Changing conventions in German causal clause complexes

A diachronic corpus study of translated and non-translated business articles

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This paper contributes to the field of diachronic corpus studies of linguistic change through language contact in translation by replicating Becher's (2011) study which found a trend from hypotaxis to parataxis in concessive clause complexes of German popular scientific articles, and examining whether a comparable trend can be found in causal clause complexes in another genre. The study draws on a one-million-word translation corpus of English business articles and their German translations, as well as on a comparable corpus of German non-translations. The corpora consist of texts published in two time periods, 1982–3 and 2008. German translations of English causal conjunctions are compared for both time periods to determine diachronic changes in causal clause complexes. The comparable corpus is then analysed to find out whether those changes also happened in non-translated language. While a trend from hypotaxis to parataxis in both corpora can be observed, hypotaxis remains more frequent than parataxis. The study also detects a shift in preference for the causal conjunctions *weil*, *denn* and *da*, which partly causes the decrease in hypotaxis.

Keywords: language contact in translation, syntactic change, diachronic corpus linguistics, features of translated language, English/German

1. Introduction

There has been much interest in the question of whether and how translation as a language contact situation affects language change (Bennett, 2010; Bennett, 2011; Kranich *et al.*, 2011; Neumann, 2011; House, 2011b). Research on German has found that, in situations of multilingual discourse production, such as translation, there are some linguistic features which seem to differ from those observed in

monolingual discourse production. It has been argued, for instance, that there is an increasing use of the German first person plural pronoun *wir* as the translation of the English equivalent 'we' in popular scientific writing from 1999–2002 when compared to 1978–1982 (Baumgarten, 2008; Baumgarten and Özçetin, 2008). Another set of studies has shown that sentence-initial conjunctions such as 'but' or 'and' are increasingly translated literally, while translators make less use of alternative constructions which are more common in non-translated German popular scientific writing. (Baumgarten, 2007; Becher *et al.*, 2009).

Thus, those scholars hypothesize that through language contact in translation, linguistic conventions of the target language are affected and altered gradually over time as authors, especially in environments of multilingual text production, adopt structures and expressions they encounter in translations. However, for the genre of popular science, that hypothesis has largely been refuted. Kranich *et al.* (2012:331) argue that while there are "shining-through effects in translation", there is not much evidence to support the claim that "German original texts in the genre of popular science will also increasingly adopt Anglophone conventions", with the exception of sentence-initial concessive conjunctions.

While plenty of research exists on translation as a language contact situation, much of it has focussed on translation universals (especially explicitation) and communicative conventions (Mauranen, 2004; Neumann and Hansen-Schirra, 2005; Hansen-Schirra *et al.*, 2007; Baumgarten *et al.*, 2008; Steiner, 2008), though the notion of translation universals has been rejected by some scholars (House, 2008; Becher, 2010). Much still remains unclear concerning the role of translation in syntactic change. The findings are scattered and unconnected, and more evidence from different genres needs to be gathered before some tentative generalizations can be made. No attempt has been made at suggesting generalizable trends, and no coherent picture of this area of enquiry as a whole has yet emerged. Furthermore, most corpus research on syntactic change has been synchronic, and so merely gives an idea of the effect of contact situations at a given time.

This paper contributes to the study of language contact in translation by applying the diachronic corpus method to the study of language change. It is an attempt to build on the findings of a previous study (Becher, 2011) by replicating its method and thus corroborating or falsifying the findings of that study in a different genre. The only way to address the difficult question of whether language contact through translation influences language change is by creating an array of connected studies that build on each other by using each other's findings and methods.

The focus of this paper is an examination of trends in the syntactic interrelationship of causal clauses. According to Halliday (1985/1994:218), clauses of any given clause complex modify each other along two dimensions, the first of which is the type of interdependency, or 'taxis'. Two types of taxis are distinguished:

hypotaxis, where one clause modifies the other and is therefore dependent on that clause, and parataxis, where both clauses are of equal status (1985/1994: 218). Consisting of dominant and dependent clauses, it is hypotaxis that is most suitable for an integrative and hierarchical discourse structure, while parataxis lends itself to a loose and sentential discourse structure (House, 2011b).

The second dimension of clause modification is the 'logico-semantic' relation, and the focus of this study will be on the relation called 'enhancement'. An enhancing relationship exists if "one clause expands another by embellishing around it; qualifying it with some circumstantial feature of time, place, cause or condition" (Halliday, 1985/1994: 220). While all those features provide interesting contexts for research, for space reasons only the causal feature has been chosen for this paper.

The most significant set of studies concerned with language change through translation has so far been the Covert Translation project. Drawing on a 500,000-word corpus of English popular science texts, their German translations and original German articles, published in 1978–82 and 1999–2002 in the *Scientific American* and its German sister publication, *Spektrum der Wissenschaft*, as well as a corpus of business texts, it investigated the influence of Anglo-American linguistic-cultural norms on German translations of English popular science articles, business communication and shareholder statements and the parallel production of similar articles (Böttger, 2007; House, 2011b; Kranich *et al.*, 2012). It pioneered a two-step diachronic corpus method to investigate whether contact with the lingua franca English has led to changes in the discursive conventions of other languages. Among other things, the project hypothesized "a shift in information structure from packing lexical information densely, integratively and hierarchically to presenting information in a more loosely linearised, sentential way" (House, 2011b: 190).

Support for this hypothesis comes from several studies (see Section 2) and it is this hypothesis that shall be tested in this paper. By replicating the corpus method from the Covert Translation project, I aim to investigate, firstly, whether a trend from hypotaxis to parataxis in causal clause complexes can be observed in English–German translations of business articles, and, secondly, whether a corresponding trend can also be observed in non-translated German business articles.

I will begin by giving an account of the most relevant existing studies (Section 2). I will then detail the structure and composition of my corpus and explain my method of analysis (Section 3). This will be followed by the corpus analysis and findings, supported by examples from my corpus (Section 4). Finally, I discuss the findings of this study by drawing on explanations offered by other researchers, and give some suggestions on how to further investigate the issues raised (Section 5).

2.   Previous research

The underlying hypothesis that is tested in this paper is whether written German exhibits, in the words of Fabricius-Hansen (1999), a trend in discourse structure from a hierarchical, hypotactic style towards an incremental, paratactic style in translation situations. If true, the paratactic style, which mainly draws on main clauses with a V2 structure, would gradually replace the hypotactic style, which makes heavy use of verb-final subordinate clauses. In spoken German, there has long been a trend to replace the mandatory verb-final structure in dependent clauses by a V2 structure (Gaumann, 1983), especially after the causal conjunction *weil* ('because') (Günthner, 1999; Farrar, 1999), but also in some cases after concessive conjunctions such as *obwohl* ('although') (Gaumann, 1983: 44ff). Thus, Becher (2011: 199) argues that, in an effort to increase the readability of their articles, German translators increasingly prefer the V2 paratactic structure because they consider it to be easier to process. Studies have indeed shown that paratactic V2 clause complexes are easier to process by the reader than verb-final hypotactic structures (Weyerts *et al.*, 2002; Hansen-Schirra, 2011).

However, the idea that verb-final structures are harder for readers to process because the full verb comes late in the clause complex still lacks convincing evidence. Drawing an analogy to the *Satzklammer*,[1] Farrar (1999: 6) argues that because "in many main clauses the full verb is at the end of the clause", readers would face the same interpretive problem that they face in a verb-final clause complex. Strikingly, however, there is plenty of evidence that the *Satzklammer* in German is not in a process of change (Marschall, 1994: 310; Wegener, 2007).

While greater comprehensibility of paratactic structures may be one of several factors in the propagation of parataxis, scholars in the field assume that language contact with English provides a model of paratactic structures for translators to adopt. Investigating "to what extent […] language contact in translation affect[s] TT production beyond lexical borrowing to take the form of the transfer of syntactic constructs", Musacchio (2005: 73) finds a higher frequency of parataxis in Italian translations of English economics articles when compared to Italian non-translations. Her study uses a synchronic corpus of business and economics articles from *The Economist* and *The World In*, and their Italian translations in *La Stampa* and *Economy* as well as non-translations from *Il Corriere della Sera*, *Il Sole 24* and *Economy* from 2001–2003 (2005: 73).

With regards to cohesive devices, Musacchio (2005: 80ff) finds significant differences between the translations and the non-translations. Simple conjunctions which connect phrases loosely, such as *ma* ('but') and *tuttavia* ('however', 'yet'), are more frequent in translations than in non-translations. Conjunctions with a higher semantic weight, such as *invece* ('whereas', 'instead') and *dunque* ('hence',

'therefore') are more frequent in non-translations (2005: 80). Often, cohesion is introduced in the translations, and individual English phrases are frequently joined together by a conjunction in the Italian translations to reflect the Italian preference for long, hierarchical clause complexes (2005: 81). But, Musacchio argues, when such cohesion is introduced by the translator, it usually only yields paratactic clause complexes due to the translators' "reluctance to introduce linkages between sentences that might lead to an incorrect interpretation" (2005: 82), concluding that the analysis "indicates that Italian as used in the economics press is slowly moving away from long sentences and linguistically connected syntactic, grammatical and lexical constructs" (2005: 94).

However, as this study is not diachronic, it merely provides a snapshot of the linguistic situation in the genre in 2001–03. Also, the English source texts all originate from The Economist Group, whose house style is rather scrupulous in promoting a simple and brief style (The Economist, 2012) which is arguably not representative of general English writing in the economics genre, as a perusal of other economics magazines such as the *Harvard Business Review* will show. Yet the study provides evidence that the influence exercised by English in a situation of multilingual discourse production promotes paratactic constructions in the target language.

A diachronic corpus study of parataxis and hypotaxis in enhancement clause complexes in translation comes from Becher (2011) as part of the Covert Translation project. He hypothesizes that parataxis may replace hypotaxis as the preferred syntactic structure of written discourse in German. In his analysis of the project corpus of popular scientific articles, he observes that in 1978–82, 55% of all translations of the concessive conjunction 'although' were hypotactic, as opposed to 19% in 1999–2002. Over the same time span, paratactic constructions have increased in proportional frequency from 27% to 59% (2011: 195). However, the findings for 1978–82 are based on only 33 occurrences, which may be too small to warrant a conclusive statement.

In the non-translations, Becher also finds a substantial increase in parataxis, from 48.5 instances pttw (per ten thousand words) in 1978–82 to 70 instances pttw in 2008. However, there is no change in hypotaxis, which is stable at 4.2 and 4.0 instances pttw, respectively (2011: 197). As the normalized frequency of hypotactic concessive constructions in the 1999–2002 translation corpus is 4.9 instances pttw, Becher argues that the frequency of hypotactic constructions in the translated texts may have assimilated to that prevailing in the non-translated texts (2011: 198). He therefore abandons the notion of syntactic change through translation in the general language of popular scientific articles and argues that the trend away from hypotaxis has already happened in non-translated language, and that translated language, due to the conservative language use of translators, is

now merely "catching up" (2011: 198). If this hypothesis is correct for concessive clause complexes, it should also be valid for causal clause complexes because both belong to the logico-semantic relation of enhancement. In what follows, I shall test this hypothesis.

3.   Corpus and methodology

The analysis presented in this study draws on two corpora compiled by the author, a translation corpus (TC) and a comparable corpus (CC). Both corpora are divided into two sub-corpora of texts from 1982–3 and 2008. The sample period of 25 years was chosen to achieve comparability with the Covert Translation project.

The TC consists of English management and business articles sentence-aligned with their German translations, and the CC consists of comparable German non-translated articles. The articles were published in the *Harvard Business Review* (henceforth *HBR*), an American business magazine, and its licensed German edition, the *Harvard Business Manager* (henceforth *HBM*). Two thirds of the content of each issue of the *HBM* consist of translations of articles published in the *HBR*, and the remaining third consists of articles originally written for the magazine in German. In the 2008 issues, more space was allocated to interviews, which led to a further decrease in the number of non-translated German articles. This content structure means that the size of the CC had to be considerably smaller than that of the TC (see Table 1), as it is paramount to adhere to the chosen time periods in order to maintain comparability with the findings of the Covert Translation project. However, the present size is sufficient for the function of the CC as a tool to validate the findings from the TC.

The TC contains 55 articles from 1982–3 and 65 articles from 2008. Most articles in the magazines are one-off contributions, while only some of the authors are regular contributors to the magazine, so the analysis draws on more than 100 different language users. According to the short biographies published with the articles in the magazines, the authors of both the English and the German articles in the corpus are economists, business leaders and academics. The translations were done by professional freelance translators, small translation businesses as well as editorial staff. The articles in the 1982–3 sub-corpus were translated by nine

Table 1. Size of the corpora used in this study.

	1982–3	2008
Translation Corpus	497,489 words	518,850 words
Comparable Corpus	145,715 words	88,312 words

different translators, while the articles in the 2008 sub-corpus were translated by 16 individual translators as well as a translation company. According to information available in the public domain, most translators have a strong background in economics and/or specialize in the field.

The *HBR* has been published monthly since 2001. According to the publishers, readers are mostly male, 44 years of age on average and hold chief officer responsibilities. They have power and ambition and are successful and innovative (Harvard Business School Publishing, 2011). The *HBM* publishes translations of selected *HBR* articles, as well as articles originally written for the magazine in German. The *HBM* has been published monthly since 2003 and its readers are mainly high-income, university-educated young executives who are 40 years old on average (SPIEGEL-Gruppe, 2009).

The study employs a two-step diachronic corpus method: in the first step, translations from 1982–3 are compared with translations from 2008 to determine diachronic changes in causal clause complexes. The four causal conjunctions 'because', 'as', 'since' and 'for' are searched for in the TC, and the tactic relationships of the corresponding German translations are compared for the two time periods. The second step is to attempt to validate those findings by searching the CC for the same German conjunctions that were observed to be most commonly used in the TC.

4. Analysis

4.1 Description of the cohesive devices used in the corpus

The absence of verb-final structures in English and their retention in German is considered "a major area of contrast in basic sentence structure" (Hawkins, 1986: 131) between those two languages. The word order in English is SVO in both main and subordinate clauses (Hawkins, 1986: 47ff). In German, clauses are marked by word order as subordinate or main clauses. Their word order is determined by conjunctions, which, in the case of a main clause, demand a V2 structure (except in an interrogative clause, where the structure is usually verb-first). A subordinate clause, on the other hand, has a verb-final structure. A V2 clause in German is defined as a clause which has a prefield, i.e. a clause where "at least one of its non-finite constituents immediately precedes the finite part of the verb phrase" (Pasch *et al.*, 2003: 92, my translation). A verb-final clause in German is defined as a clause where "the finite part of the verb phrase succeeds all the complements of that verb phrase, unless they contain a verb" (Pasch *et al.*, 2003: 95, my translation).

Due to that difference in the syntactic structure of subordinate and main clauses in German, it is possible to analyse change in paratactic and hypotactic structures by searching for specific conjunctions, and noting the word order of the translation. The difference between parataxis and hypotaxis is made clear in example 1, where a hypotactic translation of an English sentence is shown in 1a and a paratactic one in 1b.

(1)   I lent him money because he needed it.
    a.   *Ich lieh ihm Geld,   <u>weil</u>   er es brauchte.*
         I   lent him money because he it needed
                         CONJ S O V
    b.   *Ich lieh ihm Geld,   <u>denn</u>   er brauchte es.*
         I   lent him money because he needed   it
                         CONJ S V   O

The difference lies in the causal clause, which in these examples is the second part of the clause complex. The clauses in example 1a have a hypotactic relationship because the causal clause is a subordinate clause (as is evident from its structure Subject-Object-Verb, i.e. a verb-final structure) that is dependent on the main clause. The paratactic causal clause has the structure Subject-Verb-Object, a V2 structure, which marks it as a normal main clause so that both clauses in this clause complex are of equal status.

All translations of the English causal conjunctions 'because', 'as', 'for' and 'since' are sorted into categories of cohesive devices (shown in Table 2). Examples and definitions as well as explanations of the non-item categories will be given in this section before I proceed to the analysis of the TC (Section 4.2) and the CC (Section 4.3).

The first two conjunctions, *weil* and *da*, trigger a hypotactic structure. Example 2 shows a clause complex containing *weil*, but *da* could have been used in the same position.

Table 2. Cohesive Devices used to translate the English causal conjunctions.

Item	Taxis
weil	Hypotaxis
da	Hypotaxis
denn	Parataxis
deshalb	Parataxis
coordination	Parataxis
modal clause	–
transition phrase	–
omissions	–

(2)   The market leader was leaving money on the table, possibly because its
       image no longer appealed to customers. (HBR11/07,110)
       Möglicherweise verdiente der Marktführer   nicht mehr   so viel,
       possibly   earned   the market-leader not   anymore so much
       <u>*weil*</u>   *er mit seinem Image die   Kunden   nicht mehr*
       because he with his   image to-the customers no   longer
       ansprach. (HBM3/08,78)
       appealed

The clause introduced by *weil* (or *da* as the case may have been) has the verb-final
syntactic structure SOV, which means that the verb (V) is placed after the subject
(S) and all objects (O). Verb-final syntax marks the clause as subordinate to an-
other clause, and in this case the clause is dependent on the preceding main clause,
which is considered dominant (Halliday, 1985/1994: 219). Therefore, this clause
complex is hypotactic.

   Clause complexes connected by *denn* and *deshalb*, on the other hand, are con-
sidered paratactic, as shown in examples 3 and 4.

(3)   This is not a chancy decision because most of the time management will be
       dealing with trained and controlled egos. (HBR1/68,72)
       Diese Entscheidung ist keineswegs risikoreich, <u>denn</u>   das
       this   decision   is not-at-all risky   because the
       Management wird es meistens mit   geschulten und kontrollierten
       management will it mostly   with trained   and controlled
       Egos zu tun haben. (HBM1/82,32)
       egos to do have

The clauses in example 3 are connected by the conjunction *denn*, but could also
stand alone. The secondary clause has a V2 structure (the finite verb *wird* fol-
lows the subject *das Management*), so both clauses in this clause complex are main
clauses. The clause complex is paratactic.

   Another example of a paratactic clause complex is given in example 4.

(4)   Yet, because the drug enhanced efficiency, its use was necessary to keep the
       company going. (HBR5/80,86)
       Am unangenehmsten sei   aber,   daß diese Droge
       most-unpleasant   is-said-to-be however that this   drug
       andererseits   auch die Effizienz fördere; <u>deshalb</u>   sei
       on-the-other-hand also the efficiency increase therefore is-deemed
       sie unerläßlich, um   das Unternehmen in Gang   zu halten. (HBM2/83,61)
       it   imperative in-order the company   in motion to keep

Again we have two V2 main clauses which could function individually. In the secondary clause, the conjunctive adverb *deshalb* occupies the prefield position, and the finite verb *sei* comes in second place. Like a conjunction, *deshalb* connects two clauses, but as part of the verb phrase, it is part of the syntactic structure instead of being outside of it, as is the case with conjunctions (Hentschel, 2010: 157).

The category coordination contains cases where the two causally conjoined clauses in the source text are joined either syndetically by the coordinator *und* or asyndetically (see Velupillai, 2012: 308 for an account of asyndetic coordination). It is important to note that asyndetic coordination also includes cases where a full stop has been introduced into the ST sentence, so that it is split into two sentences in the TT. The strength of the Hallidayan framework is that it can analyse two such sentences as one clause complex because the interrelationship of clauses is determined by their logico-semantic and tactic connections, rather than by punctuation. A case in point is given in example 5.

> (5) Using regression analysis is more reliable than asking people how much
>   they are willing to pay for each feature because consumers often can't
>   explain how they make their choices and they often don't do what they say.
>   (HBR11/07,110)
>   *Diese Methode ist zuverlässiger, als Kunden   zu fragen wie viel*
>   this method is more-reliable than customers to ask   how much
>   *sie für einzelne   Leistungsmerkmale zu zahlen bereit   sind. Käufer*
>   they for individual features   to spend prepared are   buyers
>   *können oft   nicht erklären, wie sie   ihre Entscheidung treffen, und*
>   can   often not explain how they their decision   make and
>   *sie   tun häufig nicht das, was   sie   sagen.*   (HBM3/08,78)
>   they do often not   that which they say

As this clause complex contains two coordinated main clauses, the items in the coordination category are considered paratactic. It could be argued that cases of coordination as defined above do not have a causal relationship and should therefore be disregarded in the analysis. However, along with Carrell (1982), I would argue that the relationship between the clauses is causal because cohesion is not exclusively created by linguistic devices, but also by the readers' access to their world knowledge and familiar schemata. Thus, in the above clause complex, we know that the second main clause states the cause to the first one and though the translator has translated them asyndetically, the underlying logico-semantic relationship is one of causal enhancement.

A further category of clause complexes is composed of modal clauses. This category contains clause complexes where the sub-clause is a modal clause, i.e. a clause which specifies the manner in which something is done. The clause

complexes in this category contain, in most of the observed cases, the connecting device *dadurch (…), dass*, as in example 6.

(6) The normal logistical problem is even more acute for this worker because she has no nonworking relative living nearby who might prepare the food. (HBR3/81,28)

Das Verpflegungsproblem der   Arbeiterin wird <u>dadurch</u>   noch
the catering-problem   of-the worker   is   by-the-fact even
verschärft, <u>daß</u> sie keine nicht berufstätigen Verwandten in der
worsened that she no   not employed   relatives   in the
Nachbarschaft   hat, die   das Essen vorbereiten könnten.   (HBM1/82,71)
neighbourhood has who the food prepare   could

Even though modal clauses can sometimes have a causal function, as in example 6, they are not causal clauses. In Hallidayan terminology, they have an enhancing logico-semantic relationship, but the feature specified is manner, not cause. Furthermore, the modal clause is introduced by the generic conjunction *dass*, rather than by a causal conjunction. This means that the logico-semantic relationship between the clauses is not the same as in the ST as the overt causal link has been removed by the translator. That is why I have decided not to count modal clauses as either paratactic or hypotactic for the purposes of this study.

The next category contains transition phrases. A transition word or phrase is used to express a logical relationship between two clauses without using a conjunction. Corpus examples of causal transition phrases are *aus dem Grund, dass* ("for the reason that"), *schließlich* ("after all"), etc. (see example 7). The category also includes clause complexes that are more convoluted in expressing the causal relationship, such as example 8.

(7) […] simply because they never even knew those rights existed. (HBR6/08,129)

Und zwar   nur <u>aus dem einfachen Grund, dass</u> ihnen   die
and indeed only for the   simple   reason that to-them the
Existenz dieser   Rechte nicht bekannt war.   (HBM8/08,62)
existence of-these rights not   known was

(8) It's easy to misjudge the role of the chief strategy officer, in part because the title itself is misleading. (HBR10/07,84)

Viele   haben eine falsche Vorstellung davon, was   ein Chief Strategy
many have a   wrong idea   of-that which a   Chief Strategy
Officer eigentlich ist. <u>Daran ist</u> die missverständliche Bezeichnung
Officer actually   is in-this is the misleading   title
<u>*nicht ganz   unschuldig*</u>.   (HBM1/08,80)
not   entirely blameless

The resulting clause complexes can be paratactic or hypotactic because the syntactic structure is not determined by the transition phrase. In the analysis of hypotaxis and parataxis, therefore, they cannot be associated exclusively with one type of taxis and are therefore not counted.

The final category, called 'other', contains those clause complexes where the translator either omitted the causal clause entirely, or where a preposition was used instead of a conjunction (e.g. *aufgrund von* ("due to") or *wegen* ("because of")). The resulting clause complexes cannot be associated to either parataxis or hypotaxis, and therefore are not counted in the analysis.

4.2 Analysis of the translation corpus

Tables 3 and 4 show the absolute (n) and normalized (f) frequencies of the target text cohesive devices that were used to translate the four English causal conjunctions under analysis. The normalized frequencies are stated in i/htw (instances per hundred thousand words). The total absolute frequencies from both time periods have been tested for statistical significance using the chi-square (χ^2) test, which is commonly applied in corpus linguistics to "test whether the distribution of the observed frequencies of occurrence deviate significantly from an expected distribution" (Gries, 2010: 17). The test shows that the distribution is highly significant ($\chi^2 = 110.93$ (df = 7), $p < 0.01$).

Looking at the English conjunctions, we observe that, while the frequency of 'because' has hardly changed (62.9 i/htw against 60.5 i/htw), 'since' and especially 'for' are in strong decline (23.1 i/htw down to 10.6 i/htw for 'since', 4.4 i/htw down to 0.2 i/htw for 'for'). The use of 'as' as a causal conjunction, on the other hand, has

Table 3. Translations of causal conjunctions in the 1982–3 translation corpus.

		weil	*da*	*denn*	*deshalb*	coord.	modal	trans.	other
because	n	247	17	10	5	2	11	4	17
(f = 62.9)	f	49.6	3.4	2.0	1.0	0.4	2.2	0.8	3.4
since	n	62	38	3	–	4	2	–	6
(f = 23.1)	f	12.5	7.6	0.6	–	0.8	0.4	–	1.2
for	n	4	1	14	–	1	1	1	–
(f = 4.4)	f	0.8	0.2	2.8	–	0.2	0.2	0.2	–
as	n	–	4	1	–	1	–	–	–
(f = 1.2)	f	–	0.8	0.2	–	0.2	–	–	–
Total	n	313	60	28	5	8	14	5	23
(f = 91.7)	f	62.9	12.1	5.6	1.0	1.6	2.8	1.0	4.6

Table 4. Translations of causal conjunctions in the 2008 translation subcorpus.

		weil	*da*	*denn*	*deshalb*	coord.	modal	trans.	other
because	n	127	72	38	8	14	20	21	14
(f = 60.5)	f	24.5	13.9	7.3	1.5	2.7	3.9	4.0	2.7
since	n	4	30	8	1	6	–	3	3
(f = 10.6)	f	0.8	5.8	1.5	0.2	1.2	–	0.6	0.6
for	n	–	–	1	–	–	–	–	–
(f = 0.2)	f	–	–	0.2	–	–	–	–	–
as	n	6	9	3	–	4	1	1	1
(f = 4.8)	f	1.2	1.7	0.6	–	0.8	0.2	0.2	0.2
Total	n	137	111	50	9	24	21	25	18
(f = 76.1)	f	26.4	21.4	9.6	1.7	4.6	4.0	4.8	3.5

increased strongly. In the 1982–3 sub-corpus, it is hardly used as a causal conjunction at all. When it occurs in the corpus, it is used exclusively as a temporal conjunction signalling that the actions described in the clause complex are happening at the same time (e.g. "As profit margins increase, companies can employ more staff."). In 2008, it is used regularly to signal a causal relationship and has replaced the conjunction 'for' as an alternative to 'because'. However, the decline of 'since' and 'for' has not led to an increase in the use of 'because'.

The total frequency of causal conjunctions has decreased from 91.7 to 76.1 i/htw. This overall frequency decrease can be attributed mainly to the decrease of 'since' from 23.1 to 10.6 i/htw, as well as the disappearance of the causal conjunction 'for' in this genre, while 'as' has only slightly increased in frequency. It remains to be investigated in a separate study whether it is compensated by other cohesive devices expressing causal clause relationships in English.

Among the German conjunctions, the most striking development is the strong decrease of *weil*, while most other items increase significantly. Especially *da* and *denn* show strong increases in frequency, while the decline of *weil* is especially dramatic in the translations of 'since' and 'because'. In the 1982–3 sub-corpus, *weil* is the standard translation choice at a frequency of 62.9 i/htw, while the other conjunctions occur at less than a quarter of that frequency. In the 2008 sub-corpus, the normalized frequency of *weil* has more than halved to 26.4 i/htw, and that of *da* and *denn* has increased to 21.4 i/htw and 9.6 i/htw, respectively.

This may simply be because language users in this genre increasingly consider *weil* to be more informal or pertaining to spoken German than *da* and *denn* (Pasch, 1989; Keller, 1993: 243). Alternatively, the contrasting development of *weil* and *denn* could also be taken to represent the contrasting development of

hypotaxis and parataxis, and seems at first sight to confirm our expectations of a trend from hypotactic to paratactic constructions. However, the frequency increase of the hypotactic conjunction *da* does not fit this explanation, which may suggest that there is some intrinsic difference between *da* and *weil* which may explain the differing frequency patterns.

One such difference can be identified on the pragmatic level, where scholars have suggested differing degrees of presupposition of information between *da* and *weil* (Köller, 2004: 512–523). According to that view, *da* is considered to be primarily used in clause complexes where the cause of the effect the speaker refers to is known to or can be inferred by the recipient. *Weil*, on the other hand, indicates that the reason stated is thought to be newly discovered or previously unknown to the recipient.

Simplifying earlier attempts to differentiate semantically several functions of causal conjunctions (e.g. Küper, 1991), Köller (2004: 520ff) distinguishes what can be translated as the "objective" (*sachthematisch*) from the "reflective" (*reflexionsthematisch*) function. In Köller's definition, the objective function serves the language user as an expression of the factual causes of the effect stated in the main clause. Köller (2004: 521) argues that the conjunction most commonly used for this function is *weil*. Thus, *weil* functions rather like the "content conjunction" as defined by Sweetser (1990: 77), which serves to express "real-world causality".

Using the reflective function of causality, Köller argues, speakers present their own perspectivization, so that the causal clause, rather than supplying the real-world cause for the effect in the main clause, contains the reason why the statement in the main clause was made (Köller, 2004: 521). This definition is again basically identical to Sweetser's (1990) concept of epistemic conjunction. One conjunction which is usually used in this function, according to Köller (2004: 521), is *da*.

It is of course not possible to categorize every causal clause complex as one of the above functions. But the pragmatic difference between *weil* and *da* outlined above may explain the difference in their frequency development in this corpus. If *da* is used to ascertain commonly known reasons, whereas *weil* is used to present newly discovered ones, then the translator's decision to use one of these conjunctions instead of the other carries a certain semantic weight. The more aware translators become of the distinction between *da* and *weil*, the greater the role played by presupposition and assumed knowledge of the recipients. If translators are unsure about what knowledge to assume in the reader, they may find it less intrusive to imply that the reader has some idea about the subject matter than to present something as new which may not be new to the reader at all. Given the profile of the target audience of the magazines (see Section 3), a possible explanation for the increase in *da* and the decrease in *weil*, then, may be that translators (or editors, for that matter) opt for *da* because it constitutes the safer alternative.

It may also be instructive to look to related developments in spoken German, especially the tendency to use V2 instead of verb-final syntax after *weil* (Gaumann, 1983; Günthner, 1996). Firstly, the widespread negative view of this development may exacerbate the impression of *weil* as an overall lower-register choice among the causal conjunctions. But, more importantly, there may be reasons to draw an analogy between the increasingly frequent use of V2 word order in causal clauses with *weil* in spoken language and what has been observed for written language in this study.

Keller (1993) argues that the recent *weil*+V2 variant, which he terms "epistemic *weil*", differs semantically from the standard use of the conjunction, termed "factual *weil*". The differentiation is again analogous to Sweetser's (1990: 77f), "content" vs. "epistemic" distinction. Keller argues that in the factual *weil*, knowledge of the cause is presupposed, so it works in Köller's objective function described above. The epistemic *weil* works in the reflective function described above, and neither of the clauses is presupposed. Keller argues that in written German, *da* takes over the function of the factual *weil*, while *denn* takes over that of the epistemic *weil* (Keller, 1993: 243ff).

According to Keller, speakers perceive a need to differentiate the two functions of *weil*, which has led to the word order change that is currently ongoing in *weil*-clauses in spoken German. If this is the case, we may assume that the different functions of causal conjunctions are also differentiated in written German. As *weil*+V2 is still unacceptable in written German, language users might replace *weil* in both its objective and its reflective function with distinct words, namely *da* and *denn*, which is what the data of this study seems to suggest for business articles.

A closer analysis of the conjunctions in question shows that translators seem to have become reluctant to use *weil* in sentence-initial position. This is made clear by the data presented in Table 5. The normalized frequency of sentence-initial *da* shows no significant diachronic change, and the increase of its proportion is only due to the strong overall frequency increase of *da*. This means that translators use *da* more frequently now, but not in sentence-initial position. Sentence-initial *weil*, on the other hand, shows a strong decrease in normalized frequency. While in 1982–3 *weil* was three times more common as a sentence-initial causal conjunction than *da*, the frequency of the latter has now clearly overtaken that of *weil*.

It also seems that translators of business and management articles sometimes attempt to avoid causal clauses altogether and prefer alternative solutions, especially transition words and phrases such as *aus diesem Grund* ("for this reason"). There is some evidence in the data for this, such as the increase of transition phrases from 1 to 4.8 i/htw. An inspection of the items in that category (see e.g. examples 7 and 8) shows further that there is a multitude of different transition phrases, two of which are shown in examples 9 and 10.

Table 5. Comparison of the development of sentence-initial instances of *weil* and *da* in the TC.

		Absolute frequency (total)	Relative frequency
weil	1982–3	90 (313)	18.1
	2008	23 (137)	4.4
da	1982–3	33 (60)	6.6
	2008	38 (111)	7.3

(9) People want to go to a job that is fulfilling and that they get excited about. They get excited because we've got the right growth initiatives for them.

(HBR7/08,50)

Sie   möchten einen erfüllenden und interessanten Job haben. Und
they want   a   fulfilling   and interesting   job have   and
ihr   Job ist <u>dann</u> interessant für sie,   <u>wenn wir ihnen die richtigen</u>
their job is then interesting for them if   we them the right
Angebote für ihre persönliche Weiterentwicklung machen.   (HBM7/08,108)
offers   for their personal   development   make

(10) The local companies were reluctant to push a low-priced product, since they earn more from the higher-priced version.   (HBR12/07,60)
Die Unternehmen vor   Ort   zögerten, für ein preisgünstiges Produkt
the companies   at-the place hesitated for an affordable   product
zu werben, <u>wohl wissend, dass</u> an   der teureren   Version mehr
to advertise well knowing that with the more-expensive version more
zu verdienen war.   (HBM2/08,40)
to earn   was

In both cases, the translators could have chosen the straightforward translation using *weil* or another conjunction, but they chose to use alternative, more elaborate, ways. This may be some evidence to suggest a shift in typical features of translation in this genre. While the 1982–3 TC shows a strong preference on the part of translators to use *weil*, and thus to translate rather closely the English causal conjunctions, the data from 2008 contains a greater variety of different translation methods of causal clause relationships, even though a similar change is not observed in the source texts.

Having discussed the data of individual cohesive devices, we will now proceed to the analysis of hypotaxis and parataxis. Table 6 shows the data arranged by taxis type and provides a breakdown of absolute (n), normalized (f) and relative (p) frequencies of the English conjunctions and their translations.

The translation pattern of the established conjunctions 'because' and 'since' is very similar. In the 1982–3 sub-corpus, they are both mainly translated as

Table 6. Frequencies of tactic translation types in the TC.

| | 1982–3 | | | | | | | | |
| | Hypotaxis | | | Parataxis | | | Other | | |
	n	f	p	n	f	p	n	f	p
because	264	53.1	84%	17	3.4	5%	32	6.4	10%
since	100	20.1	87%	7	1.4	6%	8	1.6	7%
for	5	1.0	23%	15	3.0	68%	2	0.4	9%
as	4	0.8	67%	2	0.4	33%	–	–	0%
Total	373	75.0	82%	41	8.2	9%	42	8.4	9%
	2008								
	Hypotaxis			Parataxis			Other		
	n	f	p	n	f	p	n	f	p
because	199	38.4	63%	60	11.6	19%	55	10.6	18%
since	34	6.6	62%	15	2.9	27%	6	1.2	11%
for	–	–	0%	1	0.2	100%	–	–	0%
as	15	2.9	60%	7	1.3	28%	3	0.6	12%
Total	248	47.8	63%	83	16.0	21%	64	12.3	16%

hypotaxis (84% and 87%), while paratactic translations are negligible. In the 2008 sub-corpus, the hypotactic frequencies of these conjunctions are both over 20 percentage points (pp) smaller, so that only about two thirds of the constructions show a hypotactic pattern. Paratactic translations, on the other hand, are on the increase, especially in translations of 'since', where we see an increase by 21 pp.

The conjunction 'as', which, at least in this genre, has only become a causal conjunction during the time span of this corpus, is translated paratactically in 60% of cases in 2008. Facing a newly established causal conjunction, translators employ the same predominantly paratactic translation pattern that they use with the other conjunctions. This may be evidence for the paratactic structure having become the preferred choice for causal clause relationships. The overall difference

Table 7. Frequencies of variants of the causal conjunction in the TC.

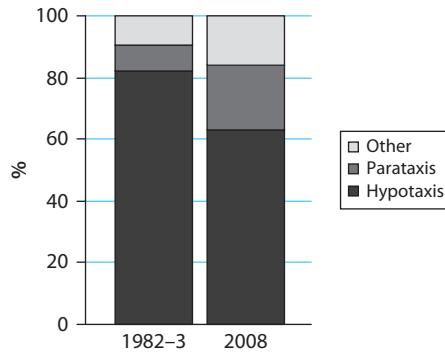| | 1982–3 | | | 2008 | | | Change | |
	n	f	p	n	f	p	f	p
Hypotaxis	373	75.0	82%	248	47.8	63%	−27.2	−19pp
Parataxis	41	8.2	9%	83	16.0	21%	+ 7.8	+12pp
Other	42	8.4	9%	64	12.3	16%	+ 3.9	+ 7pp
Total	456	91.7		395	76.1			

Figure 1. Proportional development in the translation corpus.

between both sub-corpora can be seen more clearly in Table 7, which shows only the total values for hypotactic, paratactic and other translations and the diachronic difference between the two sub-corpora.

82% of all causal clause complexes in the 1982–3 sub-corpus are translated hypotactically, and only 9% are translated as paratactic structures. In 2008, 63% of the causal clause complexes in the sub-corpus are hypotactic and 21% paratactic. So, while translators still favour hypotaxis over parataxis, the domination of hypotaxis in the syntax of causal clause complexes is waning. The proportional development is shown in Figure 1, which presents the development of hypotaxis, parataxis and 'other' translations in their proportion of the total amount of translations of causal conjunctions.

Thus, the data shows that there is indeed a trend from hypotaxis to parataxis in causal clause complexes in German translations of business and management articles due to which, in the 25 years between 1982–3 and 2008, hypotactic constructions have lost a significant share of the total of translated causal clause complexes. Paratactic translations as well as the employment of transition phrases avoiding the standard causal conjunctions have become more frequent. The principal driving force of the trend, however, is the strong decrease of the hypotactic variant. There is an increase in paratactic structures by only about 7.8 i/htw, and a slight increase in 'other' structures by 3.9 i/htw, while hypotactic structures have decreased strongly by 27.2 i/htw. The strong decrease of the conjunction *weil* is mostly responsible for this.

While source language interference may have played a role in this development, the more likely explanation seems to be the recent trend to avoid using *weil* in translation. The data shows that all cohesive devices except *weil* have increased in frequency, not only paratactic ones. The pragmatic difference between *da* and *weil* may give a range of explanations as to why *weil* has decreased so strongly in frequency over the time span of this study: translators regard it as inappropriate

for articles in this genre, and prefer *da*, which is perceived to be more formal (especially sentence-initially), not negatively connotated and more inclusive to the reader. In Section 4.3, I investigate whether these are phenomena limited to translated language in this genre, or whether they are also found in monolingual language production.

4.3 Analysis of the comparable corpus

The four conjunctions found to be most commonly used in the TC have provided the basis for the analysis of the CC. Their frequencies are shown in Table 8. Again the chi-square test was employed to test for statistical significance, and the distribution is highly significant ($\chi^2 = 23.73$ (df = 3), $p < 0.01$).

Table 8. Frequencies of causal conjunctions in the CC.

	1982–3			2008		
	n	**f**	**p**	**n**	**f**	**p**
weil	118	81.0	37%	67	75.9	34%
da	133	91.3	42%	53	60.0	27%
deshalb	8	5.5	3%	12	13.6	6%
denn	60	41.2	19%	68	77.0	34%
(of which init.)	(14)	(9.6)	(23%)	(53)	(60.0)	(78%)
Total	319	218.9		200	226.5	

Sentence-initial *denn* is displayed separately from the other occurrences of *denn*, as its frequency has increased significantly in the 2008 time period in the CC, a development that has not taken place in the TC. In the 1982–3 period of the CC, only 23% of all instances of *denn* were sentence-initial, while in 2008, that share has risen to 78% (see Table 8). It seems, then, that in the 2008 non-translations, paratactic clause complexes consisting of two main clauses separated by a full stop, where the continuing clause contains the cause and thus starts with *denn*, are commonly employed. One such clause complex is shown in example 11.

(11)   *Die Beziehung   zu   den Gemeinden, die   an einen*
       the relationship with the communities which on a
       Unternehmensstandort grenzen, ist gerade   in Wachstumsmärkten sehr
       business-location   border   ist especially in emerging-markets   very
       wichtig.   Denn   die Bürger in diesen Ländern erwarten besonders
       important because the citizens in these   countries expect   especially
       von internationalen Konzernen, die Entwicklung ihrer   Dörfer   und
       of   international   businesses the development of-their villages and

> *Städte über   die eigentliche Geschäftstätigkeit hinaus zu fördern.*
> cities beyond the basic   business-activity further to promote
>
> (HBM1/08,6)

As *denn* does not occur so frequently in sentence-initial position in the translations, this phenomenon appears to be specific to the non-translated articles. A possible reason for this might be that authors consider presenting the information in several individual main clauses easier to read than presenting it in a subordinated clause complex using hypotactic conjunctions.

The two hypotactic conjunctions *weil* and *da* show a markedly different pattern (see Table 9) to that observed in the TC. Most strikingly, both conjunctions converge from a significantly different distribution to a similar proportional frequency in the two corpora in 2008 (see Figure 2).

An explanation for this may be that the convergence of TC and CC values in Figure 2 is simply down to chance, with separate reasons existing for the development of *da* and *weil* in the CC. The conjunction *weil* has decreased significantly in frequency in the TC to around 40%, which is the same proportion that it has held throughout in the CC. This would argue for an assimilation of *weil* in translated language to the frequency displayed by it in non-translated language in business articles. The data seems to suggest that the dominance of *weil* in causal clause

Table 9. Comparison of proportional frequencies of *weil* and *da* in the translation and comparable corpus.

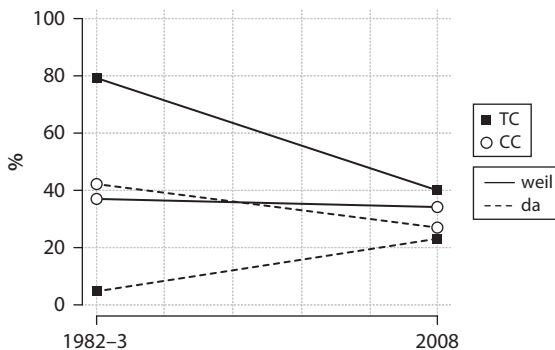|	Translation corpus				Comparable corpus			
	1982–3		2008		1982–3		2008	
weil	79%	↓	40%		37%	→	34%	
da	5%	↑	23%		42%	↓	27%	

Figure 2. Diachronic development of the proportional frequency of *da* and *weil* in the TC and CC.

translations in 1982–3 is a phenomenon of translated language. In 1982–3, translators chose to use the conventional translation *weil*, no matter how repetitive it may have seemed, while in more recent times they have attempted to vary their translation strategies.

The conjunction *da* has become more frequent in the TC at the same time as it has become less frequent in the CC, which confounds the attempt to explain the development as an assimilation of the TC to the CC. Instead, it is more likely that the frequency increase of *da* in the TC is caused by the translators' avoidance of clause-initial *weil*. In the CC, where the text is produced monolingually so that the authors are not influenced by the causal conjunction in the source text, this rise is not found. Instead, the writers tend to use two separate sentences, one of them starting with *denn*.

Table 10. Frequencies of tactic causal conjunction types in the comparable corpus.

	1982–3			2008			Change	
	n	**f**	**p**	**n**	**f**	**p**	**f**	**p**
Hypotaxis	251	172.3	79%	120	135.9	60%	−36.4	−19pp
Parataxis	68	46.7	21%	80	90.6	40%	+43.9	+19pp
Total	319	218.9		200	226.5			

Table 10 shows the conjunctions grouped together as hypotaxis and parataxis. Hypotactic constructions show a similar decrease in frequency to that observed in the TC, and paratactic constructions are increasing even more strongly than in the TC at 19 pp. The diachronic distribution analysis of hypotaxis and parataxis for both TC and CC is shown in Figure 3.

In contrast to the translations, where *weil* and *da* are by far the most commonly employed causal conjunctions, the conjunction *denn* is used as often as *weil* and *da* in the non-translations. In the 2008 CC, it occurs most frequently in initial
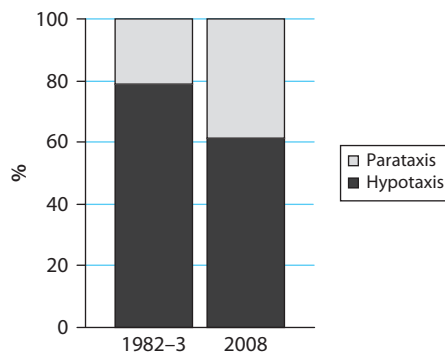

Figure 3. Proportional development in the CC.

position, introducing a main clause that contains the cause of the matter stated in the previous sentence. This noticeable development may point to a change in German discourse structure in monolingually produced business articles, by which information is presented predominantly in a paratactic style using main clauses. In the translations, this development does not occur as strongly, possibly because of the influence of the source language English, which makes heavy use of 'because' and other causal conjunctions.

The analysis of the CC corroborates the observations made in the analysis of the TC. In both corpora, the likelihood with which an English causal clause complex will be translated into German as hypotaxis has decreased from about 80% to about 60%. More in-depth studies of the CC, for which there is unfortunately no space in this article, may reveal whether the CC also shows an increase in the frequency of transition phrases. Overall, there is a combined development in translated and non-translated causal clause complexes of business articles from hypotaxis to parataxis.

5.   Discussion and conclusion

To sum up the findings of this study, it can be concluded that both research questions have been answered positively. There is a trend from hypotaxis to parataxis in causal clause complexes in both translated and non-translated German business articles. Hypotactic structures in both corpora have decreased from being used in about 80% of causal clause complexes to about 60%. However, though paratactic structures and situationally determined cohesive devices have increased in frequency, they are still used less often than hypotactic structures. Authors of translated and non-translated business articles still make use predominantly of hypotactic structures to express causal clause relationships.

In this respect, the findings from the genre of business articles seem to differ from those obtained for popular science articles by Becher (2011), who found that parataxis has become the most common way of expressing concessive clause relationships in that genre. Unlike non-translated popular science articles, non-translated business articles still seem to be in a process of change with regards to the tactic structure. However, because it seems as though parataxis increases faster in non-translated business articles than in translated ones, Becher's (2011) observation that the tactic structure of enhancement clause complexes in translations may be "catching up" on the stylistic trend from hypotaxis to parataxis that has already been completed in non-translated German may still be valid.

Further to this, the present study has produced two other observations. First, while the individual conjunctions exhibit rather different frequency developments,

the general trend of the tactic types is the same. Translated and non-translated causal clause complexes in the business articles under analysis differ noticeably with regards to preference patterns for conjunctions, and sentence boundaries are placed differently. But on the whole, there are several important similarities, mainly the diachronic tendency exhibited by both translations and non-translations. For the similar behaviour of the causal clause complexes, there may be at least two explanations.

One is that tactic structures in enhancement clauses as a whole might behave differently from genre to genre. That taxis is a consciously used stylistic device of information structuring which is employed with differing frequency according to the genre has been amply shown (Doherty, 1999; Baklouti, 2011). Baklouti (2011: 521), for instance, argues that abstracts whose aim is to persuade the readers by argumentation show a high frequency of hypotactic clause complexes, while texts which rely on experimental data to convince the readers show a higher occurrence of clause simplexes, which have a greater amount of parataxis than hypotaxis.

The layout of both *HBR* and *HBM* has noticeably changed between the two time periods under analysis in this study. The 1982–3 articles mainly consisted of blocks of text with an occasional graph or diagram. The authors therefore had to rely mainly on argumentative reasoning to convey their points to the readers. In 2008, the articles featured several diagrams, graphs and tables, as well as visually separated boxes on related topics which were referred to in the main body of the article, which means that the authors have to rely less on argumentation, because it was often sufficient to describe a figure or table. This change in document structure may well have an effect on the syntax of the language in the article. Therefore, a holistic approach which not only concentrates on the text but also considers the argumentation and the layout of the texts in the corpus will be instructive. A heavily diagram-based text may promote a predominantly paratactic style, as the content the author wishes to communicate is both described verbally as well as presented visually to the reader. Also, as suggested by Neumann (2011: 250ff), it may be useful to analyse the sources the author used to produce the text: a text that was written mainly by consulting sources of quantitative data may exhibit more parataxis than one which was written by consulting mainly persuasive articles.

The second explanation for the similarity in behaviour between the causal clause complexes may be that there are stylistic differences within the group of enhancement clauses, which would mean that concessive clauses exhibit a different syntactic trend to causal clauses. This would almost certainly have to do with language processing, and is best investigated by studying the way a text is read and understood by the reader. Due to differences in the processing complexity between concessive and causal clause complexes, for example, one of them may

become predominantly paratactic sooner than the other in non-translated language and increasingly so in translations, as Becher (2011) argues. Causal clauses, then, would still be in the process of change from hypotaxis to parataxis, possibly because hypotactic causal clause complexes are perceived to be easier to understand than hypotactic concessive clause complexes. Comparative studies of causal and concessive clauses in the same genre can serve to build up our knowledge of whether there is indeed a difference among enhancement clauses (see Bisiada, forthcoming).

The other observation made in this study is that the cohesive devices available in German seem to be used differently when contrasting translations and non-translations. Especially noteworthy is the development from an almost exclusive reliance on *weil* in 1982–3 translations to the increased use of a variety of situationally based causal cohesive devices. House argues that the phenomenon of a greater variety of cohesive devices in translations is typical of German (2011a: 171), saying that its language users prefer "situation-anchored, ad-hoc formulations with a concurrent display of a great variety of expressions adapted *in situ* to the respective contexts and co-texts". The maintenance of such a phenomenon would thus be considered a "resistance to Anglophone discourse conventions and preferences" (2011a: 171). The argument for such a resistance among translators would be even stronger in cases such as the present study where a greater variety is not only maintained in the face of source language interference, but developed from a situation where no variety exists in the ST.

The greater variety of causal cohesive devices, as I have argued above, is partly conditioned by the strong decrease of *weil* in translated texts of the present genre. The observed development would then be the product of a shift in the perception of *weil*, which causes it to be used with ever decreasing frequency, and would argue for a re-examination of the importance of the perception of register in the analysis of syntactic translation choices.

Note

1. "Sentence brace", a term for a standard arrangement of German grammar where the verb phrase is split into a finite component usually occurring in second position and a non-finite component occurring at the end of the clause. For a detailed explanation see Pasch *et al.* (2003: 67).

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