

# On some correlations between interpretative and formal properties of causal clauses\*

Werner Frey

## Abstract

This paper argues that there is a one-to-one mapping between the syntax of a causal clause and its semantic type. A causal central adverbial clause (CAC) is base-generated inside its licensing clause in a deep position and refers to a relation between eventualities. A causal peripheral adverbial clause (PAC) is base-generated inside its licensing clause in a high position and refers to a relation between propositions, and a causal non-integrated adverbial clause (NonIC) is a syntactic orphan and refers to a relation between speech acts.

The German causal sentence forms considered in this paper occur in certain classes. A *weil*-verb-final-clause is by default a CAC; if it is supported by certain indicators, it can occur as a PAC or as a NonIC. A *da*-clause typically occurs as a PAC; if it is supported by certain indicators, it can occur as a NonIC. A *weil*-V2-clause necessarily occurs as a NonIC.

The three domains in which according to Sweetser (1990) causal conjunctions may be interpreted – (i) the content domain, (ii) the epistemic domain, (iii) the speech act domain – relate to the syntax of causal clauses in the following ways: a causal CAC supports (i), a causal PAC supports (i) or (ii), a causal NonIC supports (i), (ii) or (iii).

The paper discusses several consequences of these claims, among them the distribution of root phenomena and the syntax of performative clauses.

## 1 Introduction: The three basic readings of causal clauses

This paper discusses some formal and interpretative properties of a few of the many clausal realisation forms of the causal relation in German. Causal expressions and especially causal clauses are an important research topic in many fields in linguistics. They also constitute an intensively studied field in German syntax (among many others, cf. Pasch 1983, Keller 1993, Blühdorn 2008, Breindl/Walter 2009, Ravetto/Blühdorn 2011, Stede/Walter 2011, Volodina 2011, Reis 2013, Breindl et al. 2014). One reason for this attention is certainly that the causal relation constitutes a fundamental cognitive way in which we order the world and it is of great interest how this is expressed in a given language. However, a reason why so many linguistic studies on causality have been carried out during the last 25 years in particular might also be the attraction, scepticism, and stimulation which have been evoked by the work of Sweetser (1990). The present paper also stands in this tradition. Sweetser (1990) assumes that a relation like the causal one can in principle be interpreted on three differ-

\* This work was supported by the German Bundesministerium für Bildung und Forschung (BMBF) (Grant No. 01UG0711).

I wish to thank two reviewers and Manfred Krifka and Torgrim Solstad for very helpful comments and discussions. Of course, all remaining errors and shortcomings are my own.

ent cognitive levels – the content domain, cf. (1a), the epistemic domain, cf. (1b), and the speech act domain, cf. (1c).

- (1) a. Maria ist sehr bleich, weil sie krank ist.  
*Maria is very pale because she ill is*  
 b. Maria ist krank, weil sie sehr bleich ist.  
*Maria is ill because she very pale is*  
 c. Maria ist krank, weil du dich doch immer für sie interessierst.  
*Maria is ill because you REFL MP always in her interested-are*  
 ‘Since you are always interested in Maria, she is ill.’

These readings are distinguished by Sweetser on an intuitive basis. A causal relation interpreted in the content domain is said to state that one fact of the world causes another fact of the world. A causal relation interpreted in the epistemic domain is said to give the reason why the speaker takes a certain clause to be true. Finally, a causal relation interpreted in the speech act domain tells the motivation for why the speaker is performing a certain speech act. Sweetser (1990) assumes that in English these different readings are the result of pragmatic reasoning and are not encoded in grammar. Other researchers (e.g. Lang 2000, Blühdorn 2008) argue that there are some reflexes of the different readings in the grammar of English and German. The present paper is mainly concerned with the question whether there are correlations between these readings and specific grammatical forms in German and tries to arrive at some claims on this issue.

The different meanings of the causal relations illustrated in (1) are often called propositional, (1a), epistemic, (1b), and speech act related, (1c) (cf. e.g. Breindl/Walter 2009, Volodina 2011). Below, it will be argued that the notion ‘propositional’ for the first relation is not appropriate. Therefore, in the present paper, a causal relation like the one in (1a) will be called an ‘eventuality related causal relation’, EventCRel for short. For the causal relations with the readings of (1b) and (1c), the notions ‘causal epistemic relation’, EpistCRel for short, and ‘causal speech act related relation’, SpeechCRel for short, will be used. Note that these labels are just meant to refer on an intuitive basis to the different readings Sweetser distinguishes. Importantly and crucially, these labels are neither meant to indicate how these different readings should be analysed in the semantic analysis nor are they assumed to refer to specific syntactic forms. In fact, the paper will argue that these intuitively distinguished readings come about in quite different ways in semantics and appear with quite different syntactic forms.

If we just look at the linear strings we see that all examples in (1) are verb-final clauses which are introduced by the complementiser *weil* (*weil*-Vf-clauses) and which follow their licensing clauses. The present paper also considers some variations of these forms. The causal clauses considered here vary with regard to the choice of the conjunction *weil* or *da*, cf. (2a) vs. (2b); concerning the positioning relative to the host clause and regarding the question whether they appear as part of the structure of the host clause or not, cf. e.g. (2a) and (2c) vs.

(2d); and with respect to the positioning of the verb in final or second position, cf. e.g. (2a) vs. (2e). Crucially, the paper also considers variation with regard to prosody. In (2a), for example, the causal clause and its licensing clause are contained in one prosodic domain, whereas in (2d-f) this is not the case (small caps indicate sentence accent). (We will come back to the situation in sentences like (2b) and (2c).)

- (2) a. Ich gehe nach Hause, weil es sehr SPÄT ist.  
*I go to home because it very late is*  
 b. Ich gehe nach Hause, da es sehr spät ist.  
 c. Weil es sehr spät ist, gehe ich nach Hause.  
 d. Weil es sehr SPÄT ist, ich gehe nach HAUSE.  
 e. Ich gehe nach HAUSE, weil es ist sehr SPÄT.  
*I go to home because it is very late*  
 f. Ich gehe nach HAUSE, (\) weil es sehr SPÄT ist.

Note that all the examples in (2) can be said to exhibit the EventCRel in the sense of Sweetser (1990). Thus, we already see that the EventCRel is also possible with a *da*-clause, with a *weil*-clause which has the finite verb in second position (*weil*-V2-clause) and with a *weil*-Vf-clause which constitutes its own prosodic domain.

Regarding EpistCRel and SpeechCRel, we have seen in (1) that these readings may arise with a *weil*-Vf-clause. These readings may also arise with *da*-causal clauses and with *weil*-V2-clauses. This is illustrated in (3) and (4).

- (3) a. Maria ist krank, da sie sehr bleich ist.  
 b. Maria ist krank, da du dich doch immer für sie interessierst.
- (4) a. Maria ist krank, weil sie ist sehr bleich.  
 b. Maria ist krank, weil du interessierst dich doch immer für sie.

So, in principle the three readings EventCRel, EpistCRel and SpeechCRel can arise with *weil*-Vf-, *da*- and *weil*-V2-clauses. Nevertheless, if the positioning of the causal clauses and their prosody are taken into account, there are restrictions, as we will see.

The paper proceeds as follows. Section 2 will investigate three basic syntactic properties with regard to causal clauses exhibiting the different readings EventCRel, EpistCRel and SpeechCRel. These concern the option of binding into the causal clause, the option of positioning the causal clause in the prefield of its matrix clause and the option of embedding the causal clause together with its licensing clause. The observations will allow us to gain some insights into the structural relationship between a causal clause with a given reading and its main clause. The following section introduces the basic distinction between three classes of dependent clauses: the fully integrated central adverbial clauses (CACs), the semi-integrated peripheral adverbial clauses (PACs) and the non-integrated dependent clauses (NonICs). It will be argued that the distinction between these classes can fruitfully be applied to causal clauses and it will be

shown how the different readings of causal clauses considered in the present paper are to be allocated to these classes. Crucially, it will be demonstrated that causal clauses which are CACs always give rise to an EventCRel reading, that causal clauses which are PACs give rise to an EventCRel or to an EpistCRel reading, and that causal clauses which are NonICs may give rise to an EventCRel, to an EpistCRel or to a SpeechCRel reading. An immediate consequence is that a causal clause with a speech act related reading necessarily belongs to the class of NonICs. Section 4 investigates in which types of causal clauses root phenomena may appear. In section 5, the paper goes on to compare *weil*-Vf-clauses and *da*-clauses and raises the question as to which classes of dependent clauses they belong. It will be demonstrated that a *da*-clause cannot be a CAC, in contrast to a *weil*-Vf-clause; a *da*-clause may be a PAC or a NonIC. The same is true for a *weil*-Vf-clause containing a modal particle (MP): it cannot be a CAC. These observations allow us to draw conclusions about the semantic status of such *da*- and *weil*-Vf-clauses which are not NonICs. These *da*-clauses and *weil*-Vf-clauses connect two propositions. In contrast, a *weil*-Vf-clause which is a CAC connects two eventualities. In the final section, NonICs are considered in more detail. It is argued that an adverbial clause is a NonIC if and only if it has its own illocutionary force. Then it is suggested that a causal NonIC always connects two speech acts, and it is indicated how the three readings distinguished by Sweetser may emerge. The paper ends with a summary of the main claims and of the central consequences of these claims.

## 2 Some syntactic properties of different causal clauses carrying eventuality related, epistemic and speech act related readings

We start by looking at variable binding data which can be observed with causal clauses that differ in their readings. In (5a) we find binding of a quantified DP into a *weil*-Vf-clause exhibiting the EventCRel. (5b) demonstrates that variable binding is not possible into an EpistCRel *weil*-Vf-clause. (5c) exhibits a SpeechCRel *weil*-Vf-clause. Variable binding is also not possible into this kind of causal clause.

- (5) a. Fast jeder Anwesende<sub>1</sub> wurde bleich, weil er<sub>1</sub> erschrocken  
*nearly every attendant got pale because he frightened*  
 ist.  
*got*
- b. \*Fast jeder Anwesende<sub>1</sub> ist krank, weil er<sub>1</sub> sehr bleich ist.  
*nearly every attendant is ill because he very pale is*
- c. \*Fast jeder Kollege<sub>1</sub> ist krank, weil du dich doch immer  
*nearly every colleague is ill because you REFL M always*  
 für ihn<sub>1</sub> interessierst.  
*in him interested-are*

As is well known a quantifier can bind an agreeing personal pronoun positioned in another clause if and only if the quantifier c-commands the pronoun (at the level of representation where operator binding is checked). Thus, the data in (5) show that (at the relevant level) the EventCRel *weil*-Vf-clause is inside the c-command domain of the quantified DP in the main clause, whereas the EpistCRel and the SpeechCRel *weil*-Vf-clauses are not c-commanded by the quantified DP.

A standard account for the binding in (5a) would be to assume that first the EventCRel clause is base-generated in the middle field before it is moved to the region standardly called the postfield. For checking of the binding conditions the clause is reconstructed. There are other views on how to analyse the filling of the postfield, however all views have in common that a constituent which is placed in the postfield allows binding into it. As a consequence the data in (5b,c) show that the EpistCRel *weil*-Vf-clause and the SpeechCRel *weil*-Vf-clause are not structurally positioned in their hosts in the same way as the EventCRel *weil*-Vf-clause is.

Let us next consider the options of binding into a *da*-clause, cf. (6).

- (6) a. \*Fast jeder Anwesende<sub>1</sub> wurde bleich, da er<sub>1</sub> erschrocken ist.  
 b. \*Fast jeder Anwesende<sub>1</sub> ist krank, da er<sub>1</sub> sehr bleich ist.  
 c. \*Fast jeder Kollege<sub>1</sub> ist krank, da du dich doch immer für ihn<sub>1</sub> interessierst.

The examples in (6) show that there is no binding into a *da*-clause, be it a *da*-clause exhibiting the EventCRel, (6a), the EpistCRel, (6b), or the SpeechCRel, (6c). It follows that under no reading does a *da*-clause in the c-command domain of a quantified DP occur in its host clause. Note the difference from a *weil*-Vf-clause referring to an EventCRel, which allows binding into it. This disparity is shown once more by the minimal pair in (7).

- (7) a. Kaum jemand<sub>1</sub> war beleidigt, weil er<sub>1</sub> unterbrochen wurde.  
*hardly anyone was offended because he interrupted was*  
 b. \*Kaum jemand<sub>1</sub> war beleidigt, da er<sub>1</sub> unterbrochen wurde.

There is also no binding possible into a *weil*-V2-clause under any reading. It is enough to illustrate this with a *weil*-V2-clause referring to an EventCRel:

- (8) \*Kaum jemand<sub>1</sub> war beleidigt, weil er<sub>1</sub> wurde unterbrochen.

Let us now move to the second phenomenon to be studied in this section. This concerns the option of the different dependent clauses for being positioned in the prefield of a German verb-second clause (V2-clause). We again start with *weil*-Vf-clauses under the three readings in question.

- (9) a. Weil sie krank ist, ist Maria sehr bleich.  
 b. \*Weil sie sehr bleich ist, ist Maria krank.  
 c. \*Weil du dich doch immer für sie interessierst, ist Maria krank.

We see that only the example which contains an EventCRel clause is grammatical, (9a). The *weil*-clause with the EpistCRel reading, (9b), and the *weil*-clause with the SpeechCRel reading, (9c), sound awkward.

The next question to ask is how *da*-clauses behave.

- (10) a. Da sie krank ist, ist Maria sehr bleich.  
 b. Da sie sehr bleich ist, ist Maria krank.  
 c. \*Da du dich doch immer für sie interessierst, ist Maria krank.

The *da*-clause which is interpreted as an EventCRel is possible in the prefield, (10a). Interestingly, this is also true for the *da*-clause which is interpreted as an EpistCRel, (10b). Note the difference between (9b) and (10b). Finally, the *da*-clause interpreted as a SpeechCRel is not possible in the prefield, (10c).

*Weil*-V2-clauses can never be positioned in the prefield of their licensing clauses. This is a well-known fact and here it is only illustrated with an EventCRel V2-clause:

- (11) \*Weil sie ist krank, ist Maria sehr bleich.

We now have to come back to *weil*-Vf-clauses in the prefield. Above, given (9b), we stated that a *weil*-clause with the EpistCRel reading is not possible in the prefield. This statement has to be relativised. If it is explicitly made clear that the *weil*-clause can only be interpreted on the epistemic level, such a *weil*-clause becomes possible in the prefield. Compare (9b) with the well-formed examples (12a) and (12b), in which a modal verb and a modal particle, respectively, appear in the matrix clause thereby forcing the causal relation to be interpreted on the epistemic level.

- (12) a. Weil sie sehr bleich ist, muss Maria krank sein.  
*because she very pale is must Maria ill be*  
 b. Weil sie sehr bleich ist, ist Maria wohl krank.  
*because she very pale is is Maria MP ill*

Thus, it seems that (9b) is bad because a *weil*-Vf-clause in the prefield is interpreted by default as denoting an EventCRel. Only if it is explicitly indicated that a *weil*-Vf-clause positioned in the prefield is to be interpreted epistemically is it interpreted this way.

Interestingly, if a *weil*-Vf-clause positioned in the prefield can be interpreted on the EventCRel level, the option of binding into the *weil*-clause from the outside disappears, (13). In this case it behaves like any *da*-clause.

- (13) a. \*Weil er<sub>1</sub> sehr bleich ist, muss jeder<sub>1</sub> krank sein.  
 b. \*Weil er<sub>1</sub> sehr bleich ist, ist jeder<sub>1</sub> wohl krank.

Summarising the observations regarding the options of occupying the prefield, we note that *weil*-Vf- and *da*-clauses may be positioned there but only if they are interpreted as EventCRel or as EpistCRel clauses (whereby the latter case is possible for *weil*-Vf-clauses only if lexically indicated). I believe it is of great

interest that *weil*-Vf- and *da*-clauses as SpeechCRel clauses are not possible in the prefield. We will come back to this issue in the next section.

The data considered so far suggest the following claims:

- (14) i. For an EventCRel *weil*-Vf-clause there exists the option of it being base-generated in a deep position of the host clause,  
 ii. an EpistCRel *weil*-Vf-clause which is base-generated in its host clause is base-generated in a high position of the host (i.e. in a position which allows positioning in the prefield of the host but which is outside of the c-command domain of the subject of the host),  
 iii. a *da*-clause which is base-generated in its host clause, be it as an EventCRel or as an EpistCRel clause, is base-generated in a high position of the host (i.e. in a position which allows positioning in the prefield of the host but which is outside of the c-command domain of the subject of the host).

Let us now ask the question of what can be said about the base position of a *weil*-Vf- or a *da*-clause with the SpeechCRel reading. The data in (5c), (6c), (9c) and (10c) are compatible with two assumptions. According to the first one, this position is an adjunction position inside the host sentence which is higher than the position standardly called the prefield. According to the second one, *weil*-Vf- or *da*-clauses with the SpeechCRel reading do not belong to the structure of their host. They are structurally independent of their host. The following data suggest that the second option is correct.

- (15) a. \*Dass Maria krank ist, weil/da er sich doch immer für sie  
*that Maria ill is because he REFL MP always in her*  
 interessiert, sagte Fritz heute zu Karl.  
*interested-is said Fritz today to Karl*  
 b. \*Peter sagte zu Maria, [dass er sich scheiden lässt, weil/da sie es  
*Peter said to Maria that he REFL divorced gets because she it*  
 ja doch erfährt].  
*MP anyway learns*

(15) demonstrates that a *weil*-Vf- or a *da*-clause encoding the SpeechCRel cannot be embedded together with its licensing clause. I take this as strong evidence that these clauses do not constitute common constituents with their host clauses. They are generated separately as so-called syntactic ‘orphans’.

The same conclusion emerges for *weil*-V2-clauses under any reading. They cannot be embedded together with their licensing clauses. It is enough to illustrate this with a *weil*-V2-clause referring to an EventCRel.

- (16) \*Peter sagte zu Karl, [dass Maria sehr bleich ist, weil sie ist krank].

Thus we can add to the three claims in (14) the two claims in (17).

- (17) i. clauses with the SpeechCRel reading are structurally independent of their licensing clauses,

- ii. a *weil*-V2-clause is structurally independent of its licensing clause under any reading, i.e. under the EventCRel, the EpistCRel or under the SpeechCRel reading.

### 3 Three classes of 'adverbial' clauses and the readings of causal clauses

In the literature, often three classes of 'adverbial' clauses are distinguished. (I have used quotes here since the term *adverbial clause* is not quite appropriate for the members of the third class.) These classes are the central adverbial clauses (CACs), the peripheral adverbial clauses (PACs) and, in the terminology of Frey (2012), the non-integrated dependent clauses (NonICs). Examples of CACs are restrictive temporal adverbial clauses, event-related conditionals and clauses of manner. Standard examples of PACs are adversatives and instances of concessives. According to Frey (2012), continuative *w*-relative and *d*-relative clauses, and so-called free *dass*-clauses belong to the NonICs. In the following, a temporal clause will serve as an instance of a CAC, an adversative clause represents PACs, and a *w*-relative is the example of a NonIC.

In (18) it is shown how our representatives of the three classes of dependent clauses behave regarding binding by a quantified DP sitting in the main clause. As (18a) reveals, a temporal adverbial clause does allow it, while (18b) and (18c) show that an adversative adverbial and a continuative *w*-relative, respectively, do not.

- (18) a. Keiner<sub>1</sub> hat protestiert, als er<sub>1</sub> unterbrochen wurde.  
*no-one has protested when he interrupted was*  
 b. \*Jede Kollegin<sub>1</sub> ist letzten Sonntag am Institut gewesen,  
*every colleague has last Sunday at-the institute been*  
 während sie<sub>1</sub> sonst bei schönem Wetter einen Ausflug macht.  
*while she otherwise in beautiful weather an excursion goes-on*  
 c. \*Jede<sub>1</sub> hat die Prüfung bestanden, worüber sie<sub>1</sub> sich gefreut hat.  
*every has the exam passed about-what she REFL pleased was*

What about the positioning of these clauses in the prefields of their licensing clauses? (19) demonstrates that a CAC and a PAC may occupy the prefield, whereas a NonIC may not.

- (19) a. Als Max unterbrochen wurde, hat er protestiert.  
 b. Während Maria doch sonst bei schönem Wetter einen Ausflug macht,  
 ist sie letzten Sonntag am Institut gewesen.  
 c. \*Worüber sich Max gefreut hat, hat er die Prüfung bestanden.

Another property of the three classes of dependent clauses which is of interest for us concerns the possibility of their being embedded together with the licensing clause.

- (20) a. Hans vermutet, [dass Max protestierte, als er unterbrochen wurde].  
*Hans assumes that Max protested when he interrupted was*
- b. Hans vermutet, [dass Maria klug ist, während ihr Bruder fleißig ist].  
*Hans assumes that Maria intelligent is while her brother diligent is*
- c. \*Hans vermutet, [dass Eva die Schachpartie gewann, was Oskar ärgerte].  
*Hans assumes that Eva the chess-match won which Oskar annoyed*

We see that a CAC, (20a), and a PAC, (20b), can be embedded together with its host clause, whereas a NonIC, (20c), cannot.

The data in (18), (19) and (20) yield two main insights about the structural relationships between CACs, PACs and NonICs and their licensing clauses. First, CACs are in the c-command domain of the subjects of the licensing clauses; this does not hold for PACs and NonICs. Second, CACs and PACs both belong to the structure of the main clause, while NonICs do not. In the following, the conclusions Frey (2012) draws from these observations are summarised.

According to Frey (2012), the licensings of CACs and PACs are different. A CAC is licensed in the standard way inside its host's TP by the verb or by one of its functional projections. A PAC is also syntactically licensed by its host. However, it is licensed in a very high position by the host's Force-projection. This difference explains why PACs, in contrast to CACs, show signs of non-integration like the opaqueness for binding. That a PAC is syntactically licensed by its host after all, albeit in a very high position, captures that it may be positioned in the prefield of a V2-clause. This treatment of CACs and PACs distinguishes this account from proposals like that of Pasch et al. (2003: 398), who make a sharp distinction between the semantics of CACs and PACs but treat them on a par syntactically.

Frey (2012) goes on to argue that PACs and NonICs are also licensed rather differently. Some of the pieces of evidence consist in the fact that a PAC may appear in the prefield of its host, whereas a NonIC may not, (19), and in the fact that a PAC can be embedded with its host clause, while a NonIC cannot, (20). Whereas a PAC receives syntactic licensing by the Force-projection of its host, according to Frey (2012), a NonIC is not part of the syntactic structure of its associated clause. A NonIC is a true orphan in the sense of Haegeman (1991). Thus, syntactically a NonIC constitutes an independent clause. Its licensing solely happens semantically by a rhetorical relation which connects it with its associated clause.

Let us now bring together the observations about causal clauses in section 2 and the properties of CACs, PACs and NonICs reported in this section so far. We arrive at the following claims:

- (21) i. A *weil*-Vf-clause interpreted as an EventCRel can be a CAC,  
 ii. if a *weil*-Vf-clause interpreted as an EpistCRel is generated as part of the structure of its licensing clause, then it is a PAC,  
 iii. if a *da*-clause which is interpreted as an EventCRel or as an EpistCRel is generated as part of the structure of its licensing clause, then it is a PAC,  
 iv. any type of causal clause interpreted as a SpeechCRel is a NonIC,  
 v. a *weil*-V2-clause is necessarily a NonIC.

Sections 5 and 6 will briefly discuss the rationale behind the statements in (21).

Given (21), at least regarding the clauses considered in the present paper, we now can already infer some correspondences between the degree of integration of a causal clause and its possible readings.

- (22) i. A causal CAC necessarily has the EventCRel reading,  
 ii. a causal PAC necessarily has the EventCRel or the EpistCRel reading,  
 iii. there is a causal NonIC which can have the EventCRel, the EpistCRel or the SpeechCRel reading.

(22i) holds since we have seen that if a clause does not have an EventCRel reading, then no binding into the clause is possible. This in turn implies that the clause is not a CAC. (22ii) holds since we have seen that having the SpeechCRel reading implies not being a PAC. (22iii) holds since a *weil*-V2-clause is always a NonIC and we have seen that a *weil*-V2-clause can have the EventCRel, the EpistCRel or the SpeechCRel reading. Later it will be seen that any causal NonIC may have the EventCRel, the EpistCRel or the SpeechCRel reading. All in all the correspondences expressed in (22) confirm the presumption expressed in the literature (cf. e.g. Breindl/Walter 2009, Antomo/Steinbach 2010) that less integrated structures have more interpretative freedom than more strongly integrated ones.

Next I would like to bring up two further properties to be checked regarding the three classes of ‘adverbial’ clauses and the types of causal clauses. The first property concerns the prosodic behaviour of the combination ‘licensing clause + dependent clause’ (cf. Frey/Truckenbrodt 2015). In a wide focus context, CACs like in (23) can carry the sentence stress of the entire utterance, while PACs like (24) require separate sentence stress on the host clause (Brandt 1990, Frey 2012).

- (23) What did Maria tell you?  
 a. Peter wird kommen, sobald er etwas ZEIT hat.  
 b. Peter wird KOMMEN, sobald er etwas ZEIT hat.  
*Peter will come as-soon-as he some time has*
- (24) What did Maria tell you?  
 a. #Peter wird kommen während Maria keine ZEIT hat.  
 b. Peter wird KOMMEN, während Maria keine ZEIT hat.  
*Peter will come while Maria no time has*

The contrast between (23a) and (24a) confirms that a PAC is – loosely speaking – less integrated than a CAC. However, there are also prosodic indications of the integration of a PAC. In prosody the important constraint \*STRESS-GIVEN is active (cf. e.g. Frey/Truckenbrodt 2015): a constituent marked as given should not be assigned sentence stress. (25) and (26) demonstrate that according to whether the host clause or the PAC is contextually given, this constraint can in principle remove sentence stress from them.

- (25) A: Peter wird KOMMEN.  
*Peter will come*  
 B: [Er wird kommen]<sub>G</sub> während Maria keine ZEIT hat.  
*he will come while Maria no time has*
- (26) A: Maria hat keine ZEIT.  
*Maria has no time*  
 B: Während [sie keine Zeit hat]<sub>G</sub> wird Peter aber KOMMEN.  
*while she no time has will Peter but come*  
 ‘Maria has no time. But Peter will come, while she has no time.’

The host clause and the PAC form an utterance. The constraint ‘each utterance requires at least one sentence stress’ requires sentence stress only once in the entire utterance (Truckenbrodt 2015), and so the stress may shift away from a given part to another part of the utterance.

This is different with a NonIC, illustrated here once more with a continuative *w*-relative. In (27) the host clause is contextually given. Nevertheless the constraint \*STRESS-GIVEN cannot remove sentence stress from the host clause. Thus, ‘host + continuative *w*-relative’ does not count as one utterance. With each sentence a separate utterance is performed.

- (27) Peter wird KOMMEN.  
*Peter will come*  
 a. #Ja, [er wird kommen]<sub>G</sub> worüber sich Maria FREUT.  
*yes he will come where-about herself Maria is-delighted*  
 b. Ja, [er wird KOMMEN]<sub>G</sub> worüber sich Maria FREUT.  
 ‘Peter will come. Yes, Peter will come, about which fact Maria is delighted.’

In sum, the prosodic data in (23)–(27) confirm that a CAC occupies a structurally low position in its host, and a PAC belongs to the host, but is not embedded deeply enough to be able to carry the sole sentence accent of ‘host + PAC’. A NonIC constitutes its own prosodic domain.

Let us now look at the prosodic properties of causal clauses considered in this paper. It is well known that a *weil*-V2-clause and its licensing clause both need their own sentence accent (cf. e.g. Antomo/Steinbach 2010). This holds whether the *weil*-V2-clause encodes the EventCRel, the EpistCRel or the

SpeechCRel reading. Two sentence accents are also needed when the licensing clause is combined with any other causal clause encoding the SpeechCRel, (28).

- (28) a. \*Maria ist krank, weil/da du dich doch immer für sie INTERESSIERST.  
 b. \*Maria ist KRANK, weil/da du dich doch immer für sie interessierst.  
 c. Maria ist KRANK, weil/da du dich doch immer für sie INTERESSIERST.

Thus, the prosody confirms that any causal clause encoding SpeechCRel belongs to the class of NonICs.

Prosody also confirms that a *weil*-Vf-clause encoding the EventCRel may belong to the class of CACs whereas a *da*-clause even if it encodes the EventCRel cannot, (29).

- (29) What did Maria tell you?  
 a. Fritz ist sehr bleich, weil er KRANK ist.  
 d. \*Fritz ist sehr bleich, da er KRANK ist.

Finally, prosody confirms that a *weil*-Vf- and a *da*-clause which encode the EpistCRel may be PACs, (30).

- (30) A: Max ist zu Hause.  
*Max is at home*  
 B: Max ist zu Hause, weil/da in seiner Wohnung LICHT brennt.  
*Max is at home because in his flat the-light is-on*

Thus, we can record that central prosodic properties of the constructions in question confirm the findings listed in (21).

Another property we should check regarding the three classes of ‘adverbial’ clauses and the types of causal clauses concerns the potential illocutionary independence of the clauses. With the examples in (31) it is investigated whether it is possible to perform an assertion with the main clause – ensured by the unstressed modal particle *ja* – and to perform a question with the dependent clause by inserting the question-tag *oder?* (‘isn’t that so?’). (31c) with the NonIC is grammatical, and it has a reading in which the scope of the affirmative question is restricted to the dependent clause. (31a) with a CAC and (31b) with a PAC are not grammatical. Thus, a NonIC allows the performance of a speech act that is different from that of the main clause; a CAC and a PAC do not allow this. (The dependent clauses in (31a,b) are positioned in the prefield of their hosts to ensure that they are taken as a CAC and a PAC, respectively.)

- (31) a. \*Als ihr Bruder bei der Commerzbank war, oder?, hat Emma bei  
*when her brother at the Commerzbank was, or has Emma for*  
 der Deutschen Bank gearbeitet.  
*the Deutsche Bank worked*  
 Intended: ‘When her brother worked for the Commerzbank, right?  
 Emma worked for the Deutsche Bank.’

- b. \*Während ihr Bruder etwas dumm ist, oder?, ist Emma hochbegabt.  
Intended: ‘While her brother somewhat dull is, isn’t he, Emma is highly gifted.’
- c. Emma gewann ja die Schachpartie, was Oskar sehr ärgerte, oder?  
‘Emma won, as you know, the chess match, which really annoyed Oskar.’

Thus, with regard to the possibility of performing separate speech acts with the main clause and the dependent clause, CACs and PACs pattern together in not allowing this, whereas a NonIC does permit the split.

A *weil*-V2-clause can encode a speech act which is different from the speech act encoded by its licensing clause, (32a). As (32b) demonstrates, the same is possible with a *weil*-Vfin-clause (cf. Reis 2013) and with a *da*-clause. Thus, all these forms may show the clearest sign of illocutionary independence possible. Obviously, the causal clauses in (32) encode the SpeechCRel reading. We have seen already that a causal clause which encodes the SpeechCRel is a NonIC, and we know that NonICs are illocutionarily independent. Thus, the data in (32) fit into this picture.

- (32) a. Lies mal den Artikel von HANS, weil ich finde den sehr GUT.  
*read MP the article by Hans because I find it very good*
- b. Lies mal den Artikel von HANS, (,) weil/da ich den sehr GUT finde.

#### 4 Root phenomena in causal clauses

With the notion ‘root phenomena’ one refers to phenomena which only occur in root clauses and in a restricted set of, as they are called, root-like dependent clauses. The dependent clauses which may show root phenomena are said to have some illocutionary potential. The classic examples of root-like dependent clauses are the object clauses of verbs of saying, of verbs expressing a doxastic attitude (*glauben – believe, hoffen – hope, einfallen – occur to*), and of verbs of perception (*herausfinden – find out, fühlen – feel*). Standard examples of non-root-like dependent clauses are the object clauses of predicates which are factive or inherently negative (*leugnen – to deny, unmöglich sein – to be impossible*). A classic example of a root phenomenon is topicalisation in English:

- (33) a. Mary hopes that this book, John read.  
b. \*Mary realises that this book, John read.

In German, the occurrence of a modal particle (MP) belongs to the root phenomena (Thurmair 1989, Coniglio 2011). This is shown by the fact that a MP may occur in a root-like dependent clause but not in a non-root-like one:

- (34) a. Maria fiel ein, dass Hans (ja) längst hier sein müsste.  
*Maria occurred to that Hans MP by-now here be should*  
‘It occurred to Maria that after all Hans should be here by now.’

- b. Er leugnete, dass er die Zeugin (\*ja) unter Druck gesetzt habe.  
*he denied that he the witness MP under pressure put have-subj*

The other root phenomenon I would like to consider in this paper concerns the marking of an aboutness topic. In German, the particle *jedenfalls* can be used for topic marking. The examples in (35) demonstrate that this marking is a root phenomenon:

- (35) a. Maria sagte, dass [Fritz jedenfalls] kommen wird.  
*Maria said that Fritz for-one come will*  
 'Maria said that Fritz for one will come.'  
 b. \*Maria leugnete, dass [Fritz jedenfalls] kommen wird.  
*Maria denied that Fritz for-one come will*

Coniglio (2011) systematically studies the behaviour of MPs in adverbial clauses. He finds that PACs are good hosts for MPs:

- (36) Gestern ist sie den ganzen Tag zu Hause geblieben, während sie  
*yesterday has she the whole day at home stayed while she*  
 ja sonst bei schönem Wetter meistens einen Ausflug  
*MP otherwise in nice weather mostly an excursion*  
 macht.  
*goes-on*

In contrast, CACs do not tolerate MPs:

- (37) a. \*Als Maria ja in Wien lebte, ging sie oft in die Staatsoper.  
*when Maria MP in Vienna lived went she often to the State-Opera-House*  
 b. \*Während er wohl den Brief schrieb, ist er gestört worden.  
*while he MP the letter wrote has he disturbed been*

We find the same distribution for the marking of an aboutness topic. It is possible in a PAC, but not possible in a CAC:

- (38) a. Maria wurde unruhig, während [ihr Mann jedenfalls] gelassen  
*Maria got anxious while her husband for-one calm*  
 blieb.  
*stayed*  
 b. \*Maria wurde ruhig, als [ihr Mann jedenfalls] wieder  
*Maria got calm when her husband for-one again*  
 erreichbar war.  
*reachable was*

It does not come as a surprise that NonICs allow root phenomena. In (39), this is again illustrated with MPs and topic marking.

- (39) a. Emma gewann die Schachpartie, was Oskar eben doch ärgerte.  
*Emma won the chess-match which Oskar MP MP annoyed*

- b. Emma gewann die Schachpartie, was [Oskar jedenfalls] ärgerte.

Thus, with regard to root phenomena CACs stand alone and PACs and NonICs pattern together.

So far we have seen that a *weil*-Vf-clause which refers to an EventCRel belongs to the CACs. Above this was illustrated with the binding example in (5a), repeated here:

- (40) Fast jeder Anwesende<sub>1</sub> wurde bleich, weil er<sub>1</sub> erschrocken ist.

However, a *weil*-Vf-clause which refers to an EventCRel can be enriched with a MP or with the marking of an aboutness topic. This is illustrated in (41).

- (41) a. Weil er eben doch erschrocken ist, wurde Fritz bleich.  
 b. Weil [ihr Mann jedenfalls] ganz gelassen blieb, wurde  
*since her husband for-one quite calm stayed became*  
 Maria wieder ruhig.  
*Maria again quiet*

The question arises as to what kind of dependent clauses we have in (41). The answer is pretty clear. Our criteria show that the *weil*-Vf-clauses in (41) are PACs. In (42a,b) this is illustrated for a *weil*-clause which refers to an EventCRel and which is enriched with a MP. Such a clause does not allow binding into it anymore, (42a) vs (42b), while there is still the option of embedding the *weil*-clause together with its host, (42c). Note also that the *weil*-clauses in (41) occur in the prefield.

- (42) a. Keiner von uns<sub>1</sub> ist verzweifelt, weil er<sub>1</sub> kein Geld hat.  
*no-one of us is desperate because he no money has*  
 b. \*Keiner von uns<sub>1</sub> ist verzweifelt, weil er<sub>1</sub> ja kein Geld hat.  
 c. Peter sagte, [dass Max verzweifelt ist, weil er ja kein Geld hat].

That a *weil*-clause containing a MP cannot be a CAC is confirmed by prosody:

- (43) Was hat Eva erzählt?  
 ‘What did Eva tell?’  
 a. Max ist sehr bleich, weil er sehr ERSCHROCKEN ist.  
 b. #Max ist sehr bleich, weil er halt sehr ERSCHROCKEN ist.

It makes sense that a *weil*-clause containing a MP or topic marking is not a CAC. A CAC specifies the eventuality referred to by its host clause. An eventuality cannot be specified by something which is of a higher semantic type than an eventuality. Obviously a clause which contains a MP or exhibiting topic marking is of a higher semantic type than the type of an eventuality. By the use of a MP or the marking of a topic the speaker does not directly refer to something which is part of the world but makes a contribution to the description of the world. Thus, the type of a clause which contains such a contribution (at least) has the semantic type of a proposition. It makes sense to assume that a

PAC has the semantic type of a proposition. A PAC denotes a proposition and connects to the proposition encoded by its host. This is what happens in (41).

## 5 *weil*-Vf- and *da*-clauses

Let us recapitulate two contrasts between *weil*-Vf- and *da*-clauses. We have seen that *da*-clauses cannot belong to CACs in contrast to *weil*-Vf-clauses. This is once more shown by the minimal pair in (44).

- (44) Maria sagte, dass fast jeder<sub>1</sub> regelmäßig zum  
*Maria said that nearly everyone regularly to-the*  
 Gesundheitscheck geht, weil/\*da er<sub>1</sub> nicht krank werden will.  
*health-check goes because he not ill become wants*

Another contrast concerns the EpistCRel reading. The EpistCRel reading of a *weil*-Vf-clause which is integrated in the structure of its host has to be supported by lexical indicators, (45); this is not necessary in the case of *da*-clauses, (46).

- (45) a. ??Weil der Weg weiß ist, hat es geschneit.  
*because the path white is has it snowed*  
 b. Weil der Weg weiß ist, hat es wohl geschneit.  
*because the path white is has it MP snowed*  
 c. Weil der Weg erstaunlicherweise weiß ist, hat es geschneit.  
*because the path surprisingly white is has it snowed*
- (46) Da der Weg weiß ist, hat es geschneit.  
*since the path white is has it snowed*

There is a natural tendency for a *weil*-Vf-clause to be interpreted on the EventCRel level. For a *da*-clause this is different.

A *da*-clause cannot be a CAC, but it can be a PAC. As a PAC, a *da*-clause is a perfect host for root phenomena like MPs and topic marking:

- (47) a. Da er eben doch erschrocken ist, wurde Hans bleich.  
 b. Da [ihr Mann jedenfalls] ganz gelassen blieb, wurde Maria wieder ruhig.

With a causal CAC the speaker takes the causal relation to be part of the world; with a causal PAC the speaker takes the causal relation to be part of her/his estimation of the world. As already said at the end of the last section, a PAC denotes an object of a higher semantic type than a CAC does.

So the question has to be asked why a *da*-clause, which cannot be a CAC, can have an EventCRel reading in the first place. In answering this question I would like to point out that the intuition-based EventCRel reading is compatible with two explications:

- (48) The causal relation which is intuitively understood as an EventCRel between  $\alpha$  and  $\beta$  allows two explications:
- i. it is a relation between the eventualities  $\alpha$  and  $\beta$  in the proper sense,
  - ii. it is a relation between the propositions based on  $\alpha$  and  $\beta$ .

Note that in the literature there exist two main types of analyses of EventCRel clauses. Authors like Davidson (1967) and Larson (2004) argue that the causal connector refers to a relation between two eventualities. A sentence like (1a) is analysed as in (49).

- (49)  $\exists e_2 \text{very\_pale}(e_2)(\text{Maria}) \wedge \exists e_1 \text{ill}(e_1)(\text{Maria}) \wedge \text{CAUSE}(e_2)(e_1)$

The other tradition of analysing causal clauses assumes that the causal connector refers to a relation between propositions, cf. e.g. Dowty (1979).

- (50)  $\text{CAUSE}(\lambda w.\text{very\_pale}(w)(\text{Maria}))(\lambda w.\text{ill}(w)(\text{Maria}))$

With the proposal in (48) I would like to claim that both traditions are right (at least regarding a language like German). According to this, German offers two options of realising the reading which is intuitively conceived as a causal relation between eventualities. One option is realised by the standard use of a *weil*-Vf-causal, with which two events or rather eventualities are interrelated. The other option is realised by a *da*-clause, which relates two propositions, i.e. two functions saying whether an eventuality is realised in certain worlds or not. So, it makes sense to say that the eventuality-related reading of a *da*-clause is in fact a kind of epistemic reading (cf. also Ravetto/Blühdorn 2011).

Thus, a *da*-clause like (51a), which is a PAC and has an EventCRel reading, inherently expresses that the speaker gives a cause for her/his holding the description of an eventuality to be true. Thus, with (51a) the speaker expresses (51b).

- (51) a. Da sie krank ist, ist Maria sehr bleich.  
 b. I take the truth of 'Maria is very pale' to be a consequence of the truth of 'Maria is ill'.

With a *da*-clause like (52a), which is also a PAC and has an EpistCRel reading, the speaker expresses the causal relation in (52b).

- (52) a. Da der Weg weiß ist, hat es geschneit.  
*since the path white is has it snowed*  
 b. I take the truth of 'it has snowed' to be a consequence of the truth of 'the path is white'.

Let us now come back to the options of the epistemic reading of an integrated *weil*-Vf-clause, cf. (9b) and (12), repeated here under (53). (53a) seems to describe the world in the wrong way, while the sentences in (53b,c) are fine.

- (53) a. \*Weil sie sehr bleich ist, ist Maria krank.  
 b. Weil sie sehr bleich ist, muss Maria krank sein.  
 c. Weil sie sehr bleich ist, ist Maria wohl krank.

As already stated above, the ill-formedness of (53a) indicates that by default a *weil*-Vf-clause which is part of the structure of its licensing clause is perceived as a CAC and therefore is interpreted as an EventCRel clause. However, as we have seen above, a *weil*-Vf-clause can in principle have the status of a PAC. As a PAC it can enter into a reductive reasoning. This is what happens in (53b,c). By the modal verb and the MP, respectively, it is made clear that the causal relation is to be taken on the propositional level, i.e. that the *weil*-clause is a PAC.

The following natural assumptions underlie this reasoning:

- (54) i. A causal CAC refers to a causal relation between eventualities,  
 ii. a causal PAC refers to a causal relation between propositions.

The following immediate consequences hold:

- (55) i. The EventCRel reading of a standardly used integrated *weil*-Vf-clause refers to a relation between eventualities,  
 ii. the EventCRel readings of a *weil*-Vf-clause used as a PAC and of a *da*-clause used as a PAC refer to a relation between propositions.

I would like to conclude this section with some remarks on the semantic/pragmatic status of (integrated) *weil*-Vf- and *da*-clauses. In the literature it is often claimed that the content of a *da*-clause, in contrast to that of a *weil*-Vf-clause, has to be given (e.g. Weinrich 1993, Blühdorn 2006). I doubt that this is in fact so. A *da*-clause may very well transport content which is new to the hearer. A sentence like (56) may be uttered in an out-of-the-blue context.

- (56) Da bald die letzte U-Bahn fährt, gehe ich jetzt.  
*because soon the last metro runs leave I now*

What seems to me to be closer to the truth is that *da*-clauses are treated as presuppositional. As is well known, presuppositional elements do not necessarily belong to the common ground. If they do not belong to the common ground, they need to be accommodated by the hearer, though. Thereby the speaker can present the content of a *da*-clause as established even if (s)he does not assume it to belong to the common ground. Thus, the content of a *da*-clause does not have to be given in the strict sense, but it is always treated as if it were given.

As one piece of evidence for the presuppositional character of a *da*-clause I would like to point to the well-known fact that a *da*-clause, in contrast to a *weil*-Vf-clause, is not possible as an answer to a question asking for a cause.

- (57) Warum ist Otto hingefallen?  
*why is Otto fallen-down*  
 a. Weil es glatt war.  
*because it slippery was*  
 b. \*Da es glatt war.

As a second piece of evidence, note that a *da*-clause cannot be part of a polar question. (58a) can only be understood in a way which takes for granted that it

was slippery. Thus the answer has to correspond to the question whether Otto fell down. The situation is quite different with a *weil*-Vf-clause. (58b) has a reading which allows an answer that denies that it was slippery and gives another cause for Otto's falling down.

- (58) a. Ist Otto hingefallen, da es glatt war?  
b. Ist Otto hingefallen, weil es glatt war?

## 6 The speech act related reading and illocutionarily independent causal clauses

In section 1, the embedded clause in (1c), repeated here, was given as an example of a SpeechCRel clause:

- (59) Maria ist krank, weil du dich doch immer für sie interessierst.

In section 3, it was demonstrated that SpeechCRel clauses belong to the class of NonICs, i.e. they have the properties of a non-integrated dependent clause. In the present section this point will be discussed further and it will be claimed that speech act related adverbials in general cannot be part of the clauses they relate to.

That SpeechCRel clauses and speech act related adverbials in general should always be non-integrated is not everyone's view; cf. for the opposite perspective, for example, Pittner (1999) and Ravetto/Blühdorn (2011). However, Antomo/Steinbach (2010) and Reis (2013), for instance, also assume that at least SpeechCRel clauses are non-integrated. Thus, this matter should be discussed in more detail.

In (9c) we have seen that the SpeechCRel clause of (59) cannot be placed in the prefield – an important sign for its status as a NonIC. Other speech act causals also cannot be positioned there, cf. (60c).

- (60) a. Weil/da du es doch erfährst, ich lasse mich scheiden.  
*since you it MP hear I get REFL divorced*  
b. Ich lasse mich scheiden, weil/da du es doch erfährst.  
c. \*Weil/\*da du es doch erfährst, lasse ich mich scheiden.

(Wegener 1999)

Another important sign for a dependent clause's status of being non-integrated is the impossibility of its being embedded together with its licensing clause. The examples in (15), repeated here in (61), show that in fact such an embedding is not possible with the SpeechCRel clauses considered so far.

- (61) a. \*Dass Maria krank ist, weil/da er sich doch immer für sie interessiert, sagte Fritz heute zu Karl.  
b. \*Peter sagte zu Maria, dass er sich scheiden lässt, weil/da sie es doch erfährt.

So, why is it that several authors assume that in principle speech act related adverbials may be integrated into the clause they relate to? I believe it is because of examples like (62b).

- (62) a. Wenn du mich fragst, die Aktien steigen bald.  
           *if you me ask the stocks rise soon*  
 b. Wenn du mich fragst, steigen die Aktien bald.

The adverbial in (62a) is a speech act related conditional. It seems that in (62b) this very adverbial occupies the prefield of the clause it is related to.

Note however that a slight modification of the adverbial destroys the option of placing it in the prefield.

- (63) a. Wenn du mich mal fragen würdest, die Aktien steigen bald.  
           *if you me once ask would the stocks rise soon*  
           ‘If you were to ask me, the stocks will go up soon.’  
 b. \*Wenn du mich mal fragen würdest, steigen die Aktien bald.

The impossibility of (63b) makes one wonder whether in fact the adverbial in (62b) should be understood as a speech act adverbial. Note that it is plausible to assume that the adverbial in (62b) is reinterpreted as an evidence adverbial. An evidence adverbial has its base position inside the middle field (the TP) of its host (cf. e.g. Frey/Pittner 1998) and of course may be positioned in the host’s prefield. Thus, it seems to me a plausible assumption that the adverbial in (62) can be interpreted in two ways. In (62a) it can be understood as a speech act related adverbial; however, in (62b) it is interpreted as an evidence adverbial. This is different with the adverbial in (63). Given its semantics it just cannot be interpreted as an evidence adverbial. It can only be interpreted as specifying that the speaker believes his upcoming assertion to be highly relevant for the hearer.

Thus it seems that an adverbial which unambiguously is interpreted as modifying a speech act cannot be part of the structure with which the speech act is performed. The examples in (64) illustrate this once more, now with a *da*-causal.

- (64) a. Da wir gerade über den Workshop sprechen, es gibt eine  
           *since we just-now about the workshop talk there is a*  
           Programmänderung.  
           *programme-change*  
 b. \*Da wir gerade über den Workshop sprechen, gibt es eine Programm-  
           änderung.

In section 3 it was pointed out that an important characteristic of a NonIC is that both the NonIC and the clause it relates to need their own sentence accent. That this is true for (59) was already shown in section 3. We can verify that it is also true for the other SpeechCRel clauses considered here. If the examples in (65) carried only one sentence accent, the results would be deviant.

- (65) a. Weil/da du es doch ERFÄHRST, ich lasse mich SCHEIDEN.  
 b. Wenn du MICH fragst, die Aktien STEIGEN bald.  
 c. Da wir gerade über den WORKSHOP sprechen, es gibt eine PRO-GRAMMÄNDERUNG.

In section 3 it was shown that non-integrated dependent clauses have their own illocutionary force. In the present section we have seen that speech act related adverbial clauses are non-integrated. Together, these observations lead to the claim in (66a). Furthermore, I would like to propose that the conditional relation between being non-integrated and having independent illocutionary force should be strengthened to also hold in the other direction, (66b).

- (66) a. The speech act related reading of an adverbial clause  $\gamma$  is only possible if  $\gamma$  has independent illocutionary force.  
 b. The positioning of a clause  $\gamma$  inside the structure of a sentence S is possible if and only if  $\gamma$  does not have its own illocutionary force.

There is a type of example out of the realm of causal clauses which seems to contradict the thesis in (66b). This type contains a performative verb (and possibly a performative marker like *hiermit* ('hereby')), cf. (67).

- (67) Weil ich Sie hiermit befördere, können Sie sich nun einen  
*since I you hereby promote can you REFL now a*  
 Dienstwagen bestellen.  
*company-car order*

In the literature it is sometimes assumed that with a so-called performative clause a separate speech act is inherently performed. If this were true, a sentence like (67) would contradict (66b). However, I doubt that a performative clause necessarily constitutes a separate speech act. It can be shown that a dependent clause like the one in (67) can be a CAC or a PAC, and we already know that these clauses cannot constitute an independent speech act, cf. (31). That a performative clause can be a CAC is demonstrated in (68a) by the fact that it allows binding from the outside. That it can be a PAC follows from (68b). Here the performative causal clause contains a MP and is placed in the prefield of the matrix clause.

- (68) a. Jeder<sub>1</sub> kann sich freuen, weil ich ihn<sub>1</sub> hiermit befördere.  
*everyone can REFL be-glad because I him hereby promote*  
 b. Weil ich Sie hiermit eben doch befördere, können Sie sich nun einen  
 Dienstwagen bestellen.

Note furthermore that a performative *weil*-clause can answer a *w*-question and can appear with a correlate. These facts too show that they are not necessarily NonICs since NonICs cannot do this.

- (69) a. A: Warum kann ich mich freuen?  
 ‘Why can I be glad?’  
 B: Weil ich Sie hiermit befördere.  
*because I you hereby promote*
- b. Du kannst dich deshalb freuen, weil ich dich hiermit befördere.  
*you can REFL CORR be-glad because I you hereby promote*

So, it seems that a performative causal clause can be a quite normal dependent clause. This is not that surprising if one realises that from a syntactic point of view an independent performative sentence is just a normal assertive clause.

Thus, I would like to treat a performative clause like (67) as a more or less standard assertive clause which, however, has a very special truth condition. The reason why the content of the internal argument of *weil* in (67) is true is because the *weil*-clause is uttered. Seen from this angle, there is no need to assume that with the *weil*-clauses in (67) and (68) independent speech acts are performed. They are just part of the assertions constituted by the whole complex sentences, albeit clausal parts with very special truth conditions.

Let us finally have a look at the readings of non-integrated causal clauses. In this section we have so far considered the speech act related reading of non-integrated causal Vf-clauses. The standard case of a non-integrated causal clause is a *weil*-V2-clause (e.g. Wegener 1999, Antomo/Steinbach 2010, Reis 2013), cf. section 3. (I assume, like Antomo/Steinbach 2010 and Reis 2013, that the *weil* of *weil*-V2-clauses is a very different lexeme from the *weil* of a *weil*-Vf-clause. Other researchers assume only one item. This issue is of no relevance for our concerns, though.) As observed in the literature and already noted in section 1, with a *weil*-V2-clause the EventCRel reading, e.g. (70a), the EpistCRel reading, e.g. (70b), or the SpeechCRel reading, e.g. (70c), can be expressed (e.g. Antomo/Steinbach 2010, Reis 2013).

- (70) a. Fritz wurde sehr bleich, weil er ist erschrocken.  
*Fritz got very pale because he was frightened*
- b. Fritz muss krank sein, weil er ist so bleich.  
*Fritz must ill be because he is so pale*
- c. Fritz ist krank, weil du interessierst dich doch immer für ihn.  
*Fritz is ill because you interested-are REFL MP always in him*

I would like to propose that all causal NonICs refer to a causal relation between speech acts. I think the readings illustrated in (70) naturally allow an explication based on a causal relation between speech acts. So (70a), for example, can be understood as saying that the reason why the speaker is committed to the truth of *Fritz got very pale* is because (s)he is committed to the truth of *Fritz was frightened*. Likewise (70b) means that the reason why the speaker is committed to the truth of *it is extremely likely that Fritz is ill* is that (s)he is committed to the truth of *Fritz is very pale*. The situation with (70c) is different, but, as we

know, here too we have a relation between speech acts. The speaker performs the assertion of *Fritz is ill* because (s)he is committed to the truth of *the hearer is always interested in Fritz*. So, it seems reasonable to assume that a *weil*-V2-clause is always interpreted as a SpeechCRel clause.

A non-integrated *weil*-Vf-clause and a non-integrated *da*-clause too may express the EventCRel reading, the EpistCRel reading and the SpeechCRel reading (cf. Reis 2013; see also Wegener 1999). (71) gives the variants of (70) with a non-integrated *weil*-Vf-clause and a non-integrated *da*-Vf-clause.

- (71) a. Fritz wurde sehr BLEICH, (\\) weil/da er ERSCHROCKEN ist.  
 b. Fritz muss KRANK sein, (\\) weil/da er so BLEICH ist.  
 c. Fritz ist KRANK, (\\) weil/da du dich doch immer für ihn INTERESSIERST.

As to be expected (cf. section 3), a non-integrated *weil*-Vf-clause or *da*-clause allows the insertion of a question-tag, the scope of which is restricted to the *weil/da*-clause, (72).

- (72) Fritz ist sehr BLEICH, (\\) weil/da er ERSCHROCKEN ist, oder?

For the readings of non-integrated *weil/da*-Vf-clauses the same can be assumed as for the readings of *weil*-V2-clauses. Thus, the *weil/da*-Vf-clauses in (71) all express speech act related readings. The paraphrases for the sentences in (71) are the same as those for the sentences in (70).

Note that *weil*-V2-clauses mainly belong to spoken language. If they appear in written language they are often used to mirror orality. *Weil/da*-Vf-clauses are independent of any variety (cf. e.g. Breindl et al. 2014).

## Summary

The main results and theses of this paper are the following:

- (73) There is a one-to-one mapping between the external syntax of a causal clause and its semantic type, i.e. the interpretative level of a causal clause corresponds to its syntactic linking with the licensing clause:
- A causal CAC: it is base-generated inside its licensing clause in a deep position; it refers to a relation between eventualities.
  - A causal PAC: it is base-generated inside its licensing clause in a high position; it refers to a relation between propositions.
  - A causal NonIC: it is a syntactic orphan; it refers to a relation between speech acts.
- (74) A relation of a given semantic type allows the expression of only some of the causal relations which are commonly distinguished on an intuitive basis.

For the different syntactic types it follows:

- (75) – A causal CAC can only be interpreted as an EventCRel.  
 – A causal PAC can always be interpreted as an EpistCRel; if its content allows, it can also be interpreted as an EventCRel.  
 – A causal NonIC can always be interpreted as a SpeechCRel; if its content allows, it can also be interpreted as an EventCRel or as an EpistCRel.
- (76) The causal sentence forms considered in this paper occur in certain classes:  
 – A *weil*-Vf-clause is per default a CAC; if it is supported by indicators, it can occur as a PAC or as a NonIC.  
 – A *da*-clause occurs as a PAC; if it is supported by indicators, it can occur as a NonIC.  
 – A *weil*-V2-clause necessarily occurs as a NonIC.

(73)–(76) allow us to account for different observations. Some important ones are listed in the following. From (75) it follows that a causal clause which is interpreted as a SpeechCRel cannot be positioned inside the structure of its licensing clause; in particular it cannot occur in the prefield of its licensing clause. (73) implies that it is not possible to have binding or scope from the outside into a causal clause in which, for example, topic marking, a sentence adverbial or a modal particle occurs. For scope this is illustrated in (77). Whereas (77a) has a reading according to which it is denied that anyone came because it is very hot, (77b,c) only have a reading which gives a cause for why nobody came.

- (77) a. Keiner ist gekommen, weil es sehr heiß war.  
*nobody is come because it very hot was*  
 b. Keiner ist gekommen, weil es leider sehr heiß war.  
*nobody is come because it unfortunately very hot was*  
 c. Keiner ist gekommen, weil es ja sehr heiß war.

Likewise it follows from (73) that a *weil*-clause containing a sentence adverbial or a modal particle cannot carry the sentence accent of the complex construction ‘host clause + *weil*-clause’, cf. (78).

- (78) What did Maria tell you?  
 Fritz ist bleich, weil er (\*leider/ja) KRANK ist.

Additionally, (76) makes the following observations understandable, which are presented in Zifonun et al. (1997: 2300). In the sentences in (79) *weil* sounds much better than *da*.

- (79) a. Ich weiß bis heute nicht, ob er sich verpflichtet fühlte, in  
*I know till today not whether he REFL obliged felt in*  
 der Engelsstraße zu wohnen, weil/?da er in der SPD war.  
*the Engels-street to live because he in the SPD was*

- b. Es genügt, auf die Gräber jener zu weisen, die ein  
*it suffices to the graves of-those to point who an*  
 unmenschliches Regime erschießen ließ, weil/?da sie die  
*inhuman regime to-shoot caused because they the*  
 Freiheit suchten.  
*freedom sought*

With these examples the speaker wants to strictly relate eventualities of the external world by the causal relation. The causal relation is not supposed to involve any contribution of the speaker. Thus, a PAC with *da* is not appropriate. Note, however, that if the sentences' interpretation on the propositional level is forced, they become fine. In (80) this is illustrated for (79a). The propositional interpretation of the causal clause is forced by inserting a modal particle.

- (80) Ich weiß bis heute nicht, ob er sich verpflichtet fühlte, in der Engelsstraße zu wohnen, da er ja in der SPD war.

Finally the theses of the paper imply that from a syntactic point of view so-called performative clauses are just regular clauses, i.e. they can not only occur as independent sentences with an independent illocutionary force but they can also be CACs or PACs, which do not have independent illocutionary force. Clauses containing a performative verb are clauses with very special truth conditions, but they are not clauses which per se have independent illocutionary force.

## References

- Aelbrecht, L. / Haegeman, L. / Nye, R., eds. (2012): *Main Clause Phenomena: New Horizons*. Amsterdam: Benjamins.
- Antomo, M. / Steinbach, M. (2010): "Desintegration und Interpretation: *Weil*-V2-Sätze an der Schnittstelle zwischen Syntax, Semantik und Pragmatik." *Zeitschrift für Sprachwissenschaft* 29, 1–37.
- Blühdorn, H. (2006): "Kausale Satzverknüpfungen im Deutschen." *Pandaemonium Germanicum. Revista de Estudos Germanísticos* 10. São Paulo: FFLCH-USP, 253–282.
- Blühdorn, H. (2008): "Epistemische Lesarten von Satzkonnectoren – Wie sie zustande kommen und wie man sie erkennt." In: Pohl, I., ed. (2008), 217–252.
- Blühdorn, H. / Breindl, E. / Wassner, H. U., eds. (2004): *Brücken schlagen – Grundlagen der Konnectorenssemantik*. Berlin: de Gruyter.
- Brandt, M. (1990): *Weiterführende Nebensätze. Zu ihrer Syntax, Semantik und Pragmatik*. Stockholm: Almqvist und Wiksell (= Lunder germanistische Forschungen 57).
- Breindl, E. / Ferraresi, G. / Volodina, A., eds. (2011): *Satzverknüpfung – Zur Interaktion von Form, Bedeutung und Diskursfunktion*. Berlin: de Gruyter.
- Breindl, E. / Walter, M. (2009): *Der Ausdruck von Kausalität im Deutschen. Eine korpusbasierte Studie zum Zusammenspiel von Konnectoren, Kontextmerkmalen und Diskursrelationen*. Mannheim: Institut für Deutsche Sprache.
- Breindl, E. / Waßner, U. H. / Volodina, A. (2014): *Handbuch der deutschen Konnectoren. Teil 2: Semantik*. Kap. C 4.2. Berlin, New York: de Gruyter. 787–899.

- Chiba, S. et al., eds. (1991): *Aspects of Modern English Linguistics*. Tokyo: Kaitakusha.
- Coniglio, M. (2011): *Die Syntax der deutschen Modalpartikeln: Ihre Distribution und Lizenzierung in Haupt- und Nebensätzen*. Berlin: Akademie Verlag.
- Couper-Kuhlen, E. / Kortmann, B., eds. (2000): *Cause – Condition – Concession – Contrast. Cognitive and Discourse Perspectives*. Berlin: Mouton de Gruyter.
- Davidson, D. (1967): “Causal relations.” *Journal of Philosophy* 64, 691–703.
- Dowty, D. (1979): *Word Meaning and Montague Grammar*. Dordrecht: Reidel.
- Ferraresi, G., ed. (2011): *Konnektoren im Deutschen und im Sprachvergleich. Beschreibung und grammatische Analyse*. Tübingen: Narr.
- Frey, W. (2012): “On two types of adverbial clauses allowing root-phenomena.” In: Aelbrecht, L. / Haegeman, L. / Nye, R., eds. (2012), 405–429.
- Frey, W. / Pittner, K. (1998): “Zur Positionierung der Adverbiale im deutschen Mittelfeld.” *Linguistische Berichte* 176, 489–534.
- Frey, W. / Truckenbrodt, H. (2015): “Syntactic and prosodic integration and disintegration in peripheral adverbial clauses and in right dislocation/afterthought.” In: Trotzke, A. / Bayer, J., eds. (2015), 75–106.
- Haegeman, L. (1991): “Parenthetical adverbials: The radical orphan approach.” In: Chiba, S. et al., eds. (1991), 232–254.
- Heringer, H. J. / Stötzel, G., eds. (1993): *Sprachgeschichte und Sprachkritik. Festschrift für Peter von Polenz*. Berlin / New York: de Gruyter.
- Keller, R. (1993): “Das epistemische *weil*. Bedeutungswandel einer Konjunktion.” In: Heringer, H. J. / Stötzel, G., eds. (1993), 219–247.
- Gluck, M. / Ott, D. / de Vrieds, M., eds. (2015): *Parenthesis and Ellipsis. Cross-linguistic and Theoretical Perspectives*. Berlin / New York: de Gruyter.
- Lang, E. (2000): “Adversative connectors on distinct levels of discourse: A re-examination of Eve Sweetser’s three-level approach.” In: Couper-Kuhlen, E. / Kortmann, B., eds. (2000), 235–256.
- Larson, R. (2004): “Sentence-final adverbs and ‘scope’.” In: Moulton, K. / Wolf, M., eds. (2004), 23–43.
- Moulton, K. / Wolf, M., eds. (2004): *Proceedings of NELS 34*. Amherst: GLSA, UMass.
- Pasch, R. (1983): “Die Kausalkonjunktionen *da*, *denn* und *weil*: drei Konjunktionen – drei lexikalische Klassen.” *Deutsch als Fremdsprache* 20(6), 332–337.
- Pasch, R. / Brauße, U. / Breindl, E. / Waßner, U. H. (2003): *Handbuch der deutschen Konnektoren. Linguistische Grundlagen der Beschreibung und syntaktische Merkmale der deutschen Satzverknüpfen (Konjunktionen, Satzadverbien und Partikeln)*. Berlin, New York: de Gruyter.
- Pittner, K. (1999): *Adverbiale im Deutschen. Untersuchungen zu ihrer Stellung und Interpretation*. Tübingen: Stauffenburg.
- Pohl, I., ed. (2008): *Semantik und Pragmatik – Schnittstellen*. Frankfurt/M.: Lang.
- Ravetto, M. / Blühdorn, H. (2011): “Die Kausalkonjunktionen *denn*, *weil*, *da* im Deutschen und *perché*, *poiché*, *siccome* im Italienischen.” In: Ferraresi, G., ed. (2011), 207–250.
- Reis, M. (2013): “‘*Weil*-V2’-Sätze und (k)ein Ende? Anmerkungen zur Analyse von Antomo & Steinbach (2010).” *Zeitschrift für Sprachwissenschaft* 32(2), 221–262.
- Stede, M. / Walter, M. (2011): “Zur Rolle der Verknüpfungsebene am Beispiel der Kausal-konnektoren.” In: Breindl, E. / Ferraresi, G. / Volodina, A., eds. (2011), 149–179.
- Sweetser, E. (1990): *From Etymology to Pragmatics. Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge: Cambridge University Press.
- Thurmair, M. (1989): *Modalpartikeln und ihre Kombinationen*. Tübingen: Niemeyer.
- Trotzke, A. / Bayer, J., eds. (2015): *Syntactic Complexity across Interfaces*. Berlin, New York: Mouton de Gruyter.

- Truckenbrodt, H. (2015): "Intonation phrases and speech acts." In Kluck, M. / Ott, D. / de Vrieds, M., eds. (2015), 301–349.
- Volodina, A. (2011): "Sweetsers Drei-Ebenen-Theorie: Theoretische Überlegungen vor dem Hintergrund einer korpuslinguistischen Studie über konditionale und kausale Relationen." In: Ferraresi, G., ed. (2011), 127–155.
- Wegener, H. (1999): "Syntaxwandel und Degrammatikalisierung im heutigen Deutsch." *Deutsche Sprache* 27, 3–26.
- Weinrich, H. (1993): *Textgrammatik der deutschen Sprache*. Unter Mitarbeit von M. Thurmair, E. Breindl, E.-M. Willkop. Mannheim, Leipzig, Wien, Zürich: Dudenverlag.
- Zifonun, G. / Hoffmann, L. / Strecker, B. et al. (1997): *Grammatik der deutschen Sprache*. Berlin: de Gruyter.

Berlin

Werner Frey

Zentrum für Allgemeine Sprachwissenschaft, Schützenstr. 18, 10117 Berlin,  
e-Mail: [frey@zas.gwz-berlin.de](mailto:frey@zas.gwz-berlin.de)