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Visualized Information in Multilingual Translations

Contents

Abstract

This paper deals with multifaceted dimensions of the translation process. The two major issues addressed are: (a) the semiotic interrelationship of verbal and nonverbal text parts, and (b) parallel translations for different target cultures. In principle, both verbal and visual information is localized in accordance with translation theory. By comparing source texts with their translations in various languages, we can establish what is standard practice in the translation industry. To this end, analysis was carried out on several aspects of figures (segmentation, caption, type of figure, linkage to verbal text) in texts written for specialist and non-specialist audiences. Findings are presented in a series of charts.

The answer to the question as to whether or not figure features are adapted to the target culture's conventions depends on where the texts have been translated. When texts are translated in the target culture, there is evidence that measures for adapting them to text type conventions are sometimes taken. However, if the texts are translated where they have been written, i.e. in the source culture, when it comes to adapting figures to the target culture, we find that only inscriptions in figures are sometimes translated. Regardless of the manufacturers' nationality or field of business and of whether the texts are addressed to specialist or non-specialist audiences, current practice in user brochures of German and Japanese provenance can be characterized as the mere reproduction of figures in all target texts.

1 General

This paper deals with multifaceted dimensions of the translation process. The two major issues addressed are: (a) the semiotic association of verbal and nonverbal parts of texts, and (b) parallel translations for different target cultures.

Translation theorists have long been calling for target culture text type conventions to be considered in the translation of source texts (ST) (e.g. Vermeer 1986:43; Koller 1992:247 f.; Kupsch-Losereit 1998:168). My research endeavours in this field are a response to this call. This is indeed a critical requirement since it has been set out in DIN 2345 – a standard for translation contracts (1998:12). Sorvali (1996:113) is obviously assuming compliance with text type conventions when she claims that "a translation is not a second-hand text but an independent one which has the same properties as any other text written directly in the target language".

House (1997:79) speaks of the "application of a cultural filter" with respect to phrasing the target text (TT). However, the theoretical requirement is not meant to be restricted to the verbal part of the text. In principle, both verbal and visual information (appearing as figures) is to be localized to suit target culture conventions. Göpferich (1998:332) supports the request for localizing figures from the point of view of intercultural technical writing. Schmitt (1999:196), however, points out that localization of ST figures is more or less impossible in practice for economic reasons.

To date, no proposals have been made as to how visualization practice would have to change were figures to be localized. This is primarily due to the lack of knowledge of, and experience with, text type conventions. From his perspective as a translation teacher, Kussmaul (1995:83) stresses the need for research in this field:

> We have seen that for the proper functioning of a translation, text type conventions must be taken into account. It would be very helpful if these conventions and the differences between conventions in the source and target language were known. For this reason we should encourage corpus-based contrastive studies.

Furthermore, elaboration of criteria for comprehensive analysis of figures' functions and quality in relation to the verbal text has only just begun (Kalverkämper 1993; Horn-Helf 2004). "Corpus-based contrastive studies", as mentioned by Kussmaul, are carried out to reveal text type conventions in at least a bicultural contrast. In as far as data is given for original texts, some information of this kind can also be inferred from the charts in the following sections.

The main intention of this paper, however, is to explore standard practice in the translation industry and to establish whether or not, and to what extent, the challenges of dealing with multiple linguacultures are accounted for. This can only be done by comparing STs with TTs in various languages. To this end, I have analyzed several aspects of figures in texts written for expert and non-expert addressees. The results of my investigations are presented in a series of charts which are based on the following text corpora.

1.1 Text corpora

[A] Chapter of a German book manuscript on Direct Reduction[1] (includes 29 figures) with English and Russian translations (Werner n.d.; Tulin et al. 1987).
[B] Two corpora of German manuals for industrial machinery and measuring instruments, respectively (include 105 figures) with two or more translations, including English language versions.
For comparison purposes:
- analysis data from two corpora of manuals originating in the US and UK (including 223 figures – Horn-Helf 2004).

[C] Two corpora of English manuals from Japanese manufacturers of office equipment and consumer electronics, respectively (including 318 figures) contained in multilingual brochures in up to 8 languages, including German language versions.
For comparison purposes: analysis data from
- two corpora of German manuals for household appliances and consumer electronics, respectively (including 200 figures) contained in multilingual brochures in up to 15 languages (Horn-Helf 2004).
- two corpora of manuals originating in the US or UK (including 310 figures – Horn-Helf 2004).

[1] A special type of steelmaking process, bypassing the blast furnace.

1.2 Analysis

- Segmentation of figures (item marking/keys and legend vs. figure inscriptions)
- Captions (captioned vs. uncaptioned)
- Types of figures (photograph, engineering drawing, schematic diagram, etc.)
- Linkage of figures to verbal text (textual by references vs. topical by shared topic).

1.3 Text presentation and integration of figures

Two forms of text presentation can be distinguished in manual brochures for expert addressees: the first may be called a **full version** and the second is columns. Full versions are fully illustrated texts in page format, i.e. each TT contains the complete set of figures. In the case of columns, ST and TT are arranged in parallel, with common figures extending across the columns.

Apart from full versions and columns, brochures for non-expert addressees may contain **partial versions**. These are partly illustrated texts in page format, with some figures in each version, and with common figures placed at the beginning or end of the brochure. In German brochures a folding sheet ("Ausklappseite" according to DIN EN 62079 2001:29) is frequently inserted for this purpose. If ST and TT are arranged in parallel columns, a separate column is provided at the margin for common illustrations.

1.4 Handling figures when translating technical texts

In the 1970s and 1980s, the ST presented for translation was either fully illustrated or accompanied by a list of terms and phrases for inscription in figures. Orders were placed for translating the verbal text; terms for inscription were to be provided on a separate piece of paper. The translator left blank space for the figures in the TT. Typically, the figures were then pasted into the TT at the customer's office. Differences in ST and TT volumes were rarely critical since figures could be arranged fairly freely.

In the 1990s, customers began to furnish the illustrated ST in electronic format. To produce the TT the translator overwrites the ST and translates figure inscriptions as appropriate. Since the ST layout is to be preserved, considerable restraints may be imposed on the TT volume if the space provided is inadequate for the target language (TL). Typically, space restrictions impact on Russian TTs translated from German or English STs. In such cases, either the verbal text has to be shortened or the layout changed. However, difficulties are encountered with both these options when ST and TT are laid out in columns.

To date, there has been no change to this traditional method of reproducing ST figures in every new TT. By and large the only concession made to the target culture is that figures are inscribed in the TL.

Illustration design for multilingual brochures depends on whether the figures are common to all versions or whether they are to be inserted into each version separately. Figures applicable to all versions have multilingual legends placed next to them. TL legends may also be set at the beginning of the different versions. Using a key and legend system is a typical German and Russian way of explaining items in a figure. Figures arranged within the different versions may also be provided with TL inscriptions – a common technique found in British and American manuals. Some figures have neither legends nor inscriptions. On the whole, it may be said, that the challenges of multilinguality have given rise to some changes in illustration design: preparing figures for multilingual texts aims to neutralize, rather than localize them in the sense of adapting them to target culture conventions. This is especially true for texts addressed at a multinational non-expert audience.

2 Target cultural localization of figures in an engineering book

In the course of my research, I found only one case where figures were actually adapted to target culture conventions: the Russian translation of a manuscript for a German book on Direct Reduction (cf. 1.1 [A]). The manuscript was translated in Moscow. The figures were localized in the target culture before the book was published. Figure features were adapted to Russian conventions as follows:

2.1 Segmentation of figures

Keys and legend are typically used in German and Russian technical writing to identify items of a figure. Figures most often carry inscriptions in British and American technical texts.

The illustration of the Midrex reduction furnace given in Fig. 1 shows the two different conventions. The original German manuscript as well as the English translation contain figures with English inscriptions (Fig. 1, LH[2]).

In the Russian book, however, inscriptions were replaced by item numbers used as keys and explained in a legend (Fig. 1, RH). This meant that not only were original full page figures reduced in size, but they were also adapted to suit common practice in Russian technical writing.

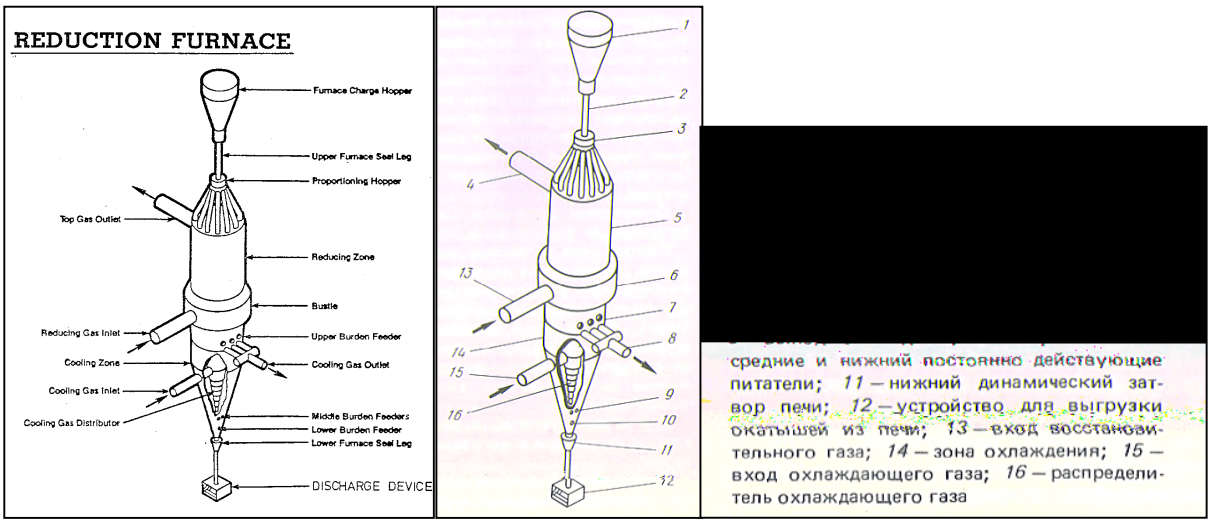


Fig. 1: Changing inscriptions to keys and legend[3]

[2] We assume these illustrations originate from Midrex Corp. (Charlotte, NC), who developed the gas reduction process dealt with in this chapter (cf. 1.1 A).

[3] Reproduced by kind permission of Dietrich Werner (LH illustration).

2.2 Types of figures

All photographs and four engineering drawings were omitted in the Russian TT; one chart, which is not part of the ST, was added. These changes can be seen in Fig. 2.

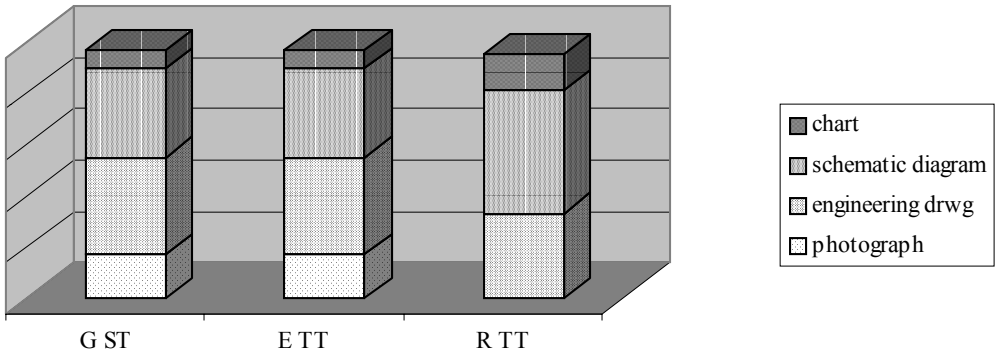


Fig. 2: Localization of types of figures

Engineering drawings constitute one of the figure types clearly favored in Russian technical texts. Therefore, we can only speculate on the reason for their omittance. These are sectional drawings of process equipment; perhaps, the internal fittings were not to be revealed in such detail. By contrast, it is common Russian practice to omit photographs (as it was in the USSR era when it was prohibited to take photographs of industrial installations, let alone publish them).

2.3 Linkage to verbal text

Reference is made to each figure at least once in Russian technical writing. This is what I call a **textual link**. German, British and American texts often contain a large number of figures with no references to them at all. They are linked to the verbal text by the common topic only. In this case, linkage is not textual, but **topical**.

The German book chapter as well as the English TT include several figures of this kind (Fig. 3). To bring the Russian TT into line with conventions, the translator changed topical links to textual ones by adding the references missing in the German ST. This measure is a further step towards localization of figures.

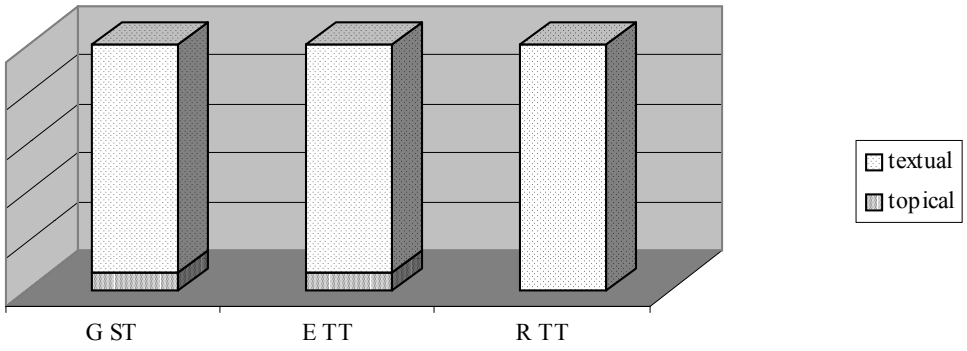


Fig. 3: Localization of linkage to verbal text

3 Source cultural handling of figures in manuals for specialist addressees

In this section I wish to present the results of my analysis of manuals for expert addressees [cf. 1.1 [B]). The charts to follow consist of two parts: they show features found in manuals for industrial machinery (LH, M) and for measuring instruments (RH, I). Within the groups, preferences found in German STs are indicated by the bar to the left; these preferences are replicated in English, French, Spanish etc. TTs which is demonstrated in the middle. Preferences as reflected in manuals of American and British origin are shown by the bar on the right.

In the light of these results, there is every reason to believe that, apart from verbal text translation, multilingual brochures for equipment exported from Germany are not written to suit their target cultures, but that the source culture text is the key for TT conventions.

3.1 Segmentation of figures

Keys and legends are applied for identifying items in figures in English, French and other TTs. This seems to agree with French practice (but still has to be confirmed by detailed analysis). As already mentioned, inscriptions are preferred in British and American manuals.

3.2 Captions

Examining manuals for German industrial machinery included in a brochure with several translations (Fig. 4, LH), we find that less than half of the figures have captions. This is absolutely in line with standard practice as reflected in US and UK manuals from mechanical equipment manufacturers.

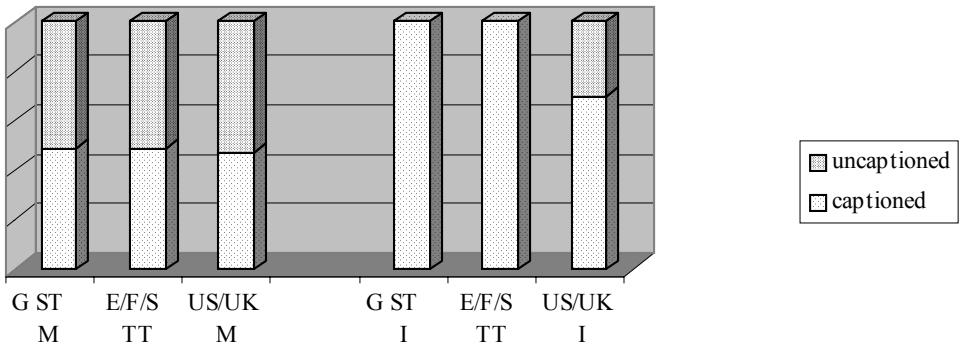


Fig. 4: Captions according to ST

By contrast, all figures in manuals from German manufacturers of measuring instruments are captioned (Fig. 4, RH). Since this feature is reproduced in every translated copy, the English TT, for example, is inconsistent with text type conventions for American and British manuals, where some of the figures typically remain uncaptioned.

3.3 Types of figures

Standard practice in Germany favors the inclusion of engineering drawings in manuals for industrial machinery and measuring instruments (Fig. 5). These engineering drawings are then carried over into the TTs.

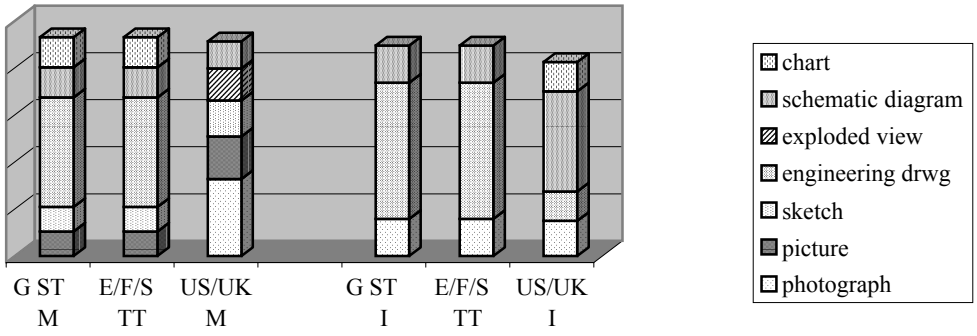


Fig 5: Types of figures according to ST (preferences)

British and especially American manuals for machinery contain numerous photographs (Fig. 5, LH); schematic diagrams are preferred in manuals for measuring instruments from both these countries (Fig. 5, RH). When German STs are translated into English, we find that the TTs are packed with engineering drawings – showing a pronounced convention mismatch.

3.4 Projection methods used. in dimensional drawings

Hoischen (2003:55) points out that the most informative view has to be the front view (**main view**) in engineering drawings. "First-angle projection is the commonly accepted method in many European countries" (EB 1981:974). Formerly known as **ISO E (European) projection** and currently named **projection method 1** (PM 1), first-angle projection is established practice in Germany. With this method, views are arranged opposite to their actual position (Fig. 6), i.e. top view (b) is located below, bottom view (e) above the main view.

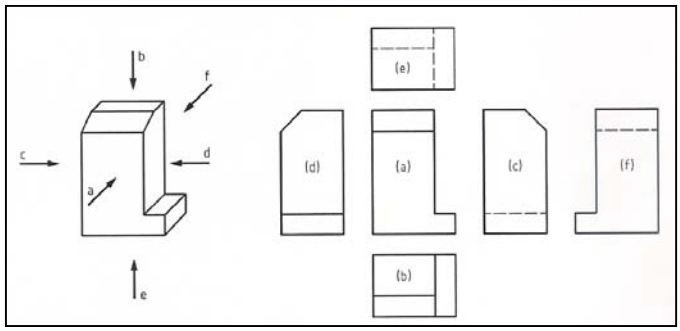


Fig. 6: First-angle projection (DIN ISO 128-30, Figure A.1)[4]

[4] Reproduced by kind permission of DIN Deutsches Institut für Normung e.V. who requested that the following be added to this note: "The definitive version for the impementation of is standard is the edition bearing the most recent date of issue, obtainable from Beuth Verlag GbH, 10772 Berlin, Germany".

Apart from the front or main view, dimensional drawings from German machine manufacturers usually include the LH side view. As can be seen in Fig. 7, this is shown on the RH side of the main view.

This type of dimensional drawing is common in Germany and, therefore, does not need to be commented on. However, the issue of concern here is that a German dimensional drawing reproduced unaltered in an English TT for readers in the US might be open to misinterpretation since "third-angle projections are the prevalent type used in the USA and Canada" (Wikipedia:3).

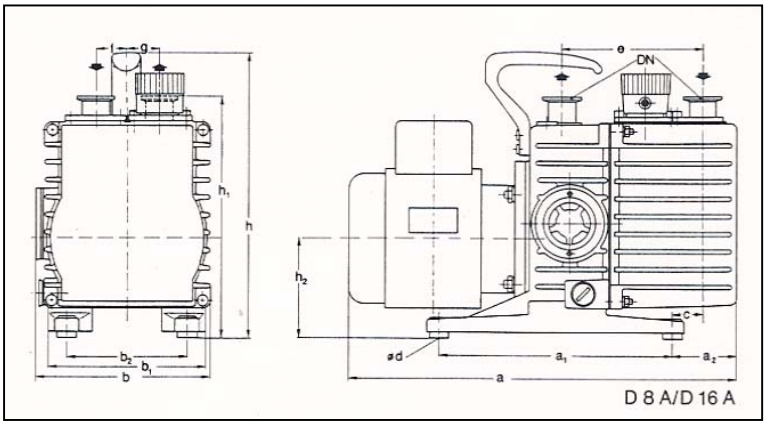


Fig. 7: PM1 – LH slide view on RH side of main view[5]

US engineers are said to prefer third-angle projection, formerly known as **ISO A (American) projection**, and nowadays called **projection method 3** (PM3). In this method, views are arranged according to their position, i.e. the top view (b) is located above the main view, the LH side view (c) on its LH side (Fig. 8). In order to adapt German dimensional drawings to US conventions, the location of the LH side view would have to be changed. However, this recommendation seems to be of a merely theoretical nature.

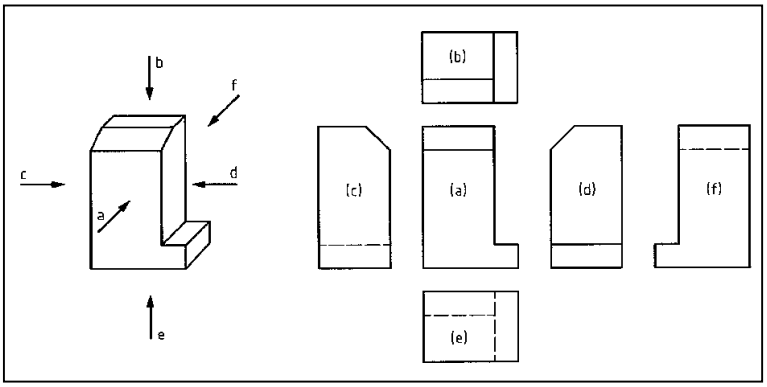


Fig 8: Third-angle projection (DIN ISO 128-30, Figure B.1)[6]

Dimensional drawings are extremely rare in manuals originating in the US. I was unable to find a single example of third-angle projection in the respective corpus: for example, first-

[5] Reproduced by kind permission of Leybold Vacuum GmbH.

[6] "The term 'third-angle' is used because, compared to 'first-angle' projection, the directions of projection are rotated through two right angles about the object" (Wikipedia:3).

angle projection was applied in two of the drawings, and in another drawing, front, rear and side views were arranged vertically on top of one another. Obviously in these cases, the purpose of arranging the views as described was to make the best possible use of the available space, rather than to follow any particular projection method.

Since dimensional drawings are designed to give dimensions for installation, inconsistencies of this kind are not likely to cause any problems in practice. However, should they occur in working drawings, a laterally reversed product might be manufactured as a result! Therefore, DIN ISO 128-30 (2002:9 resp. 11) and DIN ISO 5456-2 (1998:3 resp. 4) standards specify that the projection method shall be indicated on drawings using graphical symbols.

3.5 Linkage to verbal text

In contrast to the translation of the Russian book mentioned earlier, there is no change to linkage between verbal text and figures in multilingual manuals from German manufacturers.

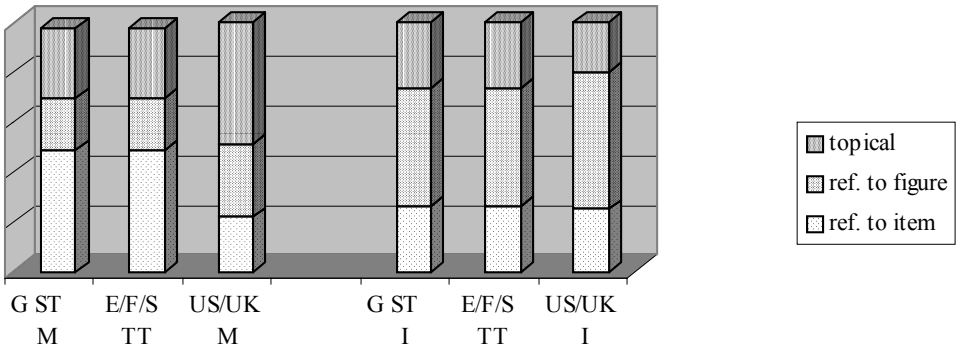


Fig. 9: Linkage to verbal text according to ST

It is very common in manuals for machinery manufactured in Germany to mark individual items in figures and refer to them from the verbal part of the text (Fig. 9, LH). The key and legend system is used in these cases (cf. 3.1). Consequently, when a German manual is translated into English, a host of references to items appear in the TT. This goes against conventions in US and UK technical writing, where inscriptions are used and figures are more frequently referred to as complete entities, if at all. Given the fact that nearly 50 % of figures are topically linked to the verbal text in American and British originals, there is a conspicuous lack of topical linkage in English TTs.

In English translations of manuals for German instruments (Fig. 9, RH) the frequency of references to items may be considered adequate, references to figures are less frequent and figures with topical linkage are more frequent than in US/UK originals.

4 Source cultural handling of figures in manuals for non-expert addressees

The assertion that the various translations reflect ST conventions only is also true for multilingual brochures addressed to non-expert readers [cf. 1.1 [C]). This section deals with multilingual brochures from Japanese enterprises with global affiliations. In a preliminary remark in one of its brochures, Fujitsu indicates that the brochure was prepared by Fujitsu Computers Ltd., UK. In brochures from other manufacturers there is no information as to where the brochure was produced. And obviously, this remark in itself, does not mean to say that the English version was drafted following British conventions. Figure features are extremely similar to those in other user guides of Japanese origin and seem to have little in common with British manuals for non-expert addressees. Evidence could only be provided by analyzing British user guides for computer hardware which could not be made available for this analysis. The first text in a multilingual brochure is usually written in the language of its source culture. In brochures from Japanese manufacturers the first text is the English manual, which may have served as the ST for producing the other language versions. As a matter of fact, we do not know what conventions to expect here, because typically these brochures do not contain a Japanese version.

Again, the charts are divided into two parts: the LH group shows features of manuals for Japanese office equipment[7] (J M) set against manuals for German (G H) and American/British household appliances (US/UK H). The RH group shows features of user guides for Japanese consumer electronics (J E) set against user guides for German (G E) and US products. We can examine user guides of Japanese origin in two ways: (a) compare the English language versions to texts of US/UK origin to determine whether or not their features comply with US/UK conventions, (b) compare the German language versions to texts originating in Germany.

4.1 Segmentation of figures

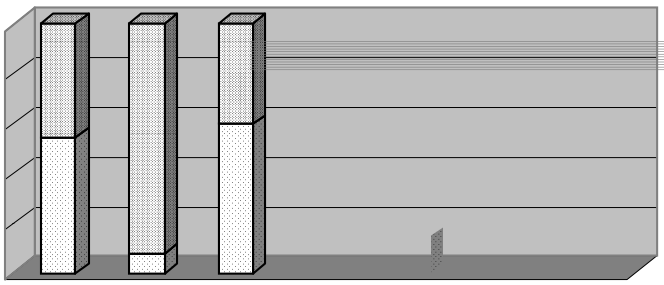
Item numbering and TL legends are deployed in figures common to all language versions in multilingual brochures of Japanese origin. A full view of the appliance or device, which is often set before the English text, is usually presented in this way. Figures set in the various versions, however, are inscribed in English, in the given TL or not at all.

4.2 Captions

Figures with captions are an exception in English manuals for Japanese products (Fig. 10). As already mentioned, German, French, and other language versions follow this pattern, whereas in the German originals of multilingual brochures for household appliances more than 50 % of the figures are captioned (LH). Since uncaptioned figures are even less frequent in manuals originating in the US and UK, the English version is therefore as inconsistent with conventional practice as is the German one.

[7] Since manuals for Japanese household appliances were not available, these texts are considered the closest possible equivalents for the following reasons: (a) portable copying machines and household appliances are manufactured by the mechanical technology industry, and (b) the manuals in both cases are for non-expert users.

If we take user guides for Japanese consumer electronics (Fig. 10, RH), we see that as far as captioning is concerned the German versions come fairly close to the originals whereas English language versions, again, contain too many uncaptioned figures.



a **sketch** and a **picture** is dimensionality. A sketch is a 2D front view of an object's contours. It lacks the spatial dimension rendered in a picture by means of perspective and shading.

According to Fig. 12 cultures also differ widely in the types of figures they use in their manuals. The only form used in all versions of user brochures for Japanese office equipment (J M) is the picture (LH). Pictures also prevail in manuals for household appliances written in the US/UK; sketches are used as well. Visual information is predominantly presented in photographs in manuals originating in Germany (G H).

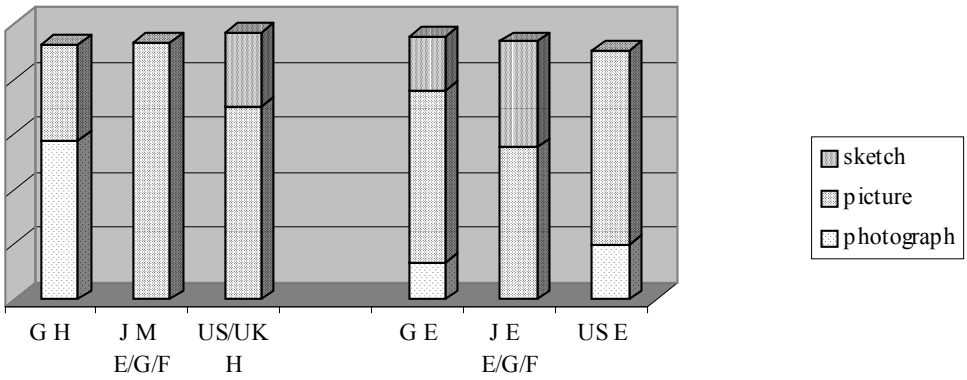


Fig. 12: Types of figures according to the English version (preferences)

The primary form of presenting visual information is a picture in user guides for Japanese consumer electronics; sketches are also fairly common (RH, J E). As opposed to original guides, German and English language versions contain an over abundance of sketches, and there are practically no photographs.

4.4 Linkage to verbal text

In multilingual manuals for Japanese office equipment (J M) figures are very seldom linked to the verbal text by references (Fig. 13, LH). The majority of links are by shared topic, i.e. linkage is preferably topical. This feature is reflected in all text versions. If the German translation were to be adapted to suit German conventions (G H), a whole series of references would have to be added. In the case of English translations for US/UK readers the number of references would have to be tripled!

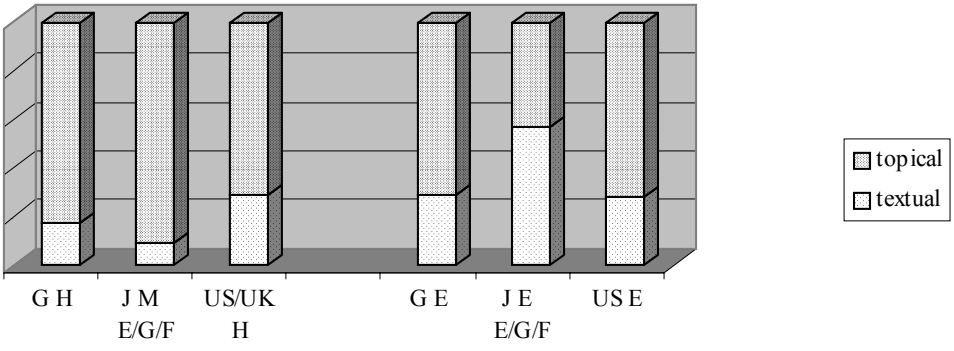


Fig. 13: Linkage to verbal text according to the English version

The opposite holds for user guides for Japanese consumer electronics (Fig. 13, RH). Most of the figures in the English and other language versions are linked to the verbal text by means of references (J E). In guides originating in Germany (G E) or the US (E) textual links are much less frequent.

Consequently, German and English versions are inconsistent with German and American conventions (a considerable increase in topical linkage would be needed to rectify this inconsistency).

5 Conclusion

The answer to the question as to whether or not figure features are adapted to the target culture's conventions seems to depend on where the texts are translated. When they are translated in the target culture, there is evidence that measures for adapting figures to text type conventions are actually taken. However, if the texts are translated in, or under the auspices of, the source culture, we find that only inscriptions in figures are sometimes translated. As for the rest, we can fairly say that, when German manuals are translated into English or other languages, figure features in any of the TTs follow German conventions.

By the same token, the German language version found in brochures from Japanese manufacturers follows the conventions of the English text – which may be considered a TT as well. Obviously in this case the underlying conventions invoked are neither of UK or US origin, but are of unknown origin.

In other words, regardless of manufacturers' nationalities or fields of business and of whether the texts are addressed to expert or non-expert audiences, it is current practice in drafting brochures to merely reproduce the figures in all language versions. There is every reason to believe that this is standard practice in Germany, Japan, France and the US, and probably further afield as well.

What measures can be taken to promote the application of target cultural conventions in the translation process? The efforts in this direction that we found in the chapter from the Russian book mentioned above provide us with a starting point, provided that customers are interested in encouraging or making the necessary alterations to their texts. Otherwise, localization of figures will definitely be restricted to adding references and captions as appropriate. Generally speaking, types of figures are not suited for adaptation to the target culture's conventions. Engineering drawings and schematic diagrams (cf. Fig. 5), for instance, are not interchangeable due to their different content. In fact, localization of content-related features has proven impractical more than once (Horn-Helf 1999; 2003; 2004). Attempts at adapting such features have failed because (a) the ST would have to be rephrased, or (b) considerable damage would be caused to the TT, thus impairing its intelligibility.

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