

Consistency and variation in technical translations – a study of translators' attitudes

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Introduction

When large quantities of technical texts are being translated manually, it is very difficult to produce consistent translations of recurrent stretches of text, such as paragraphs, sentences and phrases. This can be due to many different reasons, for example, several translators work on different sections of the same document simultaneously, the source text is not final and may be changed at a later stage, and it may be too time-consuming or practically impossible to identify recurrent units in the source text manually. Individual translators making up a translation team will also have individual criteria for choosing a certain translation or even choosing from a set of possible translations.

One suggested remedy to the problem of consistency in translation is to use tools based on translation memories. Successful use of such tools entails the supposition that source repetitions can be transferred to the target text. To validate this supposition, we first identified variant translations in two software manuals and categorized the variants. Then we designed a questionnaire based on the material and distributed this to the translators at the two translation companies who had translated the manuals. Apart from the translators, we also involved the project leaders at the translation companies and a representative from the customer (the software company).

The current study is a part of the project “Linguistic Engineering for Generation and Translation of Documentation” at Linköping University (Ahrenberg & Merkel 1996)¹. The study should be seen as complementary to assessments of practical usage of computer assisted translation tools, e.g., Schäler (1994) and Vasconcellos (1994). To prepare the text material, we used our own tools for detecting recurrent sentences and phrases (Merkel, et. al. 1994), and an alignment program based on a simplified version of Gale’s and Church’s algorithm (Gale & Church 1991). At the time of the study we did not have an available version of a verification tool

(which could pinpoint translation inconsistencies), so the variant translations used in the study were detected by manually scanning sorted translation databases containing recurrent source sentences. However, since this study was completed we have constructed an automatic tool that identifies such inconsistencies, cf. Merkel (1996). Although similar to TransCheck (Macklovitch 1994) in that it operates on bi-texts (a representation of a translation with explicit links between source and target sentences), our tool operates on consistent or inconsistent translations of sentences rather than lexical items.

Objectives and method

This study focuses on the distribution of translations of recurrent source sentences and how translators familiar with the text type evaluate the existing translations of the recurrent units in different contexts. The results of the questionnaire provide important insights to the usability of tools using translation memories, for example, by showing what types of recurrent segments can be translated uniformly, and what kind of variant translation is preferred.

The questionnaire was divided into two parts. The first part involved nine questions regarding translators' attitudes towards the text type, their potential uses of various translation tools or techniques, and their attitudes towards the benefit of using such tools. The second part consisted of 50 examples from two computer manuals from the same company, where each example described an identical source segment (paragraph, sentence, heading, etc.) occurring in two different contexts. These source segments were shown with the corresponding target segment, which had been translated in two different ways. The task for the respondent was to decide whether he/she would prefer consistent translations in the two contexts or the two variant translations. If consistent translations were preferred, the respondent was asked to motivate the choice and also rank the different alternatives. If variant translations were preferred, the respondent was asked to justify this choice. The questions accompanying each example were identical. To avoid any influence by the way the examples were ordered, we randomized the order of the 50 examples for each respondent.

The questionnaire was sent out to translators both full-time translators and freelance, working for two Swedish translation companies,. One requirement for the translator was that he/she should be familiar with the text type and the requirements of the translations (i.e., that he/she had translated texts from this software company before). We also asked a project manager at each of the translation companies to complete the questionnaire as well as the person responsible for translation quality at the client software company. In total we received 13 completed questionnaires from translators (8 from freelance translators and 5 from in-house translators).

We also received the results from the two project managers and one from the software company (client).

To distinguish between different categories of translation variants, the examples used in part two of the questionnaire were divided equally (five examples from each category) over the 50 examples, see Table 1. We distinguish between three major types of translation variation: synonym variants (where the variants have the same underlying logical form), partially synonym variants (where the variants differ in the degree of specification) and non-synonym variants (where the variants do not have the same underlying logical form). We also included a fourth category where longer stretches of text were repeated (category D below). The numbers in brackets indicate the example numbers used in Table 2 and Table 5.

Table 1 Variant translation categories

Major type of variation	Variation categories	Examples	
A. Synonym variants	1a. Syntactic variants – same context types (No. 1-5)	Running text-running text, heading-heading, etc.	
	1b. Syntactic variants - different context types (6-10)	Running text-heading, table cell-heading, etc.	
	2a. Morphematic variants – same context types (11-15)	Running text-running text, heading-heading, etc.	
	2b. Morphematic variants – different context types (16-20)	Running text-heading, etc.	
	3. Lexical variants (21-25)	Non-terminological synonyms	
	4. Coherence variants (26-30)	Pronouns, adverbs, etc.	
	B. Partially synonym variants	5. Specification variants (31-35)	Less or more specific content
		C. Non-synonym variants	6. Terminological variants (36-40)
7. Content variants (41-45)	Erroneous content translations		
D. Recurrent multi-sentential segments	8. More than one recurring subsequent sentence (46-50)	Repeated paragraphs or whole sections.	

Results and Implications

Nine questions were included in part 1 of the questionnaire. The questions involved the respondents' general attitude towards consistency and variation, translation tools, tools to identify and translate recurrent paragraphs and sentences and recurrent fuzzy patterns (such as *From the X menu, choose Y.*) We also asked if they used the inbuilt search-and-replace function of word processors while translating. Finally we asked them for their opinions regarding

translation memory tools, a hypothetical translation verification tool that highlighted variant translation and finally, we enquired if they had any other comments on translation.

All translators agreed that terminology consistency was important. Twelve out of thirteen also stated that sentences and phrases should be translated consistently and that the source text often shows too much variation. Six translators found that it was difficult to know what was actually recurrent in the source text, especially across chapter boundaries. Two translators wanted variation of recurring sentences in running (descriptive texts), but not in instructions. Still, the majority of the translators did not see variation as a goal in itself. One translator expressed this as “Variation is only confusing. The text is probably not read from cover to cover, instead the reader looks up different things.”

All translators use term lists in electronic format and all of them use the printed guide lines issued by the software company. Twelve out of thirteen translators use term/word lists in printed form as well, but only two use look-up facilities directly from the word processors. None of the translators use translation memory tools for these particular texts, but two translators used such tools for other customers' translations.

Two translators claim that they use tools to identify and translate recurrent paragraphs. Five translators use the search-and-replace function in the word processor manually to do this. The search-and-replace function is used when the translator notices that certain segments are repeated during translation. Six translators do not use tools for this purpose.

No translators have access to tools to identify close matches (fuzzy matches) automatically. Two translators state that they use search-and-replace with wildcards occasionally.

Eleven translators use the built-in search-and-replace function of their word processor regularly; however, many of them added that they do this “with caution,” or that they “always check replacement case by case”. Two translators state they do not use the feature at all.

Nine translators have a positive attitude towards the use of translation memories; four show some degree of hesitation. The reservations made are that translation memories “must be easy to use”, that they should be used “only as a reference”, and that translators “have to be careful because terminology may have changed”. One translator states the fear that it could be “tempting to work too quickly which will lead to increased number of mistakes”. No translator was totally against the use of translation memories.

Nine translators were positive towards a verification tool, three had some doubts and one translator saw no use of this kind of tool. One translator noted that this would be especially useful to check terminology and expressions.

Typical comments from the translators involved concerns about the quality of the source text. There is also a fear that translation work will become more tedious and boring, that some of the creative aspects of the job will disappear with the increasing use of translation memory tools. Some translators expressed concern over the changing role of the translator, from a linguistic innovator to a linguistic operator, or as one of the respondents expressed it: “The translator is reduced to somebody who presses the OK button.”

Translation companies' attitudes

The questionnaire directed to project leaders at the two translation companies was similar to the translators' questionnaire part 1, but geared towards what the project leader wanted the translators involved in the project to do.

In translation company A, the project leader is positive towards translation tools. At translation company A, they do not use tools for handling recurrent paragraphs or sentences in general, but the use of search-and-replace functions is stimulated, if it is done with judgment. The project leader thinks that the use of translation memories would benefit the company, and the same applies to the use of a verification tool. She states that tools would make translations of, for example references to chapter and section headings easier in printed documentation and in on-line help texts. However, she concludes, when running text is involved, there is a risk that the creativity and ability to localize text can be inhibited.

In translation company B, the project leader is, in general, very positive towards translation tools. Specifically, he would like the translators to use search-and-replace functions. At translation company B they have created their own tools for handling recurrent sentences, as well as their own terminology tools. He also thinks that the translation memories and verification tools would be used and found useful by translators and editors. However, he emphasizes that it is important that translation tools be very flexible and easy to use. Furthermore they must include functions for handling updates of the source text and provide room for a review and verification phase.

The customer's attitudes

In an interview with the person responsible for the Swedish translations (terminology and quality assurance) at the customer company the following views were expressed:

Translation memory tools are an excellent help for repetitive texts. The prerequisite is that the previous translation memories are correct, which is not always the case. Terms may have been changed and there may be mistakes in the old translations. In general it is not advisable to reuse

an old translation without verifying the accuracy of the translation. This verification must be done before a translation memory can be used in a new project. It is important that translators be able to view the context in which a certain sentence is to be translated. A pure sentence-by-sentence translation is not advisable at all. Automatic translation without the confirmation of the translator is not acceptable.

From the questionnaire, it was clear that the representative for the customer was less inclined to prefer consistent translations than the translators. In the interview, this opinion was explained by the fact that the objectives may be different for a customer and a translator. The customer demands a high quality translation and is not really interested in how this is achieved, whereas the translator is by definition involved in the actual process of translation and strives to minimize the effort of reaching high quality translation. This may result in the discrepancy shown in the questionnaire, i.e., that the customer representative had a much higher proportion of “doesn't matter” replies than the translators in general. For example, for running text (descriptive text) the customer representative stated that different translations were possible, but not necessary, whereas the translators preferred consistent translations to a higher extent.

Consistency vs. Variation

As described earlier, the respondents were asked to state whether they preferred consistent translations of a given source segment in two different contexts. The options given were either *yes* or *no*, with a space for the respondents' own motivations for his/her choice. When I examined the questionnaires, it became apparent that there was a need for a third response, in between yes and no, namely a response which we can call “doesn't matter”. This applies when the translator in the justification for the choice has indicated that the translation on the one hand could be consistent, but that it would not matter whether the source segment also was translated differently or vice versa. This introduction of a third response category may seem to diminish the possibilities to interpret the results, but if we still regard the responses as binary (*yes* or *no*), with the judgment of consistent translations as the primary problem, the responses “yes” and “doesn't matter” both indicate the possibility of consistent translations, whereas a “no” response rules out consistency. Table 2 summarizes the results from the questionnaire regarding the respondents choice of whether a source sentence should be translated consistently or not. The “YES” option shows how many respondents judge that the source sentence should be translated consistently. The “NO” option shows how many respondents want different translations in the two contexts and the “D M” (Doesn't Matter) option states how many respondents regard it possible, but not necessary, to be consistent.

Table 2 Responses to questions on consistency

Ex No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
YES	14	13	14	15	12	16	6	10	12	14	14	12	14	14	11	10	10	11	11	11	13	14	13	14	15
D M	2	2	2	1	4	0	2	1	0	1	2	4	2	2	5	0	0	1	1	0	3	2	3	2	1
NO	0	1	0	0	0	0	8	5	3	0	0	0	0	0	0	6	6	4	4	5	0	0	0	0	0
Ex No	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
YES	14	16	12	2	15	15	15	15	12	14	16	16	16	15	15	16	12	15	16	15	16	15	13	13	13
D M	2	0	4	6	1	1	1	1	2	2	0	0	0	1	0	0	3	1	0	1	0	1	3	3	3
NO	0	0	0	8	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

A first glance at the answers indicates that there is a clear preference for consistent translations; for 48 examples a majority of the respondents prefer consistent translations. Furthermore, in 38 of the examples all respondents have ruled out variation (zero value for NO).

In two of the examples, a majority of the respondents are in favour of variant translations (example 7 and 29). The first is an example of where *Calculating with precision as displayed:* occurs as both a heading and as cell item; that is, in different contexts. The second (example 29) depicts the source sentence *This value is derived using the formula:*, where the first translation is spelled out with a definite description and the second has kept the coherence marker (*this value*) of the source sentence (*Pearson-korrelation beräknas med följande formel*” vs. “*Detta värde beräknas med följande formel*”).

To compile the found preferences related to categories, we have added the number of responses in each category and distinguished two major classes: Categories with a clear preference for consistency and categories where the respondents have shown a marked degree of hesitation towards consistency. Table 3 and 4 show the number of responses and the number of examples over which the response is distributed.

Table 3 Eight categories with a preference for consistency

Category	YES	Doesn't Matter	NO
1a. Syntactic variants - same contexts	68/5	11/5	1/1
2a. Morphematic variants -same contexts	65/5	15/5	0/0
3. Lexical variants	69/5	11/5	0/0
4. Coherence markers	59/5	13/4	8/1
5. Degree of specification	71/5	7/5	2/1
6. Terminological variants	79/5	1/1	0/0
7. Content variants	74/5	5/3	1/1
8. Multi-sentential variants	70/5	10/4	0/0

In category 4, there is a single example (number 29) where the respondents actually preferred variant translations, but this seems to be an exception as there was a clear preference for consistency in the other four examples. (Example 29 is discussed above.)

Table 4 Two categories with a marked degree of hesitation for consistency:

Category	YES	Doesn't Matter	NO
1b. Syntactic variants - different contexts	60/5	4/3	16/3
2b. Morphematic variants - different contexts	58/5	2/2	20/4

In Table 4, the figures for the two categories where the functional contexts differed are shown. This contextual parameter seems to be the deciding parameter. There is still a majority of YES answers, but the number of NO answers are considerably higher for these categories. The trend for the categories with different functional contexts is definitely more towards the “hesitation” side than in other categories.

The responses here can only be interpreted in one way, namely, that consistency is something that technical translators aim for in general. The exception to this rule regards context. When two source sentences (or segments) occur in different structural contexts, such as headings and table cells, translators should be more cautious in applying consistent translations. These recurring source sentences may often require different target sentences. In some translation software this is indeed handled by recognizing that they have different formatting tags (styles or other mark-up properties) which means that no perfect match will occur, only a fuzzy match which leaves the translator to make the choice of whether or not to be consistent.

Uniformity in deciding preferred translation alternative

In the previous sections we have seen that there is an overwhelming general tendency towards consistency. One side-effect of the questionnaire was that we received a great deal of data on how uniform the choice of alternative was between different translators. As described earlier, the translators were not only asked to state whether they preferred consistency or variation in the

translation pair given, but also to state which of the alternatives they preferred. They were also asked to say whether the alternatives were equally appropriate or whether they preferred another translation. Given each example, the translator had four choices: (a) *Prefer A*, (b) *Prefer B*, (c) *Prefer A or B (equally appropriate)*, or (d) *Prefer other translation*.

As the respondents were only presented with a limited context (around two paragraphs), we expected a certain degree of disagreement in the respondents' answers. However, the differences were far greater than anticipated. The table below summarizes the choices from the questionnaires. A indicates the number of respondents who choose alternative A for each example, B alternative B, "Other" indicates "other translation" and EQ suggests that both A and B are equally appropriate translations. For each category, the alternative with the highest number is indicated in bold face. Note that the A and B alternatives do not signal any "degree of appropriateness" on our part, they are chosen completely randomly.

Table 5 Preferred translation alternatives

Ex No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A	1	10	0	1	6	6	1	3	8	3	8	4	4	0	2	2	0	2	2	5	8	1	6	8	3
B	7	1	11	10	5	4	3	4	4	6	2	8	4	12	6	3	4	4	5	2	0	5	1	1	6
Other	2	2	1	4	1	5	1	2	0	0	3	0	0	1	0	1	1	1	0	1	3	2	7	1	1
EQ	6	2	4	1	4	1	4	2	1	5	2	4	8	3	8	3	5	5	4	3	5	8	2	6	6
Ex No.	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
A	11	1	2	3	4	9	0	2	3	5	7	9	10	3	0	1	2	4	14	2	1	5	4	4	1
B	2	12	7	5	6	1	15	11	7	5	0	2	0	8	7	11	3	7	1	10	7	7	0	1	9
Other	1	0	1	0	0	3	1	2	0	3	5	1	1	1	5	4	6	5	0	1	2	2	7	2	3
EQ	2	3	6	0	6	3	0	1	4	3	4	2	5	3	4	0	2	0	1	3	6	2	5	9	3

In only one example (32), one of given the translation options is entirely ruled out, i.e., no translator has chosen alternative A in example 32. Even though some examples contain zero values for A or B, these are complemented for the others with a non-zero value for EQ (in example 3, 14, 17, 21, 36, 38, 40 and 48).

We asked the respondents to state motivations for their choices and when we studied the responses we found that most of the motivations given were vague and subjective. There are numerous "feelings", and value statements such "better", "clumsy", "correct" and so on. Some prefer translations closer to the source, some want them to be more "Swedish". Some prefer more specific and some prefer more general translations. In several cases, we found totally contradictory motivations for the same example. Many respondents do not give motivations at all, and the ones who do are very brief. Perhaps the motivations would have been more elaborate if this aspect of the questionnaire had been emphasized, but then some translators may not have filled in the questionnaire as it would have required considerably more time to complete. The

lack of consensus when picking the “best” translation gives rise to certain questions regarding the use of translation support software. If these translators had worked using a translation memory-based tool, and if one of the alternatives (A or B) had been presented as *the* suggestion to use, what would their reaction have been? Previously we have concluded that the general aim is to strive for consistency in these kinds of translations, given certain constraints on context. Would they actually use the suggested alternative or would they prefer something else? Something that is “better”, “more Swedish”, for instance?

Summary

Translators of software manuals do strive for consistency in general. They generally have a positive attitude towards translation tools, such as translation memories, but show some hesitation regarding the change of the translator’s role when working with such tools. The only explicit cause for not choosing consistency is when a repeated source segment occurs in different functional contexts, for example as a heading and as a cell in a table.

The choice of “best translation option” varies considerably among translators, which indicates that it may be difficult to encourage translators to accept suggested translations from translation memory-based programs.

The trend seems to be that the customer is not as negative towards variation in running text as the translators and project leaders. One reason for this may be found in the different perspectives that the three types of actors have in the translation project. However, to make this a substantial claim, a larger study involving several translation companies and customers would be necessary.

Notes

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