speaker at the time of speech in the world of the utterance (Kaufmann 2012, Condoravdi and Lauer 2012, Eckardt 2015). We think that one aspect of this is that the parameters x, t, and w are the parameters of the context of Kaplan (1989): the speaker, the time of speech, and the world of the utterance. We here call this context the “origo”, borrowing a name from Bühler (1982) for a closely related conception (for Bühler, this is ‘I’, ‘here’, and ‘now’).

(3) Context of Kaplan (1989) in the notation of Kaplan:

c, where cA is the speaker, cT is time of speech, and cW is the world of the utterance.

In the following, we argue that a related conception, BELx,t,w, is relevant to the analysis of the second case above, the V2-clauses illustrated in (2b), their verb position and their verbal mood. The modality is a different one here, not bouletic but, we argue, doxastic, i.e. belief-related. The parameters x, t, and w, relating to the beliefs of x at time t in world w, will be seen to be shiftable away from the origo; however, we will argue that the analysis of Konjunktiv and the analysis of indicative (at least by default) also involve reference to Kaplan's context (the origo).

1. 2.3 Declarative V2-clauses

Ross (1970) argued that declarative sentences include a silent assertive meaning component that is syntactically represented. This is shown for the declarative *Prices slumped* in (4). Ross allows some flexibility as to the silent predicate, here rendered as *tell*.

(4) ~~I [tell] you~~ Prices slumped.

Bolinger (1968) suggested a similar component of declaratives of the form *I represent that*. Oppenrieder (1987) argued that German declaratives connect the propositional content with the speaker and involve a relation of the content as true relative to the world. Gunlogson (2003) argued that declaratives commit either the speaker or the addressee, where addressee commitment applies in declarative questions (cf. *It's raining?* – which carries the assumption that the addressee is ready to confirm this). Poschmann (2008) argued that only one class of declarative questions involves this shift and Gunlogson (2008) offers a revised account in which the commitment due to the declarative is always on the speaker side, though subject to addressee confirmation in the case of declarative questions.

The four highest projections of the clause suggested by Cinque (1999) are Speech Act Mood, Evaluative Mood, Evidential Mood, and Epistemological Mode. Speas (2004) suggests that each of these have their own implicit subject; for example, the highest projection Speech Act Mood has the speaker of the utterance as its implicit subject. Hacquard (2006) argued that epistemic modals access a representation of a person's beliefs in the left clausal periphery. Giorgi (2010) argued that the C-position contains a representation of the speech time and perhaps the speaker's location. Bianchi (2003) and Adger (2007) argue that there is logophoric speaker-anchoring in the left periphery connected to finiteness.

In German, the standard declarative sentence is derived by movement of the finite verb to C and movement of another constituent to Spec,CP. Gärtner (2002) developed the idea that German V2-clauses carry inherent speech-act potential. He suggested that their speech-act potential unfolds in unembedded uses (and restricts possible matrix predicates in embedded uses; we return to this in a later section). Truckenbrodt (2006a, b) related this to features in the C-domain that give rise to deontic (imperative-like) and epistemic (assertion, question) speech act components. Sode (2014) argued that the person asserting the proposition in a declarative can be shifted by the reportative subjunctive in German.

Krifka (2015) distinguishes a commitment phrase (CmP) from a higher speech act phrase (ActP) in the left periphery of main clauses. The commitment phrase represents a speaker commitment in assertions and a requested addressee commitment in question speech acts. The speech act phrase identifies the respective actor and passes it on to the commitment phrase.

Building on these suggestions, we assume an element with a belief-related (doxastic) interpretation in the left periphery of the declaratives. The meaning of this representation is that some x (the speaker or someone else) believes the proposition (at a time t in a world w). In this assessment, we take into account an understanding of saying (asserting) that grows out of Searle's characterization of his class of assertive speech acts (Searle 1975). It is shown in (5): asserting p can be understood as expressing the belief that p. If x actually believes p, the assertion is sincere, if x does not actually believe p, it is not sincere.

(5) Speaker asserts p: speaker expresses the belief that p (Searle 1975)

With this, we build on the suggestions above and pursue the presence of a syntactic element with a belief-related (doxastic) modal interpretation in the left periphery of declaratives:

(6) Declaratives include an element interpreted in terms of belief:

BELx,t,w Prices slumped.

‘x believes at time t in world w that prices slumped.’

1. 2.4 Restrictions on embedded V2-clauses

Root clauses are clauses in which root transformations in the sense of Hooper and Thompson (1973) can apply, or, more generally, clauses which allow root phenomena (Heycock 2006). Root clauses include (a) obviously unembedded clauses such as declaratives, (b) appositive relative clauses as in (7a) and peripheral adverbial clauses as in (7b), which (translating terminology from Reis 1997) *depend* on a main clause though they are *not* genuinely *embedded* in it,[[4]](#footnote-4) and (c) object clauses of certain assertive-like verbs.

(7) a. I am going to visit Mary, *who lives in Boston*.

b. It is dark, *even though the moon is out*.

German V2 is a root phenomenon: It occurs as the standard form of unembedded declaratives (cf. (1a), (2b)) and it occurs in object clauses under assertive-like verbs as an alternative to standard clauses introduced by *dass* ‘that’ (see Reis 1997, Gärtner 2000, 2002, Featherston 2004, Meinunger 2004, Heycock 2006, Truckenbrodt 2006a, b, and Antomo and Steinbach 2010).[[5]](#footnote-5)

To be sure, not all root clauses are V2 in German. For example, standard appositive relatives and peripheral adverbial clauses are V-final (Reis 2006, Haider 2010). We will return to this below.

In this section, we address the restrictions on embedding V2-clauses in object position. All of the predicates in (8) – (13) allow a finite clause complement introduced by *dass* ‘that’, as shown in the a-examples. However, only the predicates in (8) – (10) allow V2 complement clauses, as shown in the b-examples:

(8) a. Maria glaubt, **dass** Peter nach Saarbrücken kommt/komme.

Maria believes that Peter to Saarbrücken come.ind/konjI

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

Maria believes Peter comes.ind/KonjI to Saarbrücken

Both: ‘Maria believes that Peter is coming to Saarbrücken.’

(9) a. Maria sagt, **dass** Peter nach Saarbrücken kommt/komme.

says

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

Both: ‘Maria says that Peter is coming to Saarbrücken.’

(10) a. Maria träumte, **dass** Peter nach Saarbrücken kommt/komme.

dreamed

b. Maria träumte, Peter **kommt/komme** nach Saarbrücken.

Both: ‘Maria dreamed that Peter was coming to Saarbrücken.’

(11) a. Maria leugnet, **dass** Peter nach Saarbrücken kommt/komme.

denies

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

Both: ‘Maria denies that Peter is coming to Saarbrücken.’

(12) a. Maria will, **dass** Peter nach Saarbrücken kommt/komme.

wants

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

Both: ‘Maria wants Peter to come to Saarbrücken.’

(13) a. Es ist möglich, **dass** Peter nach Saarbrücken kommt.

it is possible

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

Both: ‘It is possible that Peter is coming to Saarbrücken.’

In the context of the current programmatic overview, we defend a new generalization and a schematic account for the domain of predicates in (8) – (13). For the verbs that allow embedded V2, i.e. the verbs that embed root clauses, we employ the decompositions shown in (14). Here (14a) shows the non-decomposed verb *believe*. (14b) shows a decomposition of *saying* based Searle's analysis of assertives. For the verb *dream*, we adopt the decomposition in Heim (1998) in (14c). We return to the underlining in (14) momentarily.

(14) 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)

For the predicates not allowing embedded V2 in (11) – (13), i.e. the verbs not allowing embedded root clauses, we show approximate meaning representations in (15). Again, we return to the underlining momentarily.

(15) 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[[6]](#footnote-6))

c. it is possible that p

We turn now to the generalization that we think is promising in accounting for the difference. The verbs allowing embedded V2 in (14) all have a component “x believes p”, in which the meaning p of the complement clause is directly embedded in a component “x believes” of the embedding verb. This “x believes p” is underlined in (14). Consider then the cases in (15). Verbs like the ones in (15a,b) arguably include a *belief*-component in their lexical meaning. This is argued for the verb *want* in Stalnaker (1984) and Heim (1992). Given the results on presupposition projection in Heim (1992), we think that it is possible that most or perhaps all attitude verbs include such a belief-component in their meaning. What seems to be crucial for embedding V2 is whether this belief-component directly embeds p, the meaning of the embedded clause. While this direct relation obtains in the cases in (14), it does not obtain in (15a,b), as is highlighted by underlining. Thus, in (15b), the meaning component of negation intervenes between the belief-component of the verb and the embedded proposition p. In (15c), the comparison “that x is better off if ...” intervenes between the belief-component in the verb's meaning and the embedded proposition p. Finally, predicates as in (15c) that do not include such a component of belief do not embed the V2 object clauses we are concerned with here.[[7]](#footnote-7) We highlight the generalization that we think is promising in this domain in (16).

(16) If the verb's meaning, combined with the meaning p of the argument clause, has the argument clause embedded in a meaning component “x believes p” (for some x), then p may be an embedded root clause.

We leave open whether embedded root clauses can be licensed in a similar fashion by bouletic modality. For now, we sketch a number of conceivable accounts for the restriction in (16).

Gärtner (2002) suggested that V2-clauses have embedded proto-force, that this turns into illocutionary force in unembedded position and that it restricts the embedding of V2-clauses in object position. Truckenbrodt (2006a, b) suggested a formal implementation of this idea. In embedded position, the proto-force takes the formal shape of a presupposition. The presupposition must be satisfied by the embedding verb in V2 object clauses. Matrix verbs that satisfy this presupposition allow embedded root clauses. Matrix verbs that do not are ruled out by failure to satisfy the presupposition. Where the presupposition is satisfied, it does not project or otherwise add meaning to the utterance. As to the content of the presupposition, Truckenbrodt (2006a, b) took this to be a presupposition of a broader meaning that included a belief-relation as one of its possible instances. We here sharpen this by limiting the content of the presupposition to a belief-relation. The idea of the account is sketched in (17). The sentence (17a) receives the meaning in (17c) by the regular rules of semantic composition, with the embedded object clause interpreted as a regular proposition. In (17c) we also show the meaning of the matrix verb ‘says’ split up into two components. Now, in addition to this regular meaning, the annotation BELMary,t,w is present in the embedded C-position in connection with the movement of the finite verb to C in the embedded clause. This BELMary,t,w adds a presuppositional meaning component that is shown separately in (17b).

(17) a. Mary says [C**BEL,M,t,w** Peter is coming to S.]. (syntax)

b. M. believes [that P. is coming to S.] (presupposed)

c. M. expresses that M. believes [that P. is coming to S.]. (meaning)

"Mary says"

One can now adopt the suggestion of Fabricius-Hansen and Sæbø (2004) that a presupposition about attitudinal embedding (such as (17b)) can be satisfied by the meaning of the attitude embedding it (such as (17c)). Applying this, the presupposed (17b) is satisfied by (17c) because (17c) contains a meaning component that matches (17b). This is shown by underlining the presupposed (17b) and underlining the matching meaning component in (17c). More generally, the restriction in (16) can now be derived in this fashion.

The second possible account invokes deletion under binding (Heim 2008): The element BELx,t,w in the C-position of the embedded clause is deleted under identity with the same element on the matrix verb. This is sketched in (18).

(18) Mary says**BEL,Mary,t,w** [C**~~BEL,Mary,t,w~~** Peter is coming to S.].

We will see independent motivation for the syntactic representation of a verb's belief-component in section 4.2 below.

Each of these first two approaches imposes restrictions that are needed, but they are different ones. The approach in terms of feature deletion correctly implements that the requirement cannot be locally or globally accommodated (as we would expect in a presuppositional account; see e.g. Kadmon 2001 and the discussion of Fabricius-Hansen and Sæbø 2004 in Sode 2014). The approach in terms of a presupposition correctly derives the restriction in (16), while the approach in terms of feature deletion would need additional assumptions to make sure that not any occurrence of belief in the verb's meaning allows embedded V2. We leave open the details of the correct analysis, which may also involve a combination of elements of the analyses sketched here.

A third possible account extends the suggestion that Schlenker (2005) made for the French indicative to German V2. Like the first account, this account is presuppositional. See Truckenbrodt (2018) for discussion of such an application.

A fourth conceivable analysis employs the neo-Davidsonian analysis of Kratzer (2006), Moulton (2009, 2015), and Elliott (2017). These authors employ the neo-Davidsonian approach to represent complement clauses as semantic modifiers of verbs and of nouns. In the programmatic discussion of Kratzer (2006), for example, the meaning of the VP in (19a) is analyzed as in (19b).

(19) a. believe that there are ghosts

b. xsw. [believe(x)(s)(w) ∧ ∀w'[compatible(x)(w') →   
∃y ghosts(y)(w')] ]

The verb only contributes [xsw *believe*(x)(s)(w)] to this meaning. A logophoric complemenzier *that*, rather than the verb, contributes [px ∀w'[*compatible*(x)(w') → p(w')]. Thus, part of the meaning that is otherwise attributed to the verb *believe* is here attributed to a special complementizer in the embedded clause. This special complementizer is broadly comparable to our BELx,t,w in C. The formalism pursued by these authors thus allows for a semantic composition in which our BELx,t,w in C (semantically adjusted to this formalism) is not presupposed. Instead, it would contribute at-issue meaning to the compositional process, complementing the reduced verb meaning. While this is an interesting possibility, we will, for now, pursue the approaches sketched above, which are closer to classical assumptions about the meaning of attitude verbs.

Notice that – regardless of the formal implementation – the semantically driven restriction in terms of BEL fits nicely with the fact that there is some syntactic flexibility concerning the status of embedded V2-clauses, so long as the semantic condition is satisfied. The V2-clause can be an object clause as in (8) – (10). In a passive, however, it can also be a subject clause, as in (20).

(20) Manchmal wird gesagt, Maria komme nach Saarbrücken.

Sometimes is said Maria come.konjI to Saarbrücken

‘It is sometimes said that Maria is coming to Saarbrücken.’

The relation to the thematic object position can also be mediated by a pronominal correlate as in (61b) below, and it can be mediated by a pseudocleft construction as in (58b) below.

Let us turn to the unembedded occurrence of V2. Here, in the simplest case, one would like the same meaning component BELx,t,w in the left periphery of the V2-clause to enter into the speaker assertion, with x, t, and w being the parameters of Kaplan's context.

In a presuppositional analysis like the one illustrated for embedded V2 in (17), the presupposition may here be self-fulfilling as suggested by Schlenker (2007) for a case we consider comparable, or the presuppoition may be accommodated, as in the discussion of a comparable case in Truckenbrodt (2012). In this way, we think the presupposition might contribute to the speech act. In terms of Searle's decomposition of assertions, the speaker might then have expressed believing p by having presupposed believing p (and by relying on self-verification or accommodation).

In the feature deletion analysis, BELx,t,w might have a presuppositional analysis or an analysis as a conventional implicature (Potts 2005) or a meaning of a related kind (Gutzmann 2015). The syntactic element would be deleted in embedded position but interpreted in unembedded position. If it is a presupposition, the remarks of the preceding paragraph apply to this case as well.

In the neo-Davidsonian approach, BELx,t,w in C would contribute regular at-issue meaning in unembedded and embedded positions.

In summary, next to the motivation in the literature for treating declaratives – in German V2-clauses – as hosting assertion- or belief-related modality in their left periphery, we have reviewed indirect support for such an analysis. A promising approach to the restrictions on embedded V2 invokes a meaning component “x believes p” that is generated if the V2-order of the embedded V2-clause is correlated with such a semantic belief-component. This meaning component seems to play a role in capturing the restriction on embedded V2: The meaning of the entire clause must have an element that matches “x believes p”.

3 V1-parentheticals and the representation of root clauses

1. 3.1 V1-parentheticals as a root phenomenon

One of the root transformations of Hooper and Thompson (1973) was *complement preposing*, a transformation deriving parentheticals like *I think* in (21). They may follow the host clause, as in this example, or stand inside of it.

(21) The captain is our best player, *I think*.

Non-restrictive relatives as in (22a) are not genuinely embedded; they are root clauses and can be host clauses for such parentheticals. Restrictive relatives as in (22b) are not root clauses and cannot host a parenthetical like *I think*. The judgments in (22) and (23) are from Hooper and Thompson (1973).

(22) 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. (\* for the restrictive reading)

Hooper and Thompson (1973) also distinguished restrictive vs. non-restrictive adverbial clauses. We here adopt the terms central vs. peripheral adverbial clauses for these from Liliane Haegeman's work (Haegeman 2003, 2004a,b). Peripheral adverbial clauses as in (23a) are not genuinely embedded; they are root clauses and can host parentheticals like *I am afraid*. Central adverbial clauses as in (23b) are not root clauses and cannot host a parenthetical like *I guess*.

(23) 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) made the related observation that German V1-parentheticals are root phenomena, i.e. V1-parentheticals must have a host clause that is a root clause. His examples for a relative clause contrast are shown in (24). The appositive relative clause in (24a) is a root clause and can host the V1-parenthetical *glaube ich*. On the other hand, the relative clause in (24b) is forced to be restrictive within the quantified object. It is not a root clause. Correspondingly, it cannot be the host clause of the V1-parenthetical *glaube ich*.

(24) a. Hans beweist ein Theorem, [das, glaube ich, Martin aufgestellt

Hans proves a theorem that believe I Martin postulate

hat].

has

‘Hans is proving a theorem, which, I believe, Martin postulated.’

b. \*Hans beweist kein Theorem, [das, glaube ich, Martin

Hans proves no theorem that believe I Martin

aufgestellt hat].

postulated has

‘Hans is proving no theorem that, I believe, Martin postulated.’

We show Steinbach's argument for adjunct clauses with our examples in (25). The meaning of the *weil*-clause in (25a) allows a reading in which it scopes over the negation. The *weil*-clause can here be a root clause (dependent but not properly embedded), and host the V1-parenthetical *glaube ich*. On the other hand, the *weil*- and *sondern*-clauses in (25b) only make sense if the *weil*-clause is taken to be in the scope of the underlined negation. In this structure, the *weil*-clause cannot be a root clause. Not being a root clause, the *weil*-clause cannot be the host clause of the V1-parenthetical *glaube ich* in (25b).

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

Hans has the mixture not drunk since he it believe

*ich*) nicht bekommen hat].

I 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*

Hans has the mixture not drunk because it believe

*ich*) gut schmeckt], sondern weil sie gesund ist.

I good tastes but because it healthy is

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

1. 3.2 The representation of root clauses

Haegeman (2003, 2004a,b) employed the split-CP analysis of Rizzi (1997) in (26a). She argued that the presence of the Force projection is specific to root clauses. Haegeman (2004a,b) suggested that root clauses involve speaker-anchoring in Force, as in (26b).

(26) a. Rizzi (1997): Force > (Top\*) > (Foc) > (Top\*) > Fin

(brackets: optional; \*: iterable)

b. Haegeman (2004a,b): Root clauses involve speaker-anchoring in Force.

What is the content of this anchoring? According to Stowell (2005), appositive relatives are a separate assertion. Similarly, Reis (2006) takes appositive relatives and peripheral adverbial clauses to have assertional force. Potts (2005) defined a class of supplements that includes appositions, appositive relatives and parentheticals. Potts attributed the content of the supplements to the speaker. Later, Harris and Potts (2009) argued that (a) supplements involve a commitment and (b) this commitment, while often being the speaker's commitment, need not be a commitment of the speaker of the utterance. We think that at least the finite supplements are a subset of root clauses. For example, parentheticals of different kinds are also root clauses in the sense that they can themselves host the parentheticals that test for root clauses:

(27) a. Maria kommt nach Saarbrücken, wie du, glaube ich, weißt.

Maria comes to Saarbrücken as you believe I know

‘Maria is coming to Saarbrücken, as you, I think, know.’

b. Maria kommt nach Saarbrücken, sagte Saskia, glaube ich.

Maria comes to Saarbrücken said Saskia believe I

‘Maria is coming to Saarbrücken, Saskia said, I think.’

We thus see a common element between the assertive potential of declaratives and the commitments that Harris and Potts (2009) attribute to appositions and appositives. For the clausal constituents, we analyze this as an extension of Haegeman's speaker-anchoring of root clauses in Force, in the form BELx,t,w (or WANTx,t,w):

(28) Root clauses, unlike non-root clauses, have BELx,t,w (or WANTx,t,w) in Force.

In the case of the appositives, peripheral adverbial clauses, and parentheticals discussed in this section, their content is presented as being believed by the speaker. Under appropriate circumstances, however, this may shift to another person, see Harris and Potts (2009).[[8]](#footnote-8)

We are aware that regular assertions and supplements differ in how they contribute to the question under discussion. We put this issue aside here. We think it may be orthogonal to our suggestions.

1. 3.3 V1-parentheticals and the representation of root clauses

Root phenomena, then, should be phenomena whose presence depends on this doxastic (or bouletic) anchoring in root clauses in either their syntax or their semantics. For English parentheticals like *I think* (and, by extension, German V1-parentheticals), we can turn to Bolinger (1968) for a sketch of the relevant relation. Bolinger (1968) discussed parentheticals as "postposed main phrases (PMPs)". As in the account of Ross (1973) in terms of Slifting (S-lifting), and the account of Hooper and Thompson (1973) in terms of complement preposing, Bolinger’s idea was that the parenthetical *I believe* in (29b) is derived from the main clause *I believe* in (29a).[[9]](#footnote-9)

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

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

Bolinger was interested in the range of predicates allowing this change. He noted that predicates of doubting and denying cannot undergo it:

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

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

This is similarly true for the German translations:

(31) a. Ich bezweifle, dass es relevant ist.

b. \*Es ist relevant, bezweifle ich.

Furthermore, what Bolinger called "predicates of causing" (p. 5) do not allow this change:

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

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

We find this similarly under German *wollen* ‘want’:

(33) a. Ich will, dass das aufhört.

I want that this prt.stops

'I want this to stop.'

b. \*Das hört auf, will ich.

this stops prt want I

Bolinger arrives at the suggestion of characterizing the verbs that allow these 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 [parentheticals, F.S./H.T.] 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)

We represent this idea graphically in (34). Bolinger's idea is that the parenthetical *I guess* is a modification of the silent declarative component *I represent that*, as shown.

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

This correctly rules out doubting and denying, since they are not modulations of representing (here: of asserting or believing). It also correctly rules out the “predicates of causing”, since they are also not modulations of representing.

In German, Reis (1997) commented on a parallel between the verbs embedding V2-clause complements and verbs occurring in V1-parentheticals. Such a parallel is also suggested by the examples in (29) – (33).[[10]](#footnote-10) A known systematic exception to the parallel are the cases mentioned in footnote 6. Putting these aside as not belief-related, let us tentatively assume that the relevant predicates are the same. That means that the predicates that satisfy the strict condition on V2-embedding in (16) in terms of "x believes p" are also the ones that occur in V1-parentheticals.

Our tentative analysis of V1-parentheticals is illustrated in (35). The host-clause must be a root clause, i.e. carry BELx,t,w (or VOLx,t,w), as in (35a). Let us now assume that the host clause is reconstructed into the parenthetical as in (35b). This corresponds to the path of movement of the host clause out of the parenthetical in early analyses of such parentheticals (Bolinger 1968, Ross 1973, Hooper and Thompson 1973). Importantly, we suggest that the root-clause-defining element BELx,t,w is included in this reconstruction, as shown. (If you want, a German V2-clause is reconstructed there in its entirety.) Now the reconstructed BELx,t,w is subject to the same licensing conditions here that it was subject to in in embedded V2-clauses: It will require of the regular meaning that it provides a meaning component "x believes p", where p is the proposition of the embedded clause. (35c) illustrates how this is satisfied in the example at hand. We decompose guessing as tentatively believing. The *believe*-component of *guess* now satisfies the "x believes p"-restriction of the reconstructed ~~BEL~~~~s,t,w~~. With the presupposition of the reconstructed ~~BEL~~~~x,t,w~~ thus satisfied, ~~BEL~~~~x,t,w~~ doesn't contribute meaning any more. The parenthetical thus has the meaning ‘I guess it's all right’.

(35) a. BELx,t,w It's all right, I guess.

b. BELx,t,w It's all right, I guess ~~BEL~~~~x,t,w~~ ~~It's all right~~

c. BELx,t,w It's all right, I tentatively *believe* ~~BEL~~~~x,t,w~~ ~~It's all right~~

"I guess"

This account provides an approach to the restriction on verbs that can occur in V1-parentheticals. In doing so, it implements the idea of Bolinger (1968) that we illustrated in (34). Thus, the satisfaction of the presupposition of *~~BEL~~~~x,t,w~~* by *believe* in (35c) semantically identifies these two. The verb *guess* augments *believe* by *tentatively*. Since *believe* is identified with ~~BEL~~~~x,t,w~~, which is a copy of BELx,t,w, the addition of *tentatively* in the parenthetical verb is semantically as though it was an addition to the host-clause specification BELx,t,w. This corresponds to the arrow in (34) and to Bolinger's idea that the parenthetical modulates the speech-act representation of its host clause. The central new element of this account is highlighted in (36).

(36) V1-parentheticals require the reconstruction of CP\* into the parenthetical, where CP\* is a clause with BELx,t,w/WANTx,t,w in Force.

This account does not really answer the question why V1-parentheticals require root clause hosts. However, it gives this question a new form, namely why (36) holds. We leave this issue open here.

1. 3.4 Some formal aspects of the representation of root clauses in C

We now turn to some aspects of the representation of root clauses in C (Force). Following Borer (1984) and Chomsky (2000, 2001), we assume that morphologically driven overt movement is triggered by an abstract functional lexical entry related to the target position of movement. We also adopt the following assumptions from Chomsky (2000, 2001, 2008). An agree relation is a prerequisite for movement. In the agree relation a higher *probe* (here the abstract complementizer) searches a lower *goal* to agree with (here the finite forms of imperative, indicative, and Konjunktiv). If the probe has an additional property, which we here simply designate "§", agree is accompanied by overt movement.

For the target C of movement from V to C, we thus assume an abstract lexical entry of category C, an abstract entry here written [BEL/WANT, §]. This encompasses the §-property of triggering overt movement, and, crucially, this abstract lexical entry contains BEL or WANT. This is shown in (37) before overt movement of the finite verb.

(37) C Maria nach Saarbrücken kommt

| Maria to Saarbrücken comes

[BEL/WANT, §]

We return to the issue of how BEL/WANT enter into an agree relation with finite verbal mood in section 5.

For the German V-final root clauses (appositive relatives and peripheral adverbial clauses), we hypothesize that BEL/WANT (but not "§") can be part of other lexical entries of complementizers, where they represent that a V-final clause is a root clause. For the purpose at hand, the schematic idea in (38a) will suffice: BEL/WANT can be added to the lexical entries of category C under certain conditions. Examples are schematically shown in (38b,c). See the discussion of (75b) below for the inclusion of the WANT-option in the relative clause, which we assume is not compatible with the lexical complementizer in (38b).

(38) a. If [X] is a lexical entry of category C, and if certain other conditions are met, then [X, BEL/WANT] is also a lexical entry of category C.

b. [*da*] ‘because’ and [*da*, BEL] are lexical entries of category C.

c. [REL] and [REL, BEL/WANT] are abstract lexical entries of category C, heading, respectively, restrictive and appositive relative clauses.

We obtain a coherent representation of root clauses: Their C-head (or Force-head) contains [BEL/WANT], either as part of the special lexical entry in (37), or by the lexical rule in (38a).

We are not currently sure about the restrictions on (38a). For example, we might postulate that certain complementizers (with certain modal meanings in the case of adverbial clauses and relative clauses) allow this, while other complementizers, e.g. those with temporal meaning, do not allow it. We return to this briefly in section 6.

However, we point out that the current account leads to a sensible understanding of why complement clauses can be embedded root clauses, while various other embedded clause types cannot be embedded root clauses. This now grows out of the requirements of [BEL/WANT]. For one thing, [BEL/WANT] are compatible with the CP being a separate speech-act, to which the meaning of [BEL/WANT] contributes. This occurs with V1-imperatives, V2-declaratives, appositive relatives, and peripheral adverbial clauses, among others. On the other hand, [BEL/WANT] can occur on genuinely embedded clauses, so long as the requirement (16) is fulfilled. We hypothesize that there are independent reasons having to do with linking lexical meaning to phrase structure (see e.g. Dowty 1989), which have the effect in (39):

(39) Hypothesis: For reasons of linking lexical meaning and argument structure to syntactic positions, a meaning component ‘x believes p’, where p is the meaning of an overt clause, occurs only in lexical entries to which the clause is a complement; it does not arise where the clause is a thematic subject or an adjunct.

Let p be the meaning of an overt clause. If the clause is to be an embedded root clause, (16) requires that it is embedded in a meaning component ‘x believes p’. If (39) is right, this may arise for thematic object clauses of verbs or nouns. These can therefore be embedded root clauses, allowed by (16). However, where p is a central adverbial clause, a restrictive relative clauses, or a clause linked to a thematic subject position, it will, by (39), not be embedded semantically in an independently present meaning component ‘x believes p’. Consequently, the latter clause types will not be allowed to be embedded root clauses by (16). This is the desired result.

4 Verbal mood, V2, and root phenomena

We now show that WANTx,t,w and BELx,t,w receive further support insofar as they are useful elements in an analysis of the German verbal mood system and its interaction with V-to-C movement.

1. 4.1 The larger picture: How verbal mood fits in

In the following, we are concerned with verbal mood phenomena related to (2a,b). For these, there are reasons to believe that the verbal mood in V-final clauses is not controlled by the properties of its local complementizer-position C. Unlike in French (Hawkins and Towell 1996), individual complementizers (*dass* ‘that’, *weil* ‘because’etc.) do not select for a specific verbal mood in German (indicative, Konjunktiv I, Konjunktiv II). Furthermore we will argue below that Konjunktiv in such clauses is licensed in situ at a distance from outside of the clause.

There are also reasons to believe that verbal mood, when moving to C, is controlled by the properties of C. Thus, imperative morphology, which moves to C, is dependent on WANTx,t,w in C and on x, t, and w being the origo-parameters. We will also argue below that indicative verbal mood, when moved to C, shows a close connection to BELx,t,w in C, where x, t, and w are again the origo-parameters.

We pursue an account along the lines of Brandt et al. (1992):18 whereby verbal mood is controlled by semantically interpreted features in the C-domain, which also relate to overt movement of the verb to C.[[11]](#footnote-11) This further follows Grosz (2012). Grosz assumes a projection of Mood and a separate C-projection. In the domain of optatives he discusses (see section 6.3), Grosz argues that there is a connection between the two that relates to V-to-C movement: Mood can transfer features to C that attract V-to-C movement. Our account is also close in spirit to that of Lohnstein (2000), who viewed the CP as a projection of verbal mood, and to that of Lohnstein (to appear), who sees finiteness and V-to-C in connection with anchoring the proposition to the discourse situation.

For the analysis of verbal mood, we add the feature [origo] to WANTx,t,w and BELx,t,w. For example, WANTx,t,w[+origo] is WANTx,t,w with the restriction that x is the speaker, t the utterance-time and w the world of the utterance. This is more generally sketched in (40).

(40) a. [**+origo**] on BELx,t,w or WANTx,t,w requires that <x,t,w> is the origo.

b. [**-origo**] on BELx,t,w or WANTx,t,w requires that <x,t,w> is different from the origo.

With this, we think that the following holds for clauses with the finite verb in C: The contributions of the verbal moods imperative, indicative, Konjunktiv I, as well as the reportative use of Konjunktiv II, can be captured in terms of the distinction between WANT or BEL and a distinction in terms of [origo], i.e. the specifications we claim are present in the C-position of V-in-C clauses. The correlations are shown in (41).[[12]](#footnote-12)

(41) Feature specifications in C with verbal mood in C

a. imperative: WANTx,t,w[+origo]

b. indicative: BELx,t,w[+origo] ([+origo] is preliminary; see below)

c. Konjunktiv I: BELx,t,w[-origo] (reportative) or WANTx,t,w (request)

d. Konjunktiv II: BELx,t,w[-origo] (reportative) or irrealis (not covered   
 here[[13]](#footnote-13))

Thus, the imperative is requesting and tied to an actual request by the speaker (Kaufmann 2012). The indicative in a regular declarative is a speaker assertion. We return below to how well this specification generalizes. The classification of the two Konjunktivs here follows Fabricius-Hansen (2016). Konjunktiv I and II share the reportative option, here analyzed in terms of BELx,t,w[-origo]. Konjunktiv I has, in addition, requesting uses, here captured in terms of WANTx,t,w. Konjunktiv II has an additional use as irrealis, which is not analyzed in the current account.

The distinction between WANT and BEL is broadly related to the feature [±IMP] of Altmann (1993). He employed [±IMP] to separate imperative verbal mood from indicative and Konjunktiv I,II. (In addition, he employed [±IND] to separate indicative from Konjunktiv I and II.) However, we also follow Brandt et al. (1992) in assuming that the features in the left periphery that control verbal mood are somewhat more abstract than the surface morphology, and that they are semantically interpreted. Thus, our semantically interpreted WANTx,t,w includes not only the imperative, but also forms of Konjunktiv I that share the bouletic/preferential meaning of the imperative (in German, “heischender” Konjunktiv I and “Adhortativ”). See Sode (2014) for detailed discussion. Also, our BELx,t,w will have a meaning in terms of belief, and both WANTx,t,w and BELx,t,w are specified for the semantically interpreted feature [origo]. A formal semantic interpretation will be given in section 5.

Before that, the following sections will address the licensing of reportative Konjunktiv and the semantic effect of indicative in German in interaction with V-to-C movement.

1. 4.2 The licensing of reportative Konjunktiv I and II

Konjunktiv I is morphologically built from the infinitive stem (for the verb ‘come’, infinitive *komm-en*, Konjunktiv I *komm-e*). An analytic form of Konjunktiv II is morphologically built from the past-tense stem (again for the verb ‘come’, past *kam* ‘came’, Konjunktiv II *käm-e* ‘would come’). An additional synthetic Konjunktiv II form that shares the two uses in (41d) is built with *würde* ‘would’ and a dependent infinitive (*würde kommen* ‘would come’).

Earlier suggestions about the use of Konjunktiv I or about the reportative use of the Konjunktiv I and II forms are found in Jäger (1970), Lohnstein (2000), Fabricius-Hansen and Sæbø (2004), Potts (2005), and Schlenker (2003), among others. See Sode (2014) for detailed discussion of these suggestions. Here we confine ourselves to briefly highlighting two results of Sode’s (2014) study, which we present in slightly simplified form.

First, the reportative use of Konjunktiv I/II is licensed by a c-commanding element whose meaning includes a belief-related interpretation that is anchored to x at t in w (here: BELx,t,w). Second, this licensing element must be anchored to something other than the origo. More formally, the analysis involves an uninterpreted [-origo] feature on verbs with reportative Konjunktiv I or II, which is licensed by an interpreted specification BELx,t,w[-origo] under c-command.

(42) After Sode (2014): Verbs carrying reportative Konjunktiv I/II carry an   
uninterpreted [-origo] feature that is licensed under c-command by a   
[-origo] feature interpreted on BELx,t,w[-origo].

Consider the complement clauses in (43) – (45). The root-clause-embedding predicates in (43) allow the embedded Konjunktiv I, as do the predicates in (44), which do not embed root clauses (do not have a meaning component “x believes p”, for embedded clause meaning p). However, the predicates in (44) plausibly have a belief component, and this seems to be enough to license the embedded Konjunktiv. The matrix predicates in (45), without a belief component, do not license the embedded Konjunktiv.

(43) a. Saskia glaubt, dass Maria nach Saarbrücken **komme**.

Saskia believes that Maria to Saarbrücken come.KonjI

b. Saskia sagt, dass Maria nach Saarbrücken **komme**.

says

c. Saskia träumt, dass Maria nach Saarbrücken **komme**.

dreams

‘Saskia believes/says/is dreaming that Maria is coming to Saarbrücken.’

(44) a. Saskia leugnet, dass Maria nach Saarbrücken **komme**.

denies

‘Sasika denies that Maria is coming to Saarbrücken.’

b. ?Saskia will, dass Maria nach Saarbrücken **komme**.

wants

‘Saskia wants Maria to come to Saarbrücken.’

(45) a. \*Saskia führt herbei, dass Maria nach Saarbrücken **komme**.

brings about

‘Saskia is bringing about that Maria is coming to Saarbrücken.’

b. \*Es ist möglich, dass Maria nach Saarbrücken **komme**.

it is possible

‘It is possible that Maria is coming to Saarbrücken.’

One is led to postulate that verbs with a belief component, i.e. both those in (43) and those in (44), have this belief component represented in the form of BELx,t,w[-origo] for licensing the embedded Konjunktiv. On that assumption (42) accounts for the difference between (43)/(44) and (45), as shown in (46).

(46) a. Saskia sagt**[BEL,Saskia,t,w][-origo]**, dass Maria nach S. **komme[-origo]**.

Saskia says that Maria to S. come.KonjI

b. Saskia leugnet**[BEL,Saskia,t,w][-origo]**, dass M. nach S. **komme[-origo]**.

Saskia denies that M. to S. come.KonjI

c. \*Es ist möglich, dass Maria nach Saarbrücken **komme[-origo]**.

it is possible that Maria to Saarbrücken come.KonjI

Thus, verbs with “x believes p” (for embedded clause meaning p) embed root clauses including V2-clauses by (16), and verbs with any belief component BELx,t,w[-origo] scoping over p license embedded Konjunktiv under c-command by (42).

Striking support for the c-command condition is that Konjunktiv is not just licensed in the clause immediately below the licensing verbs. Instead, all verbs in embedded V-final clauses in the scope of a Konjunktiv-licensing element can be in the Konjunktiv, as predicted by (42). Thus, the examples in (47) are similar to those in (45), with an added matrix clause on top. This matrix clause licenses Konjunktiv on both the second and the third verb of the complex sentence, as shown.

(47) a. Peter sagt**[BEL][-o]**, dass Saskia **herbeiführe[-o]**, dass Maria

Peter says that Saskia brings.about.KonjI that Maria

nach Saarbrücken **komme[-o]**.

to Saarbrücken come.KonjI

‘Peter says that Saskia is bringing about that Maria is coming to Saarbrücken.’

b. Peter sagt**[BEL][-o]**, dass es möglich **sei[-o]**, dass Maria nach

Peter says that it possible be.KonjI that Maria to

Saarbrücken **komme[-o]**.

Saarbrücken come.KonjI

‘Peter says that it is possible that Maria is coming to Saarbrücken.’

The restriction to non-origo uses was observed by Schlenker (2003), on whose work Sode (2014) builds. Thus, an embedding under a declaration of the speaker's actual current beliefs as in (48a) is an embedding under a [+origo] belief, which does not license Konjunktiv, as shown. However, if the time is shifted away from the origo to the past, as in (48b), if the world is shifted away from the origo as in (48c), or if the individual is a different one, as in (48d), the specification is [-origo] and an embedded Konjunktiv is allowed.

(48) a. \*Ich glaube**[BEL][+o]**, dass Maria nach Saarbrücken **komme[-o]**.

I believe that Maria to Saarbrücken come.KonjI

‘I believe that Maria is coming to Saarbrücken.’

b. Ich glaubte**[BEL][-o]** damals, dass Maria nach S. **komme[-o]**.

I believed then that Maria to S. come.KonjI

‘I believed at the time that Maria was coming to S..’

c. Wenn jemand fragt, sage**[BEL][-o]** ich, dass Maria nach

if someone asks say I that Maria to

Saarbrücken **komme[-o]**.

Saarbrücken come.KonjI

‘If someone asks, I will say that Maria is coming to Saarbrücken.’

d. Saskia glaubt**[BEL][-o]**, dass Maria nach Saarbrücken **komme[-o]**.

Saskia believes that Maria to Saarbrücken come.KonjI

‘Saskia believes that Maria is coming to Saarbrücken.’

The reader is referred to Sode (2014) for an account without a simplification we have made, for more details of the account and more detailed arguments in its favour.[[14]](#footnote-14) Of particular interest to the current paper are the following points. First, the c-command condition provides a further reason for maintaining that doxastic attitude components are represented in the syntax, for only then can they enter into a syntactic c-command relation. We have seen that the Konjunktiv provides reasons to think that this doxastic attitude component is also represented on verbs that have corresponding belief-components. Second, the licensing conditions for Konjunktiv support the presence of a feature [-origo] and thus more generally the existence of a feature [origo]. Third, the licensing of [-origo] from outside of the clause, in the V-final clauses considered so far, gives substance to the claim that verbal mood in V-final clauses is not dependent on its local C-position. The reportative Konjunktiv in a V-final clause can instead be licensed from outside of the V-final clause.

Let us also briefly consider how the account applies to Konjunktiv in V2-clauses. It occurs both in embedded V2-clauses as in (49) and in unembedded V2-clauses as in (50).

(49) Saskia sagte, *Maria* ***komme*** *nach Saarbrücken*.

Saskia said Maria come.KonjI to Saarbrücken

‘Saskia said Maria is coming to Saarbrücken.’

(50) [Saskia sagte, dass jetzt alles gut werde.]

Saskia said that now everything good become.KonjI

*Maria* ***komme*** *nach Saarbrücken*.

Maria come.KonjI to Saarbrücken

‘Saskia said that everything will be fine now. Saskia said that Maria is coming to Saarbrücken.’

The representation before movement is as in (51). The movement-attracting abstract complementizer contains BELx,t,w[-origo], which licenses the [-origo] feature of the reportative Konjunktiv.

(51) C**[BEL,-origo]** Maria nach Saarbrücken **komme[-origo]**

Maria to Saarbrücken come.KonjI

In an indicative assertion, BELx,t,w[+origo] encodes a belief by the speaker. In the Konjunktiv case in (51), BELx,t,w[-origo] correctly encodes a belief with a different anchor. In (49) and (50), this is a belief that Saskia has expressed.

1. 4.3 Indicative and V-to-C movement

In German V-final clauses, the indicative seems to be unrestricted. It occurs in adjunct clauses, subject clauses and object clauses of any kind. The examples in (52) – (54) show it in object clauses under the predicates discussed here.

(52) a. Saskia glaubt, dass Maria nach Saarbrücken **kommt**.

Saskia believes that Maria to Saarbrücken come.ind

b. Saskia sagt, dass Maria nach Saarbrücken **kommt**.

says

c. Saskia träumt, dass Maria nach Saarbrücken **kommt**.

dreams

‘Saskia believes/says/is dreaming that Maria is coming to Saarbrücken.’

(53) a. Saskia leugnet, dass Maria nach Saarbrücken **kommt**.

denies

‘Saskia denies that Maria is coming to Saarbrücken.’

b. Saskia will, dass Maria nach Saarbrücken **kommt**.

wants

‘Saskia wants Maria to come to Saarbrücken.’

(54) a. Saskia führt herbei, dass Maria nach Saarbrücken **kommt**.

brings about

‘Saskia is bringing about that Maria is coming to Saarbrücken.’

b. Es ist möglich, dass Maria nach Saarbrücken **kommt**.

it is possible

‘It is possible that Maria is coming to Saarbrücken.’

The examples in (55) show in addition that neither reality nor anyone's beliefs need to be connected to a clause in the indicative.

(55) a. Es ist unmöglich/ausgeschlossen, dass Maria nach S. **kommt**.

it is impossible/excluded

‘It is impossible/excluded that Maria is coming to Saarbrücken.’

b. Niemand glaubt, dass Maria nach Saarbrücken **kommt**.

noone believes

‘Nobody believes that Maria is coming to Saarbrücken.’

This is quite different from the indicative when it occurs in a V2-clause. Various considerations suggest that indicative in V2-clauses is connected to [+origo], i.e. to a speaker commitment. To begin with, an ordinary assertion in V2 form as in (56) is the expression of a [+origo]-belief, i.e. an expression of what the speaker believes at the speech time in the world of the utterance.

(56) Maria **kommt** nach Saarbrücken.

Maria comes.ind to Saarbrücken

‘Maria is coming to Saarbrücken.’

Further, when the belief is attributed to another person by reportative Konjunktiv, the return to indicative normally marks an obligatory return to the speaker's perspective, as in the following example.

(57) Peter sagte, dass Maria schön **sei**.

Peter said that Maria beautiful is.KonjI

Sie **habe** grüne Augen. Ihre Mutter **ist** auch schön.

she has.KonjI green eyes her mother is.ind also beautiful

↓ ↓

Peter speaker

‘Peter said that Maria is beautiful. (He said) she has green eyes. Her mother is also beautiful.’

In addition, we have found a range of cases, partly inspired by the discussion of complementizer-less clauses in English by Boskovic (1997) and Boskovic and Lasnik (2003) (though they do not make origo-related observations), in which V2 with indicative requires a relation to the origo. For example, it seems that (58a) is deviant because the indicative in the bracketed V2-clause requires a [+origo] interpretation. The alternatives with V2 and [-origo] subjunctive in (58b) and with a V-final clause with indicative in (58c) are possible.

(58) a. ??Was Saskia glaubt, ist, [Maria **ist** in Saarbrücken].

what Saskia believes is Maria be.ind in Saarbrücken

b. Was Saskia glaubt, ist, [Maria **sei** in Saarbrücken].

what Saskia believes is Maria be.KonjI in Saarbrücken

c. Was Saskia glaubt, ist, [dass Maria in Saarbrücken **ist**].

what Saskia believes is that Maria in Saarbrücken be.ind

‘What Saskia believes is that Maria is in Saarbrücken.’

The indicative in the V2-clause becomes acceptable when the matrix clause is made compatible with a [+origo] interpretation of the embedded clause:

(59) Was ich glaube, ist, [Maria **ist** in Saarbrücken].

what I believe is Maria be.ind in Saarbrücken

‘What I believe is that Maria is in Saarbrücken.’

Shifting away from [+origo] with a matrix clause in the past makes the sentence degraded again:

(60) Was ich damals glaubte, ist/war, [M ??**ist/\*war** in S.]

what I then believed is/was M is.ind.pres/past in S.

‘What I believed at the time is/was that M. is/was in S.’

Related paradigms are shown in (61) and (62). The contrast in (61a,b) between V2 with indicative vs. subjunctive in the presence of a pronominal correlate (italicized) is from Schwabe (2013).

(61) Peter hat sich *damit* herausgeredet, ...

Peter has himself therewith talked.his.way.out.of.it

a. \*... er **hat** das nicht gewusst.

he has.ind that not known

b. ... er **habe** das nicht gewusst.

he has.KonjI that not known

c. ... dass er das nicht gewusst **hatIND**.

that he that not known has.ind

‘Peter talked his way out of it by saying he did not know that.’

(62) a. ??Der Maria scheint, [Peter **ist** in Saarbrücken].

the Maria seems Peter be.ind in Saarbrücken

‘It seems to Maria that Peter is in Saarbrücken.’

b. ??Mir schien damals, [Peter **ist/war** in S.].

me seemed then Peter be.ind.pres/past in S.

‘It seemed to me then that Peter is/was in Saarbrücken.’

c. Mir scheint, [Peter **ist** in Saarbrücken].

me seems Peter is.ind in Saarbrücken

‘It seems to me that Peter is in Saarbrücken.’

These distinctions suggest that indicative in C has a [+origo] interpretation. A further case involves clausal complements of nouns. Here, too, the indicative in C is not possible in the absence of an origo-related reading (see Reis 1997 on the Konjunktiv version of nominal V2-complements.)

(63) a. die Behauptung, [Maria **sei** in Saarbrücken]

the claim Maria be.KonjI in Saarbrücken

b. die Behauptung, [dass Maria in Saarbrücken **ist**]

the claim that Maria in Saarbrücken be.ind

c. \*die Behauptung, [Maria **ist** in Saarbrücken]

the claim Maria be.ind in Saarbrücken

‘the claim that Maria is in Saarbrücken’

The observations about the indicative up to here could be accounted for in parallel to the account of reportative Konjunktiv. Thus, the indicative would be specified [+origo] and licensed by a c-commanding element BELx,t,w[+origo]. Where the indicative occurs in V-final clauses, it could be licensed under c-command at a distance, from the occurrence of BELx,t,w[+origo] at the top of an assertion:

(64) Es C**[BEL,+origo]**-ist ausgeschlossen, dass es morgen **regnet[+origo]**.

it is.ind impossible that it tomorrow rains.ind

‘It is impossible that it will rain tomorrow.’

Consider, on the other hand, the case in which the indicative moves to C in (65). Here the indicative needs to be in an agree relation with the C to which it moves. This forces the [+origo] of the indicative to be shared with the origo specification in C, where it is semantically interpreted on BELx,t,w.

(65) C**[BEL,+origo]** Maria in Saarbrücken **ist[+origo]**

Maria in Saarbrücken be.ind

These assumptions can derive the origo effects of the indicative that we discussed up to here.

However, there are non-trivial obstacles to showing that this is really the correct analysis. We are aware of the following issues.

First, in colloquial speech, it is possible to have embedded V2-clauses in the indicative as in (66).

(66) a. Saskia glaubt, [Maria **kommt** nach Saarbrücken].

Saskia believes Maria comes.ind to Saarbrücken

b. Saskia sagt, [Maria **kommt** nach Saarbrücken].

says

c. Saskia träumt, [Maria **kommt** nach Saarbrücken].

dreams

‘Saskia believes/says/is dreaming that Maria is coming to Saarbrücken.’

This exception seems to be very local. It is not allowed in the presence of a correlate in the matrix clause as in (61a) or with the correlate *was* ‘what’ in (58a) and (60). It is not allowed in the presence of a noun as the matrix predicate, as in (63c). It is furthermore not possible in (62a,b) where one might want to say that the matrix verb does not carry a component BELx,t,w but at the same time has a meaning that is close enough for accommodation of the presupposition of BELx,t,w in the embedded clause. This might point to the effect of a local relation, by which the BELx,t,w of a matrix clause verb can locally overwrite the [+origo] specification in the C-position of the embedded clause.

Another problem is that a V1-parenthetical can shift an indicative V2-clause away from its origo reading. Reinhart (1983) distinguished two kinds of English third-person parentheticals: (a) those in which the host clause is presented from the speaker's perspective; these are generally in the indicative in English and German, and in the current account have their regular [+origo] perspective in the host clause; (b) those (in German more typical) cases in which the host clause is presented as being in the perspective of the parenthetical subject, as in (67). These can carry Konjunktiv as in (67a) (in English, *would*), but in both English and German, they can also carry indicative, as in (67b).

(67) a. Sie **komme** nach Saarbrücken, sagt Maria.

she come.KonjI to Saarbrücken, said Maria

‘She would be coming to Saarbrücken, Maria said.’

b. Sie **kommt** nach Saarbrücken, sagt Maria.

she come.ind to Saarbrücken said Maria

‘She is coming to Saarbrücken, Maria said.’

A further challenge for the account that assigns [+origo] to the indicative is that indicative in a V-final clause does not actually require a normal assertion at the top of the utterance, as was the case in (64). Thus, the following are also possible:

(68) a. C-WANT[+o]-bring mir bitte den Stuhl, der dort **steht**.

bring me please the chair which there stands.ind

‘Please bring me the chair that is over there.’

b. [Saskia war unzufrieden.]

‘Saskia was dissatisfied.’

Man C-BEL[-o]-habe ihr versprochen, dass man sie **informiert**.

one has.KonjI her promised that one her inform.ind

‘One had promised that one would inform her, she said.’

We do not think that these are insurmountable obstacles to an account in which the indicative is inherently [+origo]. However, it is clear that such an account would need additional machinery. Thus, it is also very reasonable to pursue an alternative: Perhaps the indicative is not specified for [+origo] inherently, but only by default, in some fashion to be worked out.

In the following section, we offer a more precise formalization of some elements of our programmatic account.

5 Elements of a formal account

1. 5.1 The modal meanings at the syntax-semantics interface

The triple <x,t,w>, the basis for defining the meaning contributions of the bouletic and the doxastic modalities, has a long history in philosophical and linguistic discussions. For example, Kaplan (1989) established a special triple of this kind, here called ‘the origo’, as a reference point in the interpretation of all utterances. Lewis (1986) viewed triples of the kind <x,t,w> as temporal stages of individuals in worlds and construed this as closely related to the doxastic alternatives of x at t in w that can be defined on the basis of <x,t,w>. Schlenker (2003) treats the triple <x,t,w> as corresponding to a syntactic index for local and global contexts, and in addition represents the propositional meaning of the content of attitudes not as sets of possible worlds but as sets of such triples. Much related literature since employs related conceptions.

Similarly, the fundamental concepts of belief and wanting have played an important role in philosophical and linguistic discussions. Belief, for example, plays a central role in the influential discussions of Stalnaker (1988, 2014) and both concepts take center stage in Heim (1992).

An element with the properties required for BELx,t,w was formalized in the analysis of French verbal mood in Schlenker (2005). Schlenker formalized this as a syntactic index that refers to a speech- or thought-event. In this formalization, x, t, w, and the doxastic alternatives are retrieved from the speech- or thought event.

Here we offer the following partial formalization. We adopt from Schlenker (2003) the syntactic representation of a local context <x,t,w> in terms of syntactic context variables ci. Their indices are interpreted by assignments as in (69a). While these subscripted c’s are syntactic variables (and the triples of the form <x,t,w> their semantic values), we retain c (without a subscript) as the context of Kaplan, as in (69b). Thus, c without subscript is not a syntactic variable.

(69) a. For all assignments g and indices i on syntactic variables ci,   
let g(i) ∈ {<x,t,w> | x ∈ De, t ∈ DT, w ∈ DW}.

b. c = <cA, cT, cW>, where cA is the speaker of the utterance, cT the utterance time and cW the world in which the utterance is taking place.

A crucial extension relative to Schlenker's formalization is that we employ these indices as a formal implementation of sentence mood. This includes, drawing on Sode (2014), that we take them to be specified for features. One feature, [pref], marks the addition of an attitudinal WANT or BEL-interpretation, with [+pref] corresponding to WANT, [-pref] corresponding to BEL. The second feature is [origo], already introduced in section 4. We define *dox* and *boul* in (70a). Adapting elements from Sode (2014), we then define the informal WANTx,t,w as ci[+pref] and the informal BELx,t,w as ci[-pref] as in (70b). Further, the contribution of [origo] is defined in (70c). [+origo] on ci requires that the value of ci is identical to Kaplan's utterance context c. [-origo] on ci requires that the value of ci is not identical to c.

(70) a. For all individuals x, times t and worlds w:

let dox(<x,t,w>) be the set of propositions believed by x at t in w, and

let boul(<x,t,w>) be the set of propositions wanted by x at t in w.

b. For all indices i on variables ci, all worlds w, assignments g, and utterance contexts c:

⟦ci[+pref]⟧w,g,c = p. p ∈ boul(g(i)) (informally WANTx,t,w)

⟦ci[-pref]⟧w,g,c = p. p ∈ dox(g(i)) (informally BELx,t,w)

c. For all v ∈ {[+pref], [-pref]}, all indices i on variables ci, all worlds w, assignments g, and utterance contexts c:

⟦ci[v][+origo]⟧w,g,c is defined if g(i) = c;

⟦ci[v][-origo]⟧w,g,c is defined if g(i) ≠ c;

if defined, ⟦ci[v][+/-origo]⟧w,g,c = ⟦ci[v]⟧w,g,c.

In this formalization, the index ci itself is assigned only the meaning of a semantic triple <x,t,w>, which does not automatically combine with the meaning of the remainder of the clause. The combinations ci[+pref] and ci[-pref] have bouletic and doxastic modal meanings that can combine with the remainder of the clause.

The formalization of the two modal meanings as ‘believing’ and ‘wanting’ is schematic in (70), intended to illustrate the architecture of the semantic interpretation and reflecting our preferred views of the approximate meanings. For the imperative, see Kaufmann (2012), Condoravdi and Lauer (2012) and Oikonomou (2016) for detailed discussion.

There are several advantages to formally distinguishing the representation of bouletic modality WANT and the representation of doxastic modality BEL in terms of a feature like [pref]. For the purpose at hand, this leads to a unified lexical entry of BEL and WANT as part of the lexical entry for C that attracts V-to-C-movement. We employ § for the property of the target that requires overt movement in connection with the agree relation.

(71) German lexical entry for the abstract complementizer attracting V-to-C movement in the classes illustrated in (1) and (2):

[C [ci][pref][origo], § ]

We return to the syntax of this in the following section.

We think that there are also additional applications for the disjunction “WANT or BEL”, that ci[pref] provides. For one thing, one may think of the German modals *wollen* ‘want’ and *sollen* ‘be supposed to’ as built from ci[pref]. They can both stand with bare infinitives in German and when they do, they both have a bouletic root reading and a reportative epistemic reading; see Bech (1949, 1951), Öhlschläger (1989), Zaefferer (2001), Sode and Schenner (2013), Matthewson and Truckenbrodt (2017). In ongoing work by the last authors, the current ci[+pref] represents the bouletic root readings of *wollen* and *sollen* and the current ci[-pref] represents the reportative epistemic readings of *wollen* and *sollen*.

Furthermore, Bogal-Allbritten (2016) has shown that Navajo has a flexible attitude verb *nisin* that shows finite inflection and that means ‘want’ or ‘believe’, the choice determined by elements in the clause embedded under it that require one or the other reading. From the perspective developed here, the Navajo verb *nisin* is another instance of a lexical element with the meaning ci[pref].

There is, more generally, a further distinction between beliefs and specifically public beliefs (or expressed beliefs or commitments). The German modals *wollen* and *sollen* in their epistemic reading are clearly reportative, i.e. about public commitments. The Navajo verb *nisin*, as described by Bogal-Albritten, is about beliefs more generally. Declaratives are related to public beliefs by Gunlogson (2003, 2008), Poschmann (2008), and Krifka (2015). For the formalization here, we employ beliefs, noting that this may need to be refined to public beliefs in certain cases, and that there may be an additional feature distinguishing between the two. Similar issues arise for bouletic modality. Thus, Condoravdi and Lauer (2012) suggest a formal analysis of the imperative in terms of public preferences, rather than just preferences. This issue is similarly left open here.

We sketched different accounts of the status of BELx,t,w in C in accounting for embedded V2-clauses, including one in which the contribution of BELx,t,w in C is presupposed as in (17). In (70), the meaning of the index with its features is defined in general terms that supply the at-issue meaning. In case the meaning contribution of BELx,t,w is presupposed in C, this will need to be stated in a rule specific to the C-position:

(72) For all v ∈ {[+pref], [-pref]}, all u ∈ {[+origo], [-origo]}, all indices i on variables ci, all worlds w, assignments g, and utterance contexts c:

⟦ [Force-ci[v][u] FocP] ⟧w,g,c is defined if

⟦ ci[v][u] ⟧w,g,c(⟦FocP⟧w,g,c) = 1.

If defined, ⟦ [Force-ci[v][u] FocP] ⟧w,g,c = ⟦ [Force FocP] ⟧w,g,c.

1. 5.2 Verbal mood and V-to-C movement

We stay close to standard assumptions, e.g. Chomsky (2000, 2001, 2008) and Adger (2003), but we will formulate the relevant elements in a way that is neutral to technicalities concerning valued and unvalued features and other specifics of the agree relation.

We call one of our features interpreted if it occurs on the index ci, where the feature is semantically interpreted by (70). We call it uninterpreted if it does not occur on an index ci, since our two features can only be semantically interpreted in connection with ci by the rules in (70).

All complementizers of root clauses carry ci with the features [pref] and [origo]. This can be the movement-attracting complementizer (71) (which also has the §-property), or it can be the specification added to existing complementizers by the rule in (38a) (which does not add the §-property).

The features on the verbal mood inflection on finite verbs are given in (73). They are uninterpreted, because there is, by assumption, no ci index on the lexical entries of verbal mood. Their values correlate with the choice of verbal mood as shown.

(73) a. finite imperative morphology: [+pref][+origo]

b. indicative morphology: [-pref][+origo]

c. Konjunktiv I morphology: any specification except [-pref][+origo]

d. Konjunktiv II morphology (reportative use): [-pref][-origo]

(irrealis use not formalized here)

The features are thus semantically interpreted in C on the index ci, but they are morphologially correlated with the verbal mood forms of the finite verb.

Consider then (74), where an agree relation between C and verbal inflection makes sure that the features match in values. After the agree relation, the features are semantically interpreted on ci in C. They are not semantically interpreted on the finite verb; however, they are correlated with the choice of verbal mood indicative of the finite verb. Since C has the §-property, the finite verb is also moved to C in this case.

(74) a. Die Sonne hat geschienen.

the sun has.ind shone

‘The sun shone.’

b. [C ci[**-pref**][**+origo**], §] die Sonne geschienen hat[-pref][+origo]

the sun shone has.ind

The licensing of Konjunktiv at a distance in (47) testifies to the nature of this agree relation as independent of V-to-C movement. The formal properties remain to be investigated further (see Sode (2014) for a proposal).

The account predicts that in appositive relatives and peripheral adverbial clauses, the features on [ci] in C can separately agree with, and thus control, the verbal mood of the clause. Following up on the discussion in Sode (2014), we think that this is correct. (75a) shows a reportative peripheral adverbial clause attached to a non-reportative main clause. (75b) shows an imperative-like use of an appositive relative clause with Konjunktiv I, which allows for imperative-related modality also in V2-clauses. We include the feature of the V-final root clauses that seem to control the verbal mood in their clause.

(75) a. [We collected evidence and also interrogated various people.]

Peter ist nicht am Tatort gewesen, obwohl–ci[-p,-o]

Peter is not at.the crime.scene been.ind although

er angekündigt habe[-p,-o], dorthin zu kommen.

he announced have.konjI there to come.

‘Peter was not at the scene of the crime, although he was said to have announced that he would come there.’

b. Dieser Schuft, der ci[+p,+o] verflucht sei[+p,+o],

this scoundrel who cursed be.konjI

hat mein Geld gestohlen.

has.ind my money stolen

‘This scoundrel, whom I hereby curse, stole my money.’

We note, finally, that it is important that the indices and features are associated with morphemes, rather than words. The index ci and its interpreted features are properties of lexical C-heads and of belief-related verb stems. The uninterpreted features for verbal mood forms, on the other hand, are associated with the verbal mood suffixes. Multiple features on the same word, but on different morphemes, can have conflicting specifications. An example of this is given in (76). The feature [pref] is here omitted for reasons of simplicity.

(76) Maria [C sag**ci[-o]**-t**[+o]**-ci[+o]] dass Peter nach S. komme**[-o]**.

Maria say-past that Peter to S. come.KonjI

‘Maria said that Peter is coming to Saarbrücken.’

The matrix C carries ci[+origo], agreeing with the indicative suffix of the finite matrix verb, which thus marks the speaker assertion. At the same time, the stem of the matrix verb contains a belief component related to Maria's beliefs, and so carries ci[-origo], which agrees with [-origo] on the embedded Konjunktiv I. The stem and suffix of the matrix verb have conflicting specifications for [origo]. This must be allowed.

6 V-final clauses as independent utterances

In this section we comment on an additional clause type, in the context of the current volume: V-final clauses that are used as utterances of their own. We introduce them in section 6.1. In section 6.2, we review an argument from Truckenbrodt (2013) for an independent restriction on their meaning. In section 6.3, we review elements of the relevant analysis of Grosz (2012). In section 6.4 we lay out new issues that arise in connection with these suggestions and the account in the first part of this paper.

1. 6.1 Introduction to independent V-final clauses

There are four main types of independent V-final clauses in German. They are illustrated in (77). The names we use for them are shown on the right. (77a–c) employ an initial complementizer. (77d) employs an initial wh-phrase. None of them have V-to-C movement. The verb is in clause-final position. The clauses have the typical shape of German embedded clauses, yet they also have uses where they are employed on their own. See Evans (2007) for related cases of such *insubordination* in other languages.

(77) a. Dass sie so schön singen kann! (*dass*-clause)

that she so beautifully sing can

‘I am impressed/amazed that she can sing as beautifully as that.’

b. Wenn ich doch ein Königssohn wäre! (*wenn*-clause)

if I mp a son.of.a.king were

‘I wish I were the son of a king.’

c. Ob ich das schaffe? (*ob*-clause)

whether I that manage

‘I wonder/would like to know whether I can manage that.’

d. Wen sie wohl alles eingeladen hat? (V-final *wh*-clause)

whom she mp all invited has

‘I wonder/would like to know whom she has invited.’

The literature on the German case is largely in agreement that the relevant occurrences are not elliptical (Brugmann 1918:20, Weuster 1983, Reis 1985, Meibauer 1989, Altmann 1987, 1993, Oppenrieder 1989, Truckenbrodt 2006a, 2013, Zimmermann 2013). An elliptical view is defended in Schwabe (2007).

An argument against the elliptical analysis from Truckenbrodt (2013) is reviewed here. We first point out that the speech-act impact of such clauses can typically be paraphrased by a simple matrix clause. For example, the impact of (77c) is along the lines of *‘I would like to know* (or: *I wonder*) whether I can do that.’ In (78), then, the use of such a speech-act paraphrase in (i) is contrasted with the deployment of the V-final clause on its own. (i) is an answer to the preceding question, but (ii) is not. Now, if (ii) were derived from (i) by syntactic deletion, as shown in (iii), we would wrongly expect that they are not only identical in underlying syntax, but also in meaning. We would then wrongly expect that (ii) is as much a felicitous answer to the preceding question as (i).

(78) A: Warum versuchst du, den Stein zu heben?

‘Why are you trying to lift the stone?’

B: i. Ich will wissen, ob ich das schaffe.

I want know whether I that manage

ii. #Ob ich das schaffe?

whether I that manage

iii. ~~Ich will wissen~~, ob ich das schaffe.

I want know whether I that manage

The contrast seems to show more generally that the interpretation of (ii) that is shown in (iii), whatever its status, is not asserted. If it was, (i) and (ii) should behave the same, since the matrix clause is asserted in (i), and since this is what seems to allow it serve as an answer to the context question. See Truckenbrodt (2013) for similar contrasts with the other independent V-final clause types.

The speech-act meanings of the independent V-final clause-types are different from that of the V1/V2 clause type. We illustrate this with three comparisons.

V2-declaratives are typically assertions as in (79a). An observation of Altmann (1987) is that *dass*-clauses cannot assert. This is shown in (79b).

(79) [Where is the car?]

a. Es steht da drüben.

it stands there over.there

‘It stands over there.’

b. #Dass es da drüben steht.

that it there over.there stands

‘that it stands over there’

The *dass*-clauses can have an ordering-related impact as in (80). However, it seems that this is really a reminder of an order already established earlier. In a context in which a new order is given, as in (81), it can be given by the imperative, but not by the *dass*-clause, as pointed out by Schwabe (2007).

(80) Dass du nicht wieder dein Pausenbrot verkaufst!

that you not again your pause.sandwich sell

‘(Remember that) I don't want you to sell your lunch sandwich again.’

(81) Polizeibeamte: a. Folgen Sie mir.

follow you.polite me

‘Follow me.’

b. #Dass Sie mir (bloß) folgen!

that you.polite me mp follow

‘that you follow me’

Yes-no-interrogatives in V1-form seem to require that the context does not preclude the possibility that they are answered, as shown in (82a).[[15]](#footnote-15) However, *ob*-clauses can raise a yes-no-question in such a context, as in (82b) (from Truckenbrodt 2004, building on related observations by Thurmair 1989).

(82) Stefan: Ich habe seit Jahren nichts von Peter gehört.

‘I haven't heard from Peter in years.’

Heiner: Ich auch nicht.

‘Me neither.’

Stefan: a. #Mag er immer noch kubanische Zigarren?

likes he always still Cuban cigars

‘Does he still like Cuban cigars?’

b. ✓Ob er immer noch kubanische Zigarren mag?

whether he always still Cuban cigars likes

‘I wonder whether he still likes Cuban cigars.’

1. 6.2 A restriction on the meaning of independent V-final clauses

Truckenbrodt (2013) argues that the following restriction governs independent V-final clauses:

(83) *Meaning restiction on independent V-final clauses*

German unembedded V-final clauses have similarities with the reference of definite expressions: They (a) refer to a fact or (b) link up to an earlier utterance.

Obviously factive or anaphoric uses are illustrated in (84) and (85). In (84), reference is to the fact that she can sing as beautifully as that. In the interrogative in (85), the true answer is taken to be a known fact.

(84) Dass sie so schön singen kann!

that she so beautifully sing can

‘I am impressed/amazed that she can sing as beautifully as that.’

(85) Was Maria alles kann!

what Maria all can

‘I am impressed/amazed what a multitude of things Maria can do.’

Anaphoric uses are illustrated in (86)–(88). In (86), the *dass*-clause works as a reminder of an earlier request. The V-final wh-question in (87) and the *ob*-clause in (88) are reminders of the content of an earlier question.

(86) Police officer: ‘Please follow me in your car when I drive away from here later.’

(Later, after some questioning:)

Dass sie mir auch folgen, wenn ich jetzt losfahre!

that you me also follow when I now drive.away

‘Remember that I want you to follow me when I drive now.’

(87) A: Wen bringt er mit?

‘Who is he bringing along?’

B: Wie bitte?

‘Pardon?’

A/C: Wen er mitbringt.

who he brings.along

‘who he is bringing along’

(88) A: Hast du Zeit?

‘Do you have time?’

B: Wie bitte?

‘Pardon?’

A/C: Ob du Zeit hast.

whether you time have

‘whether you have time’

There are two classes of cases that do not fit with the restriction to factive or anaphoric use in an obvious way. The first class consists of desiderative *wenn*- or *dass*-clauses, as in (89). See Grosz (2012, 2014) for discussion.

(89) a. Wenn ich doch ein Königssohn wäre!

if I mp a son.of.a.king were

‘I wish I was a son of a king!’

b. Oh, dass ich ein Königssohn wäre!

oh that I a son.of.a.king were

‘I wish I was a son of a king!’

In the analysis of Truckenbrodt (2013) that is reviewed here, (83) restricts the interpretation to one in which the speaker resumes (or pretends to resume) a silent wish that the speaker said to herself before.

The second class embraces V-final interrogatives (V-final wh-questions and *ob*-clauses). They can be used to raise a question.

(90) a. Ob Maria einen Freund hat?

whether Maria a boyfriend has

‘I wonder whether Maria has a boyfriend.’

b. Wen Maria wohl eingeladen hat?

who Maria mp invited has

‘I wonder who Maria has invited.’

In the analysis reviewed here, these are restricted by (83) to uses in which the speaker resumes (or pretends to resume) a question she has asked herself before.

Both V-final wishes and V-final questions are in some sense speaker-oriented: Nothing is assumed of the addressee. For the wishes, this is obvious. For the questions, this was seen in (82). This can be connected to the anaphoric account: The speaker needs to (pretend to) resume a speech act she performed silently before.

For both V-final wishes and questions, Truckenbrodt (2013) provides an argument in favour of this account. The arguments are that sentences expressing such wishes and questions require that factive readings are blocked by overt elements like certain modal particles (obligatory in the relevant cases) or counterfactual Konjunktiv II (likewise obligatory in the relevant cases). It seems that accommodation of speaker-internal speech acts for satisfying (83) is an option only where (83) cannot be directly satisfied by reference to facts. The arguments closely track suggestions about blocking relations by Oppenrieder (1989). The reader is referred to the literature cited for details and for related discussion.

1. 6.3. The EX operator in wishes and exclamations

Grosz (2012) argues for the exclamative operator EX in the clausal left periphery. Its meaning is paraphrased in (91a). He discusses two relevant scales: operating on speaker preferences as in (91b), the operator gives optative, wish-related meanings; operating on speaker unlikelihood as in (91c), it gives surprise-related meanings as in (91c).

(91) *Grosz (2012): exclamative operator EX in C*

a. EX selects a contextually salient scale and conveys that the modified proposition exceeds a salient threshold on that scale.

b. EXScale: Speaker-Preferences: Wenn ich doch nur reich wäre!

if I mp only rich were

‘If only I were rich!’

c. EXScale: Speaker-Unlikelihood: Dass sie so schön singen kann!

that she so beautifully sing can

‘Amazing that she can sing so beautifully.’

Grosz (2012) discusses co-occurrence restrictions between EX and Konjunktiv II in German. He suggests that EX in C interacts with a Mood projection that licenses Konjunktiv II. He analyzes the indicative as a default. He argues that there is V-to-C movement related to EX, but only in the presence of Konjunktiv II:

(92) Wäre/\*Ist er nur rechtzeitig gekommen!

is.KonjII/ind he only on.time arrived

‘If only he had/has arrived on time!’

This is close to the architecture we assumed for WANT and BEL above, which is inspired by Grosz (2012) in relating V-to-C movement to verbal mood. Thus, EX/Mood can agree with Konjunktiv II and there can be V-to-C movement in this connection. This seems not to involve WANT or BEL but EX. In our classification related to (2), this is in the category exemplified in (2c).

1. 6.4 Open issues for independent V-final clauses and WANTx,t,w/BELx,t,w

Do the speech acts of V-final clauses ever employ the WANTx,t,w or BELx,t,w operators that we discussed in the first sections of this paper? Truckenbrodt (2006a) explored representing the reduced speech-act potential of independent V-final clauses in terms of reduced presence of such features in C, but he did assume some such features in independent V-final clauses. Antomo and Steinbach (2010) argued that the Epist-operator of Truckenbrodt (2006a), the antecedent of our BELx,t,w, is not present in the left periphery of independent V-final clauses. This is a view that we certainly sympathize with. Here we would like to raise some new issues for independent V-final questions in connection with the first sections of this paper.

First, we do not want to exclude that WANT and BEL co-occur with EX in V1- and V2-clauses. This would amount to an overlaid component of exclamation on regular assertions, requests etc. It would be compatible with the view that exclamativity is something that can in principle be added to various sentence types (Rosengren 1992).

We think that there is therefore also an open theoretical issue whether EX occurs as the only operator in the left periphery in V-final wishes and expressions of surprise. A conceivable alternative seems to be that EX also co-occurs with WANT in the V-final wishes, and possibly with BEL in the expressions of surprise, though importantly with the added restrictions on the independent V-final clauses that come from (83).

We think that the following theoretical questions are related to this issue. First, is it correct that EX can co-occur with WANT/BEL in V1/V2-clauses? If not, the presence of EX might block the presence of WANT/BEL in independent *dass*- and *wenn*-clauses.

Second, can (38a) assign WANT/BEL to the complementizers *dass* and *wenn* in independent V-final clauses? It is possible that (38a) is restricted to, say, relative clauses, parentheticals, and complementizers of certain modal meanings not including *wenn*. In other words, perhaps independent *dass* and *wenn*-clauses cannot carry WANT/BEL for reasons having to do with co-occurrence of WANT/BEL with individual complementizers.

Third, in working out the issue whether indicative and [+origo] are connected by a default or by a more inherent connection (see section 4.3), independent V-final clauses will also play an important role. Relatedly, building on Grosz (2012), other uses of Konjunktiv I and II in independent V-final clauses will also need to be integrated into theories addressing these verbal moods.

7 Summary

We sum up our programmatic suggestions. Central to them is an index in the C-head that is a proto-attitude representation ci[pref] from which two actual proto-attitudes ci[-pref] (= BELx,t,w) and ci[+pref] (= WANTx,t,w) are obtained. These are further specified for the feature [origo] that regulate whether ci refers to the origo-parameters of Kaplan (1989) (the speaker at the speech time in the world of the utterance) or not.

The verbal mood categories are defined in terms of the features of these proto-attitudes. V-to-C movement is preceded by an agree relation in which the verbal mood features of the finite verb agree with their interpreted occurrences in C (imperative: [+pref][+origo], reportative Konjunktiv: [-pref][-origo], indicative possibly [-pref][+origo]). The more general way in which reportative Konjunktiv is licensed in V-final clauses seems to testify to a more general application of this agree relation. We showed how this leads to a sensible understanding of the deployment of verbal mood and its interaction with verbal position, with open questions concerning the [+origo] specification of the indicative, among other things.

In the view developed, these proto-attitudes also characterize the lexical entry for C in German that triggers V-to-C movement. The imperative is characterized by ci[+pref][+origo] and the V2-declarative by ci[-pref]. We showed how this specification of declaratives not only fits with earlier suggestions, but also leads to a promising route for understanding the restrictions on embedded V2 in German.

Furthermore, ci[pref][origo] is also present in C in root clauses that do not attract V-to-C, such as appositive relatives and peripheral adverbial clauses. Here, too, there seems to be an agree relation between these features in C and the finite verb (though in this case the property § that additionally requires overt movement is not present). More generally, then, the presence of ci[pref][origo] in C (more precisely: in Force) is a development of the suggestion of Haegeman (2004a,b) that root clauses involve speaker anchoring in Force. A partial analysis of V1-parentheticals as a root phenomenon was motivated and outlined. V1-parentheticals seem to require that their host clause carries ci[pref][origo] in C and that the host CP including these features is copied into the parenthetical. It was seen that this can have the semantic consequence that the parenthetical adds meaning to the ci[pref][origo] specification in the C-position of the host clause.

Finally, we reviewed suggestions about independent V-final clauses: the restriction to factive or anaphoric uses and the EX operator of Gross (2012). We reviewed open issues that the current analysis, in combination with these suggestions, raises for these sentence types. The open issues include the co-occurrence of EX with WANT and BELIEVE, the question whether lexical complementizers like *dass* and *wenn* can be assigned WANT/BEL, and issues of the interaction with verbal mood.

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2. In the absence of an overt complementizer, English allows two word orders that translate German V1-parentheticals: quotative inversion and non-inverted parentheticals; German uses only the inverted V1-parentheticals of (1c) in direct and indirect speech. [↑](#footnote-ref-2)
3. We take this class to include V2- and V1-interrogatives; see footnote 11. [↑](#footnote-ref-3)
4. See Downing (1970) for an early discussion of (a) and (b) in connection with intonation. [↑](#footnote-ref-4)
5. They also occur as dependent but not genuinely embedded clauses in a marked class of relative clauses (Gärtner 2000) and in adverbial clauses introduced by *denn* and in colloquial cases of *weil* with V2 (Antomo and Steinbach 2010). [↑](#footnote-ref-5)
6. 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-6)
7. There is a class of cases in which a V2-clause replaces a *wenn* (‘if’) clause rather than a *dass* (‘that’) clause. These include cases like (i); see Reis (1997). We classify these with the V-in-C clauses related to conditionals like (2c), rather than the V-in-C clauses related to (2b), which we are concerned with here.

   (i) Es ist besser, du **kündigst** ihm.  
    it is better you give.notice.ind him  
    ‘It's better if you give him notice.’ [↑](#footnote-ref-7)
8. We think that more empirical work on German is needed in this area. We also refer the reader to Jacobs (to appear) for critical discussion of embedded main clause phenomena in German. [↑](#footnote-ref-8)
9. Bolinger was concerned with parentheticals both of the form "Mary thinks" and "as Mary thinks". As discussed in the text, we think that he was right for the former kind, which are also analyzed in terms of Slifting by Ross (1973). On the analysis of the *as*-parenthetical, which we believe is not a root-phenomenon, see Potts (2002). [↑](#footnote-ref-9)
10. The parallel extends to cases like the following. See Truckenbrodt (2006a):288f and Truckenbrodt (2006b):p.409,(26) for reasons to subsume these cases under *say*-/*belief*-related meanings.

    (i) a. Der Minister fordert, die Schulen müssen mehr Geld erhalten.

    the minister demands the schools must more money receive

    ‘The minister is demanding that the schools (have to) receive more money.’

    b. Die Schulen müssen mehr Geld erhalten, fordert der Minister.

    the schools must more money receive demands the minister

    ‘The minister is demanding that the schools (have to) receive more money.’

    (ii) a. Er hofft, sie wird noch kommen.

    he hopes she will still come

    ‘He is hoping that she will still come.’

    b. Sie wird noch kommen, hofft er.

    she will still come hopes he

    ‘She will still come, he is hoping.’

    [↑](#footnote-ref-10)
11. Brandt et al. (1992) assume that these features are not related to attitudes, and we deviate from them in this regard. [↑](#footnote-ref-11)
12. We comment on how the account can be generalized to interrogatives. Krifka (2015) analyzes question speech acts as *requests for addressee-assertions* and represents the requested addressee-assertion as part of the question. In our notation: BELx,t,w represents the speaker-belief in a statement and the requested addressee-belief in a question speech act. Since both have indicative in C, i.e. are here [+origo], this extension requires redefining [+origo] in terms of “speaker or addressee”.

    There is independent evidence for representing the requested addressee-assertion as part of the question speech act. Zimmermann (2004) shows that the German modal particle *wohl* weakens the speaker commitment in a statement and, in questions, weakens the expected addressee-commitment. Wechsler (to appear) discusses a phenomenon of *interrogative flip* in a range of non-European languages, in which conjunct- rather than disjunct-forms are used in connection with the speaker in statements and in connection with the addressee in questions. The common denominators discussed for these, e.g. “epistemic authority”, are compatible with Krifka's account and support it. [↑](#footnote-ref-12)
13. There are good reasons to assume that Konjunktiv II in its irrealis use is not a category that directly contributes to sentence mood in the sense of this paper; see Sode (2014) for discussion. [↑](#footnote-ref-13)
14. See also Eckardt (2015) for a similar but slightly different proposal for the Konjunktiv that also assumes a connection with Kaplan's context. [↑](#footnote-ref-14)
15. This can plausibly be related to the remarks in footnote 11 about the syntactic and semantic presence of a requested addressee-assertion in direct questions. [↑](#footnote-ref-15)