Causal clauses: A cross-linguistic investigation of their structure, meaning, and use

Holger Diessel and Katja Hetterle

Abstract

In this paper we investigate the form and function of causal adverbial clauses, which have never been systematically studied from a cross-linguistic point of view. Using data from 60 languages, it is shown that causal clauses tend to be more independent of the associated main clause than other semantic types of adverbial clauses. In contrast to temporal and conditional clauses, causal clauses predominantly follow the (main) clause, include the same non-reduced verb forms as independent sentences, and are often intonationally separated from the semantically related clause. We argue that the particular structural properties of causal clauses are motivated by their communicative function in speaker-hearer interactions. Drawing on conversational data from English, German, Mandarin Chinese and Japanese, we show that causal clauses are commonly used to support a previous statement that has been challenged by the hearer. In this use, causal adverbial clauses function as independent assertions that are only loosely combined with the associated main clause.

Keywords: adverbial clause, causal clause, coordination-subordination continuum, clause order, grammar and language use, grammaticalization, language acquisition

1 Introduction

The cause-effect relationship is one of the most fundamental concepts of the human mind that has been studied extensively in various subfields of cognitive science (cf. Sowa 2000; Meyer 2000). Linguistically, causal relationships are commonly expressed by complex sentences consisting of a main and a subordinate clause, but they can also be expressed by two coordinate sentences. In this paper, we examine the structure, meaning, and use of causal clauses from a cross-linguistic point of view. Our analysis concentrates on causal adverbial clauses, but since the distinction between adverbial subordination and sentential coordination is fluid, we will also look at causal clauses at the borderline between subordination and coordination. In fact, the subordination-coordination continuum plays an important role in our study. It is the central claim of this paper that causal adverbial clauses are structurally more independent of the associated main clause than other semantic types of adverbial clauses and often are reminiscent of coordinate sentences.

In the typological literature, causal adverbial clauses have been studied together with other semantic types of adverbial clauses, such as conditional and temporal clauses (cf. Thompson and Longacre 1985; Couper-Kuhlen and Kortmann 2000), but in contrast to these other types, causal clauses have never been systematically investigated from a cross-linguistic point of view. The current study seeks to fill this gap. It is the first cross-
linguistic investigation that systematically examines the form and function of causal clauses from a typological point of view (cf. Hetterle 2007).

Drawing on data from a wide range of languages, the paper argues that adverbial clauses constitute a family of related constructions that vary as to the degree to which they are integrated into a complex sentence. Some adverbial clauses are only loosely adjoined to a neighboring clause, resembling a coordinate sentence, whereas other adverbial clauses are tightly integrated into the main clause (cf. Diessel 2001, 2004: chap 3). The degree of formal integration is determined by several features: the morphosyntactic properties of the verb and its arguments in the adverbial clause (cf. Cristofaro 2003), the positioning of the adverbial clause relative to the main clause (cf. Diessel 2001, 2005), and the intonational link between main and adverbial clauses (cf. Chafe 1984; Ford 1993). The paper shows that causal clauses tend to be less tightly integrated into complex sentences than other semantic types of adverbial clauses. In contrast to temporal and conditional clauses, causal clauses typically include the same verb forms and arguments as ordinary main clauses, are usually placed after the semantically associated clause, and are commonly expressed by a separated intonation unit. Taken together these features suggest that causal clauses are only loosely combined with the associated main clause; they are commonly realized by constructions that exhibit the same morphosyntactic properties as main clauses and thus may be analyzed as coordinate sentences rather than adverbial clauses.

The paper argues that the particular structural properties of causal clauses are motivated by their communicative function in speaker-hearer interactions. Drawing on conversational data from several unrelated languages, it is shown that causal clauses are commonly used to support a problematic statement. More precisely, the paper argues that causal clauses are often embedded in a particular discourse pattern involving three verbal actions: (1) a statement that the hearer does not accept or understand, (2) the hearer’s response to this statement indicating disagreement or lack of understanding, and (3) a causal clause providing a reason for the problematic statement (cf. Ford 1993). Causal clauses that are embedded in this discourse pattern are structurally independent sentences that lack the usual properties of subordinate clauses, which they may exhibit in other contexts, notably in written genres. However, in conversational discourse causal clauses are commonly used as independent assertions that are structurally independent of the semantically associated clause.

2 Database

Cross-linguistic investigations are often based on a variety sample including several hundred languages, but we decided to use a probability sample, which tends to be smaller than a variety sample because it is more rigorously designed. A probability sample includes a group of languages that are independent of each other and therefore can be submitted to statistical analysis (cf. Rijkhoff et al. 1993; Rijkhoff and Bakker 1998; Jansen et al. 2006). A pure probability sample would include languages that are selected at random from all languages across the world, but since languages are genetically and geographically related, the selection procedure cannot be entirely at random; instead, the researcher has to control for genetic and areal factors in order to compile a sample in which the languages are independent of each other (cf. Rijkhoff et al. 1993; Bakker to appear).
In our study, we used a stratified probability sample controlled for genetic and areal dispersion. The sample includes 60 languages selected from 60 different genera, i.e. linguistic groups that roughly correspond to the subfamilies of Indo-European (Dryer 1992), distributed across six large areas: Eurasia, Africa, South East Asia and Oceania, Australia and New Guinea, North America, and South America (Dryer 1989, 1992). Thus, the languages in our sample are genetically and geographically unrelated (or only distantly related). A complete list of the languages we examined is given in the appendix.

In what follows, we investigate the cross-linguistic properties of causal clauses in comparison to other semantic types of adverbial clauses. Specifically, we compare causal clauses to temporal and conditional clauses, which are often expressed by similar types of constructions that are historically related (cf. Matthiessen and Thompson 1985; Givón 1990, 2006). However, despite this relationship there are some important differences between them, which are the focus of the current study.

3 The form and function of causal clauses in cross-linguistic perspective

3.1 The morphosyntactic properties of causal clauses

To begin with, adverbial clauses can be expressed by a wide range of constructions that differ in terms of the verb forms and arguments they include. In a recent study, Cristofaro (2003) argued that subordinate clauses can be divided into two basic types: balanced and deranked clauses (cf. Stassen 1985). Balanced subordinate clauses include the same verb forms and arguments as main clauses, but deranked subordinate clauses are different. They include a reduced verb form and do not always require an overt subject. For instance, in English adverbial clauses are commonly realized by participial constructions that do not carry tense and person markers and lack an overt subject.¹

(1) And he encountered the problem of conducting with one hand while holding the reins with the other eighteen months ago...

Both the missing subject and the uninflected verb forms are characteristic of deranked subordinate clauses. Since the interpretation of a deranked subordinate clause relies on semantic features of the main clause, it is reasonable to assume that a deranked subordinate clause is more tightly integrated into a complex sentence than a balanced subordinate clause, whose semantic interpretation is more independent of the associated main clause. Note that in English the occurrence of deranked adverbial clauses is most typical of temporal clauses, notably temporal clauses of simultaneity, whereas causal clauses are primarily expressed by balanced constructions. However, in other languages, causal adverbial clauses are also commonly deranked. For instance, in Evenki (Tungusic, Russia) all adverbial clauses are expressed by converbs (cf. Haspelmath 1995). A convert is a particular non-finite verb form that indicates the semantic relationship to the associate main clause by an affix, as in example (2), in which two converbal clauses are marked by the suffix –kA(n)im indicating a temporal link of

¹ The English examples in this paper are taken from the International Corpus of English, British Component.
anteriority between the converbs and the main clause. Example (3) shows that the same
type of construction is used to realize a causal adverbial clause.

(2) Evenki (Nedjalkov 1997: 45)
[Asi-va ga-kaim] [oron-mo rege-keim] tar beje suru-re-n.
wife-ACC take-CONV reindeer-ACC sit-CONV that man go.away-NONFUT-3SG

‘Having taken a wife and having sat on a reindeer that man left.’

(3) Evenki (Nedjalkov 1997: 53)
strong be-CONV he bear-acc.DEF win-NONFUT-3SG

‘He overcame the bear because he was strong.’

Interestingly, Cristofaro (2003) showed that causal clauses are less often
expressed by deranked subordinate clauses than others semantic types of adverbial
clauses. Examining a variety sample of 70 languages, she found that causal clauses are
commonly expressed by balanced constructions whereas other semantic types of
adverbial clauses, notably temporal and purpose clauses, are typically deranked (see
also Cristofaro 2005).

Our data are consistent with these findings. Following Cristofaro, we distinguished
between deranked and balanced adverbial clauses based on the criteria she proposed.
Deranked adverbial clauses are expressed by reduced or special verb forms such as
infinitives, participles, converbs, and nominalizations, which lack at least some of the
inflectional distinctions of verbs in main clauses (such as tense, aspect, mood, or
agreement distinctions) and often do not include an overt subject. Balanced adverbial
clauses, in contrast, are expressed by finite constructions including the same verb forms
and arguments as independent sentences. Note that we disregarded cases of simple
clause juxtaposition (i.e. asyndetic parataxis), which Cristofaro included in her sample if
juxtaposition served as a general means for the expression of an adverbial relationship.
Figure 1 shows that in our sample causal clauses are less often deranked than temporal
and conditional clauses, which we lumped together in one class (cf. data in the
Appendix).
As can be seen, in more than half of the languages in our sample (56.7%), causal clauses are exclusively expressed by balanced constructions; only a minority of the languages employs deranked causal clauses. If we look at the latter more closely we find that their occurrence is restricted to languages in which temporal and/or conditional clauses are also deranked; there is not a single language in the entire sample in which deranking is an exclusive feature of causal clauses. A randomized $2 \times 3 \chi^2$-analysis revealed a significant difference between causal clauses and temporal/conditional clauses ($\chi^2=12.30$, $p<0.01$, $B=10.000$), supporting our hypothesis that causal clauses tend to be more independent of the main clause than other semantic types of adverbial clauses.\(^2\)

### 3.2 The positioning of adverbial clauses

Another feature that distinguishes causal clauses from temporal and conditional clauses is their position. In many languages, the positioning of adverbial clauses is rather flexible. For instance, as can be seen in examples (4) and (5), in English adverbial clauses can precede or follow the associated main clause.

(4) He got really pissed off **when** we were watching Back To The Future Two.
(5) **When** she gets on that phone she just does not get off.

\(^2\) Since language sampling cannot be entirely at random, Janssen et al. (2006) recommend that typological data be submitted to non-parametric tests, which in contrast to parametric tests do not make assumptions about the distribution of the variables. In this study, we used a randomized chi-square test, which permits logical inferences from the tested sample, rather than the usual statistical inferences on the population. Janssen et al. argue that these tests are as valid and informative as the standard statistical tests that are better known in linguistics.
If the adverbial clause follows the main clause, as in example (4), the bi-clausal structure can be processed sequentially; that is, speaker and hearer can process one clause at a time. The adverbial clause may be planned and adjoined to the main clause only after the processing of the main clause has been completed (cf. Diessel 2005, 2008). By contrast, adverbial clauses that precede the main clause are only possible if the speaker plans from the very beginning to produce a bi-clausal structure in which the adverbial clause is followed by a main clause. In other words, complex sentences with initial adverbial clauses constitute a single processing unit, whereas complex sentences with final adverbial clauses may be planned and processed as a sequence of two separate clauses. The position of the adverbial clause is thus essential to the organization of a complex sentence. Since final adverbial clauses can be planned and processed after the completion of the main clause, it is reasonable to assume that they are less tightly integrated in a complex sentence than initial adverbial clauses, which are generally planned and processed together with the following main clause.

Interestingly, Diessel (2001) observed that the ordering of main and adverbial clauses varies with the meaning of the adverbial clause. Drawing on data from a convenience sample of 40 languages, he found that conditional clauses tend to precede the main clause, temporal clauses are commonly found both before and after the main clause, and causal clauses typically occur at the end of a sentence, i.e. after the associated main clause.

Our data are consistent with these findings. As can be seen in Figure 2, temporal and conditional clauses precede the main clause more often than causal clauses. In 45 percent of the languages in our sample, causal clauses follow the main clause (either rigorously or as a tendency), whereas temporal and conditional clauses are commonly preposed. A randomized 2×3 $\chi^2$-analysis revealed a highly significant difference in the positioning of causal clauses and temporal/conditional clauses ($\chi^2=31.4914$, $p<0.001$, $B=10.000$), suggesting that the predominant use in final position is a particular property of causal clauses that sets them apart from other semantic types of adverbial clauses, supporting our hypothesis that causal clauses are less tightly integrated in complex sentences than other semantic types of adverbial clauses.
Note that the occurrence of initial causal clauses is restricted to particular languages types. Languages in which causal clauses precede the main clause are left-branching languages, i.e. OV languages, in which all adverbial clauses are commonly preposed (cf. Diessel 2001; Hetterle 2007). As can be seen in Table 1, in VO languages adverbial clauses are commonly found both before and after the associated main clause. There is one language, Wambaya (West Barkly, Australia), an Australian language with extremely flexible word order, in which all adverbial clauses typically follow the main clause; but in all other VO languages the positioning of adverbial clauses varies with their meaning: While temporal and conditional clauses often precede the main clause, causal clauses are commonly postposed.

By contrast, in OV languages causal clauses are also commonly placed before the main clause. As can be seen in this table, there are 15 OV languages in our sample in which all adverbial clauses, including causal adverbial clauses, generally precede the main clause (disregarding cases of pragmatically motivated extraposition), suggesting
that the occurrence of initial causal clauses is motivated by general properties of this language type. Adopting Hawkins’ processing theory of constituency and order (Hawkins 1994, 2004), Diessel (2005) argued that left-branching languages tend to employ initial adverbial clauses because in languages of this type complex sentences are often easier to process, and thus more highly preferred, if the adverbial clause precedes the main clause. Specifically, he claims that OV languages tend to employ initial adverbial clauses if they are marked by a subordinating morpheme at the end of the adverbial clause, as in the following example from Barasano (Tucanoan, Columbia) in which a causal adverbial clause is marked by a subordinating affix attached to the clause-final verb.

(6) Barasano (Jones and Jones 1991: 159)
Yukú yeba-u ti wábe kuti-hare ‘Yeba bás-a
Tree yeba-tree 3in name have-because Yeba human-p
yá-a-há yua’ yi-rá-bá ñáda.
be-PRES-3 1 say-anp-3p 3p

‘Because the tree has the name Yebau, they refer to themselves as Yeba’s people.’

Our data are consistent with this hypothesis. In all 15 languages in which adverbial clauses precede the main clause regardless of their meaning, the subordinator occurs at the end of the adverbial clause; whereas in most other languages, both VO and OV, adverbial clauses are marked by an initial subordinator. In other words, the consistent use of initial adverbial clauses correlates with the occurrence of a final subordinator, which may favour the order adverbial-main clause for processing reasons (cf. Diessel 2001, 2005).

However, the processing analysis does not account for all of the data. In particular, it does not explain why in the vast majority of the languages in our sample the positioning of adverbial clauses varies with their meaning. Diessel (2005) suggests that the distributional differences between conditional, temporal, and causal clauses are motivated by semantic and pragmatic factors that characterize individual types of adverbial clauses, but his analysis is mainly concerned with conditional and temporal clauses. In what follows we will take a closer look at the semantic and pragmatic features of causal clauses. Specifically, we will review some discourse studies that examined the use of causal clauses in conversations. Our analysis concentrates on a few selected languages in which the conversational use of causal clauses has been studied based on quantitative corpus data: English, German, Mandarin Chinese, and Japanese. The review of the conversational literature suggests that the particular structural properties of causal clauses are motivated by their occurrence in a particular discourse pattern in which causal clauses function to support a previous statement that has been questioned by the hearer.
4 The form and function of causal clauses in conversational discourse

4.1 Causal clauses in English conversations

The most frequent causal conjunction in English is because. Apart from because, since and as can function as causal subordinate conjunctions, but unlike because, since and as are also used in temporal adverbial clauses. In contrast to certain other semantic types of adverbial clauses, notably temporal and purpose clauses, causal adverbial clauses are predominantly expressed by balanced adverbial clauses.

Moreover, causal clauses show a strong tendency to follow the associated main clauses (cf. Altenberg 1984; Schleppegrell 1991; Ford 1993, 1994; Couper-Kuhlen 1996; Diessel 1996, 2005; Hetterle 2007). In particular in spoken discourse, causal clauses are almost always post-posed. Using data from conversational discourse, Ford (1993) found that while conditional and temporal clauses often precede the main clause, causal clauses are always placed at the end of the sentence. As can be seen in Table 2, there was not a single causal clause in Ford’s entire database that occurred in front of the associated main clause.

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<th>Conditional</th>
<th>Temporal</th>
<th>Causal</th>
<th>Total</th>
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<tbody>
<tr>
<td>Initial</td>
<td>26 (59.1%)</td>
<td>21 (34.4%)</td>
<td>0 (0%)</td>
<td>47 (26.1%)</td>
</tr>
<tr>
<td>Final</td>
<td>18 (40.9%)</td>
<td>40 (65.6%)</td>
<td>75 (100%)</td>
<td>133 (73.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>61</td>
<td>75</td>
<td>180</td>
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Similar results are reported in Diessel (2005), who investigated the positioning of finite adverbial clauses in both spoken and written genres. Like Ford, he found that in English conversations causal clauses almost always follow the main clause; but interestingly in written discourse, causal clauses are also commonly placed before the main clause. As can be seen in Table 3, initial causal clauses are especially frequent in academic writing, in which they precede the main clause almost as frequently as temporal clauses. Note, however, that initial causal clauses are commonly introduced by since or as. In Diessel’s data, 50 percent of the initial causal clauses in academic writing are marked by since or as, whereas final causal clauses are mostly introduced by because.
If we look at the use of final clausal clauses in conversations, we find that they are often intonationally separated from the preceding main clause. In Ford’s data, 53 percent of all causal clauses follow a main clause with closing intonation (see also Couper-Kuhlen 1996), whereas temporal and conditional clauses are usually bound to the preceding clause: Only 18 percent of the final temporal clauses and 33 percent of the final conditional clauses are intonationally separated from the main clause in her data.

What is more, Ford noticed that final causal clauses are often prompted by a hearer response indicating disagreement or lack of understanding. Consider for instance the following example from Ford’s database, in which the speaker adds a *because*-clause to his previous statement after the hearer expressed surprise (cf. Ford 1993: 115).

(7)  
A: Did you get your/ ... your first pay check from it?  
A: ... At least?  
B: No, I won't get that for a couple of weeks yet.  
A: Oh, ... w'l/  
B: *Cause* it takes a long time.  
A: At least it's in the bank.  
B: Yeah it will be.

In example (7), the occurrence of the *because*-clause is indirectly prompted by an interjection (i.e. *oh*, forth line), but the hearer may also directly ask for an explanation, as in example (8), in which the *because*-clause provides an answer to a causal *why*-question (example from International Corpus of English).

(8)  
A: Well I mean part of the reason I am eating will be that I/ we don’t have to have a picnic.  
B: Yeah.  
B: Why?  
A: *Because* you hate getting anything like that prepared.

What these examples demonstrate is that causal clauses are commonly used “in response to interactional trouble” (Ford 1993: 135). They serve as independent speech acts that are only loosely adjoined to the associated main clause, suggesting that causal clauses are less tightly combined with the (main) clause than other semantic types of adverbial clauses. In fact, a number of studies have argued that final *because*-clauses

<table>
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<tr>
<td>Conversation</td>
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<td>41.5%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Fiction</td>
<td>67.0%</td>
<td>34.1%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Academic writing</td>
<td>72.2%</td>
<td>34.2%</td>
<td>27.1%</td>
</tr>
<tr>
<td>Mean</td>
<td>70.7%</td>
<td>36.6%</td>
<td>12.8%</td>
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</table>

Table 3: Proportion of initial adverbial clauses in different genres (based on Diessel 2005: 454).

The particular function of causal clauses is reflected in the fact that in final position because-clauses are compatible with syntactic structures that are usually restricted to ordinary main clauses. As Lakoff (1984) pointed out, in contrast to conditional if-clauses, final because-clauses may occur with a tag question (cf. 9a-b), locative inversion (cf. 10a-b), or a rhetorical question (cf. 11a-b) (examples from Lakoff 1984: 474; see also Green 1976).

(9)  
  a. I guess we should call off the picnic because it’s raining, isn’t it?
  b. *I guess we should call off the picnic if it’s raining, isn’t it?

(10)  
  a. I’m leaving because here comes my bus.
  b. *I’m leaving if here comes the bus.

(11)  
  a. The Knicks are going to win, because who on earth can stop Bernard?
  b. *The Knicks are going to win, if who on earth can stop Bernard?

Note that these phenomena are not permissible if the because-clause precedes the main clause (cf. 12a-b), suggesting that initial and final causal clauses are two distinct constructions.

(12)  
  a. *Because it is raining, isn’t it, I guess we should call off the picnic.
  b. *Because here comes the sun, I’m leaving.
  c. *Because who on earth can stop Bernard, the Knicks are going to win.

As Chafe (1984), Givón (1990), and others have argued, initial adverbial clauses serve particular discourse pragmatic functions. They provide a thematic framework that helps the hearer to interpret the subsequent main clause. This explains why the syntactic structures in (9) to (11) are not compatible with causal clauses that precede the main clause. Since initial adverbial clauses are used for discourse-organizing functions, they cannot occur with main clause phenomena such as tag questions or rhetorical questions that are immediately tied to the illocutionary force; this is only possible in a final adverbial clause functioning as an independent assertion.

4.2 Causal clauses in German conversations

Like causal clauses in English, causal clauses in German tend to be more independent of the main clause than other semantic types of adverbial clauses. The most frequent causal subordinate conjunction in German is weil. In addition to weil, da can introduce causal adverbial clauses; but unlike weil, da is largely restricted to formal registers.

Examining data from various spoken and written genres, Diessel (1996) found that in German causal clauses typically follow the main clause. As can be seen in Table 4, 76.6 percent of all causal clauses occur after the main clause in Diessel’s data, whereas
conditional clauses are commonly preposed and temporal clauses are about equally frequent in initial and final position ($\chi^2 = 77.1, df = 2, p < 0.001$).

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<th>Total</th>
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<tbody>
<tr>
<td>Initial</td>
<td>151 (69.9%)</td>
<td>82 (49.1%)</td>
<td>33 (23.4%)</td>
<td>266</td>
</tr>
<tr>
<td>Final</td>
<td>65 (30.1%)</td>
<td>85 (50.9%)</td>
<td>108 (76.6%)</td>
<td>234</td>
</tr>
<tr>
<td>Total</td>
<td>216</td>
<td>167</td>
<td>141</td>
<td>500</td>
</tr>
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</table>

Table 4: Positioning of German adverbial clauses (based on Diessel 1996: 72).

The vast majority of the initial causal clauses occur in written genres and are marked by *da*, suggesting that the occurrence of initial causal clauses is a particular trait of formal registers. In free conversations, causal clauses are usually introduced by *weil*, which predominantly occurs in final adverbial clauses. In Diessel’s data, 79 percent of the *da*-clauses precede the main clause, whereas 92 percent of the *weil*-clauses are postposed.

Like English *because*-clauses, German *weil*-clauses are commonly used as independent (coordinate) sentences if they follow the main clause. One indication for this is that *weil*-clauses are often used with main clause word order. In standard German, *weil*-clauses include the finite verb in final position like all other semantic types of adverbial clauses; but in colloquial German *weil* is often used with main clause word order, i.e. with the finite verb in second position (cf. 13 from Günther 1996: 42).

(13) Der hat sicher wieder ge-soff-en; weil...  
3SG.MASC.NOM have.AUX.3SG.PST probably again PTCP-drink.PST-PTCP because  
sie läuf-t total deprimiert durch die Gegend.  
3SG.FEM.NOM run.PRES-3SG totally depressed through DET.FEM.SG.ACC area

‘He is probably drunk again, because she is running around totally depressed.’

The occurrence of main clause word order in *weil*-clauses has been discussed extensively both in the media and in linguistics (cf. Keller 1993; Günther 1996; Pasch 1997; Gohl and Günther 1999; Uhmann 1998). In the media, this phenomenon is commonly characterized as language decay, but linguists agree that the use of main clause word order in *weil*-clauses is motivated by the communicative function. Like English *because*, German *weil* can introduce an independent assertion supporting a previous statement that the hearer may not understand or may not find convincing. Consider for instance the dialogue in example (14), in which the *weil*-clause supports a statement that the hearer would not be able to understand without an explanation (example 14 from Uhmann 1998: 97).

(14) A: Und ich ähhoff-e auch, dass ich Herr-n Mackermann and 1SG hm hope.PRES-1SG PART COMP 1SG Mr.-ACC Mackermann
B: Ja da/ da möchte-Ø ich aber kein-e
Well there want.AUX.PRES-1SG 1SG.NOM PART no-SG.FEM.ACC

A: 'I just hope that I can convince Mr. Mackermann of that.'
B: 'Well, I don't dare to make a prediction, because Mr. Mackerman is not a/ hm let's say, not an easy partner.'

Note that the *weil*-clause is intonationally separated from the semantically associated clause and that it includes an interjection (i.e. *na*) and a metalinguistic formula (i.e. *sagen wir mal* 'let's say'), which are characteristic of main clauses. The *weil*-clause functions as an assertion and is structurally independent of the semantically associated clause. Another indication that this construction has main clause status is that it allows for word order permutations that are not permissible in adverbial clauses (cf. Uhmann 1998). For instance, as can be seen in example (15), a *weil*-clause with main clause word order can occur with a topicalized adverb at the beginning of the *weil*-clause, which is unacceptable if the finite verb occurs at the end of the clause (example 15 from Uhmann 1998: 111).

(15) Ich frag-Ø dich dann noch mal; weil nachher
treff-Ø ich mich mit dem Köhlersen.
'I'll ask you again, because later I'll meet Köhlersen.'

Finally, while ordinary adverbial clauses can precede the main clause, *weil*-clauses with main clause word order cannot be fronted. As can be seen in (16a-b), a *weil*-clause with main clause word order is not acceptable before the (main) clause, because the assertive function of the *weil*-clause is incompatible with the discourse-organizing function of a preposed adverbial clause (see above).

(16) a. Ich mache das nicht, weil dazu habe ich einfach keine Lust.
‘I don’t do that, because I just don’t feel like it.’


### 4.3 Causal clauses in Chinese conversations

Since English and German are genetically and geographically related, one might assume that they inherited the paratactic use of causal clauses from their common ancestor language or through language contact. However, in a recent study Wang (2006) showed that causal clauses in Mandarin Chinese exhibit the same main clause phenomena in conversations as causal clauses in English and German, suggesting that the paratactic use of causal clauses is not a particular trait of Germanic or European languages (see also Biq 1995; Tsai 1996).

Using data from both spoken and written discourse, Wang found that causal clauses introduced by *yinwei* 'because' tend to follow the main clause, whereas conditional and temporal clauses are commonly preposed. The distributional contrast between causal, conditional and temporal clauses is especially striking in spoken data, notably in conversations. As can be seen in Table 5, in Wang’s conversational data 74 percent of all causal clauses occur in final position, i.e. after the main clause, whereas 87 percent of the conditional clauses and 91 percent of the temporal clauses are preposed ($\chi^2=177.43$, $df=2$, $p<0.001$).

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<th>Conditional</th>
<th>Temporal</th>
<th>Causal</th>
<th>Total</th>
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<tbody>
<tr>
<td>Initial</td>
<td>94 (87.0%)</td>
<td>110 (90.9%)</td>
<td>53 (26.1%)</td>
<td>257 (59.5%)</td>
</tr>
<tr>
<td>Final</td>
<td>14 (13.0%)</td>
<td>11 (9.1%)</td>
<td>150 (73.9%)</td>
<td>175 (60.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td>121</td>
<td>203</td>
<td>432</td>
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</table>

Interestingly, the majority of the causal clauses in Wang’s data are intonationally unbound: 62 percent of the final *yinwei*-clauses are independent intonation units that follow a main clause with closing intonation, as in example (17), in which the causal clause occurs after a short pause (filled with the hearer’s back channel response to the previous sentence) (example 17 from Wang 2006: 71-72).

(17) A: ... Ta yi tian shui duojiu?
... 3SG one day sleep how.long

B: ... Qishi shui/ ... ta dagai ye keyi shui nage/
... actually sleep ... 3SG probably also can sleep that
... qishi wo bushi hen queding ... ta meitian
... actually 1SG NEG very sure ... 3SG everyday
wanshang jidian shui.
night what.time sleep.
A: .. Mm.
 .. Mm.

B: .. Yinwei .. wo doushi xian shui.
 .. Because 1sg always early sleep

A: ‘... How much does she sleep?’
B: ‘... Actually sleeping/ .. she can probably sleep for/
 .. Actually, I’m not sure how much she sleeps every night.’
A: ‘. Mm.’
B: ‘. Because .. I always go to bed first.’

In this example, the Yinwei-clause serves as an independent speech act supporting the speaker’s previous assertion. Wang characterizes causal clauses of this type as coordinate sentences that are structurally independent of the semantically associated clause. Thus, like causal clauses in English and German, causal clauses in Mandarin Chinese are often used as independent assertions that speakers use to justify or support a previous statement. Note that in written discourse, causal Yinwei-clauses are more similar to other semantic types of adverbial clauses: 56.5 percent of all causal clauses in Wang’s written data precede the main clause providing a thematic ground for the interpretation of subsequent clause(s) (Wang 2006: 56). Thus, while causal clauses in Chinese conversations are commonly used as independent speech acts, in writing they behave more like ordinary adverbial clauses functioning to organize the information flow in the ongoing discourse.

4.4 Causal clauses in Japanese conversations

Let us finally turn to Japanese, a left-branching language with relatively rigid word order in which dependent categories generally precede the head (cf. Kuno 1978). Since adverbial clauses are dependent categories, they are usually placed before the main clause in Japanese (ibid.). This raises the interesting question how causal clauses are realized in Japanese conversations. Do they follow the same discourse pattern as causal adverbial clauses in English, German, and Mandarin Chinese or is the conversational use of causal clauses different in Japanese?

This question has been addressed in a study by Ford and Mori (1994) that compared the conversational use of causal clauses in English and Japanese. Like other semantic types of adverbial clauses, causal clauses are marked by a connective particle in Japanese, kara ‘because’, which occurs at the end of the adverbial clause (cf. example 18 from Ford and Mori 1994: 40).

(18) Peepaa kaite nai kara watashi wa dame nan desu yo.
 paper write NEG because 1sg TOP not.good CO PART
 ‘Because I haven’t written any paper, I have little chance.’
In the literature, it is commonly assumed that the canonical position of adverbial clauses in Japanese is before the main clause, but Ford and Mori found that this does not hold true for causal clauses in conversations. In their data, *kara*-clauses are also commonly placed after the main clause. As can be seen in Table 6, 47 percent of the causal clauses in Ford and Mori’s data are extraposed to the position after the main clause. This is in stark contrast to conditional and temporal clauses, which usually precede the main clause ($\chi^2=59.90$, df=2, $p<0.001$).

<table>
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<th>Conditional/Temporal</th>
<th>Causal</th>
<th>Total</th>
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<tr>
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<td>61 (53%)</td>
<td>239 (77.1%)</td>
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<tr>
<td>Final</td>
<td>17 (9%)</td>
<td>54 (47%)</td>
<td>71 (23.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>195</td>
<td>115</td>
<td>310</td>
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</table>

What is more, the vast majority of the final *kara*-clauses do not occur under the same intonation contour as the preceding main clause. In Ford and Mori’s data, 93 percent of the final *kara*-clauses are independent intonation units that are separated from the preceding (main) clause. Note that conditional and temporal clauses are more often bound to the main clause: 59 percent of the final conditional and temporal clauses occur under the same intonation contour as the preceding main clause (cf. Ford and Mori 1994: 41).

The particular structural properties of *kara*-clauses reflect their particular use in conversations. As Ford and Mori (1994) showed, like causal clauses in English (and German and Mandarin Chinese), causal clauses in Japanese are commonly used to support a statement that the hearer does not accept or understand. Consider for instance example (19), in which speaker B produces a *kara*-clause in order to explain his previous statement, which speaker A is unlikely to accept as an answer to her question (cf. 19 from Ford and Mori 1994: 43-44).

(19) A: Amerika josei wa ja ikaga doo desu ka?
America woman TOP then how how COP Q
B: Nakanaka hitokoto de iemasen nee.
not.easily one.word by can’t.say PART
B: Ano boku no un honto iroNna hito iru *kara*. well 1SG GEN yeah really various.kind people exist because

A: 'What do you think of American women then?'
B: 'I can’t say so easily.'
B: 'Well, my/ yeah because really there are various kinds of people.'

Example (20) is similar in this regard. In the discourse preceding this sentence speaker A argued that she expects her students to express their own opinion in an essay exam; speaker B replied that this depends on the kind of question. However, speaker A
disagrees and supports her view by the *kara*-clause in (20) (example from Ford and Mori 1994: 46).

\[(20)\] Maa mondai ni mo yoru daroo kedo, boku wa docchi ka
tte iu to originaritii o motomeru hoo da *kara*.

'Well, even though it may depend on the question, (I still disagree) because I’m the kind of person who prefers originality.'

Interestingly, like causal adverbial clauses in English and German, causal adverbial clauses in Japanese can occur with main clause phenomena that are not permissible in other semantic types of adverbial clauses. As Hara (2008: 229-230) pointed out, *kara*-clauses may include the contrastive marker *wa* and the evidential morpheme *sooda/soona*, which may not occur in temporal and conditional adverbial clauses.

In addition to *kara*, Japanese has another causal conjunction, *datte*, that is commonly translated into English by ‘because’. However, *datte* is not a subordinate conjunction; it occurs at the beginning of a clause that generally follows the semantically associated sentence. In contrast to *kara*-clauses, *datte*-clauses cannot be preposed (cf. 21 from Ford and Mori 1994: 44).

\[(21)\] Kimete nai yo. Datte kaanegii meron nante itsutsu da
tte iu shi.

'I haven’t decided. Because Carnegie Mellon for instance requires five (references).'

According to Ford and Mori, *datte* occurs in the same discourse context as *kara*; both are commonly used in situations in which speaker and hearer disagree about a previous statement or action. The two conjunctions differ in that *datte* expresses the disagreement more forcefully than *kara*; but this is just a minor aspect of their use. Important is that both types of causal clauses are used in the same discourse pattern that we observed in the use of causal clauses in other languages. Like speakers of English, German, and Mandarin Chinese, Japanese speakers make common use of causal clauses as independent assertions; both *datte*-clauses and postposed *kara*-clauses function to support a controversial statement (or action) that has been challenged by the hearer.

### 4.5 Other languages

Concluding this section, we will look at the causal clauses in a few other left-branching languages in our sample. We suspect that in left-branching languages with initial adverbial clauses right-extraposition is a common strategy to use causal clauses as independent assertions, but apart from the Japanese data reviewed in the previous section we do not have any evidence to support this view. However, we *do* have
evidence that causal clauses are often realized by coordinate sentences that supplement the use of adverbial clauses in left-branching languages, like *datte*-clauses in Japanese. For instance, in Santali (Munda, India) adverbial clauses are realized by converses that generally precede the main clause (cf. example 22); but causal clauses are different. As can be seen in (23), causal clauses are expressed by finite sentences that generally follow the associated clause. Like Japanese *datte*-clauses, these constructions are independent intonation units that are marked by a conjunction at the beginning of the causal clause.

(22) Santali (Neukom 2001: 185)

```
Orak’-re sen-kate uni haram-dɔ hɔpn-tet’ kora-e
house-LOC go-CONV that old.man-TOP son-3POSS boys-3SG.SBJ
met-a-e-kan-a ...
say-appl-3sg.obj-ipfv-ind

‘When (he) reached home, the old man said to his son, …’
```

(23) Santali (Neukom 2001: 180)

```
Am-then-ge baba-ŋ cala-k’-kan-a;
you(s)-DAT-FOC father-1SG.SBJ go-MID-IPFV-IND
gente-ŋ badae-y-et’-a dharti mɔː-re-dɔ:
for/because-1SG.SBJ know-y-IPFV;ACT-IND earth among-LOC-TOP
am kan-ge-a-m molik-dɔ.
you.sg cop-foc-ind-2sg.sbj master-top

‘I am coming to you, father, because I know that you are the master in the world.’
```

A similar causal clause construction occurs in Kannada (Dravidian, India), another left-branching language in which adverbial clauses commonly precede the main clause. Interestingly, Kannada has multiple causal clause constructions that differ in terms of their structure and use. There are two types of causal clauses with deranked verb forms that generally precede the main clause like all other semantic types of adverbial clauses in Kannada (cf. 24-25). In addition, there is a finite type of causal clause that includes an initial conjunction and always follows the semantically associated clause (cf. 26). According to Sridhar (1990: 66), the two non-finite causal clauses are subordinate constructions, whereas the finite clause functions as an independent sentence. Although it expresses the same causal link as the two non-finite clauses, there is no evidence that this construction is subordinated to the main clause.

(24) Kannada (Sridhar 1990: 74)

```
Bisilu hecca: giruv-udarinda oLage: a-Ta aDo:Na.
heat much.ADV: be-because inside.EMPH game play.HORT
```

18
'Since it's very hot, let's play inside.'

(25) Kannada (Sridhar 1990: 74)

Ra:manige jvara bandidda karana na:vu maduvege
Rama.DAT fever com.e.PST.PRF because we wedding.DAT
barala:galilla.
come.INF.possible.INF.NEG

'Because Rama had a fever, we couldn’t come to the wedding.'

(26) Kannada (Sridhar 1990: 75f)

Na:vu mya:cige ho:galla, ya:kandre namma yajama:narige mayyalli
we match.DAT not.go because my husband.DAT body.LOC
sariya:gilla.
not.well.ADV

'We won’t go to the match because my husband isn’t feeling well.'

There are several other left-branching languages in our sample in which causal relationships are commonly expressed by coordinate sentences while temporal and conditional clauses are realized by adverbial clauses (e.g. Lavukaleve, Marphathan Thakali, Lakota, Abun, Supyire). Interestingly, in some of these languages, causal clauses are marked by a reduced causal question reflecting the interactive use of these constructions in conversations. For instance, in Marphathan Thakali (Bodic, Nepal) there are several causal clause constructions, but the most common strategy to express a reason or cause involves the expression tālan1 pi3-janse, which literally means ‘if you ask why’:

(27) Marphatan Thakali (George 1996: 220)

T’e lo1-la a3 k’am2 tālan1 pi3-janse mi2 a3 mràn1.
3SG read-INF NEG can why say-COND eye NEG see

‘He cannot read because he is blind.’ [lit. ‘He cannot read. If you ask why: He is blind.’]

George (1996) describes tālan1 pi3-janse as a “petrified construction” that has assumed the function of a causal conjunction introducing a coordinate sentence. Similar constructions occur in Supyire (Gur, Mali) and Koyra Chiini (Songhay, Mali). In Supyire, the commonest way of expressing a causal clause involves a reduced question: gāhá ná ye ‘what for’ or gāhá kúrúgó ye ‘through what’ (cf. 28). Carlson points out that the connecting question is intonationally separated from the combined clauses by pauses, suggesting that the reason clause after gāhá ná ye functions as an independent assertion, whose “syntactic subordination and integration into the main clause has not progressed very far” (Carlson 1994: 580-581).
(28) Supyire (Carlson 1994: 580)

Supyire (1994: 580)

Bòm-ɛ̀ɛ̀gé mɛ́́gɛ́ mpyi “Sámbà na ṣ-kwɔ́hɔ́lì”;
Baboon-male.DEF name.DEF was Samba PROG INTR-dance

àhá ná ye kwɔ́hrá a tààn ka à.
hat on Q dancing.DEF PRF be.sweet it to

‘The male baboon’s name was ‘Samba is dancing’, because it likes dancing.’

In Koyra Chinni, causal clauses are commonly marked by maa se ‘because’ (cf. example 29), which also appears in causal questions (cf. example 30). According to Heath (1999: 182), maa se is a genuine question word that has assumed the additional function of a causal clause marker.

(29) Koyra Chinni (Heath 1999: 280)

A wane albarka di jaatir o bow [maa se] a-a
3SG POSS force DEF self IMPV be.big what? DAT 3SG.SUBJ-IMPV

jii-jii.
REDUPL.be-only

‘It’s (melon seeds’) very value is great, because it is oily.’

(30) Koyra Chinni (Heath 1999: 182)

[Maas se] n koy?
what? dat 2sg.subj go?

‘Why did you go?’

The same extension of a question word to a causal connective occurs in Italian. Like Koyra Chinni, Italian uses an interrogative pronoun, perché ‘why’, to mark a causal clause (cf. Schwarze 1995). Finally, English uses the copular clause that's why to indicate a reason, though in this case the reason precedes the statement after the connecting clause (cf. They are not too bad. That's why I’m worried).

5 Conclusion

To summarize, this paper has shown that causal clauses are commonly expressed by constructions that are less tightly integrated into complex sentences than other semantic types of adverbial clauses. In contrast to conditional and temporal clauses, causal clauses predominantly follow the main clause, are often realized as independent intonation units, and may exhibit structural properties such as the occurrence of a tag
question or topicalization that are characteristic of main clauses. In fact, in many languages causal relationships are expressed by coordinate constructions that are syntactically independent of the semantically associated clause. In particular, in left-branching languages with initial adverbial clauses coordinate sentences are commonly used to express a causal relationship. We have argued that the particular structural properties of causal clauses are motivated by their communicative function in speaker-hearer interactions. As Ford and others demonstrated, in conversational discourse causal clauses are commonly used to support a problematic statement. More precisely, causal clauses are often embedded in a discourse pattern that involves three verbal actions:

1. A statement or activity that the hearer may not accept or understand.
2. The hearer’s reaction to this statement (optional).
3. The speaker’s justification or explanation of the controversial statement.

This is an extremely frequent discourse pattern that appears to be so fundamental to everyday communication that one might expect it to be universal (cf. Ford and Mori 1994).

Interestingly, children seem to learn the use of causal clauses in the context of this pattern. As Diessel (2004: chap 7) showed in an extensive corpus study of five children, the earliest causal clauses that English-speaking children produce are prompted by a causal why-question, as in the following examples from a two-year old boy (examples from Diessel 2004: 161).

(32) CHILD: No you can’t get a napkin. [Peter 2;7]
ADULT: Hmhm.
CHILD: No!
ADULT: Why?
CHILD: Cause it’s Mommy’s, ... Mommy’s cleaning.

(33) CHILD: No, don’t touch this camera. [Peter 2;7]
ADULT: Why?
CHILD: Cause it’s broken.

(34) CHILD: The microphone. [Peter 2;7]
CHILD: Don’t touch it!
ADULT: Why?
CHILD: Cause it’s ... I wanna put this right there.

(35) CHILD: You can’t have this! [Peter 2;8]
ADULT: Why?
CHILD: Cause ... I’m using it.

(36) CHILD: Over here right over here, ... don’t put it there. [Peter 2;8]
ADULT: Why not?
CHILD: **Cause** it’s my horse.

The *because*-clauses in (32) to (36) are characteristic of children’s early causal clauses (cf. Eisenberg 1980). In Diessel’s data, an average of more than 80 percent of the first fifteen *because*-clauses produced by the five children he examined occur in response to a causal question. As the children grew older, they extended the use of *because* to other patterns in which the adverbial clause is more tightly bound to the preceding (main) clause. However, there is not a single *because*-clause in the entire database that precedes the main clause, supporting the hypothesis that the use of initial causal clauses is largely restricted to written genres. In writing, causal clauses are also commonly used to enhance discourse coherence; but in conversations, causal clauses are associated with a particular discourse pattern in which the causal clause functions as a separate speech act that is structurally independent of the associated (main) clause.
## Appendix

### Language sample

<table>
<thead>
<tr>
<th>Language</th>
<th>Affiliation</th>
<th>Word order</th>
<th>Position order</th>
<th>Position temp/cond</th>
<th>Deranking causal</th>
<th>Deranking temp/cond</th>
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3 The affiliation indicates the level of the genus based on the classification in the World Atlas of Linguistic Structures (Haspelmath et al. 2005).
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**South America**

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References


Green, Georgia M. 1976 Main clause phenomena in subordinate clauses. Language 52: 382-397.


