Interpreting embedded verb second
Causal modifiers in German

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The paper discusses V2 order in German adverbial clauses expressing causation. As an embedded root phenomenon, V2 order in adverbial clauses is associated with an assertive force potential of the clause. Furthermore, V2 adverbials can express a wider range of semantic interpretations than their verb-final counterparts. They can be interpreted as central adverbials, modifying the event structure, or as peripheral adverbials, modifying the discourse structure. In this paper, I will derive the possible interpretations of V2 adverbials from three factors: an invariable semantics of the causal connective *weil* (roughly 'because'), the syntactic attachment site of the adverbial clause and the contribution of pragmatic principles.

1. Introduction

German is an asymmetric verb second (henceforth V2) language. The finite verb appears in the second position in main clauses (1-a) and in clause final position in subordinate clauses (1-b).

(1) a. Sam isst nur   Salat.
         Sam eats only salad.
         'Sam only eats salad.'
     b. Sam ist sehr mager, weil   er nur   Salat **isst**.
         Sam is very skinny because he only salad eats.
         'Sam is very skinny because he only eats salad.'

Yet, in spoken German, adverbial clauses introduced by *weil* 'because' are frequently used with V2 order:

(2) Sam ist sehr mager, weil   er **isst** nur Salat.
     Sam is very skinny because he eats only salad.

In this paper, I will argue that V2 *weil*-clauses are not simply a colloquial synonymous variant of standard verb-final *weil*-clauses, but that they have specific syntactic, semantic, and prag-

matic properties. V2 *weil*-clauses can express a wider range of semantic relations than causal adjunct clauses with verb-final order. The main issue of this paper is to identify the possible semantic interpretations of V2 *weil*-clauses and to determine the factors that are relevant to the composition of these different interpretations. I will develop a compositional analysis to explain the possible interpretations of V2 *weil*-clauses based on three factors: the semantic contribution of the connective *weil*, the syntactic attachment site of the adverbial clause relative to its host clause, and general principles of utterance.

In the next section, I will show that V2 and verb-final *weil*-clauses do not occur in the same contexts. In section 3., we will see that these syntactic differences go hand in hand with interpretive differences. Based on these observations, I will develop a syntactic analysis of V2 adverbials in section 4. Since the different interpretations cannot be traced back to syntax, in section 5., I will develop a compositional derivation of these differences at the syntax-semantics-pragmatics interface. In section 6., I will show that V2 *weil*-clauses cannot occur in presupposed contexts due to the assertive force potential triggered by the movement of the finite verb to C.

2.   *The distribution of V2 and verb-final weil-clauses*

The occurence of V2 *weil*-clauses is more restricted than the occurence of standard adjunct clauses with verb-final order. The V2 realizations are subject to numerous syntactic restrictions. Verb raising is blocked whenever the causal clause is within the scope of an element of the preceding main clause.[1] Whereas example (3-a) is well-formed, V2 order is illicit if the *weil*-clause is within the scope of the matrix negation (3-b):

(3) a. Paul fährt nicht nach Berlin, weil   er dort Familie **hat**, sondern weil   er die
          Paul goes not   to   Berlin because he there family has but   because he the
          Stadt besichtigen will.
          town visit   wants
          'Paul doesn't go to Berlin because he has family there but because he wants to visit the
          town.'
      b.*Paul fährt nicht nach Berlin, weil   er **hat** dort Familie, sondern weil   er will
          Paul goes not   to   Berlin because he has there family   but   because he wants
          die Stadt besichtigen.
          the town visit.

The same degradation can be observed if a V2 *weil*-clause is within the scope of a correlative or a presupposing focus particle. If the adjunct clause has verb-final order, the sentences are fine.[2]

(4) a. Petra hat heute deshalb gefehlt, weil   sie krank **ist**.
          Petra has today COR   missed because she ill   is.
          'Petra has missed today because she is ill.'
      b.*Petra hat heute deshalb gefehlt, weil sie **ist** krank.

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[1]I will avoid the term matrix clause since we will see that V2 *weil*-clauses are unembeddable.

[2]list of abbreviations used in this paper: COR = correlative, PART = particle, verb-IMP = imperative morphology, PRO = pronoun

(5) a. Lukas hat auch gefehlt, weil   er krank **war**.
      Lukas has too   missed because he ill   was.
      'Lukas has missed, too, because he was ill.'
    b.*Lukas hat auch gefehlt, weil er **war** krank.

Unlike *weil*-clauses with verb-final order, V2 *weil*-clauses may not be within the scope of the matrix interrogative operator.

(6) a. Bist du böse, weil   ich deinen Geburtstag vergessen **habe**?
      Are you angry because I   your   birthday   forgotten have?
      'Are you angry because I have forgotten your birthday?'
    b.*Bist du böse, weil ich **habe** deinen Geburtstag vergessen?

Binding theory provides another difference between the two types of adjunct clauses. Unlike the *weil*-clause with verb-final order in (7-a), the V2 clause in (7-b) can contain R-expressions which are co-referential with a subject NP in the associated main clause. Thus, condition C is only violated if the adjunct clause has verb-final order.

(7) a.*Sie$_i$ war verärgert, weil   Maria$_i$ nicht eingeladen **war**.
      she$_i$ was angry   because Maria$_i$ not   invited   was.
      'She$_i$ was angry because Maria$_i$ wasn't invited.'
    b. Sie$_i$ war verärgert, weil Maria$_i$ **war** nicht eingeladen.

Similarly, variable-binding into an embedded V2 clause is degraded as shown in (8-b).

(8) a. Niemand$_i$ war verärgert, weil   er$_i$ nicht eingeladen **war**.
      nobody$_i$ was angry   because he$_i$ not   invited   was
      'Nobody$_i$ was angry because he$_i$ **was** not invited.'
    b.*Niemand$_i$ war verärgert, weil er$_i$ war nicht eingeladen.

Another difference between *weil*-clauses with verb-final order and those with V2 order is linked to the V2 restriction found in German. Whereas a canonical verb-final *weil*-clause may occur as the first constituent of a V2 host clause (in traditional German terminology the *Vorfeld*), a V2 *weil*-clause cannot function as the first constituent in a V2 clause (see (9-a)). According to Haegeman et al. (2008), adverbials that occupy the *Vorfeld* must be integrated into the syntactic structure of the associated main clause. Therefore, the ungrammaticality of example (9-b) suggests that V2 *weil*-clauses are characterized by higher syntactic disintegration.

(9) a. Weil   Paula krank **ist**, war sie heute nicht in der Schule.
      because Paula ill   is   was she today not   in the school.
      'Because Paula was ill she missed school today.'
    b.*Weil Paula **ist** krank, war sie heute nicht in der Schule.

Finally, V2 *weil*-clauses are often set off by comma intonation (\\) from the associated main clause, whereas *weil*-clauses with verb-final order are generally integrated into its prosodic contour (/).

(10) a. Paula fährt morgen   nach Hamburg, (/) weil   ihre Mutter Geburtstag **hat**.
          Paula goes tomorrow to   Hamburg (/) because her mother birthday   has.
          'Tomorrow, Paula goes to Hamburg because it's her mother's birthday.'
      b. Paula fährt morgen nach Hamburg, (\) weil ihre Mutter **hat** Geburtstag.

The distribution of V2 order in German *weil*-clauses is summarized in table 1.

	Verb-final *weil*-clause	V2 *weil*-clause
within scope of negation	+	-
within scope of a correlative	+	-
within scope of a focus particle	+	-
within scope of the matrix interrogative operator	+	-
within c-command domain	+	-
position in the *Vorfeld*	+	-
prosodic integration	+	-

Table 1: The distribution of V2 and verb-final order

Most of the properties in table 1 are subject to c-command configurations. On the basis of these structure diagnostics, I assume that, unlike adjunct clauses with verb-final order, V2 *weil*-clauses must be generated in a position outside the c-command domain of the associated main clause. In section 4, I will show that verb-final *weil*-clauses and V2 *weil*-clauses are distinguished in terms of their external and internal syntax. The latter are less integrated into the syntactic structure of the main clause than the former. Before returning to the syntactic structure of the sentences, I will first discuss the possible interpretations of V2 *weil*-clauses.

3.   The interpretation of V2 weil-clauses

Embedded V2 order is also attested for other Germanic languages, mainly for Frisian and Mainland Scandinavian (see Heycock 2005 for an overview). In German, embedded V2 is possible in relative clauses that modify indefinite heads and in the complements of bridge verbs:

(11) a. Berlin hat viele Häuser, die stehen leer.
          Berlin has many houses that are   empty.
      b. Paul glaubt,   Paula hat den Bus verpasst.
          Paul believes Paula has the bus missed.
          'Paul believes Paula has missed the bus.'

Interestingly, these embedded V2 clauses share the same distributional restrictions as V2 *weil*-clauses, namely, they cannot occur in the scope of negation, of a correlative or of a focus particle (see table 1). However, when it comes to the semantic interpretation of the embedded V2 clauses in (11), they receive the same interpretations as their verb-final counterparts. The V2 relative in

(11-a) is interpreted as restrictive relative and the V2 complement clause in (11-b) is interpreted as selected argument of the matrix verb (as argued in Frank 2000 and Gärtner 2001).

In contrast, there are important interpretive differences between *weil*-clauses with verb-final order and those with V2 order. Whereas *weil*-clauses with verb-final order can only express one possible reading, V2 *weil*-clauses can have three possible interpretations. In the following, I will provide an overview of the three semantic interpretations (see also Antomo & Steinbach to appear; Uhmann 1998; Scheffler 2005; Wegener 1993). My basic assumption is that the connective *weil* expresses in all three readings the same semantic contribution, which I will briefly present in the following subsection.

3.1.   *The semantics of weil*

Connectives act as logical predicates taking propositions as their arguments. I will treat propositions as existential quantifications over events by assuming that predicates have in addition to their semantic arguments an event variable as one of their arguments. To form a proposition, this variable must be bound by a quantificational operator such as an existential quantifier (as argued in Davidson 1967 and Johnston 1994).

The connective *weil* introduces a two-place relation over events which it links causally. To represent the semantics of *weil*, I will use the two-place predicate CAUSE. I assume the semantic type of *weil* to be $<t,<t,t>>$. The truth conditions of CAUSE are given in (12) and the formal representation of a standard *weil*-clause (13-a) is given in (13-b).

(12)   If q and p are propositions, then CAUSE (p, q) is true iff q is true as a result of p being true.

(13)   a. Paula kauft eine Tulpe, weil   sie Blumen mag.
             Paula buys a   tulip   because she flowers likes.
             'Paula buys a tulip because she likes flowers.'
         b. CAUSE ($\exists$ e_1 [like (Paula, flowers, e_1)], $\exists$ e_2 [buy (Paula, tulip, e_2)])

Whereas the semantic contribution of *weil* is the same for all three interpretations, that is, it expresses a causal relation between two events, the selectional requirements that *weil* places on its q-argument are less determined (see also Pittner 1999:339 et seqq.). We will see that the first argument (p) is always the proposition of the clause introduced by *weil*. In contrast, the second argument (the modifiee) can have different values.

3.2.   *Propositional modification*

In the standard case, both arguments of *weil* are propositions. In example (14-a), the *weil*-clause expresses a reason for the propositional content of the main clause. The snow is the reason why the road is white.

(14) a. Die Straße ist weiß, weil   es geschneit **hat**.
          the road   is white because it snowed   has.
          'The road is white because it has snowed.'
      b. CAUSE ($\exists$ e$_1$ [snow (e$_1$)], $\exists$ e$_2$ [white (street, e$_2$)])

If the adverbial clause is not within the scope of the matrix negation or another element of the matrix clause, it can have V2 order. This doesn't effect the causal relation between the two clauses. As example (14-a), example (15) is interpreted as causal relation between two propositional arguments.

(15) Die Straße ist weiß, weil   es **hat** geschneit.
      the road   is white because it has snowed.

Thus, this interpretation is available for both types of adverbial clauses introduced by *weil*. But, whereas it is the only possible interpretation available for integrated *weil*-clauses with verb-final order, V2 *weil*-clauses can express two additional readings.

3.3.   Epistemic modification

A V2 *weil*-clause does not always modify the propositional content of its associated main clause. In example (16), the two-place predicate CAUSE takes an epistemic argument as its second argument and expresses a causal relation between a proposition and the speaker's attitude. The V2 *weil*-clause is interpreted on the illocutionary level and expresses an evidence for the claim expressed in the associated clause. The reason why the speaker believes that there must have been an accident is that the car's inflatable safety bag is deployed.

(16) Es hat einen Unfall   gegeben, weil   der Airbag **ist** aufgegangen.
      it has an   accident given   because the airbag has deployed.
      'An accident has happened because the airbag has deployed.'

This semantic interpretation is represented in (17). The difference to an interpretation as propositional modification such as in (15) is that in (17), the predicate CAUSE takes an epistemic argument as argument. Thus, the causal relation is established between a proposition, the clause introduced by *weil*, and the speaker's attitude, represented according to Scheffler (2008:79) as an epistemic operator MUST.

(17) CAUSE ($\exists$ e$_1$ [deploy (airbag, e$_1$)], MUST [$\exists$ e$_2$ [happen (accident, e$_2$)]])

Note also that the temporal order of the two arguments of the predicate CAUSE is inverse to that of a causal relation between two propositions as in example (15).

   If the adverbial clause shows verb-final order, an interpretation of the *weil*-clause as epistemic modifier is not possible. This becomes clearer if the *weil*-clause is in the *Vorfeld* (and hence a constituent of the matrix clause).

(18) a. Es hat einen Unfall   gegeben, (/) weil   der Airbag aufgegangen **ist**.
          it has an   accident given   (/) because the airbag deployed   has.

    b. Weil   der Airbag aufgegangen ist, hat es einen Unfall   gegeben.
         because the airbag deployed   has has it an   accident given.

Both examples in (18) can only be interpreted as causal relation between two propositions as represented in (19): A suddenly deploying safety bag causes an accident.

(19) CAUSE ($\exists\, e_1$ [deploy (airbag, e_1)], $\exists\, e_2$ [happen (accident, e_2)])

3.4. *Speech act modification*

Another possible reading, which is only available if the *weil*-clause has V2 order, is an interpretation as speech act modifier. By uttering the V2 *weil*-clause in example (20), the speaker justifies the utterance of the preceding main clause. In this case, CAUSE takes an utterance as its cause argument as represented in (21).

(20) Paula hat den Job übrigens   bekommen. Weil   das wolltest du doch unbedingt
      Paula has the job by-the-way got.   because that wanted you PART absolutely
      wissen.
      know.
      'By the way, Paula got the job. Because you absolutely wanted to know it.'

(21) CAUSE ($\exists\, e_1$ [want to know (you, it, e_1)], ASSERT [$\exists\, e_2$ [get (Paula, job, e_2)]])

Note, that in this use the V2 *weil*-clause can follow either an assertive speech act, an interrogative clause, or an imperative.

(22) a. Hast du mal   fünf Euro? Weil   ich habe mein Portemonnaie vergessen.
         has you PART five euro? because I   have my   purse   forgotten.
         'Do you have five euro? Because I forgot my purse.'
    b. Vertrauen Sie diesem Mann nicht! Weil   ich kenne ihn.
         trust-IMP you this   man not! Because I   know him.
         'Don't trust this man! Because I know him.'

Again, this interpretation is not available for *weil*-clauses with verb-final order. Whereas the V2 *weil*-clause in example (22-b) is interpreted as speech act modifier, the corresponding *weil*-clause with verb-final order in (23) can only express a reason for the propositional content of the main clause.

(23) Vertrauen Sie diesem Mann nicht, (/) weil   ich ihn kenne!
      trust-IMP you this   man not   (/) because I   him know!
      'Don't trust this man (only) because I know him.'

In this section, I have shown that V2 *weil*-clauses can express three different semantic interpretations, whereas *weil*-clauses with verb-final order have only one possible reading[3]. I argued

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[3]Note, however, that a *weil*-clause with verb-final order can express all three semantic interpretations if it is separated by comma intonation from its matrix clause (see example (34)).

that the semantics of the connective *weil*, represented by a two-place predicate CAUSE, is the same for all three interpretations. It expresses always a causal relation between its two arguments. Yet, the selectional requirements that it places on its q-argument allow for three different types of arguments. If the *weil*-clause has V2 order, the modifiee can be either a proposition, an epistemic state, or an utterance. In contrast, if the adverbial clause has verb-final order, the modifiee can only be a proposition.

It is an interesting question to know why V2 *weil*-clauses allow a wider range of semantic relations than causal clauses with verb-final order. In the next two sections, I will develop an account to derive the different interpretations from different degrees of syntactic attachment and the contribution of general principles of utterance.

4.   The syntax of V2 weil-clauses
4.1.   Internal syntax

In this subsection, I will adopt an analysis which has been proposed by Haegeman (2003) and Haegeman (2006) for the syntactic description of different types of conditional clauses. I will argue that the C-system of *weil*-clauses with verb-final order is truncated, whereas V2 *weil*-clauses contain a full-fledged CP similar to that of root clauses. The theoretical background is provided by a richly articulated left periphery in the sense of Rizzi (1997). In the following, I will provide empirical arguments for this proposal.

V2 *weil*-clauses have illocutionary force, whereas their verb-final counterparts are generally integrated into the illocution of their host clause. The adverbial clause with verb-final order in (24-a) is within the scope of the matrix interrogative operator. Both clauses form together one illocution. In contrast, the V2 adverbial in example (24-b) forms an independent illocution and is interpreted as speech act modification.

(24) a. Kommt er, weil   er es versprochen hat?
          comes   he because he it promised   has?
          'Does he come because he promised it?'
      b. Kommt er? Weil   er hat es versprochen.
          comes   he? because he has it promised.
          'Does he come? Because he promised it.'

Along with Rizzi (1997), I assume that illocutionary force is encoded in a syntactic head Force. Then example (24-b) suggests that V2 *weil*-clauses have a Force projection, whereas verb-final *weil*-clauses lack Force. Further support for this assumption is provided by the fact that speech act markers can be inserted into a V2 *weil*-clause, whereas the insertion of an assertive particle into a verb-final *weil*-clause leads to degradation.

(25) a.?Das Kind ist traurig, weil   es nämlich seinen Teddy verloren hat.
         the child is sad   because he PART   his   teddy lost   has.
         'The child is sad because it lost his teddy bear.'

b. Paula ist krank, weil   sie war heute nämlich nicht in der Schule.
Paula is ill   because she was today PART   not   in the school.
'Paula is ill, because she wasn't at school, today.'

Both examples show that V2 *weil*-clauses have an illocutionary force potential and hence the syntactic head Force, whereas adverbial clauses with verb-final order lack Force. According to Haegeman (2003), the syntactic head Force licenses the presence of TopP and FocP. If the projection Force is not present because the clause has no illocutionary force, TopP and FocP do not occur, either. That this conclusion holds for German adverbial clauses expressing causation can be observed in example (26). Here, argument fronting is not available in *weil*-clauses with verb-final order, which lack Force, but it is possible if the adverbial clause has V2 order and hence Force.

(26) a.*Paula ist zufrieden, weil $jeden_1$ sie t_1 gegrüßt hat.
Paula is pleased   because $everybody_1$ she t_1 greeted has.
'Paula is pleased because she greeted everybody.'
b. Paula ist zufrieden, weil $jeden_1$ hat sie t_1 gegrüßt.
Paula is pleased   because $everybody_1$ has she t_1 greeted.

Assuming that the target position of fronted arguments are FocP and TopP, I conclude that the verb-final *weil*-clause in (26-a) lacks these projections. In contrast, the grammaticality of example (26-b) suggests that V2 *weil*-clauses contain target positions for fronted arguments and hence a complete C-layer. In this aspect, German verb-final and V2 *weil*-clauses behave just like central and peripheral adverbial clauses in (amongst others) English (see Haegeman 2003 and Hooper & Thompson 1973).

According to Haegeman (2006) and Julien (2007), I will distinguish between the projection Force, which encodes illocutionary force in unembedded clauses, and Sub (= Subordination), the highest projection in embedded clauses. Whereas verb-final *weil*-clauses are headed by SubP and lack Force, V2 *weil*-clauses have the same internal structure as root clauses. In sum, I assume the three structures in (27) for the syntactic representation of the left periphery of (a) unembedded main clauses, (b) V2 *weil*-clauses and (c) *weil*-clauses with verb-final order.

(27)   Unembedded clause   Top   Foc   Force   Fin
       V2 *weil*-clause: Top   Foc   Force   Fin
       Verb-final *weil*-clause: Sub   Fin

4.2.   Syntactic attachment

Concerning different types of adverbial modifiers, it has often been observed that there is a connection between the syntactic position of the adverbial clause relative to its host clause and its interpretation (see Johnston 1994, Haegeman 1991 and Haegeman 2003). In this section, I will investigate the question to which extent the semantic differences between different types of *weil*-clauses in German can be traced back to syntactic differences.

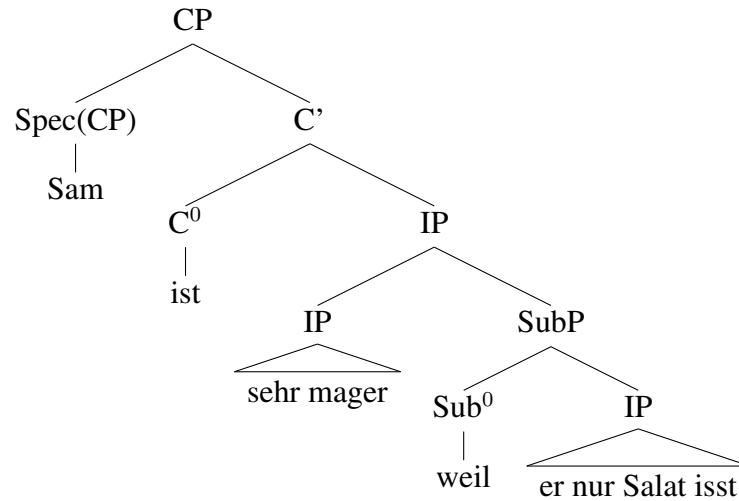Generally, a canonical *weil*-clause with verb-final order is analyzed as an adjunct to the matrix IP as shown in figure 1[4].

Figure 1: Syntactic attachment of verb-final weil-clauses

In this position, the adverbial clause cannot take scope over the matrix speech act operator. The modifiee, that is the value of the q-argument of the CAUSE relation, is limited by syntactic principles to the propositional content of IP. As a consequence, verb-final *weil*-clauses are always propositional modifiers and cannot be interpreted as epistemic or speech act modifications.

In section 3, we have seen that unlike verb-final *weil*-clauses, V2 *weil*-clauses can be interpreted as propositional, epistemic, or speech act modification. An exact mapping between semantic representation and syntactic structure would therefore result in three different syntactic positions for V2 *weil*-clauses for the three uses shown in section 3. The different interpretations would hence arise as a result of the adverbial clause being adjoined to three different projections. However, structure diagnostics do not suggest a syntactic distinction of three different attachment sites. Quite contrary to what one might expect, syntactically, the three uses of the V2 adverbials behave the same way. In table 1, we have already seen that V2 adverbials are outside the c-command domain of the associated clause. This is true for all three semantic uses of V2 *weil*-clauses, even for the event-modifying adverbials such as (15). Take, as an example, the interaction with negation and variable-binding. The examples (28) and (29) contain each a propositional modifier, an epistemic modifier and a speech-act modifier with V2 order. As can be seen in (28), all three types of V2 *weil*-clauses are outside the scope of negation. Similarly, variable-binding is degraded in all three uses as shown in (29).

(28) a.*Ich gehe nicht ins   Kino,   weil   ich mag den Film, sondern weil   ich mag
      I   go   not   in-PREP cinema because I   like the film   but   because I   like
      den Schauspieler.
      the actor.

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[4]The use of the notion "'CP'" corresponds to the full-fledged structure in (27).

b.*Paula ist nicht krank, weil   sie war nicht in der Schule, sondern weil   ich habe
Paula is not ill   because she was not   in the school but   because I   have
ihre Mutter getroffen.
her mother met.

c.*Spiel   nicht mit dem Hund, weil   er hat ein Kind gebissen, sondern weil
play-IMP not with the dog   because he has a   child bitten   but   because
er hat Flöhe.
he has fleas.

(29) a.*Niemand$_i$ war verärgert, weil   er$_i$ war nicht eingeladen.
nobody$_i$ was angry   because he$_i$ was not   invited.

b.*Jeder$_i$ schläft schon, weil   in seinem$_i$ Zimmer brennt kein Licht mehr.
everybody$_i$ sleeps already because in his$_i$ room   burns no   light anymore.
'Everybody$_i$ is already sleeping because the light in his$_i$ room is turned out.'

c.*War denn niemand$_i$ verärgert? Weil   er$_i$ hat so wütend geguckt.
was PART nobody$_i$ angry?   because he$_i$ has so furious looked.
'Wasn't anybody$_i$ angry? Because he$_i$ looked so furious.'

Thus, even if a V2 *weil*-clause modifies the propositional content of the matrix clause as in
(28-a) and (29-a), it is outside the scope of negation or variable-binding. Similarly, none of the
three types of V2 *weil*-clauses can function as the first constituent of a V2 clause as shown in
(30).

(30) a.*Weil   es hat geschneit, ist die Straße ganz   weiß.
because it has snowed   is the road   totally white.

b.*Weil   der Airbag ist aufgegangen, hat es einen Unfall   gegeben.
because the airbag has deployed   has it an   accident given.

c.*Weil   du wolltest das unbedingt wissen, hat Paula den Job bekommen.
because you wanted it   absolutely know   has Paula the job got.

Again, the examples shows that V2 *weil*-clauses are distinguished by a lower degree of syntac-
tic integration than *weil*-clauses with verb-final order. Even event-modifying V2 *weil*-clauses
turn out to be syntactically unembeddable. Furthermore, the examples show, that the semantic
differences between the three uses of V2 *weil*-clauses cannot be traced back to three differ-
ent syntactic attachment sites. Concerning negation, the possibility of variable-binding and the
integration as the first constituent of a V2 clause, propositional, epistemic, and speech-act mod-
ifying V2 *weil*-clauses behave exactly the same way.[5] Thus, the connection existing between
meaning and syntactic position does not function in a ratio of 1:1. Instead of establishing a
syntactic distinction between the three semantic uses of V2 *weil*-clauses, the application of the
structure diagnostics reveals rather a contrast between *weil*-clauses with verb-final order on the
one side and V2 *weil*-clauses on the other (see also table 1 in section 2). Since all V2 *weil*-
clauses show the same pattern with respect to the structure diagnostics, it seems reasonable

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[5]The three semantic types of V2 *weil*-clauses behave also the same way with respect to the following structure
diagnostics: They cannot be within the scope of a correlative or of the matrix interrogative operator and they are
prosodically independent. Argument fronting and the insertion of speech act marker is possible in all three types.

to explain this pattern for reasons independent of the semantic interpretation of the adverbial clause. In section 6, I will argue that the movement of the finite verb to C is associated to an assertive force potential. As a consequence, a V2 *weil*-clause cannot be presupposed and must be outside the scope of the associated main clause. The syntactic similarities between the three uses of V2 adverbials arise therefore as a consequence of the position of the finite verb in these clauses, and they are independent of the semantic interpretation of the causal relation.

However, there are some differences between propositional and epistemic modifiers on the one hand, and speech-act modifiers on the other. Interpreted as a speech act modification, a V2 *weil*-clause can be used alone. In example (31), the adverbial has no overt linguistic antecendent. This means that the modifiee of the causal relation has not to be realized.

(31) (context: A gives a wrapped box to B)
  a. Weil   du   hattest doch Geburtstag.
     because you had   PART birthday.

In contrast, example (32) shows that *weil*-clauses which function as propositional or epistemic modifiers cannot be used without a sentential antecedent.

(32) a.*(Die Straße ist ganz   weiß), weil   es hat geschneit.
        (the road   is totally white) because it has snowed.
      b.*(Es hat geschneit), weil   die Straße ist ganz   weiß.
        (it   has snowed)   because the road   is   totally white.

Furthermore, we have seen in section 3.4. that, unlike propositional and epistemic V2 *weil*-clauses, speech act modifiers can follow either an assertion, an interrogative, or an imperative clause. This means that the assertive force potential of the V2 adverbial cannot be absorbed by the associated main clause. These differences between speech act modifying V2 *weil*-clauses on the one hand and propositional and epistemic clauses on the other suggest two distinct syntactic treatments. Let's consider first the speech act modifying use of V2 *weil*-clauses. According to Haegeman (1991), the fact that a conditional clause as (33) can be used alone is an argument to abandon syntactic attachment of the adverbial.

(33) If you will come this way.

Since in example (31) there is nothing to attach the adverbial clause to, this suggests that speech act modifying *weil*-clauses act as parenthetical constructions. Adopting Haegeman (1991), I propose that speech act modifying V2 *weil*-clauses are syntactic orphans which are completely outside the syntactic representation of the associated clause as shown in figure 2.
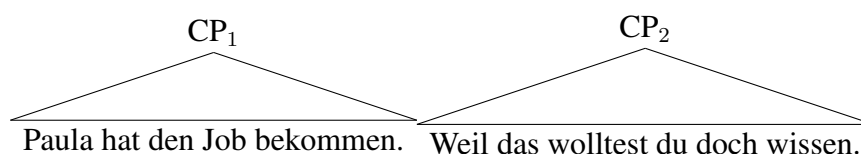

CP_1 CP_2

Paula hat den Job bekommen.   Weil das wolltest du doch wissen.

Figure 2: Orphan analysis

Syntactically, the V2 adverbial is not linked. As a consequence, the semantic relation between the two independent CPs is not determined by grammar but has to be interpreted at the level of discourse (see section 5). I assume the semantic type of *weil* to be $<t,<t,t>>$, i.e. *weil* takes two propositional arguments. In the proposed structure in figure 2, *weil* takes only one argument. Here, semantic restructuring has to take place, inserting CP_1 into an argument slot of the CAUSE relation[6].

If there is a structure diagnostic allowing to distinguish speech act modifying V2 *weil*-clauses from the other two types of V2 *weil*-clauses, no syntactic difference between propositional and epistemic adverbials can be found. Scope effects suggest that both types are generated outside the syntactic c-command domain of the matrix clause. This is surprising since propositional V2 *weil*-clauses have the same interpretation as adverbials with verb-final order (see (14-a) and (15)) and should therefore attach to the same projection, namely IP. Yet, even event modifying V2 *weil*-clauses such as (15) cannot be analyzed as IP adjuncts since they turned out to be syntactically unembeddable as we have seen in example (28) and (29). As we will see in section 6, the syntactic disintegration of V2 adverbials is due to independent reasons, namely the assertive force potential of German V2 clauses, which disallows the clause to be within the scope of another clause. I therefore propose one and the same syntactic analysis for epistemic and propositional V2 *weil*-clauses, assuming that both attach to the same projection. Since propositional and epistemic V2 *weil*-clauses are outside the c-command domain of the associated clause but cannot be used alone, I assume that they are coordinate structures. Both clauses are conjuncts of a supra-sentential paratactic phrase πP (see Gärtner 2001 for a similar analysis for V2 relatives). The conjunction *weil* is in the head of the paratactic phrase, π^0. In conformance to its semantic type $<t,<t,t>>$, *weil* takes two propositional arguments. Assuming a structure like figure 3 therefore reduces semantic computation to functional application. Furthermore, the insertion of an epistemic operator MUST into the semantic representation of CP_1 is not affected by this structure. Another fact which can be derived from the structure in 3 is that V2 *weil*-clauses cannot appear alone under an epistemic or propositional interpretation as shown in ((32)). Since one of the argument positions of the two-place predicate *weil* is not saturated, such a structure would violate the θ-criterion[7]. Thus, semantic restructuring seems to be impossible for propositional and epistemic V2 *weil*-clauses.

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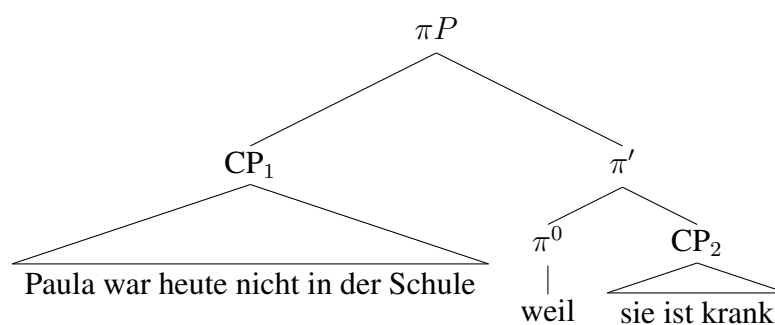
[6]Another problem for this analysis is the fact that it is not clear in which position *weil* is situated. One possibility is to assume a recursive structure. I will leave this open.

[7]Thanks to Stefan Keine for pointing this out to me.

Figure 3: Paratactic analysis

The V2 *weil*-clause in figure 3 can modify either the propositional content of CP_1 or it can take an epistemic argument. Hence, the syntactic structure in figure 3 is semantically undetermined since it can be interpreted as propositional or epistemic relation between the two conjuncts. This ambiguity is only resolved at the level of utterance processing by the contribution of pragmatic principles.

Thus, verb-final *weil*-clauses and V2 *weil*-clauses are not only distinguished in terms of their internal syntax. Whereas the former are structurally integrated in the domain of the matrix clause as IP-adjuncts (see figure 1), the latter are distinguished by a higher degree of syntactic disintegration. Speech-act modifying V2 *weil*-clauses behave like parentheticals and are analyzed as being outside the syntactic representation. In contrast, propositional and epistemic V2 adverbials are conjuncts of a paratactic phrase[8]. If the semantic interpretation of V2 *weil*-clauses allows to distinguish three different types of V2 *weil*-clauses, the syntactic behavior suggests the distinction of only two different syntactic attachment sites. The distinction between propositional, epistemic, and speech act modifying uses of V2 *weil*-clauses arises then on the one hand as the result of the adverbial clause being the conjunct of a coordinate structure or a syntactic orphan and, on the other hand, since this distinction is not sufficient to distinguish the three semantic uses, from the contribution of pragmatic principles (see section 5).

Another interesting question concerns the analysis of epistemic and speech-act modifying *weil*-clauses with verb-final order. As V2 *weil*-clauses, a verb-final *weil*-clause can take an epistemic argument as in (34-a) or modify a speech act as in (34-b) if it is separated by comma intonation from its matrix clause.

(34) a. Es hat geschneit, (\) weil   die Straße ganz   weiß ist.
         it has snowed,   (\) because the road   totally white is.
      b. Kochst du etwas?   Weil   ich heute Besuch bekomme.
         cook   you something? because I   today visit   receive.
         'Can you cook something? Because I'm receiving a visit, today.'

Interpreted as epistemic or speech-act modification, a *weil*-clause with verb-final order is outside the c-command domain of the associated clause as can be seen in example (35).

(35) a.*Jeder$_i$ schläft schon, (\) weil   in seinem$_i$ Zimmer kein Licht mehr brennt.
         everybody$_i$ sleeps already (\) because in his$_i$ room   no   light more burns.
      b.*War denn   niemand$_i$ verärgert? Weil   er$_i$ so wütend geguckt hat.
         was PART nobody$_i$ angry?   because he$_i$ so furious looked has.

The data in (35) raise the question of whether clauses like (34-a) and (34-b) should be analyzed as the corresponding V2 *weil*-clauses, namely as coordinate structures and syntactic orphans respectively. The scope effects in (35) seem to support this analysis. On the other hand, the fact that the finite verb is in the clause final position is a clear signal for subordination and therefore for syntactic integration. In this paper, I will not investigate this question but leave it for further

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[8]A point that needs to be clarified by future research is that in my analysis, *weil* is not tied to an uniform structural position.

research.

5. A compositional derivation at the syntax-semantics-pragmatics interface

We have seen that explaining the three possible interpretations of V2 *weil*-clauses by three different attachment sites is not possible since scope effects suggest that all V2 *weil*-clauses must be generated in a position outside the c-command domain of the associated clause. Even propositional V2 *weil*-clauses turned out to be syntactically unembeddable. Hence, there isn't a one-to-one correspondence between syntactic structure and semantic meaning since the syntactic differences are not a sufficient explanation for the semantic differences. In this section, I will show that the semantic differences can be derived from the interaction of three factors: The semantic contribution of the connective *weil*, the degree of syntactic integration, and pragmatic principles. Therefore, V2 *weil*-clauses are a phenomenon located at the syntax-semantics-pragmatics interface.

I propose that the semantic contribution of the connective *weil* is the same for all three interpretations. In section 3.1., I have introduced a two-place predicate CAUSE which expresses a causal relation over its two arguments p and q, p expressing a cause for the modifiee q. Whereas the argument p is always the proposition introduced by *weil*, the modifiee of the causal relation, q can be of different types. As we have seen in section 3, the *weil*-clause can modify either the propositional content of the associated clause, the speaker's belief state or the utterance of the previous speech act:

(36) a. CAUSE (p, q)
      b. CAUSE (p, MUST q)
      c. CAUSE (p, ASSERT q)

If a V2 *weil*-clause can express one of the three interpretations represented in (36), a *weil*-clause with verb-final order can only modify the propositional content of q (see (36-a)). This is due to the fact that the interpretation of the latter is determined by syntactic principles. Since a verb-final *weil*-clause is adjoined to IP, an analysis strongly suggested by scope effects (see table 1), it can only modify elements which are inside IP, hence, the propositional content of the matrix clause.

In contrast, V2 *weil*-clauses are syntactically less integrated. As coordinate structures or syntactic orphans (see figures 2 and 3), they are generated in a position in which they can take scope over the associated CP. As a consequence, they can modify not only the propositional content of the associated clause but they can also express an epistemic or a speech act modification. Speech act modifying V2 *weil*-clauses have been analyzed as completely unattached orphans. This means that syntax doesn't give any hint on how to interpret the causal relation between the two clauses. Similarly, the coordinate structure in figure 3 is semantically ambiguous since the causal clause can express either a propositional or an epistemic modification. Both representations generated by syntax are semantically not enough determined since syntax doesn't encode the way how the causal relation must be interpreted. Therefore, it is necessary to define the processes by which the object of the causal modification is determined. Since syntax generates an

undetermined representation and the semantic contribution of the connective *weil* is the same for all three interpretations, I will argue that pragmatic principles are needed to derive in each case the appropriate semantic interpretation.

It has often been observed that syntactic disintegration leads to semantic and pragmatic disintegration (as argued in Blakemore & Carston 2005; Carston 2002; Haegeman 1991; Posner 1979). Since the semantic interpretation of syntactically disintegrated structures is not determined, the processing of these constructions involves pragmatic strengthening. Due to the lack of syntactic informations to guide towards the appropriate semantic interpretation, the semantics of the clause linkage must be derived at the level of utterance processing on the basis of general principles of utterance such as the principle of relevance. According to Sperber & Wilson (1986) and Sperber & Wilson (2004), utterances create expectations of optimal relevance. An utterance is relevant if it connects with the hearer's knowledge yielding a conclusion deducible from the utterance and the context. The hearer has to look for the interpretation with maximal contextual relevance at minimal processing efforts by constructing a hypothesis about the intended meaning. To do so, the hearer must enrich the linguistically encoded meaning until the utterance satisfies his expectation of relevance. In a relevance-theoretic framework, it is a general assumption that linguistically encoded meaning is undetermined and must be pragmatically enriched: ambiguities must be resolved, references must be assigned and other indeterminacies must be dealt with. Therefore, Relevance theory treats the identification of the logical form (LF) as inferential. This is illustrated in an example from Kempson (1988:19) about the assignment of pronominal references.

(37) John came in. He felt tired.

Grammar doesn't define the reference of the pronoun *he*. It only imposes constraints on the value to be associated with. *He* must refer to a male, it is a singular form and, following binding-theory, cannot be bound. Only at the level of utterance interpretation, the pronoun *he* will be interpreted as co-referential with *John* since this is the interpretation with maximal contextual relevance. Thus, the utterance is enriched with extra-linguistical information in order to maximize relevance. Haegeman (1991) adopts this analysis to the interpretation of orphan constituents. She argues that a conditional clause like (38) refers like a pronominal to a referent which must be recovered from contextual, thus extra-linguistic, information.

(38) If you don't mind (said by a speaker moving past neighbours to take his seat in a crowed cinema).

Similarly, the value of the modifiee of a V2 *weil*-clause must be recovered at the level of utterance. A V2 *weil*-clause must be associated with another event, which can be a proposition, an epistemic state, or an utterance. At the level of utterance processing, the V2 *weil*-clause is inserted into a conceptual schema which has two open positions.

(39) $\lambda p \, \lambda q \, \mathrm{CAUSE} \, (p, q)$

The complete derivation of the semantic interpretation of example (40) is shown in (41). The V2 clause which is introduced by *weil* (= SubP) is always inserted for p (see (41-b)). In contrast, the value of the variable q must be recovered from the context. For example (40), the interpretation

which satisfies most the expectation of relevance is an interpretation as speech act modification, thus, q has the value represented in (41-c): The causal clause expresses a reason for the utterance of CP_1.

(40) Die Bild   ist in der Schublade. Weil   alleine findest du es nie.
      the picture is in the drawer.   because alone find   you it never.
      'The picture is in the drawer, because you won't find it by yourself.'

(41) a. $\lambda p \, \lambda q$ CAUSE (p, q)
      b. p = SubP
      c. q = ASSERT(CP_1)
      d. CAUSE (SubP, ASSERT(CP_1))

Since the interpretation of a V2 *weil*-clause is characterized by a high degree of structural underspecification, the logical form of a construction like (40) must be contextually enriched. More precisely, this represents a narrowing of the selectional requirements which the two-place predicate *weil* places on its second argument. This pragmatic process is driven by the search for relevance. In contrast, for syntactically integrated *weil*-clauses with verb-final order, the value of q is constrained by syntax: Since the adverbial clause is adjoined to IP, it can only modify the proposition of CP_1.

In this section, I have argued that the interpretation of V2 *weil*-clauses must be compositionally derived from an unchanging semantics of the connective *weil*, the syntactic attachment site of the adverbial clause, and the contribution of pragmatic principles such as the principle of relevance. Grammar generates an incomplete logical form which must be enriched by non-grammatical principles at the level of discourse in order to satisfy the hearer's expectation of relevance.

6. *The semantics of V2 clauses*

Propositional V2 *weil*-clauses modify the event structure and should therefore be generated in a low position in the syntactic structure. Nevertheless, structure diagnostics (see (28) to (29)) suggest that event-modifying V2 *weil*-clauses are attached very high in the syntactic representation, and that is why I argued in section 4.2. that propositional V2 *weil*-clauses are coordinate structures. Since even event-modifying V2 adverbials turned out to be syntactically unembeddable, there is no syntactic asymmetry between V2 clauses that modify the event structure and those which modify the discourse structure such as it is attested for central and peripheral adverbials in English. Now, the question which is raised by the German data is why propositional V2 *weil*-clauses behave syntactically like peripheral adverbials. Why are V2 adverbials which modify the event structure syntactically unembeddable?

Scheffler (2008:55 et seqq.) argues that causal clauses with V2 order (introduced by *weil* or *denn*) are unembeddable because the causal meaning of these clauses is contributed by a conventional implicature. She argues that the connective has the semantics of the logical $\wedge$ and that the causal relationship is derived as a conventional implicature. As a consequence, the

causal modifier cannot be embedded in any other functor such as negation. Yet, her proposal does not account for the fact that embedded V2 clauses are generally outside the scope of matrix functors. As shown in example (42), even V2 relatives and V2 object clauses are illicit if they are in the scope of negation or of a negative predicate.

(42) a.*Ich kenne keinen Linguisten, der forscht über Dialekte.
       I   know no   linguist   who works about dialects.
   b.*Peter glaubt   nicht, Paula hat das Buch gelesen.
      Peter believes not   Paula has the book read.
      'Peter doesn't believe that Paula read the book.
   c.*Peter bezweifelt, Paula hat das Buch gelesen.
      Peter doubts   Paula has the book read.

The observation that Embedded Root Phenomena are not possible in negated clauses is also attested for embedded V2 in Frisian (see (43)) and argument-fronting in English (see (44)).

(43) *Pyt betwivelet dat hy hie my sjoen.
    Pyt doubts   that he had me seen.
    'Pyt doubts that he had seen me.'

(44) a. John believes that this book Mary read.
   b.*John doesn't believe that this book Mary read.
   c.*John regrets that this book Mary read.

The examples show that explaining the syntactic unembeddability of causal V2 clauses by arguing that conventional implicatures do not embed, cannot account for the degradation of other Embedded Root Phenomena in negated contexts. That is why, in this section, I will argue that V2 order is only possible in asserted clauses which have a full-fledged CP and therefore illocutionary force. As a consequence, embedded V2 clauses cannot occur in presupposed contexts. Since negation triggers presupposition, the degradation of V2 order in negated *weil*-clauses, negated relative clauses and negated object clauses can therefore be explained by one single assumption: Embedded Root Phenomena such as V2 order occur only in asserted contexts.

The syntactic disintegration of event-modifying V2 *weil*-clauses such as (15) is due to reasons independent of the semantic interpretation of the causal relation. Unlike English, German is an asymmetric V2 language with the distinction of V2 and verb-final clauses. Generally, V2 order is limited to unembedded main clauses. But in specific contexts, subordinate clauses such as object clauses selected by bridge verbs, restrictive relative clauses which modify indefinite heads, and adverbial clauses introduced by *weil* can have V2 order, too (see also Antomo & Steinbach to appear; Gärtner 2001, Gärtner 2002; Meinunger 2004; Truckenbrodt 2006). Therefore, V2 order in German *weil*-clauses can be subsumed under the notion of Embedded Root Phenomena (as described in amongst others Hooper & Thompson 1973; Haegeman 2003; Heycock 2005; Julien 2007; Sawada & Larson 2004; Vikner 1995; Wechsler 1991). It has often been observed that, in German, the movement of the finite verb to C is associated with an assertive force potential. In the following, I will first briefly discuss the semantics of V2 in German according to Truckenbrodt (2006). Based on this approach, I will argue that due to the specific semantics of V2 order, V2 *weil*-clauses are always outside the scope domain of the

associated clause. Thus, the syntactic disintegration of propositional V2 *weil*-clauses is independent of the interpretation of the clause linkage and can be explained in terms of assertion and presupposition.

According to Truckenbrodt (2006), grammatical features in C interact with specific interpretations which are triggered by two context indices $<\text{Deont}_S (,x)_1>$ and $<\text{Epist}_2>$. All sentential speech acts are volitional on the part of the speaker S, i.e. they are deontic. By uttering a speech act, the speaker S wants something from the addressee A. In an imperative such as (45-a), S wants A to do something. In declarative and interrogative clauses, S wants to change the epistemic states of A or his own epistemic state. By uttering a question like (45-b), S wants to know something from A, by uttering an assertion like (45-c), S wants to convey knowledge to A.

(45) a. Lies das Buch! ('Read the book!')
        S wants from A that A reads the book.
     b. Hat Tim das Buch gelesen? ('Has Tim read the book?')
        S wants from A that it is Common Ground whether Tim has read the book.
     c. Tim hat das Buch gelesen. ('Tim has read the book.')
        S wants from A that it is Common Ground that Tim has read the book.

All three types of speech acts, imperatives, interrogatives, and declaratives, are deontic because the speaker S wants something from the addressee. In contrast, only interrogative and declarative clauses are epistemic speech acts which involve a call for updating the Common Ground. According to Stalnaker (1978), an asserted proposition like (45-c) is added to the Common Ground and becomes common knowledge of S and A. This means that the Common Ground is intersected with the proposition p and that all possible worlds which are not compatible with p are excluded. Truckenbrodt's (2006) central claim is that grammatical elements in C interact with the two context indices $<\text{Deont}_S (,x)_1>$ and $<\text{Epist}_2>$ represented in (46):

(46) $<\text{Deont}_S (,x)_1>$ '*S wants from A*'
      $<\text{Epist}_2>$ '*that it is Common Ground that/if p*'

Except in purely exclamative utterances, the context index $<\text{Deont}_S (,x)>$ is present in all utterances. In contrast, the presence of $<\text{Epist}>$ depends on grammatical features in C. It is only active if C is marked [+WH] and/or if C contains a finite verb with indicative or Konjunktiv II[9] morphology. In declarative clauses, the finite verb in C is the only trigger of $<\text{Epist}>$. In the following minimal pair from Reis (2006:371), only the sentence with V2 order can express an assertive speech act. By uttering (47-a), the speaker makes an assertion which triggers an update of the Common Ground. In contrast, the root *dass*-clause with verb-final order (see (47-b)) has no epistemic but only an exclamative or (depending on the modal particle *ja*) a directive reading. Thus, the example shows that only V2 clauses have an assertive force potential and can therefore modify the Common Ground.

(47) a. Alle   sind rechtzeitig da.
        everybody are punctual   there.
        'Everybody is there in time!'

_____

[9]Roughly, Konjunktiv is the German subjunctive mood

b. Dass (ja) alle rechtzeitig da sind!
   that (PART) everybody punctual there is!
   '(It's imperative that) everybody is there in time.'

Furthermore, the context index $<\text{Deont}_S>$ is extended by the specification 'from A' if C contains a finite verb. As argued in Truckenbrodt (2006:270), only [V-in-C]-clauses presuppose a reaction from the addressee A. This is shown in the following example. By uttering (48-a), S expects from A an answer to his question. In contrast, the *ob*-question with verb-final order does not express the expectation of an answer from A. Instead, (48-b) can be paraphrased by the expression 'I wonder if...'.

(48) a. Kommt er?
         comes he?
         'Does he come?'
      b. Ob er wohl kommt?
         if he PART comes?
         'I wonder if he comes.'

Thus, a clause with the finite verb in C expresses the expectation that A reacts. In interrogative clauses, this reaction should be an answer to the question, in declarative clauses, A should accept the information p. Thus, in both cases, A controls whether the desired update of the Common Ground will be felicitous or not. According to Truckenbrodt (2006:265), the interaction of the two context indices with grammatical features in C is summarized in (49) (his (17)).

(49) In a context index $<\text{Deont}_S (,x)(,<\text{Epist}>)>$ in C
      a. Epist is present iff
         (i)   C contains a finite verb with indicative or Konjunktiv II or
         (ii)   C/CP is marked [+WH].
      b. x = A(ddressee) iff C contains a finite verb with person inflection.

Therefore, a German V2 declarative has the semantics shown in (50):

(50) $<<\text{Deont}_S, A>, <\text{Epist}>>$
      '*S wants from A that it is Common Ground that p*'

In German, V2 declaratives have an assertive force potential. The movement of the finite verb to the left periphery is associated with an update of the Common Ground. In contrast, embedded clauses typically lack illocutionary force since the finite verb does not move to the C-system. Therefore, *weil*-clauses with verb-final order such as (1-b) lack illocutionary force. Instead, they are integrated into the speech act of their matrix clause. In contrast, a V2 *weil*-clause has assertive force independent of its associated main clause. The movement of the finite verb to the left periphery triggers an update of the Common Ground. As a consequence, a V2 clause cannot be presupposed, that is, it cannot already be part of the Common Ground.

Thus, only asserted *weil*-clauses allow V2 order. This is a correlation between the syntax and pragmatics of adverbial clauses which has often been observed. Amongst others, Hooper & Thompson (1973), Julien (2007), and Sawada & Larson (2004) note that presupposed adverbial

clauses resist root transformations. Root transformations or Main Clause Phenomena are syntactic transformations normally limited to root clauses which occur in some embedded contexts. For instance, in English adverbial clauses, left dislocation is blocked if the adverbial clause is presupposed. Adopting this idea to German *weil*-clauses, I propose to explain the syntactic distribution of V2 and verb-final *weil*-clauses (see table 1) in terms of assertion and presupposition. V2 order as a root transformation is illicit whenever the adverbial clause is presupposed.

Based on this assumption, the degradation of V2 order in presupposed *weil*-clauses is due to a semantic mismatch. Now I'm able to explain the degradation of V2 *weil*-clauses in environments in which a *weil*-clause with verb-final order is fine. We have seen in section 2 that V2 order is not possible if the causal clause is within the scope of negation, a focus particle, a correlative, or of the matrix interrogative operator. Strikingly, these are all elements which presuppose the existence of their complement. I will first consider the case of negation. In example (3-b), repeated here as (51-a), we have seen that a V2 *weil*-clause cannot be within the scope of matrix negation.

(51) a.*Paul fährt nicht nach Berlin, weil er hat dort Familie, sondern weil er will die Stadt besichtigen.
       'Paul doesn't go to Berlin because he has family there but because he wants to visit the town.'
      b. ¬ CAUSE (p, q)

As shown in (51-b), the negative operator takes scope over the CAUSE predicate. As argued in Sawada & Larson (2004), negation forces presupposition. Thus, example (51-a) presupposes that Paul has family in Berlin. Since V2 order is not possible in presupposed clauses, example (51-a) with the formal representation in (51-b) is not well formed. V2 order is only possible if CAUSE takes scope over negation as in (52-a), represented in (52-b). In this case, the reason why Paul is not going to Berlin is that he has family in Berlin (and he doesn't want to see them). The *weil*-clause is not within the scope of negation and hence not presupposed.

(52) a. Paul fährt nicht nach Berlin, weil   er hat dort Familie.
         Paul goes not   to   Berlin because he has there family.
      b. CAUSE (p, ¬ q)

Similarly, V2 order is not possible if the *weil*-clause is in the scope of another presupposition trigger. Just like negation presupposes that there IS an event p, a correlative such as *deshalb* (see example (4)) presupposes the existence of its complement event. In the same way, a V2 *weil*-clause cannot be within the scope of a focus-sensitive particle such as *sogar* 'even'. According to Horn (1969) and Krifka (1993), focus-sensitive particles are presupposition triggers.

(53)*Sogar Paul ist nach Berlin gekommen, weil   Tim wohnt hier.
     even Paul is to   Berlin came   because Tim lives here.
     'Even Paul came to Berlin because Tim lives here.'

Other presupposition triggers are according to Beaver (2001:11) iterative adverbs, unstressed constituents, and questions. As expected, this material, which is thought to induce presupposition, is incompatible with V2 *weil*-clauses. In example (5), we have already seen that V2 order

is illicit if the adverbial clause is in the scope of *auch* 'too', example (10) shows that V2 *weil*-clauses are prosodically independent and example (6) demonstrates that a V2 adverbial cannot be integrated into a question.

Following Sawada & Larson (2004), I assume that presupposed adverbial clauses are in the scope of a covert existential quantifier as in (54) and that quantifier-restrictions are presupposed to be non-empty. If the adverbial clause expressing causation is in the scope of an existential quantifier, it is presupposed and cannot undergo root transformations. Therefore, it cannot have V2 order.

(54) $\exists (\text{CAUSE}_{e1} (e_1)) (e_2)$

In contrast, if the adverbial clause is not presupposed, CAUSE expresses according to Johnston (1994) a relation between two closed events as represented in (55), which is the representation of a *weil*-clause with V2 order.

(55) $\text{CAUSE} (\exists e_1, \exists e_2)$

Comparing the two representations in (54) and (55), it becomes apparent that V2 *weil*-clauses have a larger semantic domain than presupposed *weil*-clauses. Whereas in (54) the connective *weil* combines with open event descriptions, in (55), *weil* combines with a quantifier $\exists$ and an event description. This semantic difference is reflected in syntax. As we have seen in section 4.1., V2 *weil*-clauses have a full fledged CP-layer, whereas adverbial clauses with verb-final order have a reduced left periphery. Since V2 *weil*-clauses have an extra layer of structure, they allow root transformations as, for example, Left Dislocation (see (56-a)). According to Grewendorf (2008:65), German Left Dislocation targets the specifier of TopP. Hence, Left Dislocation is only possible if TopP projects. As shown in (56-b), Left Dislocation is not possible in *weil*-clauses with verb-final order since they have a reduced left periphery.

(56) a. Lass uns lieber Tim einladen, weil   den Lukas, den   will ich nicht sehen.
           let   us rather Tim invite   because the Lukas, PRO want I   not   see.
           'Let's invite Tim, because I don't want to see Lukas.'
      b.*Lass uns lieber Tim einladen, weil   den Lukas, den   ich nicht sehen will.
           let   us rather Tim invite   because the Lukas PRO I   not   see   want.

Based on cross-linguistic evidence, Sawada & Larson (2004) conjecture that, compared to temporal *when*-clauses, adverbial clauses expressing causation have in general an extra layer of structure. *Because*-clauses allow cross-linguistically root transformations, whereas temporal adverbials resist Main Clause Phenomena. Yet, in German, there is a distinction between *weil*-clauses with verb-final order and those with V2 order. Only the latter allow root transformations, whereas the former cannot undergo root transformations.

In sum, in this section, I have argued that the syntactic unembeddability of V2 *weil*-clauses is due to their assertive force potential. Since V2 clauses are always asserted, a V2 *weil*-clause cannot occur in presupposed environments. Thus, the fact that even event modifying V2 *weil*-clauses such as (15) are syntactically unembeddable can be explained by independent reasons. The availability of V2 order in German *weil*-clauses is a semantic phenomenon, explainable in terms of assertion and presupposition. The degradation of V2 *weil*-clauses in combination with

a presupposition trigger is a projection of a semantic phenomenon into syntax.

7.   Conclusion

This paper investigates formal and functional differences between German V2 and verb-final *weil*-clauses. V2 *weil*-clauses are syntactically unembeddable, whereas causal adverbials with verb-final order are typically within the c-command domain of the associated main clause. I have argued that the syntactic unembeddability of V2 *weil*-clauses is due to the assertive force potential of German V2 clauses. As an embedded root phenomenon, V2 order is not possible in adverbial clauses in presupposed contexts. As a consequence, a V2 *weil*-clause cannot be in the scope of negation, a correlative, or another presupposition trigger.

A *weil*-clause with verb-final order structures the event by expressing a reason for the propositional content of the matrix clause. In contrast, V2 adverbials can express three readings. Like their verb-final counterparts, they can be interpreted as event modification. Furthermore, they can express a reason for the speaker's attitude or a speech act modification. I proposed that this semantic differences between V2 and verb-final *weil*-clauses can partially be traced back to syntactic differences. Verb-final *weil*-clauses have a truncated CP domain in that they lack ForceP, TopP and FocP and they are merged within the proposition of the matrix clause as IP-adjuncts. In contrast, V2 *weil*-clauses have a full fledged CP and they are outside the syntactic domain of the main clause. Yet, I have shown that the three different interpretations of V2 *weil*-clauses cannot be traced back to three different syntactic attachment sites since all three types of V2 adverbials are syntactically unembeddable and allow Main Clause Phenomena. That's why I have proposed a compositional analysis which derives the three semantic representations from an invariant semantics of the causal connective *weil* and the syntactic disintegration of V2 clauses which leads to a third factor, namely pragmatic strengthening guided by the search for relevance.

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