

‘Lösen Sie Schachtelsätze möglichst auf’: The Impact of Editorial Guidelines on Sentence Splitting in German Business Article Translations

MARIO BISIADA

Department of Translation and Language Sciences, Universitat Pompeu Fabra
E-mail: m.bisiada@kent.ac.uk; mbisiada@fastmail.fm

Sentence splitting is assumed to occur mainly in translations from languages that prefer a hierarchical discourse structure, such as German, to languages that prefer an incremental structure. This article challenges that assumption by presenting findings from a diachronic corpus study of English–German business article translations, which shows that sentence splitting has long been common in German business translation, and perhaps because of editorial guidelines, has increased strongly over the course of the 25 years under analysis. A corpus of unedited draft versions and published versions of the same translations is used to show that sentence splitting is also affected by editors where translators did not split the sentence. The evidence suggests that sentence splitting may be a strategy of explicitation in translation rather than a phenomenon triggered mainly in translation into languages with incremental discourse structures. The observed increase in sentence splitting in German may indicate a shift by which meaning relations are increasingly made between sentences using cohesive resources of reference rather than within sentences using grammatical devices such as hypotaxis or parataxis.

1. INTRODUCTION

Sentence splitting has been considered a ‘process’ in translation that is ‘triggered’ by differences in structural conventions between the languages involved (Fabricius-Hansen 1996: 560f., 1999: 203; Solfeld 2008: 115). This choice of diction implies a certain automatism that seems to assume that translators have little choice in the matter, as the structural principles of the languages involved determine whether sentences are split. The research underlying that assumption thus far appears to be largely limited to the German–Norwegian direction of translation (Fabricius-Hansen 1996, 1999; Ramm 2008; Solfeld 2008), where German is said to prefer a hierarchical, hypotactic style, whereas Norwegian prefers an incremental, paratactic style (Fabricius-Hansen 1996: 558, 1999: 203). The consensus that seems to emerge from the literature is that in translating from a language such as German, which normally packs ‘much information into each sentence and/or clause

by way of a complex syntactic structure' and therefore has a 'high informational density' (Fabricius-Hansen 1996: 558) to a language that normally has a lower informational density, such as English, translations will undergo a process of sentence splitting (Fabricius-Hansen 1996: 558; Solfeld 2008: 115f.). The existence in German of 'structural peculiarities' such as 'recursive compounding, repeated nominalization, heavy prenuclear and postnuclear noun phrase modification, and accumulation of adverbial adjuncts' is said to 'allow or even favour hierarchical information packaging to a larger extent than is feasible in English', which is said to limit the number of new discourse referents per sentence and the amount of information stated for them (Fabricius-Hansen 1999: 183f, 203f.).

Translating into a high informational density language such as German, then, should require the opposite strategy to sentence splitting: 'information collecting [...] and determining which condition on a given discourse referent is to be syntactically downgraded, and how' (Fabricius-Hansen 1996: 561). A few examples to support that idea might be said to exist. In a study of Italian translations of English business and economics articles, for instance, Musacchio (2005: 81) shows that in order to satisfy the preference of Italian for long, hierarchical sentences, translators frequently join individual source text (ST) sentences by a paratactic conjunction in the target text (TT) but are reluctant to 'introduce linkages between sentences that might lead to an incorrect interpretation' (2005: 82). Cohesion is also achieved, she says, by the introduction of coordinators, subordinators, demonstrative pronouns, and repetition in general (Musacchio 2005: 93). Investigating translations of popular science articles between Norwegian and German, Ramm (2006: 126) notes that sentence splitting is 'much more frequent in translations from German to Norwegian than in the other translation direction', which she explains by the existence of a 'more complex and extended NP modification' in German compared with Norwegian (see also Doherty 1998).

Beyond that, little attention has been paid to sentence splitting when the target language is a high informational density language, and it has not yet been convincingly shown that sentence joining or increased subordination are commonly applied methods when translating into such languages. It is therefore surprising that the claim that sentence splitting should be determined by the structural conventions of the languages involved has so far gone unchallenged, which is what this article seeks to address. Challenging the claim that sentence splitting does not frequently occur when translating into a high informational density language such as German, I suggest that sentence splitting is not necessitated by the incremental style of low informational density languages, but rather a feature peculiar to translation in general. As such, rather than being a phenomenon that is 'triggered' by the language combination, sentence splitting is argued to be a strategy that translators can employ in order to adjust the complexity of meaning relations.

Using a 1 million word corpus of English business and management articles and their German translations, the frequency of the occurrence of sentence

splitting has been measured diachronically between 1982–1983 and 2008, so that shifts in frequency of sentence splitting over time can be tracked. A comparable corpus (CC) of German business texts is used to test whether observations from the translations are valid for German in this genre in general or whether they are limited to translated language.

In addition, a corpus of draft translations that have not yet undergone editing by the publisher ('pre-edited translations') is analysed to investigate whether sentence splitting might be stipulated by the editors of the German magazine. The stylistic guidelines given to translators specifically ask them to dissolve nested sentences:

Bitte übersetzen Sie möglichst textgetreu in einem klaren, verständlichen und lebendigen Deutsch. Lassen Sie keine Sätze oder Satzteile weg, die Ihnen unverständlich erscheinen. Vermeiden Sie Nominalstil, Fachjargon, das Passiv und das Wörtchen 'man'. Lösen Sie Schachtelsätze, insbesondere dass-Sätze, möglichst auf.

'Please translate as true to the original as possible in clear, understandable, and lively German. Do not leave out sentences or parts of sentences that seem hard to understand to you. Avoid nominalizations, subject-specific terminology, the passive, and impersonal constructions using *man*. Where possible, dissolve nested sentences, especially those containing *dass*.' (my translation)

In the study of translations, we usually think of the translated text as being authored solely by the translator. The role of editors in the production of translations has not been pursued to a noticeable extent, and so sentence splitting is generally attributed to the translator. It is conceivable, however, that an intervention like sentence splitting can also be attributed to an editor whose strategy, according to the guidelines quoted above, is to keep sentences simple. The multi-authored nature of translated text is therefore taken into account in this study by investigating the influence of editors on the final translation. Editing translations 'can usually be accomplished without referring back to the original text' (Nida 1997: 10), but editors can also revise the translation by reference to the ST, which may imply significant changes to the translators' decisions.

2. SENTENCE SPLITTING AS A GLOBAL TRANSLATION STRATEGY

Sentence splitting can be employed as a 'local translation strategy' to translate individual expressions or contexts (see Baker and Saldanha 2009: 283) and can be the result of 'lexical gaps [...], word order rearrangements, or translation problems resulting from the context' of the split sentence (Ramm 2006: 127). In other cases, sentence splitting amounts to no more than a change in typography, where the translation follows the ST closely, except for the fact that the translator introduces a sentence boundary between two clauses, thus translating one ST sentence by two TT sentences. In functional linguistic

terms, the meaning relations are then expressed cohesively rather than grammatically (Martin 1992: 179; Halliday 1985/2004: 365f).

A frequent occurrence in the TT of cases like (1)¹ and (2), where the alteration is not just typographical, on the other hand, might suggest that sentence splitting has been employed as a ‘global translation strategy’, that is, a strategy applied to the entire text (Baker and Saldanha 2009: 283). The gerund in the English ST sentence in (1) is turned into an independent sentence in the German TT. The connection is then achieved by the anaphoric pronoun *das* in the following sentence.

(1)

HBR (1i) Forcing everyone to stand signals (1ii) that the meeting’s purpose
1/08,62 is not to spend time together, passively listening.

HBM (1i) Alle müssen stehen. (2i) **Das** zeigt, (2ii) dass es nicht darum geht,
5/08,28 sich gemeinsam ein paar Vorträge anzuhören.
‘Everyone must stand. That shows that it’s not about listening to a couple of talks together.’

In example (2), the ST sentence treats *the gift of time* as a theme, even though no mention of it is made in the previous sentence. The German TT sentence, on the other hand, treats *ein Geschenk* (‘a gift’) as a rheme, specifically introducing the proposition that time is a gift. *Dieses Geschenk* then becomes the theme of the second sentence.

(2)

HBR (1i) It is then standard for the newcomer to actively set up meet-
11/07,100 ings with the people on the list, (1ii) even when it means traveling
to other locations. (2i) The gift of time—in the form of hours spent
on coaching and building networks—is seen as crucial to the col-
laborative culture at Nokia.

HBM (1i) Üblicherweise arrangiert der Neuling dann Treffen mit den auf-
1/08,24 gelisteten Personen—(1ii) auch wenn er dafür in andere
Niederlassungen fahren muss. (2i) Hier ist Zeit ein Geschenk—in
Form von Stunden, (2ii) die dem Coaching und dem Aufbau von
Netzwerken gewidmet sind. (3i) **Dieses Geschenk** gilt als
entscheidend für die kooperative Unternehmenskultur bei Nokia.
‘Usually, the newcomer sets up meetings with the people on the list, even when he has to travel to other locations for it. Time is a gift here—in the form of hours spent on coaching and building networks—This gift is seen as crucial to the collaborative culture at Nokia.’

That sentence splitting as a translation strategy has an effect on the clarity of meaning relations in a text is shown by the fact that the direction in which information is extracted affects the importance that the TT reader is likely to assign to the involved discourse referents (Fabricius-Hansen 1999: 194f.). It has been convincingly shown that translations into a low informational density language such as Norwegian can achieve logical subordination of information despite a high frequency of sentence splitting, for instance, by backwardly extracting the information in the ST sentence (Solfeld 2008: 124). Backward extraction, exemplified in (3), refers to cases of sentence splitting where the last sentence in the group of TT sentences translating one ST sentence is the ‘principal counterpart’, that is, introduces the discourse referent that is established by the main clause in the ST (Fabricius-Hansen 1999: 195). Forward extraction, on the other hand, refers to cases like (4), where the principal counterpart is the first sentence in the group of TT sentences (Fabricius-Hansen 1999: 199). While backward extraction usually maintains the theme–rheme progression from the ST, forward extraction may put inappropriate emphasis on information subordinated in the ST by raising it to the level of a main clause.

(3)

HBR (1i) We have learned, **sometimes painfully**, (1ii) that not all executives and companies are prepared to embrace the notion (1iii) that personal renewal for employees will lead to better and more sustainable performance.

HBM (1i) Nicht alle Manager und Unternehmen können akzeptieren, (1ii) dass ihre Mitarbeiter mehr und nachhaltigere Leistung bringen, (1iii) wenn sie ihre Energiereserven regelmäßig auffüllen. (2i) Das mussten wir in einem oft schmerzhaften Prozess lernen.

‘Not all executives and companies can accept that their employees perform better and more sustainably if they regularly renew their energy reserves. That we had to learn in an often painful process.’²

Sentence splitting thus entails the splitting of information and the explicit introduction of discourse referents that are implicit in the ST (Fabricius-Hansen 1996: 541), which makes sentence splitting an instance of explicitation, one of the proposed features of translated language (Baker and Saldanha 2009: 104; Mauranen 2004). Explicitation consists of ‘additions in a translated text which cannot be explained by structural, stylistic, or rhetorical differences between the two languages’ (Séguinot 1988: 108). According to this definition, Musacchio’s (2005) findings discussed above would not count as an act of information collection, as the translators’ actions merely satisfied Italian stylistic conventions. I would argue, then, that there is no *prima facie* evidence for

sentence splitting to be enforced by structural conventions of the languages involved, but rather, until studies show consistent sentence joining by the syntactic downgrading of discourse referents, that it may simply be a feature naturally occurring in translation in any language combination.

Evidence to support that claim comes from Séguinot (1988: 108), who argues that stylistic or structural differences between languages determine the degree of explicitness with which they convey meaning (see also Teich 2003). In a study of insurance communication translated from English to French, Séguinot (1988) finds greater explicitness in the TTs, deriving, among other things, from sentence splitting, or, in her words, the 'raising of information subordinated in the source text into co-ordinate or principal structures' (1988: 109), even though French has the structural capabilities to maintain the amount of subordination in the ST.

The same holds true for German in the present corpus, as the translation in example (4) shows. Here, the ST sentence has been split, and the causal marker has been removed. The absence of the grammatical relation means that the logical interrelation between the propositions is less clear than in the English ST. Similarly to what Séguinot describes, information that is subordinated in the ST has been raised to main clause level in the TT. The German ST is also ambiguous because it is not clear whether sentence 2i specifies the cause for sentence 1 or just another consequence of the information in clause 1i. Because of the forward extraction, it also raises the subordinated ST causal clause 1ii to higher importance than the ST main clause 1i, so that, in the TT, the information in sentence 2 has equal prominence to that in sentence 1, which is not the case in the ST.

(4)

HBR 4/08,70	(1i)Customer involvement in operations has profound implications for management (1ii) because it alters the traditional role of the business in value creation.
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HBM 6/08,60	(1i)Dass die Kunden an der betrieblichen Leistungserstellung beteiligt sind, (1ii)hat tiefgreifende Auswirkungen auf das Management. (2i)Es verändert die traditionelle Rolle des Unternehmens im Wertschöpfungsprozess. 'That customers are involved in operations has profound implications for management. It alters the traditional role of the business in value creation.'
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The examples in (5a–5c) show some alternatives that the translator could have used. The most obvious one in (5a) uses a subordinated causal clause to make the logical relation between the propositions clear. Examples (5b) and (5c) draw on the potentials of German to avoid incrementality, as suggested by Fabricius-Hansen (1999: 203). They include the possibility to have phrasal adverbials in the central element, which can be exploited to convey non-critical

information as adjuncts, as shown in (5b). English adverbials usually follow the verb, which can lead to ambiguity, so that logical relations must be explicitated in most cases. In addition, Fabricius-Hansen (1999) states that German allows greater extensions of noun phrases, as exemplified in (5c), as well as more freedom in compound building so that sentences can be kept simple, whereas in English, the information must often be expressed in a separate clause.

(5)

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- a. *Eine Kundenbeteiligung an der betrieblichen Leistungserstellung hat tiefgreifende Auswirkungen auf das Management, weil sie die traditionelle Rolle des Unternehmens im Wertschöpfungsprozess verändert.*

‘Customer involvement in operations has profound implications for management because it alters the traditional role of the business in value creation.’

- b. *Eine Kundenbeteiligung an der betrieblichen Leistungserstellung hat **durch die einhergehende Veränderung der traditionellen Rolle des Unternehmens im Wertschöpfungsprozess** tiefgreifende Auswirkungen auf das Management.*

‘Due to the altering of the traditional role of the business in value creation, customer involvement in operations has profound implications for management.’

- c. *Die **die traditionelle Rolle des Unternehmens im Wertschöpfungsprozess verändernde** Kundenbeteiligung an der betrieblichen Leistungserstellung hat tiefgreifende Auswirkungen auf das Management*

‘Customer involvement in operations, which alters the traditional role of the business in value creation, has profound implications for management.’

Example (4) has shown that sentence splitting can be applied selectively to adjust the information presented in each sentence, which challenges the claim that languages that have the structural possibilities to make incrementality unnecessary exhibit information collecting and sentence joining rather than sentence splitting in translation. Used in this way, sentence splitting is an explicitating strategy in accordance with Séguinot’s definition above rather than a process that is triggered by the target language. The translation in (4) makes no use of any of the structural capabilities of German to avoid incrementality. Instead, the translator expanded the subject of the ST clause Ii into a whole subject clause (Ii in the TT). The verbosity thus introduced is then compensated for by shortening the sentence through the removal of the causal link.

While the raising of subordinated information to main clause level has been considered an issue of explicitation, the discussion of the previous example may prompt the intervention that such explicitation may actually make the meaning relation between the sentences less explicit than in the TT. The ST sentence in (6), another example of forward extraction, has an adverbial clause that is connected to the main clause by *to*, specifying a purpose. This connection can be expressed in German using an *um...zu* construction, but the TT sentences have no overt relation, so that the statement of intention that exists in the ST is only implicit in the TT.

(6)

HBR 11/07,100	(1i) We then interviewed the teams that were very strong in these practices, (1ii) to find out (1iii) how they did it.
HBM 1/08,24	(1i) Im Anschluss befragten wir die Teams, (1ii) bei denen diese acht Merkmale sehr ausgeprägt waren. (2i) Wir wollten herausfinden, (2ii) wie sie dies geschafft hatten. 'After that, we interviewed the teams that were very strong in these practices. We wanted to find out how they did it.'

Sentence splitting, then, can cause a reduction in the clarity of meaning relations, usually when information is forwardly extracted and the grammatical relation is not replaced by a cohesive relation between the sentences, which yields an asyndetic relation (Halliday 1985/2004: 365f., 373f.).

In this section, I have argued that sentence splitting is a global translation strategy applicable to any language rather than merely a phenomenon whose occurrence is determined by the languages involved. As a phenomenon of explicitation, sentence splitting usually involves the marking of meaning relations cohesively (between sentences) rather than grammatically (within sentences), though sentences can also have an asyndetic connection. In addition, I have argued that backward extraction of the information in the ST sentence seems more likely to preserve the logical progression of information, whereas forward extraction is likely to lead to inappropriate emphasis on originally subordinate information.

The widespread view in the literature that sentence splitting happens predominantly in translations to low informational density languages is usually based on the claim that principles of incremental discourse organization governing those languages are violated (Fabricius-Hansen 1999: 203). It has been shown, however, that sentence splitting also occurs in a high informational density language such as German in contexts where the linguistic convention to prefer hierarchical, hypotactic structures would have led to the assumption that the ST construction should be maintained. It is the aim of the rest of this article to show that the examples presented in this section are not isolated instances, but that sentence splitting, at least in the present genre, is a highly frequent phenomenon.

Table 1: Size of the TC and CC in words

Time period	English STs	German TTs	German CC	Total
1982–1983	251,148	246,341	145,715	643,204
2008	258,589	260,261	88,312	607,162

Table 2: Size of the PC in words

Subcorpus	2006–2011
English STs	104,678
German translations (before editing)	106,829
Published German translations	104,448
Total size	315,955

3. CORPUS ARCHITECTURE AND METHOD

Three corpora of business and management articles built by the author are drawn on in this study:

- a translation corpus (TC), which consists of English STs and their published German translations
- a CC, which consists of German non-translations
- a pre-edited corpus (PC), which consists of English originals, unedited draft translations into German that are yet to undergo editing, as well as the versions of these translations that were finally published.

The texts in the TC and CC were published in 1982–1983 and 2008, which provides a diachronic view of language change in the corpora. The texts in the PC are from 2006–2011. The sources for the corpora are the *Harvard Business Review* (HBR), an American business magazine, and its licensed German edition, the *Harvard Business Manager* (HBM). The size of the corpora is shown in Tables 1 and 2.

The TC and PC have been sentence-aligned using the text alignment tool in *+Tools*.³ In cases where one ST sentence corresponded to two TT sentences (or vice versa), the two-sentence groups have been aligned with the one sentence they translate. The file was then converted to .txt format so that each line contains the corresponding ST and TT items, delimited by a tab. As no suitable corpus tool is known to me that has been devised for the analysis of sentence splitting, a method to isolate instances of sentence splitting had to be devised.

Using *Vim*, a text editor, split as well as joined TT sentences could be identified by the following command

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:%s/ //gn
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This command searches for full stops followed by a space and will only return full stops inside ST or TT sentence groups (i.e. those where sentence splitting occurred), as the final full stops were either at the end of a line or followed by a tab. Full stops in abbreviations (e.g. 'U.S.') or enumerations ('1.', '2.') were cleaned out in advance.

That analysis was carried out first on the 1982–1983 and 2008 texts in the TC in order to find out whether there have been changes in sentence splitting over the analysed time span and how meaning relations were marked in the TT sentence group. Frequencies will be stated as absolute values (*n*) and in instances per 100,000 words (i/htw). In the second step, the PC was analysed using the same method in order to ascertain whether the observed changes are introduced during translation or in the editing process. The third step then analyses the CC to determine whether the observed shifts in sentence splitting are limited to translated language or whether they are corroborated in non-translated language.

4. ANALYSIS AND FINDINGS

4.1 Analysis of the TC

The data in Table 3 show that, first, translators have split sentences much more frequently than they have joined them, and second, sentence splitting has become significantly [$\chi^2 = 16.58$ (df = 1), $p < 0.001$]⁴ more frequent in the 2008 corpus. The frequent replacement of grammatical relations with cohesive relations suggests that the incremental presentation of information in simple sentences may be a global rather than a local translation strategy in German in this genre. The editorial guidelines requiring that nested sentences be split where possible seem to have had a considerable impact on translators' styles and on the way cohesion is achieved. As is generally assumed in the literature (Fabricius-Hansen 1996: 560, 1999: 196f.), the increasing tendency to split sentences manifests itself in two major ways.

One is a significant increase in sentence-initial direct anaphors, more specifically relative pronouns such as *das* ['that', see example (7)], demonstrative pronouns such as *dies/e/es/er* ('this', 'these') and noun phrases including one of those demonstrative determiners, as shown in example (8). These anaphoric reference items serve to establish 'new discourse objects by re-activating referents on the text-semantic level' (Consten *et al.* 2007: 96).

Table 3: Sentence splitting in the TC

Action	1982–1983		2008	
	<i>n</i>	i/htw	<i>n</i>	i/htw
Sentences split	423	85	1516	292
Sentences joined	42	8	65	12

(7)

HBR
1/08,62 (1i) In our recent work, we've found (1ii) that companies can simplify the structure and use of a strategy map (1iii) by chunking it into three to five strategic themes.

HBM
5/08,28 (1i) Wir haben mittlerweile aber herausgefunden, (1ii) dass sich Strategy Maps in drei bis fünf strategische Themen untergliedern lassen. (2i) **Das** macht die Sache übersichtlicher und leichter zu handhaben.

'In our recent work, we've found that strategy maps can be chunked into three to five strategic themes. That makes the thing more structured and simpler to use.'

(8)

HBR
2/08,94 (1i) Very early in their careers, people incorporate into their mental models the notion (1ii) that it's important to meet externally set targets.

HBM
11/08,90 (1i) Die meisten lernen schon früh in ihrem Berufsleben, (1ii) dass es wichtig ist, (1iii) die von außen auferlegten Ziele zu erreichen. (2i) **Diese Erkenntnis** nehmen sie in ihr mentales Modell auf.

'Most people learn early in their careers that it's important to meet externally set targets. That notion they incorporate into their mental models.'

The other manifestation of a change in the marking of meaning relations due to sentence splitting is a more frequent occurrence of sentence-initial pronominal adverbs, which also function as anaphors, as exemplified in (9) and (10).

Table 4: Frequencies of sentence-initial anaphoric pronominal reference in sentence splitting contexts in the TC

Reference item	1982–1983		2008	
	<i>N</i>	i/htw	<i>n</i>	i/htw
<i>Das</i>	18	3.6	94	18.1
<i>Dies/e/es/er</i>	25	5.0	109	21.0
Pronominal adverb ^a	0	0.0	28	5.4

^aPronominal adverbs counted here are *darin*, *daran*, *daraus*, *darum*, *daraufhin*, *darunter*, *darauf*, and *darüber hinaus*.

Table 5: Frequencies of sentence-initial connectives in sentence splitting contexts in the TC

Connective	1982–1983		2008	
	<i>n</i>	i/htw	<i>n</i>	i/htw
<i>Doch</i>	2	0.4	76	14.7
<i>Aber</i>	20	4.0	37	7.1
<i>Denn</i>	2	0.4	15	2.9
<i>Deshalb</i>	3	0.6	17	3.3
<i>Allerdings</i>	1	0.2	10	1.9

(9)

HBR (1i)Johnson & Johnson offered Guidant shareholders \$68 a share
12/07,92 in late 2004, (1ii)which wasn't much of a premium over the stock's
trading price.

HBM (1i)Johnson & Johnson legte Ende 2004 ein Angebot über 68
7/08,80 Dollar je Guidant-Aktie vor. (2i)**Darin** war kaum ein Aufschlag
auf den damaligen Kurs der Aktie enthalten.

'Johnson & Johnson offered Guidant shareholders \$68 a share in
late 2004. In this there wasn't much of a premium over the stock's
trading price.'

(10)

HBR (1i) He sold off most of the recent acquisitions, (1ii) reduced the
2/08,62 number of service offerings, (1iii) and streamlined internal roles
and processes.

HBM (1i) Die meisten der Neuerwerbungen stieß er wieder ab.
8/08,46 (2i) **Darüber hinaus** reduzierte er die Zahl der
Dienstleistungsangebote (2ii) und rationalisierte interne
Funktionen und Abläufe.

'Most of the recent acquisitions he sold off. On top of that, he reduced the number of service offerings, and streamlined internal roles and processes.'

In most cases, sentence-initial anaphoric reference is used in sentence splitting contexts where the ST has relative clauses involving *which*, modal clauses with *by* + participle or gerunds. Instead of opting to maintain the ST structure in translation, then, translators opt for splitting the sentence and use cohesive resources to mark the meaning relation between the discourse referents.

Both anaphoric pronouns and pronominal adverbs, the latter of which were not used at all in the 1982–1983 corpus, are cohesive devices of reference and, according to Table 4, show an increasing usage frequency in environments of sentence splitting [$\chi^2 = 6.11$ (df = 2), $p < 0.05$]. Thus, editorial guidelines that require the dissolution of nested sentences seem to correlate with the shift from grammatical relations within the sentence using hypotaxis and parataxis to cohesive relations between sentences in the form of sentence-initial anaphoric pronominal reference as a means of achieving text cohesion in German translations of business and management writing.

While sentence splitting makes the text more incremental, the use of direct anaphors does not necessarily lead to an interruption of the information flow. Direct anaphors have been described as having a 'double purpose as a means of textual continuity' (Consten *et al.* 2007: 96): they are thematic because they 'condens[e] prementioned referential structures' and thus 'stabilize the coherence structure that is already established', and they are rhematic because 'by setting up new entities at the text-world level they contribute to the progression of information flow and the incremental constitution of the text world model' (Consten *et al.* 2007: 96).

The second major way in which sentence splitting manifests itself is an increasing use of sentence-initial connectives, which may be conjunctions or conjunctive adverbs. Table 5 shows a significant [$\chi^2 = 27.48$ (df = 4), $p < 0.001$] overall increase in sentence-initial connectives in sentence splitting contexts, especially noticeable in the concessive connective *doch* ('however'). What may be problematic about this type of sentence splitting is that it seems to promote

Table 6: Editorial influence on sentence splitting

Translator's action	Editor's action	Occurrences
Sentence split	—	542
Sentence split	Split reverted	26
—	Sentence split	296
Two sentences joined	—	20
Two sentences joined	Joining reverted	0

forward extraction, which, as argued above, can lead to false emphasis in the TT. Consider, on the other hand, example (11), where the translator has backwardly extracted the information so that the statement in the ST main clause has its principal counterpart in the last sentence of the TT sequence.

(11)

HBR 1/81,103 (1i)Although today less in fashion (1ii)and to many a relic of more autocratic times, (1iii)the simple structure remains a widespread and necessary configuration.

HBM 2/82,7 (1i)Heute ist sie weniger gefragt (1ii)und gilt vielen als Relikt aus autokratischen Zeiten. (2i)**Trotzdem** ist sie nach wie vor eine weithin verwendete und notwendige Konfiguration.

'Today it is less in fashion and to many it is a relic of more autocratic times. Still it remains a widespread and necessary configuration.'

We have no way of telling whether the translator was aware of doing so, or whether he or she simply maintained the clause order from the ST. The examples given in this article generally show that translators, though prepared to split sentences, only rarely rearrange the order of the clauses, which may indicate a lack of awareness of the effect of information extraction in sentence splitting. Clause rearranging can be necessary to backwardly extract information in order to maintain the appropriate meaning relation between the clauses and avoid incorrect emphasis.

The increasingly high frequency of sentence splitting in translation reported in this section contradicts the view that German translators do not need to resort to sentence splitting because German, as a high informational density language, favours packing information into noun phrases and arranging information hierarchically. In accordance with Séguinot's (1988) definition of explicitation, then, most instances of sentence splitting that introduce anaphoric pronominal reference or sentence-initial connectives observed in this

study can be classed as additions that are not grounded in structural or stylistic conventions. That sentence splitting happens in German may also suggest that, in the present genre, sentence splitting may be a form of explicitation in translation in general rather than a translation strategy used mainly in low informational density languages.

4.2 Analysis of the PC

The analysis of the PC (Table 6) shows that the observed phenomena cannot only be attributed to the translator but are also caused by the intervention of editors. Translators seem to be mainly responsible for the increasing frequency of sentence splitting. However, there are also a vast number of sentences that were kept as one by the translators and split by an editor, as shown in examples (12) and (13).

In the pre-edited translation in (12), the translator used a relative clause equivalent to that in the ST. The published version shows that the editor preferred to split the sentence, using an anaphoric demonstrative pronoun to mark the logical relation of the two sentences.

(12)

HBR 7/10,52 (1i)Podolny is in sympathy with Harvard Business School professors Rakesh Khurana and Nitin Nohria, (1ii)who argued in the October 2008 issue of HBR (1iii)that it was time to make management a true profession.

pre-edited (1i)Podolny sympathisiert in seinem Beitrag mit den Professoren Rakesh Khurana und Nitin Nohria der Harvard Business School, (1ii)die in der HBR-Ausgabe vom Oktober 2008 argumentierten, (1iii)das Management in den Status einer Profession zu erheben.

'In his contribution, Podolny is in sympathy with professors Rakesh Khurana and Nitin Nohria from the Harvard Business School, who argued in the October 2008 issue of HBR to raise management to the status of a profession.'

HBM 9/10,92 (1i)Podolny sympathisiert in seinem Beitrag mit den Professoren Rakesh Khurana und Nitin Nohria von der Harvard Business School. (2i)**Diese** plädierten im Harvard Business Manager vom Januar 2009 dafür, (2ii)das Management in die Riege der Professionen aufzunehmen.

'In his contribution, Podolny is in sympathy with professors Rakesh Khurana and Nitin Nohria from the Harvard Business School. They argued in the January 2009 issue of HBM in favour of accepting management into the range of professions.'

Table 7: Frequencies of sentence-initial anaphoric pronominal reference in the CC

Reference item	1982–1983		2008	
	<i>n</i>	i/htw	<i>n</i>	i/htw
<i>Das</i>	64	43.9	86	97.4
<i>Dies/e/es/er</i>	429	294.4	158	178.9
Pronominal adverb	25	17.2	13	14.7

In example (13), the pre-edited translation has a causal clause introduced by the hypotactic conjunction *da*, while in the published version, the editor changed the construction by splitting the sentence and using the paratactic conjunction *denn* at the beginning of the second sentence.

(13)

HBR 7/08,50	(_{1i})HCHP executives worked hard to deliver on this promise (_{1ii})because they understood (_{1iii})that each part added value to the firm as a whole.
pre-edited	(_{1i})Die HCHP-Führungskräfte legten größten Wert auf die Einhaltung dieser Versprechen, (_{1ii}) da ihnen bewusst war, (_{1iii})dass jedes einzelne einen Nutzen für das Unternehmen als Ganzes bietet. 'HCHP executives worked hard to deliver on this promise because they understood that each part added value to the firm as a whole.'
HBM 8/08,20	(_{1i})HCHP-Führungskräfte legen größten Wert auf die Einhaltung dieser Versprechen. (_{2i}) Denn ihnen ist bewusst, (_{2ii})dass jedes einzelne einen Nutzen für das Unternehmen als Ganzes schafft. 'HCHP executives worked hard to deliver on this promise. Because they understand that each part adds value to the firm as a whole.'

There are only 26 cases in which editors rejoined a sentence that was split by the translator, as opposed to 296 cases where the editor split a sentence that was not split by the translator (see Table 6). Sentence splitting therefore seems to be not only a product of translation decisions but also of editorial intervention. The analysis of the effect of editing confirms that sentence splitting by far outnumbers sentence joining, which has also been observed to be the case for

Table 8: Frequencies of sentence-initial connectives in the CC

Connective	1982–1983 i/htw	2008 i/htw
<i>Aber</i>	4.1	17.8
<i>Doch</i>	4.1	79.3
<i>Denn</i>	9.6	60.0
<i>Allerdings</i>	6.9	18.1

Table 9: Document statistics for the CC and the TC

Value	1982–1983	2008
CC		
Full stops per 100,000 words	4363.3	5161.2
Number of words per full stop	23.2	19.3
ST		
Full stops per 100,000 words	4544.2	4693.8
Number of words per full stop	22.0	21.3
TT		
Full stops per 100,000 words	4481.8	5070.3
Number of words per full stop	22.3	19.7

the behaviour of translators, so that sentence splitting seems to be a strategy followed by translators and editors alike.

4.3 Analysis of the CC

In this section, I investigate whether the shift from grammatically to cohesively marked meaning relations is corroborated in the CC, or whether it is a phenomenon that is limited to translated text in this genre. To this effect, I have analysed diachronic shifts in frequency of anaphoric pronominal reference items and sentence-initial connectives. A side effect of sentence splitting is, of course, that sentences become shorter. For this reason, I will also measure the average sentence length in the CC to investigate whether a similar trend might be in progress here.

The analysis of anaphoric reference in the CC (Table 7) shows a less clear picture than it did in the TC. While the reference item *das* increases from 43.9 to 97.4 i/htw, the pronominal adverbs show no increase, and the demonstrative pronouns even decrease from 294.4 to 178.9 i/htw, which is highly significant [$\chi^2=42.63$ (df=2), $p<0.001$]. The shift towards an increasingly frequent use of anaphoric pronominal reference to achieve cohesion does

not seem to be corroborated in non-translated language and therefore seems to be a phenomenon that is exclusive to translated language in this genre.

However, the increase in frequency of sentence-initial use of the connectives listed in Table 8 suggests that, at least in this respect, the tendency towards cohesive relations is corroborated to some extent by non-translations. Especially the concessive conjunction *doch* and the causal conjunction *denn* occur significantly ($\chi^2 = 10.58$ (df = 3), $p < 0.01$) more frequently in sentence-initial position in 2008 than in 1982–1983.

Finally, then, the number of full stops in the text have been counted, and the average sentence length of the texts in the corpus has been measured (see Table 9). For comparison, the statistics for the TC are also given. While the average sentence length in the English texts has remained more or less the same (–0.7 words per full stop), both German texts show a noticeable decrease in their average sentence length [$\chi^2 = 22.32$ (df = 2), $p < 0.001$]. The translated texts have decreased by 2.6 words per full stop, and the non-translated texts have even decreased by 3.9 words per full stop.

The evidence from the CC provides no clear picture. While some sentence-initial connectives do increase in frequency, others do not, and anaphoric reference is not increasing in the CC. Sentences do seem to become shorter in the CC as well as the TC, but that may be because of a separate development. Overall, therefore, it can be concluded that the evidence is not sufficient to suggest that a shift from grammatically to cohesively marked meaning relations is also taking place in non-translated language. That shift, if indeed it exists, would thus be a phenomenon of translated language.

5. DISCUSSION

The analysis conducted in this study has found a strong increase in the frequency of sentence splitting in German translations. That increase may entail a tendency in text cohesion from using primarily grammatical relations such as hypotactic and paratactic clause connections to using primarily cohesive relations such as anaphoric pronominal reference or sentence-initial conjunctions. Unlike Italian translators in the business genre, who join English sentences in their Italian translation to satisfy Italian syntactic conventions (Musacchio 2005: 81f.), German translators rarely join ST sentences. Instead, as I have shown, translators as well as editors split sentences to a significant extent. This seems to suggest that sentence splitting is not just a phenomenon that is ‘triggered’ only in translations from high to low informational density languages but also occurs in translations into high informational density languages.

However, explicitation alone cannot account for the strong increase in sentence splitting, as it does not explain why editors also frequently split sentences. A further explanation may be the editorial guidelines that stipulate sentence splitting. These guidelines may be driven by the editors’ awareness of the reputation of German as a complex and high informational density language so that editors perhaps attempt to increase readability of the texts

simply by shortening sentences (see Table 9). That may explain the increasing use of sentence-initial conjunctions in cases such as (13) above, perhaps reflecting a tendency to use two paratactic sentences where authors of 1982–1983 may have used one hypotactic sentence. Such a preference for short sentences may also explain why the strong tendency to split sentences is not matched by an equal tendency to join ST sentences.

The question of what makes a text accessible is usually addressed in purely quantitative terms, so that the length of the sentences in a text is directly correlated to what is called ‘readability’. Formulas devised to measure readability usually have sentence length as one of their factors (Best 2006; Dubay 2006). The *Hamburger Verständlichkeitskonzept* (‘Hamburg Model of Readability’, see Langer *et al.* 1974) establishes four parameters of readability, among them simplicity (‘*Einfachheit*’), which stipulates short sentences of between 9 and 13 well-known words of no more than three syllables where possible, and structure (‘*Gliederung*’), where the authors suggest that sentences should ideally contain no more than one idea, which should be found at the beginning of the sentence.

Shortening sentence length is usually argued to be the product of condensation of information by extending noun phrases (von Polenz 1999: 354), which concentrates a maximum of content to a minimum of words (Eggers 1983: 138) or by avoidance of subordinate clauses (Eichinger 2005: 374). Both lead to greater complexity and informational density, as shown in example (14), where the translator has chosen to render the ST relative clause as a prepositional attribute within the subject noun phrase (note, though, that the translator’s omission of the presuming reference item *one such process* removes some cohesion from the TT).

(14)

HBR 1/08,98	(_{1i})One such process, (_{1ii}) which Rita Gunther McGrath and Ian MacMillan call discovery-driven planning, has the potential to greatly improve the success rate.
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HBM 5/08,52	(_{1i})Das von den US-Professoren Rita Gunther McGrath und Ian MacMillan beschriebene Discovery-Driven Planning kann die Erfolgsquote enorm verbessern. ‘Discovery-driven planning, which was described by the US professors Rita Gunther McGrath and Ian MacMillan, can greatly improve the success rate.’
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Sentence length alone, however, is not a criterion of the accessibility of a text. If reading a text is a process of interpreting it sentence by sentence, the representational discourse structure that the reader mentally creates while reading is updated after each sentence (Asher 1993: 63). A full stop thus

marks the end of a 'basic complete unit of communication', which the author has employed with a particular intention (1993: 270f.). If the cohesive relations that make a text 'a unified whole' (Halliday and Hasan 1976: 1) are overtly expressed, the reader can detect the hierarchy straight away. If they are not, the reader has to infer them by drawing on the order of discourse units, semantic knowledge, or world knowledge (Fabricius-Hansen 1996: 543). This means that the interpretation of a written text demands two activities from the reader: first, they have to use the information in the sentence and their 'non-linguistic knowledge systems' to build a 'representation of the information given in the discourse' and update this constantly, and secondly, they have to 'assign a segmented discourse structure to the text' and decide for each new sentence how the previously built discourse representation fits into that structure, revising it if necessary (Fabricius-Hansen 1996: 543).

The important aspect of this concept is that the text as the container of information is considered as a whole. Proposals of keeping to short sentences in order to maximize readability seem to consider each sentence an independent element. This would, however, only take into account the first of the two tasks described above, that is, creating a mental representation of the discourse and updating it after every sentence. That task may indeed be facilitated by shorter sentences, as the amount each 'update' contains is kept small. But the second activity that reading a text demands, namely, the creation of a segmented structure in which the reader has to decide how the current sentence fits into the entire text is not facilitated if the text mainly contains short sentences. It is not the information content of a text that changes but only its layout, so it may well cost more effort to create a coherent discourse map of the text without any guidance to the logical connection of the various discourse units.

A quantitative approach to complexity seems to have been used by Stahlheber (1992) in her diachronic contrastive analysis of differences in the degree of popularization and in syntactic genre conventions in scientific writing, based on a corpus consisting of articles from *Science*, an American academic journal, and *Die Naturwissenschaften*, a German academic journal. Stahlheber (1992: 185) notes a significant decrease in syntactic complexity between the years of 1913 and 1987 in the German articles, which she explains by contact of the authors with English scientific journal articles. Sentence complexity was measured by Stahlheber (1992: 173) simply by adding the number of subclauses together, where a subclause is defined as a clause that has only one finite verb. Then, she divided the number of finite verbs by the number of sentences in the corpus. While this is an accurate enough guide to sentence length, it does not really say much about the complexity of the sentences itself, primarily because it gives paratactic and hypotactic constructions an equal weighting, as both have two finite verbs. Equating sentence length with complexity, then, does not seem to yield accurate results because it ignores hierarchy in the sentences.

Measurements of complexity should relate to the objective intricacy of a given system as such rather than the difficulty that this system represents to

a user of it. It should not relate to the length of the description of an object, but to its structure, so that 'the complexity of an object is really a measure of the complexity of its structure' (Dahl 2004: 24). Greater complexity of a sentence therefore means greater hierarchization. Langacker (1977: 111f.) has argued that reducing complexity will necessarily conflict with the aim of achieving semantic transparency, which refers to the varying degree to which meaning relations in a sentence are explicitly realized as signs (see also Fischer 2007). That is because complex hierarchy supplies information about the inner relations of a clause complex by making use of conventional regulations, and thus removes uncertainty and leaves fewer things ambiguous.

6. CONCLUSION

This article has argued that sentence splitting is an explicating strategy in translated language in general rather than a process that is triggered only in specific translation directions. As editors have been shown to split sentences as well, I have further suggested that a contributing factor to the increase in sentence splitting may be the increasingly popular (and problematic) notion that short sentences automatically improve readability.

The issue of sentence splitting should receive more attention in translator training. The examples in this article seem to indicate that translators usually retain the ST clause order when they split sentences, possibly because they are under the impression that they will not change the meaning that way. However, as research in this field has shown, the maintenance of the intended meaning relations can be determined by the direction of information extraction. Splitting sentences at the point of the conjunction, for instance, may be the least intrusive way of introducing full stops that does not require reformulation of the sentence. But, as has been argued above, this may introduce false emphasis on the logically subordinated propositions if the information is inaccurately extracted. If sentence splitting is as commonly used as this study suggests, translator training should teach aspects of text cohesion and reference in discourse.

Future research by translation scholars should engage in qualitative analysis of the issue of sentence splitting, especially on the direction of information extraction. Research on translations into other high informational density languages should test the claims made in this article. A study might isolate and analyse linguistic environments where forward extraction is especially common. I have suggested above that clause order is seldom altered by translators, so that the introduction of sentence-initial conjunctions may automatically lead to forward extraction and the concomitant raising of information from the subordinate to the main level. Future research should also investigate whether translators do indeed make use of the capability of German for noun phrase extension, that is, whether ST subordinate clauses are expressed as attributive extensions to the noun phrase. Such research would require ways of identifying noun phrase extensions in corpora and annotating them

accordingly, but the results might provide more information about the idea of a tendency to avoid subordination and instead favour cohesive meaning relations between simpler sentences.

NOTES

- 1 Based on Eggins (2004), subscript numbers show sentences (ordinary numbers) and clauses (Roman numerals).
- 2 This translation, of course, sounds clumsy in English. The reader should note that the word order of the back

translations is kept deliberately close to the German to depict the structure of the TT expressions.

- 3 See http://www.wordfast.com/products_plustools.html.
- 4 The chi-square test is used to ascertain statistical significance.

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