References


A translation corpus as a resource for translators: the case of English and German prepositions

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Abstract. This contribution uses an English - German Translation Corpus as a database for translations. It demonstrates how such a database can be used for translations by giving translators guidelines and examples when they have to choose between various expressions. It analyses the variation of English local prepositions and their German equivalents by distinguishing between original, extended, figurative and idiomatic usages. The presentation also shows that although German and English are closely related languages their use of prepositions varies a lot in detail. Thus a new form of “dictionary” on the Internet, where general rules on using English prepositions are combined with concrete contrastive examples, can be useful.

1. Introduction

The objective of this presentation is to demonstrate how a translation corpus can be used by translators and in translator training as a resource, parallel and in addition to a dictionary and a thesaurus. This has developed from a tradition well-known in translation training, the study of parallel texts, which enables translators to see how similar meanings were expressed in texts serving similar functions. This is why translation corpora are sometimes called parallel corpora (e.g. in McEnery/Wilson 1999-2001); we would like to keep the term parallel corpora for (the wider) text collections with similar functions and call (the more narrow) collections that consist of real (professionally) translated texts translation corpora explicitly.

We would like to show that a translation corpus can serve as a basis for an empirical pre-translation analysis of prepositions even in the two closely related languages German and English, where “automatic” translations by humans or machines have failed because correspondences are not as simple as one might assume and idiomaticity is central to natural language - as opposed to translationese (cf. Schmied/Schäffler 1996 and 1997). In
particular, language service providers in the widest sense, especially translators or writers that do not have English as their mother-tongue, e.g. Germans, will appreciate a database that gives them sample cases "at the push of a button" and summaries of usage on such an empirical basis.

2. The English - German translation corpus as a basis for analysis

The English – German translation corpus has basically two functions (cf. Schmöld 1994): On the one hand it is a research tool, which helps students and linguists to find out about specific (contrastive) constructions; on the other, it is a service tool for language service providers, translators in the widest sense. In order to understand its scope and limitations a few basic facts have to be borne in mind.

The Chemnitz corpus is projected to contain over 2 million words, over one million words of which have been computerised to date (this is why we call our database a subcorpus in some quantitative analyses below). Core corpus parameters include British English, written and non-literary, with the texts ranging from academic textbooks from various domains (e.g. history, philosophy, the arts, economics and physics) to publications by the European Community/Union and a selection of tourist brochures.

The analysis of bilingual corpora and its use by translators (cf. McEnery/Wilson 1999, Johansson/Hofland 1994 or Baker 1995) is facilitated by modern retrieval programs that allow the parallel scrolling of two aligned texts in two windows, such as the new Windows-based version of Word Cruncher. For the web-based version of our English - German translation corpus a specific robust retrieval system was developed (Gorlov et al. 2001), which enables the user to make a choice of simple strings or string combinations in the L1 and the L2 corpus or in selected text types only (Fig. 1). The search for a string (with options and wildcards), word or construction, in one language automatically shows its rendering in translation; comparing such translations of the same structure gives the user an impression of variable options, where these are possible. Depending on the statistical options included, general conclusions on the co- and context, e.g. the distributions across text types, can be drawn directly "from the screen"; an additional statistical-analysis program can be subsequently applied. In any case, interactive computer-aided comparison can make (attempts at) comparative analyses more entertaining and inspire the translator to look for non-prototypical solutions for translation problems.

Fig. 1: Query form for the search engine of the English - German translation corpus

Since even a multimillion-word corpus is only a weak reflection of language reality, the occurrence of prepositions in our corpus has to be compared with other reference corpora. Table 1 compares the LOB corpus (Hofland/Johansson 1990: Vol. I: 19) and our normalised translation corpus and demonstrates that the distribution of the most frequent prepositions is similar. Thus our database seems suitable for comparative analyses, at least for phenomena as frequent as simple prepositions.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>LOB</th>
<th>translation subcorpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>of</td>
<td>35716</td>
<td>41877</td>
</tr>
<tr>
<td>to</td>
<td>26760</td>
<td>31050</td>
</tr>
<tr>
<td>in</td>
<td>21108</td>
<td>20646</td>
</tr>
<tr>
<td>for</td>
<td>9299</td>
<td>9540</td>
</tr>
<tr>
<td>with</td>
<td>7197</td>
<td>6696</td>
</tr>
<tr>
<td>on</td>
<td>7027</td>
<td>6615</td>
</tr>
<tr>
<td>at</td>
<td>6043</td>
<td>4887</td>
</tr>
<tr>
<td>by</td>
<td>5796</td>
<td>4833</td>
</tr>
<tr>
<td>from</td>
<td>4686</td>
<td>4770</td>
</tr>
</tbody>
</table>

Table 1: Occurrences of prepositions in 1 million words: LOB Corpus and our normalised English - German translation subcorpus in comparison
3. Prepositions as a special borderline case between the lexicon and grammar

Prepositions are notoriously difficult fields for language users in general. This is partly due to the practical problem of reference works, i.e., prepositions are not really presented in an appropriate system in the traditional grammar books, nor in the traditional dictionaries. But it is also a more theoretical problem, because prepositions have syntactic as well as semantic specifications that are unique to them. Of course, prepositions are syntactic link words that link nouns to verbs, nouns and occasionally other word classes. The choice of prepositions, however, often depends on the meaning of the syntactic element that determines it. To put it in terms of dependency theory, prepositions partly depend on the preceding noun, verb, etc. and partly on the following noun. Prepositions also overlap, at least in English and German, with other word classes, such as adverbs and particles. All this makes it very difficult to use prepositions or to categorize prepositions only on the basis of their surface value, which is common practice in simple corpus linguistics analyses or automatic translations. For the more sophisticated semantically based corpus analysis and idiomatic translations we would need semantically tagged corpora; but they are not available, since there are no generally acknowledged simple tools that can do the job automatically with a sufficiently high accuracy, and experienced linguistic labour is usually too scarce to go through millions of words “manually.” Thus the tagging for a corpus-based analysis of prepositions in a German - English translation corpus can, for instance, only be problem-oriented; but for that a specific tagging system would have to be developed first, possibly on the basis of a quantitative analysis as suggested below.

4. The general analysis of prepositions in German and English

Since prepositions are among the most common words in Germanic languages, the database for an analysis of prepositions is usually extremely good. In a contrastive list of the most common words in our translation corpus (e.g., with Wordsmirth) we find of in 2nd, to in 4th, in in 5th, for in 9th and with in 13th position. In the German wordlist is in 4th, zu 6th, von 8th, auf 11th, mit 15th and für 21th. This comparison shows that generally the prepositions occupy similar positions in the frequency hierarchy3. But there are also a few differences between the position of equivalents, for instance of and for in English are more common and thus seem to have more functions than von and für in German. Some prepositions are relatively similar in their status in the hierarchy, such as in and with. It must, however, be emphasised again that this analysis is only based on purely formal surface parallels. A more detailed analysis of the actual usage, which is only possible with a good compatible database like our translation corpus, reveals some interesting divergence, for instance, in the behaviour of English and German in and English with and German mit (cf. Schmied 1998).

A rough comparison of the English prepositions in, from, with, at and by German equivalents (in, von, mit, an and bei, respectively) shows a surprisingly small overlap, especially for at and by (Table 2). Here we have to consider not only morphological variants (like am or bei), but also the fact that semantically related prepositions like auf or durch/von are used for many of the functions of at and by in English (in brackets). Even then the direct equivalents cover only between 40 and 60 per cent.

<table>
<thead>
<tr>
<th>English</th>
<th>German</th>
<th>per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>at</td>
<td>2714</td>
<td>en/an/auf</td>
</tr>
<tr>
<td>by</td>
<td>3666</td>
<td>bei/durch/von</td>
</tr>
<tr>
<td>from</td>
<td>3083</td>
<td>von</td>
</tr>
<tr>
<td>in</td>
<td>12273</td>
<td>in</td>
</tr>
<tr>
<td>with</td>
<td>3745</td>
<td>mit</td>
</tr>
</tbody>
</table>

Table 2: English prepositions and their German equivalents

5. Original, extended, figurative and idiomatic usage

The following presentation starts from the assumption that the most frequent English prepositions have their origin in their local meaning, indicated in the following figures as PLACE, with subdivisions in one to three dimensions like POINT, LINE, SURFACE, AREA, VOLUME or DIRECTION, which is then further extended into the fourth dimension TIME. These meanings are usually seen as prototypical and constitute the basis of the discussion of the semantics of English prepositions in grammar (e.g., Downing/Locke 1992, Leech/Svartvik 1994 or Quirk/Greenbaum/Leech/Svartvik 1985). Thus we see the local/temporal meanings as prototypical at one end of a spectrum, idiomatic expressions4 as exceptions at the other. The “meaning” of a preposition in English is often determined by the context, mainly by the preceding verb, noun or adjective or on the following noun, so that is has to be learnt as a relatively fixed collocation by foreign language learners. These lexicon-specific meanings will be grouped under the heading LEXICON. In modern dictionaries of the
English language such additional, lexicon-specific senses are usually listed after examples illustrating the prototypical and figurative meanings.

This study focuses on the language user, e.g., a translator, and on how information on prepositional usage has to be presented to him to ensure a wide choice of options and an efficient selection process. When German users read the detailed explanations for prepositions in dictionaries (but also in many web-based grammar explanations), they “learn” very little because a lot of the basic and original meanings are listed and explained with examples that are intuitively well-known to Germans from their mother tongue. This is not surprising, since German and English are closely related and the cognitive systems of prepositions have not diverged greatly in the past 2000 years (cf. above). Thus, German learners often assume that all their problems with prepositions are based on “idiomaticity” and think “you just have to learn it by heart” and German translators assume that they have to find an instance with exactly the same lexemes in context. But, as will be shown below, many such usages can be explained, independently of individual cases, and therefore they are not really “irregular” and “singular”. In a category between prototypes and idiomaticity, which we call “figurative TRANSFER”, we will put together semantically related cases, which often exhibit interesting metaphorical shifts from the original but are not lexicon-specific. Categories and labels for these multiple cases could be selected from the case grammar categories developed since Fillmore’s “case” or one could try to harmonise the definitions in standard dictionaries. We have followed the latter path.

The meanings for the English preposition from, which looks so similar to the German von, have been taken from the standard dictionaries used in Germany (e.g., ALD or CID in German). Handwörterbuch as a bilingual reference work). These dictionaries follow the traditional route of explaining more prototypical, local and temporal usages first, before moving on to more figurative usages.

Thus, our presentation of prepositional usage combines a deductive and an inductive approach: the categories are first established from the dictionaries and then verified and exemplified by data from our translation corpus.

6. Presenting prepositional usage in a hypertext system

The following diagram of the preposition in (Fig. 2) illustrates the extent to which the prepositions have developed further and further away from the basic local meaning. Here a plus sign (+) indicates the occurrence and a minus (-) the non-occurrence of a German equivalent. Of course, these indications of partly overlapping structures are only tentative and their validity will have to be proven in a large quantitative analysis. In a hypertext format the corpus examples and the explanations can be made visible by clicking on the diagram presented, thus an overview of all the sample cases can always be gained by returning to the diagram “surface”.

![Fig. 2: Prototypical, figurative and idiomatic usages of in with their German translation equivalents](image1)

Of course, the system developed using the preposition in can be expanded to other prepositions of local origin (Figs. 3 – 6).

![Fig. 3: Prototypical, figurative and idiomatic usages of from with their German translation equivalents](image2)
All these diagrams indicate to what extent the transfer of the German equivalents *(in, von, mit, an and bei, respectively)* is possible. They emphasise a grey area between the original meanings that can be looked up in grammars and the idiomatic lexicon-related meanings that can be found in dictionaries. This transfer area is of particular interest for two reasons:

- These meanings occur frequently enough to justify a specific entry and
- They can be deduced from the original meanings, as is indicated by the arrows in the diagrams.

They constitute a problem area, however, since the transfer is not "logically" one-directional. For instance it does, not only occur with the local meaning of *from* but also of *with* (as in *with rage/langer*). To make matters worse, at least for the German translator into English, their mother tongue is more consistent here, using *aus* in both cases.

7. Use and non-use of prepositions as translators’ choices

When you look at the actual usage of prepositions it is clear that the temporal and locative usages constitute, as expected, the vast majority of examples, but prepositions are so common that other cases can be found in relatively few texts. Thus "exceptions" where, for instance, English *in* is not translated by German *in* are numerous and can be classified in various ways also on a syntactic or functional basis. The following list is based on the first few different such occurrences in one EU document (adverbials like *in addition* and *in particular* occurred several times - see concrete examples in the appendix):

- phrasal/prepositional verbs → PREPOSITIONS integrated in full verb (e.g. 1, 8, 12, 13, 22)
- postmodifying noun phrases → rendered differently
- as genitive or compound (e.g. 2, 3, 18, 21, 25)
- premodifying ADJECTIVES (e.g. 7)
- noun/verb phrases → with other PREPOSITIONS (e.g. 4, 5, 10, 14, 15, 17, 20, 26)
- adverbials → no prepositions
- short idiomatic adverbials → adverbs (e.g. 9, 19)
- general noun phrases → same form adverbs (e.g. 6, 16, 27)
- general noun phrases → non-prepositional noun phrase (e.g. 11, 24)

Of course, there are a few other options, like complex prepositions that can be reduced (e.g. 23), and the subclassification could be changed, but the categorisation above highlights inter- as well as intralinguistic option for, although the typological system may be similar, the "normal" choices can be quite different. Thus apart from the, surprisingly few, cases where simply...
different prepositions have to be chosen, the language user, including translators, has certain options depending on the functions that prepositional phrases can play:

- phrasal, and less often prepositional, verbs, a typical feature of English, can be rendered as normal verbs where the semantic content of the preposition is fully integrated in the main verb,
- prepositional postmodifying noun phrases can be integrated into the preceding noun phrase as a compound, rendered as a postmodifying genitive or, occasionally as a premodification, an adjective,
- prepositional adverbial complements often take the form of simple adverbs in the case of short idiomatic expressions (like in addition, in particular as additionally, particularly) and some others (like in the community as community-wide), but there are also other nominal expressions.

Such structural options would be easiest to see in a translation corpus that is part-of-speech tagged, but as long as this is not available a list of non-prototypical choices might be equally inspiring for a linguistically minded language user.

8. Outlook

In this contribution I have tried to illustrate the major areas of differences, particularly the possibilities of figurative meaning of English prepositions; this system goes beyond the usual list of "idiom expressions". Although other scholars (e.g. Radden 1989) have pointed out the "expansion of local prepositions", the graphic representation with underlying examples is a unique feature of our contrastive approach.

Further work will have to be undertaken to corroborate the proposed system. A quantitative analysis will be undertaken in two ways: first, to determine where the borderline between regular transfer and lexeme-specific idiomatic expressions lies, and secondly, to show clusters of meanings in the transfer categories. Generally, the use of a translation corpus as a tool in language analysis and language learning has proved useful and we intend to continue until we can assemble a thorough qualitative and quantitative comparative treatment of English and German prepositions.

Notes

1 The English - German translation corpus is part of the Internet Grammar of English that has been constructed at Chemnitz since 1998. I wish to thank my collaborators Diana Hudson-Ettle, Naomi Hallan, Ellen Gorlow and Christoph Haase for many discussions and the German Research Association (DFG) for the necessary funding. An introduction to the project is given in Schmied 1999, technical details are available on-line in Gorlow et al. 2001.

2 The table also raises questions as to why certain prepositions are under- (or with) and others overused (of or to) in our corpus. Interestingly, the latter are the two prepositions with grammatical functions, of covers most functions of the traditional "genitive" and to serves as the infinitive marker in English.

3 Differences are mainly caused by the morphological endings of German articles, so that die, der, das, den etc. are separate entries in the German list whereas the is only one entry in the English list.

4 If prepositional phrases are idiomatic in the sense that the composite meaning cannot be deduced easily, as in be with s.o. 1. stay in s.o.'s house 2. understand, they are clearly marked as IDM or even entered in separate lexical entries in modern learner dictionaries.

References


Appendix:


(1) This is reflected in the fear that the creation of a single market could open the way to a form of social dumping, that the gaining of unfair competitive advantage within the Community through unacceptably low social standards.

So wird die Besorgnis geäußert, der Binnenmarkt könne Wegbereiter für ein Sozialdumping sein, das es ermögliche, sich mit unfairen Mitteln - nämlich durch inakzeptabel niedrige soziale Standards - einen Wettbewerbsvorteil innerhalb der Gemeinschaft zu verschaffen.

(2) But there is also a concern that, somehow, the imperative of action at European level can become a pretext for changes in social standards at national level.

Daher hinaus wird befürchtet, die Notwendigkeit eines Tätigwerdens auf europäischer Ebene könne als Vorwand für eine Änderung der nationalen sozialen Standards benutzt werden.

(3) The premise at the heart of this Green Paper is that the next phase in the development of European social policy cannot be based on the idea that social progress must go into retreat in order for economic competitiveness to recover.

Diesem Grünbuch liegt die Prämisse zugrunde, daß die nächste Entwicklungsphase der europäischen Sozialpolitik nicht im Zeichen des Sozialabbaus zur Wiederherstellung der wirtschaftlichen Wettbewerbsfähigkeit stehen kann.

(4) In current conditions this will not be easy.

Unter den heutigen Gegebenheiten ist dies keine leichte Aufgabe.

(5) Only in this way will sustainable growth, social solidarity and public confidence be restored.

Nur auf diesem Wege können ein dauerhaftes und umweltverträgliches Wachstum, gesellschaftliche Solidarität und das Vertrauen der Öffentlichkeit wiederhergestellt werden.

(6) Legislation has, therefore, been only one of a number of tools at the disposal of Community social policy and is too often considered in isolation.

Rechtsetzungsinitiativen waren somit nur eines von vielen Mitteln zur Gestaltung der gemeinsamen Sozialpolitik. Allzuoft werden sie isoliert betrachtet.

(7) Legislation itself can be used in various ways; only rarely has it been used to prescribe certain specific actions in the social policy sphere.

Rechtsakte können auf unterschiedliche Weise eingesetzt werden; nur selten dienen sie dazu, konkrete sozialpolitisches Maßnahmen verbindlich festzulegen.

(8) Legal provisions have been put in place over a long period.

Rechtsvorschriften werden schon seit langem erlassen.

(9) Other legislation concerning the protection of workers and labour law has been significant in particular for preventing risks of social dumping, even if number of major pieces of proposed legislation have yet to be finalized.

Weitere Rechtsakte, die den Schutz der Arbeitnehmer und das Arbeitsrecht betreffen, waren insbesondere bei der Abwendung der Gefahren des Sozialdumpings von Bedeutung, auch wenn eine Reihe wesentlicher Regelungen noch aussteht.
(10) Details of the scope and content of Community legislation are to be found in Annex II.

Umfang und Inhalt des Gemeinschaftsrechts auf diesem Gebiet sind aus Anhang II ersichtlich.

(11) The Charter as such was a new point of departure for the Community - not only in operational terms but also as a political signal.

Mit der Sozialcharta setzte die Gemeinschaft eine neue Wegmarke, die nicht nur die laufende Tätigkeit betraf, sondern auch als politisches Signal gedacht war.

(12) (iv) reducing disparities between Member States without interfering in the comparative advantage of the less-developed regions.

(iv) die Verringerung der zwischen den Mitgliedstaaten bestehenden Unterschiede, wobei komparatives Vorteile der weniger entwickelten Regionen nicht gefährdet werden sollten.

(13) Details of the progress of individual initiatives are set out in Annex III.

Einzelheiten zum Verlauf der entsprechenden Initiativen sind Anhang III zu entnehmen.

(14) In each initiative a balance was sought and achieved.

Bei jeder Initiative wurde ein Interessenausgleich gesucht und gefunden.

(15) ..., which is the prime aim of competition in the internal market.

...- dem eigentlichen Sinn des Wettbewerbs auf dem Innenmarkt beizutragen.

(16) During the period 1989-93 the ESF devoted more than ECU 21 billion to these activities, benefitting around 17 million people in the Community.


(17) There is an explicit commitment that the principle of equal opportunities for women and men should be respected in the implementation of actions financed by the ESF.

Es besteht die ausdrückliche Verpflichtung, bei der Verwirklichung von Maßnahmen, die über den ESF finanziert werden, den Grundsatz der Chancengleichheit von Frauen und Männern einzuhalten.

(18) A new Objective 4 has been created which aims to facilitate the adaptation of workers to industrial change and changes in production systems.

Es wurde ein neues Ziel Nr. 4 formuliert, das die Anpassung der Arbeitnehmer an die industriellen Wandlungsprozesse und an Veränderungen der Produktionssysteme erleichtern soll.

(19) Moreover, in addition to continuing its focus on young people and the long-term unemployed, ESF support under Objective 3 has been extended to cover those exposed to long-term unemployment and exclusion from the labour market.

Als zusätzliche Aufgabe neben der beruflichen Eingliederung von Jugendlichen und Langzeitarbeitlosen kommt im Rahmen des Ziels Nr. 3 die Förderung von aus dem Arbeitsmarkt ausgegrenzten Personen hinzu.

(20) In response to social and economic change and to common challenges facing Member States, a number of programmes and exchanges have been developed.

Als Antwort auf die sozialen und wirtschaftlichen Veränderungen und die gemeinsamen Herausforderungen, denen sich die Mitgliedstaaten gegenübersehen, wurde eine Reihe von Programmen und Austauschmaßnahmen konzipiert.

(21) These are good examples of the combining of instruments in social policy.

Sie sind gelungene Beispiele für den kombinierten Einsatz sozialpolitischer Instrumente.

(22) ... they are based on the same approach, one in which the Community added value is clearly identifiable.

... beruhen sie auf dem gleichen Ansatz, der die Vorteile gemeinschaftlichen Vorgehens deutlich erkennen läßt.

(23) In parallel with legal provisions and complementary to them, the development of social dialogue between employers and unions is a major feature of the evolution of European social policy.

Die Entwicklung des sozialen Dialogs zwischen Arbeitgebern und Gewerkschaften ist ein wichtiges Merkmal der Entwicklung der europäischen Sozialpolitik, das dem Rechtsetzungsvorzeig begleitet und ergänzt.

(24) What follows is an attempt to identify, in a synthetic and concise way, the major trends and challenges for Europe.

Im folgenden wird der Versuch unternommen, einen kurzen Überblick über die wichtigsten Entwicklungstendenzen zu geben und aufzuzeigen, welchen Herausforderungen sich Europa gegenübersehe.

(25) Pressure is being felt in many areas: demography, family structure, new technology, relations in the workplace, tax and the distribution of income, etc.

In vielen Bereichen ist ein gewisser Druck zu verspüren. Dies gilt für die demographische Entwicklung, die Struktur der Familie, die neuen Technologien, die Arbeitsbeziehungen, die Steuersysteme, die Einkommensverteilung usw.
DIY corpora: the WWW and the translator

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Abstract. The WWW is the single largest existing repository of electronic texts, and has recently attracted the attention of researchers involved in translator training as a suitable source of texts for the creation of ”disposable corpora”. These are small, specialized corpora created ad-hoc to serve the needs of the translator for a specific translation project, and their value lies not only in their analysis but even more so in their creation. This approach complements a number of studies which have been carried out on the use of small corpora for language learning and translator training, where the main focus is on methods and techniques for analysing texts already collected by the teacher. This paper presents an experiment which was carried out at the School for Translators and Interpreters of the University of Bologna in Forlì with third and fourth year translation students in the context of a course on computer assisted tools. Students were given a task to translate and asked to search the Internet, select suitable web pages in the target language, and download them on disk. In this way, while cyclically performing the translation and adding material to the corpus as the translation proceeds, they were able to familiarize themselves with the topic of the translation at hand, to select texts according to text type, to assess the reliability of text sources and evaluate the perspective readership. These DIY corpora were then browsed switching between a full text mode and a concordancing, and learners were able to tackle many translation problems related to specific terminology and phraseology.

1. Introduction

Traditionally, translators have used “parallel texts”, i.e. collections of printed texts produced in similar communicative situations, as a way of checking text-typological conventions in the source and target languages. In the last few years information technology has brought about a completely new scenario. The availability of vast quantities of texts in many languages and on all kinds of subjects is a dream come true for translators as well as for all types of discourse professional, text processors and language services providers.

The WWW is the largest existing repository of texts. The number of