UNIVERSITY OF JYVÄSKYLÄ

AN OLD PROGRAMMER'S TRADITION – VANHOJEN OHJELMOIJIEN PERINNE

Observations on the quality of the Finnish translations of three American computer programming guides

A Pro Gradu Thesis in English

by

Mari Nokkonen-Pirttilampi

Department of Languages
2007

HUMANISTINEN TIEDEKUNTA
KIELTEN LAITOS

Mari Nokkonen-Pirttilampi

AN OLD PROGRAMMER'S TRADITION – VANHOJEN OHJELMOIJIEN PERINNE

Observations on the quality of the Finnish translations of three American computer programming guides

Pro gradu -tutkielma

Englannin kieli
Helmikuu 2007 157 sivua

Tutkielman tarkoituksena oli selvittää amerikkalaisten ohjelmointioppaiden suomenkielisten käännösten laatua. Tutkimusmateriaali koostui kolmesta vähintään kymmensivuisesta englanninkielisestä otteesta, jotka valittiin kolmesta eri ohjelmointioppaasta, sekä otteiden suomenkielisistä käännöksistä. Otteet valittiin ohjelmointioppaista arpomalla. Tutkielmassa etsittiin vastausta kysymyksiin: 1) Millainen on suomennosten laatu? 2) Kuinka hyvin käännökset noudattavat suomalaista asiatekstityyliä? Tutkielma on luonteeltaan tapaustutkimus ja se on pääosin kuvaileva.

Tutkielmassa käytettiin Juliane Housen (1997) kehittämää analyysimenetelmää "A model for translation quality assessment". Tekstit analysoitiin ja löydetyt piirteet jaoteltiin eri rekisterikategorioihin. Lähtö- ja kohdetekstien piirteitä vertailtiin sana-, rakenne- ja tekstitasolla. Löydetyt eroavaisuudet jaettiin rekisterikategorioihin. Erojen syitä pohdittiin ja käännösratkaisuja pyrittiin arvioimaan kriittisesti. Arvioinnissa otettiin huomioon kulttuuri- ja kielioppierot sekä muut kääntämiseen mahdollisesti vaikuttaneet seikat. Käännöksen laadusta annettiin lopuksi sanallinen arvio, joka perustui käännösratkaisujen onnistuneisuuteen. Laadukkaan teknisen käännöksen tunnusmerkkeinä pidettiin tiiviyttä, selkeyttä, virheettömyyttä ja oikeakielisyyttä.

Tutkimuksessa havaittiin, että tekstiä jouduttiin muokkaamaan paljon ennen kuin käännös kuulosti aidolta suomen kieleltä. Lähdekielisissä ohjelmointioppaissa esiintynyt metateksti sekä asioiden ja sanojen toisto voitiin usein jättää kääntämättä. Kaikissa kohdeteksteissä havaittiin jonkin verran englannin kielen vaikutusta. Vaikutus näkyi useimmiten sanajärjestyksessä ja teknisten termien käännöksissä. Kahdessa kohdetekstissä pyrittiin välttämään persoonapronominien ja erityisesti yksikön toisen persoonan käyttämistä lähes aina, kun se oli mahdollista. Loppupäätelmänä oli, että kohdeteksteistä kaksi vastasi melko hyvin asiasuomelle asetettuihin vaatimuksiin. Kyseisiä käännöksiä pidettiin laadultaan melko hyvinä. Kolmas käännös toisti englannin kielen rakenteita siinä määrin, että sitä ei pidetty kovin laadukkaana.

Asiasanat: technical translation. quality assessment. qualitative analysis.

CONTENTS

1 INTRODUCTION

The idea for this thesis arose from the observation that all is not well in the realm of translated computer literature in Finland. I heard from quite a few people who work, or are otherwise involved with computers, programming and information technology, that they never use Finnish translations of computer books, because they contain mistranslations and have quality issues. Some even went as far as to claim that if one wants to stay out of harm's way, there are two things one should never do: never buy a translated computer book - and never buy a translated software product. Since I was involved with computer literature and software translation myself, I started to feel uneasy after hearing these comments over and over again. At first I dismissed these claims as simply a bias against Finnish computer literature, but after a while I began to wonder whether there was some truth behind the scepticism of those computer professionals. Perhaps it was not all just prejudice. The realisation that something may be wrong with Finnish computer book translations, and the urge to know what it is, was the reason for choosing this topic. After all, problems cannot be remedied before they are identified.

The present study will be based on a sample of three recent American computer programming guides and their Finnish translations. Its aim is to assess the quality of the translations. The objective is to find out what the quality of translated computer programming guides is like. Due to the length of the programming guides, I will randomly choose an excerpt from each text. The original text will be analysed first, then the translation. I will use Juliane House's (1997) model for translation quality assessment as my methodology of analysis.

As far as I know, relatively little research has been conducted on Finnish computer book translations. In this study, only some tentative results can be presented; there are hundreds of computer books on the market and this study can only deal with a few of them.

2 TECHNICAL TRANSLATION AND TRANSLATION QUALITY ASSESSMENT

The purpose of this chapter is to provide background information on technical translation and translation quality assessment, introduce some relevant research and define some concepts for later use. Chapter two thus acts as an introduction to technical translation and translation quality assessment. This chapter is divided into two parts. Subchapter 2.1 deals with technical texts and technical translation and subchapter 2.2 focuses on translation quality assessment.

2.1 Technical texts and technical translation

This chapter aims to give an overview of technical texts, technical translation and related issues. Chapter 2.1 is divided into four subchapters. Subchapter 2.1.1 deals with the classification of texts and introduces three influential text typologies. Subchapter 2.1.2 introduces some features of technical texts and technical translation, and summarises the relevant earlier research conducted on the English-Finnish technical translation. Subchapter 2.1.3 discusses the problems in technical translation and Chapter 2.1.4 introduces the main objectives in technical translation.

2.1.1 Classification of texts

This chapter deals with the classification of texts and introduces three influential text typologies. The discussion of text classification and text typologies paves way for determining the text typology which will be used in the present study. The reason for determining a text typology is that it seems easier and theoretically more sound both to talk about texts and to classify them against the backdrop of a text typology; a typology provides the terminology for talking about texts and some means for their classification.

It seems useful to define the term ‘text’ before proceeding to text typologies, since the term ‘text’ can be defined in different ways depending on who uses the term and to what purpose. On the field of linguistics, Halliday and Hasan (1976) define text in the following way:

> A text is a passage of discourse which is coherent in these two regards: it is coherent with respect to the context of situation, and therefore consistent in register; and it is coherent with respect to itself, and therefore cohesive. (Halliday and Hasan, 1976: 23)

Although 'text' can also be used to refer to coherent stretches of speech, in the present study the term 'text' refers primarily to written texts. Since this study deals with text analysis, it is necessary to establish some kind of classification of texts for the purposes of this study. Such a classification is also necessary, because different kinds of texts call for different ways of translating and therefore all translations cannot be assessed according to the same criteria. For example, Katharina Reiss calls a typology of texts "a non-negotiable prerequisite for any objective approach to translation criticism" (Reiss 2004: 16). Also Bell (2001) emphasises the importance of a text typology. Next, I will take a look at text types and some text typologies and then determine the classification which will be used in this study.

As readers, we have certain expectations about certain types of texts, based on our previous encounters with such texts, and we intuitively recognise a variety of text types (see e.g. Baker 2000: 112, Hatim and Mason 2001: 125). However, it seems that finding tangible criteria to use in text type categorisation is anything but easy. Numerous proposals for text type categorisation can be found in linguistic literature, but many of them seem to have faced a hail of criticism. Setting up an all-inclusive typology of texts has proven problematic, because real-life texts are often multifunctional, exhibiting features of not one, but several text types (Hatim and Mason 2001: 138).

Texts have been classified on basis of for instance the field of discourse, that is, according to what is being talked about in them. This approach has resulted in categories such as religious texts and journalistic texts (see e.g. Crystal and Davy 1969). Texts have also been classified on basis of their domain, resulting in broad categories such as literary, poetic and didactic texts (see e.g. Beaugrande and Dressler 1981). Other criteria used for categorising texts include text function, communicative distance and thematic development (*Routledge Dictionary of Language and Linguistics* 2000: 481-482). However, I was unable to find an exhaustive text typology with practical text type definitions. Since each proposed typology has been criticised for some incompleteness, it seems to me that an

exhaustive typology does not exist as of yet. As a matter of fact, in my view a universal text typology might be a contradiction in terms, since it is highly likely that all cultures and languages do not have the same text types, and some text types might be inadvertently left out of the classification. In my view, assigning texts to categories thus remains a controversial and somewhat intuitive issue.

Since a universal, theoretically sound text typology does not exist, and since the present study needs some way to classify texts in a bid to be objective, one of the existing text typologies will be chosen for this study. Texts could naturally be divided simply into nonliterary and literary texts or technical and non-technical texts, but this approach does not seem very useful, because the resulting categories are far too broad to be of any real value. In the following, I will present three existing text typologies. These text typologies are the most promising ones, considering the topic of the present study, and they have been chosen on basis of their applicability to translation. It should be noted, however, that the following is by no means an exhaustive treatment of text typologies.

Reiss's text typology

The first typology to be considered has been put forth by Reiss. Reiss (1971, 2000) has suggested a text typology based on Bühler's (1965) language functions. She divides text types into three categories on the basis of three language functions, namely representation, expression and persuasion. In addition, Reiss suggests a fourth category; the audiomedial type. These four text types, which each require a different way of translating, are content-focused (informative), form-focused (expressive), appeal-focused (operative) and audio-medial (multimedial) text type (Reiss 2004: 24-27). Of these, the audio-medial text type will not be discussed further here, because it is concerned with special kinds of texts, such as film, whereas this study concentrates on printed texts.

Even though Reiss divides texts into text types on the basis of the three language functions, she acknowledges that these functions co-exist and overlap in texts in practise. However, a given text can be assigned to one of these text types on the basis of its dominant function (Reiss 2004: 24-27). In content-focused texts the dominant function is communicating information (Reiss 2004: 30). Form-focused texts use

formal elements for a certain aesthetic effect, in other words, in these texts the linguistic form and the way things are expressed is important (Reiss 2004: 31-32). Appeal-focused texts have a certain purpose and they aim at achieving a non-linguistic result. In these texts their purpose is clearly more important than information content or linguistic form. (Reiss 2004: 38-39.)

Each of these text types entails certain kinds of texts. The content-focused text type includes for example news reports, operating instructions, educational works, non-fiction, and specialized literature in humanities and technical fields (Reiss 2004: 27-28). The form-focused text type entails literary and imaginative prose and poetry (Reiss 2004: 35), whereas the appeal-focused text type includes advertisements, propaganda and other texts which aim is to influence the reader (Reiss 2004: 39-41). Reiss (2004) explains the difference between *the type of a text* and *the kind of text* in the following manner:

> While the type of a text concerns essentially the translation method and the relative priorities of what is to be preserved in the target language, the kind of text concerns the linguistic elements to be considered when translating. (Reiss 2004: 27)

Reiss has developed this typology especially for translators and translation critics, and she gives some guidelines for translating different types of texts. In translating content-focused texts, the most important goal is to transfer the informational content in its entirety. Furthermore, the form of the translation should be target language oriented, so that the information is presented to the readers in a familiar form. (Reiss 2004: 30-31.) Form-focused texts are source language oriented in the sense that the most important issues in their translation are using similar formal principles and recreating a similar aesthetic effect in the target language. (Reiss 2004: 33.) Appeal-focused texts require translation which preserves the impact of the source text. Since achieving the same effect as the original is the main concern in appeal-focused texts, transferring the form or content is less important and deviation from source text may be great. (Reiss 2004: 41.) Translation of an audio-medial text (which is a text written to be spoken) should have the same effect on the hearer as the original (Reiss 2004: 43-46).

Newmark's text typology

Like Reiss, also Newmark (2001: 39) uses Bühler's three main functions of language as a basis for his text typology. Also Newmark (1988) emphasises that one text may include all the three language functions, one of which is the dominant function. Newmark (2001: 40-41) divides texts into text types for "the purposes of translation". Table 1 below shows this division:

Table 1. Language functions and Newmark's text types.

Expressive function	**Informative function**	**Vocative function**
Serious imaginative literature (e.g. novels, plays, poetry)	Scientific non-evaluative texts	Propaganda
Authoritative statements (e.g. political speeches, legal documents)	Technological non-evaluative texts	Persuasive writing (requests, cases and theses)
Autobiography	Commercial non-evaluative texts	Publicity
Essays	Industrial non-evaluative texts	Notices Instructions
Personal correspondence	Economic non-evaluative texts	Popular fiction

Table 1 has been drawn on the basis of the figure found in Newmark (2001: 40). As the table shows, expressive texts include the following text types: serious imaginative literature, authoritative statements, autobiography, essays and personal correspondence. Informative texts include scientific, technological, commercial, industrial and economic non-evaluative texts which often have certain form, for example textbook, report or article. Vocative texts include for instance propaganda, persuasive writing, publicity, notices, instructions and popular fiction. (Newmark 2001: 39-42.)

Hatim and Mason's text typology

In their book *Discourse and the Translator* (1990), Hatim and Mason define text type as "a conceptual framework which enables us to classify texts in terms of communicative intentions serving an overall rhetorical purpose" (Hatim and Mason

2001: 140). They also share the view that while multiple rhetorical purposes may exist in a text, only one of them is predominant at one time in a given text. Following Werlich (1976), Hatim and Mason (2001: 145-146) call this purpose the dominant contextual focus. They introduce the following basic text types: argumentative, expository and instructional text type (Hatim and Mason 2001: 154-157). Each of these text types has a different dominant contextual focus. The dominant contextual focus of argumentative texts is on evaluating concepts and/or beliefs (Hatim and Mason 2001: 154, 239). In expository texts the dominant contextual focus is on analysis or synthesis, and the presentation of concepts, events and objects is non-evaluative. Expository texts (or 'conceptual exposition') can be further divided into descriptive and narrative text types. Descriptive texts deal with objects and situations, whereas narrative texts deal with arranging events and actions in a certain order. (Hatim and Mason 2001: 154-155.) The contextual focus of instructional texts is on "the formation of future behaviour" and they aim at controlling the way people think or act (Hatim and Mason 2001: 156). Instructional texts can be divided into two types, instruction with option and instruction without option, depending on whether the reader/hearer can ignore the instruction or must submit to it respectively. The former type includes for example advertisements, the latter treaties and contracts. (Hatim and Mason 2001: 156.)

The text typology to be used in the present study

While there is more than one way to classify texts, in the present study I settle on Hatim and Mason's (1990) text typology and related terminology and refer to argumentative, expository and instructional texts. I will maintain that despite of the multifunctionality of texts, one rhetorical purpose is predominant at one time in a given text. Thus, if a text is predominantly expository, I will refer to it as an expository text, even if it has some features of the instructional or the argumentative text type.

I chose Hatim and Mason's (1990) text typology because it seems best suited for this study in that of these three typologies, it seems to be conceptually closest to House's (1997) model, which will be used for translation quality assessment in this study. In my view, Hatim and Mason's typology seems to take field, tenor and mode into account better than Reiss' (1971, 2000) or Newmark's (1988) text typology. In

addition, Reiss' way of placing the kinds of texts directly under the four text type categories raises the question of whether these text type categories are too broad to be useful. In this respect, Newmark (1988) goes to the opposite direction by subsuming a large number of text types under the three language functions. However, he does not give much advice on how these text types can be identified, which renders his typology unsuitable for the purposes of the present study.

The texts chosen as the data for the present study will be assigned to the categories on basis of the descriptions Hatim and Mason (1990) give of each text type. The texts have features of both instructional and expository text types. A text belonging to the instructional text type attempts to "…regulate through instruction the way people act or think" (Hatim and Mason 2001: 156). The texts chosen as data exhibit signs that the writers attempt to affect the reader's behaviour. The most notable of these signs are the use of imperatives and suggestions. However, although these texts aim to influence the behaviour of the reader to a certain extent, instruction still seems to be the secondary text type in these texts. These texts do not simply give the reader directions on what to do next, as for example user manuals might do. There is also a notable amount of description in these texts, and it seems that the descriptive parts of the texts outnumber the instructional parts. This seems to indicate that these texts are information-focused. The dominant contextual focus thus seems to be on presenting information mostly in a non-evaluative manner. Thus in Hatim and Mason's (1990) typology these texts fall under the expository text type.

Even though the text typology adopted here may not universally be the best way to classify texts, it suits the present purposes, as an in-depth text type analysis is beyond the scope of this study. In comparison, for example Biber's (1988) comprehensive analysis calls for establishing significant linguistic features of texts, running frequency counts and then doing a factor analysis. Unfortunately this approach must be dismissed as too extensive for the purposes of the present study. In the following, references to expository, instructional and argumentative texts thus presuppose Hatim and Mason's (1990) text typology.

2.1.2 Technical texts and translation

As far as I know, computer programming guides have not been extensively studied as a group. There is hardly any information about their special features or the best translation practises. Although there is some research available on computer and software user manuals, I find that such research is only partly applicable to computer programming guides, because their purpose and structure seem to differ from user manuals to a certain extent. Due to the lack of research on computer programming guides, it seems best to take a look at a higher category, which has been studied more. This higher category is technical texts.

The category of technical texts subsumes a large number of different texts from different fields. What is common to all of them is that their subject matter is technical and that technical texts are usually written for some practical purpose (Pinchuck 1977: 17-18). Technical texts are either expository (i.e. informative), instructive (i.e. directive), or both (Pedersen 2005). Technical expository texts include for example handbooks, textbooks, product information and technical reports. Instructive texts might for example teach readers how to operate a machine. Examples of technical instructive texts are operating instructions, manuals and advertising. (Pedersen 2005.)

Technical texts have certain features which distinguish them from other types of texts. Field specific terminology and the frequency of technical terms are the most notable features, even though technical terms often constitute only five to ten percent of a technical text (Newmark 2001: 151). Although scientific and technical texts are sometimes considered as one group, they are divided into two separate groups in the present study. This is because the form of scientific texts is often different from the form of technical texts and they are not usually written for a specific practical purpose. (Communicating information is not seen as a specific practical purpose). Since the data to be analysed in this study do not include scientific texts, such texts are not discussed any further here. Thus it should be noted that when the present study refers to technical texts, scientific texts written on technical subjects are not counted in.

There has been a prolonged debate since Cicero about whether translation should be literal, free or something in between (*Routledge Encyclopedia of Translation Studies* 2004: 87ff, 496, Newmark 1981: 4). However, I will not engage in the theoretical discussion on literal versus free translation at this point. Although the above mentioned discussion undoubtedly has its merits, I would rather stay on a more practical level for the simple reason that translating technical texts is, in essence, a practical activity, even if some theories are at work in the background. Following Catford (1965), most writers on the field of translation (e.g. Baker 1992, Ingo 1990, House 1997, Hatim and Mason 1990) as well as technical translation (e.g. Pinchuck 1977, Herman 1993, Newmark 1988) seem to agree that the most important issue in translation is transferring the meaning of the original. Thus, I infer that transferring the meaning of the original is the most important issue in translating technical texts, computer programming guides included.

2.1.3 Problems in technical translation

The purpose of the following treatment is to give an insight into the matters a translator may struggle with while translating a technical text. This knowledge may be useful when I consider the possible reasons behind particular translation choices. Since the present study deals with translation quality assessment, it seems useful to distinguish between translation difficulties and translation problems. According to Nord (2001: 64), translation difficulties are ones which a particular translator faces in the translation process. Translation difficulties have to do for example with the linguistic, translational and cultural competence of a translator, as well as with the possible lack of proper documentation to aid in translating (Nord 2001: 64). Translation problems are objective problems encountered by all translators. A translator may learn to deal with translation problems effectively, but they are still problems. (Nord 2001: 64.) Nord (1997) suggests the following categories of translation problems: pragmatic, cultural, linguistic and text-specific problems. Pragmatic translation problems are caused by the differences between the source and target text situations (Nord 2001: 65). Cultural translation problems arise from "the differences in the norms and conventions guiding verbal and non-verbal behaviour" in the source and target culture, whereas linguistic translation problems are caused by the structural differences of the source and target language (Nord 2001: 66). Text-

specific problems are problems which a translator may encounter in a specific source text (such as puns, for example) (Nord 2001: 67). Although Nord (1997) originally created these categories for pedagogical purposes, I think these categories provide a good basis for classifying and identifying translation problems in the present study as well. This is important in order to better understand the translation choices made in the target texts. In contrast, translation difficulties will not be discussed further here, because they are translator-specific and as such hardly generalisable. I take Nord's (1997) categories of translation problems as a basis and present my interpretation of what the categories might entail in relation to technical translation. In the following, I will first discuss linguistic problems, then pragmatic and cultural problems and finally look briefly at text-specific problems.

Linguistic translation problems

According to Nord (2001: 66), linguistic problems "arise from structural differences in the vocabulary, syntax and suprasegmental features of the two languages". The term 'suprasegmental features' refers to features like stress, accent and intonation (*Routledge Dictionary of Language and Linguistics* 2000: 465). Since the present study will not focus on these finer details of the source and target texts, I exclude suprasegmental features from consideration for now. In contrast, I suggest that it would be beneficial to consider the textual problems a translator may encounter for two reasons. Firstly, it is beneficial because the analysis will deal with lexical, syntactic and textual issues, and secondly, because in my view it is important to take the surrounding text into the consideration during translation and translation analysis. Thus, I suggest that linguistic problems are problems which occur at the lexical, syntactic and textual levels and as such can be directly linked to language itself (see also Nord 2001: 66).

At the lexical level, these problems include for example difficulties in finding a translation for a word in cases where there appears to be a lexical gap in target language, i.e. the target language does not have a word which carries the same meaning as the source language word (Nord 2001: 66). Finding a word which has the same meaning as the source word is further complicated by the fact that a word may have more than one kind of meaning (see e.g. Baker 2000: 12ff). Words may express four kinds of meaning: propositional, expressive, presupposed and evoked meaning

(Baker 2000: 13, derived from Cruse 1986). Propositional meaning refers to the relation between the word and the thing it describes. Expressive meaning covers the tone of the word. It refers to speaker's feelings or attitude; it tells for example if the speaker is pleased or annoyed. Presupposed meaning refers to the tendency of words to appear with certain other words. (Baker 2000: 13-15.) For instance, the word *lazy* refers usually to an animate subject and thus an expression like *a lazy rock* would not normally be used (except in figurative language). This has to do with the selectional restrictions of a language (Baker 2000: 14-15). In English the word *tooth* collocates with *brush* (as in *brush your teeth*) but not with *wash* (compare with Finnish *harjata hampaat*, *pestä hampaat*). This has to do with the collocational restrictions of a language. (Baker 2000: 14-15.) Evoked meaning refers to variation in dialect and register. Register deals with language variation which is caused by the situation (Baker 2000: 15-17). For instance, a person may choose different words to describe the same thing when speaking to a friend or giving a lecture. Given the fact that a word may have four kinds of meaning, finding a translation equivalent for a word may prove difficult.

Since syntax refers to "the grammatical structure of groups, clauses, and sentences" (Baker 2000: 83), linguistic problems at the syntactic level are, in my view, caused by the differences in the grammatical structures of source and target languages. Differences in source and target language word order are a potential source of translation problems (Baker 2000: 110), but there are also other grammar-related issues that may cause problems. A given language has certain notions about whether for example number, gender, shape or time need to be expressed explicitly (Baker 2000: 82). Grammatical choices are obligatory for the most part. Thus, if morphological resources to express number and shape exist in a language, then expressing them is obligatory. If a language lacks such resources, those categories need to be expressed only when they are relevant. (Baker 2000: 84.) Problems arise when the source text does not specify certain details which are obligatory in the target language. For example, Chinese does not use the plural, except for people. If the number of things is relevant, it is expressed lexically. If a Chinese text is translated into Finnish or English, which do distinguish between the singular and the plural, translator has to make up for the missing information. This also works the other way round. When an English text is translated into Chinese, unnecessary

details concerning number can be omitted in translation. These kinds of additions and omissions caused by the differences between grammatical structures may lead to changes in the information content of the target text. (Baker 2000: 84-86.) If a grammatical category does not exist in the target language, it implies that the information in question is optional. If this optional information, which is usually not specified in the target language, is transferred to the translation, the language in the translation seems unnatural. (Baker 2000: 87.) Further, as Baker (2000: 85) points out, "…in translation, grammar often has the effect of a straitjacket, forcing the translator along a certain course which may or may not follow that of the source text as closely as the translator would like it to".

It seems to me that the linguistic translation problems on the textual level could relate to thematic structure, information structure and cohesion. Thematic structure refers to the way themes and rhemes are used in sentences. Information structure refers to the way a text is organized into units of given and new information. (Halliday and Hasan 1976: 27, Halliday 1985: 59.) See also Chapter 3.2.2. (p. 41ff) below for further information on thematic structure and information structure. Cohesion is the relationship between successive sentences (see Chapter 3.1.2 (p. 31) below). Without cohesion a text would not be a text, but just a group of unconnected sentences. (Halliday and Hasan 1976: 28-30, 291.) The target language may prefer certain kind of textual patterns in certain kind of texts and it may use cohesive devices in a different way (Hatim and Mason 1990). Furthermore, the target language may require more or less given information than the source language (Gerzymisch-Arbogast 1993). The translator should be aware of these differences so as to be able to produce a natural-sounding translation in the target language.

Pragmatic and cultural translation problems

Pragmatic translation problems stem from the differences between the target text and the source text situations (Nord 2001: 65). According to Nord (2001: 65), pragmatic translation problems "can be identified by checking on the extratextual factors (sender, receiver, medium, time, place, motive, text function)". Thus, if the situation surrounding the target text is different from the source text situation, it may have an effect on the translation. For example, the target text may be directed at a different

audience, or the audience may be basically the same, but their knowledge level is higher or lower than that of the source text audience.

According to Nord (2001: 66), "*Cultural translation problems* are a result of the differences in the norms and conventions guiding verbal and non-verbal behaviour in the two cultures involved". I think that cultural translation problems may be brought about for example by the differences in the thought processes between two cultures (see Herman 1993: 15) or by different textual conventions. Culture-bound words may also cause problems in translation. For example, in Finland *kesämökki* is a common concept, but in China this concept does not exist. Cultural differences and their effect on technical translation will be discussed further later.

Text-specific translation problems

Text-specific translation problems are ones which arise in connection with a specific source text (Nord 2001: 67). Neologisms and figures of speech belong to this category (Nord 2001: 67). I would like to suggest that translation problems caused by globalisation also belong to the text-specific problems. In my view they belong to this category because these problems may vary from text to text; one text could suffer from terminological inconsistency and another from stylistic fluctuation.

By globalisation I refer to the fact that many companies operate in different countries around the word. It seems to me that globalisation has given rise to a new phenomenon in translation especially in the field of computing. A text may be translated into multiple languages simultaneously, so that the product it belongs to can be released around the globe approximately at the same time. What seems to matter most in this fast developing field is the time to market. Books, software and websites may quickly become outdated, so getting products to the market fast is critical. There may not even be time to finish the product before translators are called in. Thus, translating must often be started before the final version of the manual, software, website or online help has been completed. Translators may only have an access to a fragment of the source text to begin with, which makes it difficult to get an overall picture of the text. Furthermore, the source text is being revised at the same time as the text is being translated, and the corresponding parts of the target text must be revised accordingly. The text must often be edited in a hurry due to

overtly optimistic deadlines and meagre budget. The translation problem is how to create a terminologically sound and natural-sounding translation amid all revisions. I think that this phenomenon, brought about by globalisation, presents new challenges to the translators.

2.1.4 Main objectives in technical translation

In general, the primary goal in translation is to transfer the meaning of the original text using idiomatic target language (e.g. Catford 1965: 20). I see this as the basic requirement in technical translation as well, since meaning is what matters in technical texts and, in my opinion, it cannot be conveyed effectively if the translation 'sounds foreign', i.e. if the target language used is not idiomatic. Many contemporary writers (e.g. Gerzymisch-Arbogast 1993, House 1997, Katan 1999) also emphasise the importance of taking the target culture into account as well when translating, in order to create a translation which is well received in the target linguaculture. I think that in addition to taking account of the differences in words and concepts between the source and target culture, the translator should also consider the textual conventions of the respective cultures.

Technical translation has some special features, which distinguish it from other types of translation. These features seem to overlap with those of technical writing. Firstly, the emphasis in technical translating is on communicating the message of the source text in an accurate manner. Secondly, the translation should be clear and explicit. Finally, concision is valued also in technical translation. Next I will take a closer look at these issues. The aim of the following introduction is to get an idea of what is considered important in technical translation, and to prepare for the analysis part of this study.

Accuracy

In the field of technical translation, for instance Newmark (1988) and Herman (1993) have stressed the importance of conveying the exact meaning. According to Newmark (2001: 47), technical texts call for communicative translation, which "attempts to render the exact contextual meaning of the original in such a way that both content and language are readily acceptable and comprehensible to the

readership." It is noteworthy that Newmark (2001: 47) pays attention not only to the content of the original, but also to the language used in the translation. Herman (1993) also considers that transferring the meaning is very important, and emphasises that creating a semantically accurate translation is a crucial issue in technical translating. Technical translation should carry the meaning of the original over to the translation as accurately as possible, since the primary purpose of technical texts is to transfer information. Thus a single slip in technical translation may result in erroneous information and have serious consequences to the reader (Herman 1993). The importance of correctness in a technical text can best be demonstrated with an example. For instance, a translator is translating a user's manual for a lawn mower and accidentally reverses the order of clauses in a sentence saying *first pull out the spark plug and then clean the blades carefully*, creating a sentence telling the user to first clean the blades and then pull out the spark plug. In the worst case, the lawn mower could start up while the user is cleaning it and cause serious injuries to the user. Although all mistakes in technical texts may not have such grave consequences, this imaginary example nevertheless goes to show how important accuracy may be in technical translation.

The notion of accuracy does not refer only to translating the ideas and technical terms of the source text correctly; it also entails correcting the possible errors of the original, or "... producing an accurate technical document in the target language despite mistakes in the original." (Herman 1993: 18). Factual errors or misstatements should be corrected, not just transferred to the target text (Herman 1993, Reiss 2004: 64). In order to be able to produce an accurate translation, the translator needs detailed knowledge about the subject of the source text. However, despite the competence of the translator, it may occasionally happen that there is more than one way to translate an expression, but no way to determine which translation is the correct one. In case the translator is uncertain about the meaning of an expression in the source text, s/he should tell it to the reader in a footnote. Herman expresses this point promptly: "Non-footnoted guessing is impermissible in a technical translation." (Herman 1993: 18.)

Clarity

Another objective to pursue in technical translation is clarity. In expository texts the emphasis is on transferring unambiguous information. (Herman 1993, Ingo 1990: 42-43, 65.) At their best, expository texts are completely unambiguous (Nykänen 2002: 9-10). An ambiguous expression for example in a computer book may leave the reader perplexed and not knowing what to think or to do next. If the reader cannot understand the information provided, the text does not fill its purpose. Since technical writers and translators are probably aware of the importance of clarity in technical texts, it is likely that they seldom use ambiguous expressions on purpose. Nevertheless, ambiguities may slip into a text inadvertently. The author may not notice them, since s/he usually knows exactly what s/he means, but the translator may not be able to deduce the exact meaning from the context. An often quoted example of an ambiguous sentence is *Flying planes can be dangerous*. Unambiguous information reduces the risk of misunderstanding, whereas ambiguity leaves room for incorrect interpretations of the message. The source and target languages often have different syntactical and lexical features, and thought patterns may also be different (Herman 1993: 13, 17). Thus it may be necessary to recast sentences in order to achieve clarity in target text. (Herman 1993: 13.) As to lexical features, the source language terms may for example be broader in meaning than the terms available in the target language, and it may be necessary to use several terms in order to convey the meaning of the source text. Syntactical differences are essentially grammatical differences between source and target language. For example, the sentence *There are flowers on the table* would most likely be translated into Finnish as *Pöydällä on kukkia*, and not as **Siellä on kukkia pöydällä*. As to thought patterns, the source language may prefer telling the reader the desired outcome of an action first, and giving instructions how to do it after that. The target language may prefer the opposite ordering: first instructions, then the outcome. Thus the translator should re-arrange the sentence to suit the target language thought patterns.

In addition to unambiguousness, clarity can also be thought to refer to the style of a text. The emphasis of technical texts may be on the accuracy of information, but stylistic issues should not be overlooked either. Some writers on the field of technical translation seem to view stylistic issues essential (Wright 1993, Newmark 1981).

Newmark (1981) acknowledges the importance of style in technical translation and states that reading something in stylistics would aid in translating. According to Wright (1993), it is not enough to pay attention to style at word and sentence level, but the style of the entire text should also be considered, keeping in mind the situation (e.g. topic, intention and target audience) outside the text. Wright calls for "stylistically appropriate solutions" in translation which would result in texts that read like original target language texts (Wright 1993: 70). Finnish writers on stylistic issues seem to agree that clarity and readability are of the essence: they say that the style of an exposition should be such that the text is easy to read and understand (Ingo 1990: 179-181, Nykänen 2002: 10-12). Thus it seems that in a technical text - or a technical translation - stylistic clarity may be as important as the accuracy of information.

Yet another point related to clarity and style is that the form of a technical text should not catch the reader's attention (Herman 1993, Nykänen 2002: 10, 138). Thus word plays, alliteration and other things which may shift the reader's focus from the content of the text to the form of the text are not recommended (Herman 1993).

Concision

Concision is yet another important issue in technical translation. The first draft of a translation is often wordy, and needs "an extra pruning step" to achieve concision. (Herman 1993: 17.) Unfortunately the "economic facts of translation life" step into picture here and it is up to each individual translator to decide how much time and effort they put into making the translation concise (Herman 1993: 17). Conciseness seems to be a desirable quality also in Finnish expository texts. According to Nykänen (2002: 138), the writer should leave out of everything the reader already knows, everything that is irrelevant and everything the reader can deduce from the context (see also Rainio 1988: 96). In addition, presenting unnecessary detail and straying from the topic are to be avoided as they often distract the reader (Nykänen 2002: 12). It is also recommended that phrases, clauses and words which do not carry any informational value are left out (Nykänen 2002: 139). In this light, it seems that Finnish technical translations should also be concise.

Cultural considerations

It was mentioned at the beginning of this section (p. 19) that using idiomatic target language is a basic requirement in technical translation. Idiomatic refers here to the typical and natural way of using the target language, such as could be found in original target language texts in the same domain. Thus it is not enough to pay attention to cultural differences on word and sentence level only. If a translated text is to read like an original target language text, then it needs to be translated to suit the textual conventions of the target culture and the preferences of the target audience. As Varantola (1993: 138-139) has argued, technical communication is culture-bound and things cannot be said in the same way in every culture. Finnish readers for example do not use the same reading strategies as American readers. When it comes to word-processing program manuals, for instance, Finnish readers often consider the American writing style naive and longwinded, and they find the information structure difficult to interpret. (Varantola 1993: 138-139.)

Differences in text type conventions between cultures may bring about drastic changes in the target text, even though the source text may be seemingly simple to translate (Wright 1993: 70). In my view, the differences in text type conventions between two cultures could be for example stylistic issues, such as preference of formal style or avoidance of imperatives (see e.g. Gerzymisch-Arbogast 1993). Gerzymisch-Arbogast's (1993) studies provide an example of the changes that may be necessary in translation. Gerzymisch-Arbogast (1993) has found that in the English scientific-technical register there is no clear line between spoken and written modes of language, and everyday speech and colloquialisms are used in scientific-technical texts. Contrary to the English usage, everyday language is not used in scientific-technical texts written in German. (Gerzymisch-Arbogast 1993: 43.) Furthermore, if the English imperatives are transferred into German without restructuring them accordingly, the German reader may be offended, because s/he is told to do things too directly (Gerzymisch-Arbogast 1993: 48). Thus, even though cultural differences may not change the way in which machines or computer programs work, they may cause vast changes in the documentation which comes with them. Some cultural differences which should be accounted for when translating

from English into Finnish will be discussed as necessary in connection with the analysis and discussion in Chapter 5.

In sum, in technical translation, it is desirable to create a pragmatic translation, that is, a translation in which the message is translated as efficiently and clearly as possible, the emphasis being on transferring unambiguous information. However, the stylistic and the cultural issues should not be forgotten either.

2.2 Translation quality assessment

Translation evaluation has long been carried on mainly as a subjective activity, and the criteria used for evaluation have been vague. Outside the academic world subjective approaches are still used, but in recent decades academic translation evaluation has evolved towards increasingly objective approaches. (Hurtado Albir and Martínez Melis 2001: 272-273.) Several proposals for translation quality analysis have been put forward, but few of them have been developed into a practical model of translation analysis and evaluation. According to Hurtado Albir and Martínez Melis (2001: 274), a model which would take textual, contextual and functionalist criteria into consideration and be thoroughly validated "by means of empirical-experimental research" is still missing. There are several different approaches to translation, which each have a different view of translation quality. And since their views of translation quality vary, they also assess the quality of translations in different ways. Approaches to translation quality assessment can be divided into three categories: anecdotal and subjective approaches, response-oriented approaches and text-based approaches (*Routledge Encyclopedia of Translation Studies* 2004: 197-198). Next we will take a look at the different approaches to translation quality assessment in order to determine which approach will be used in the present study.

2.2.1 Anecdotal and subjective approaches

Firstly, anecdotal and subjective approaches treat translation quality subjectively and intuitively (*Routledge Encyclopedia of Translation Studies* 2004: 197). These approaches have been used for hundreds of years by translators and writers, who have passed evaluations of other writer's texts intuitively, without basing them on any solid theoretical framework (House 1997). The quality of translation is thought

to depend on the translator's personal knowledge, intuition and artistic skills (*Routledge Encyclopedia of Translation Studies* 2004: 197). The most recent subjective approach is the neo-hermeneutic approach introduced in the 1990's (*Routledge Encyclopedia of Translation Studies* 2004: 197). The idea of the neo-hermeneutic approach is that the process of understanding and interpreting the source text as well as the production of a translation are individual, creative acts that cannot be systematised or generalised. (*Routledge Encyclopedia of Translation Studies* 2004: 197.) Since each instance of translation is unique, translation rules cannot be developed. Furthermore, producing a good translation is seen possible only when the translator identifies entirely with the source text (House 1997). Although the neo-hermeneutic approach presents the notion of a good translation, it does not explain in detail how translation quality can be assessed (*Routledge Encyclopedia of Translation Studies* 2004: 197). These approaches have been criticised for not considering the source text or the expectations of the target audience (House 1997: 3). Since the anecdotal and subjective approaches do not offer precise guidelines for translation quality assessment, they are not considered suitable for the purposes of the present study.

2.2.2 Response-oriented approaches

The second category entails response-oriented, behavioural approaches to translation quality assessment. According to House (1997), these approaches have been proposed for example by Nida (1964), MacNamara (1967) and Nida and Taber (1969). The main concern of the response-oriented approaches is dynamic equivalence between the source and target text. A text is seen to be dynamically equivalent if the recipients of the source and target text respond to the text in a similar manner (House 1997: 4-6). However, the level of dynamic equivalence is difficult to measure. Different sets of criteria for optimal translation have been proposed, but the suggested tests do not seem to implement the criteria in full (House 1997: 5). Nida and Taber (1969) have, for example, proposed the use of a cloze technique, back-translation and read-aloud tests as viable tests for determining the level of dynamic equivalence in the target text (Ingo 1990: 278-279). Back-translation means that the translation is tested by translating the target text back into source language (Ingo 1990: 278-279). In cloze technique, readers receive a

translated text in which some of the words have been deleted and they are then asked to fill in the gaps. If the predictability of the text is high, it is easier to understand and it is more probable that the reader is able to guess the missing words correctly (House 1997: 4-5). There are two types of read-aloud tests. In the first one, a translation is read aloud to a test subject, who will then explain the contents of the text to other persons. In the second type of read-aloud test, test subjects read a translation aloud, and if they have any difficulties, it shows that those parts of the text contain translation problems. (House 1997: 5.)

The response-oriented approaches have been criticised for a number of deficiencies. For example, they tend to ignore the source text, and thus they cannot tell anything about the relationship between the source and target text (House 1997: 5-6). The form and meaning of the translation are not properly compared with the source text (Ingo 1990: 278-279). Furthermore, tests which employ expert judges take unspecified criteria for granted, so there is no way of knowing what the criteria used in the assessment actually are (House 1997: 5-6). These approaches are also dismissed in the present study on the grounds that the criteria for the translation evaluation seem too vague, and the tests which have been suggested seem incomplete in that they do not take the source text into account. Furthermore, the tests are somewhat difficult to conduct in the present circumstances.

2.2.3 Text-based approaches

The third group, text-based approaches to translation quality assessment, can be divided into approaches which draw on linguistics, comparative literary studies or functional theories of translation (*Routledge Encyclopedia of Translation Studies* 2004: 198). The linguistically-based approaches compare pairs of source and target texts, aiming at finding "syntactic, semantic, stylistic and pragmatic regularities of transfer" (*Routledge Encyclopedia of Translation Studies* 2004: 198). Theorists among the linguistically-based approach include for example Reiss (1971), Wilss (1982) and Newmark (1981, 1988).

The second group of text-based approaches are the approaches based on comparative literature. One of the best-known advocates for these approaches is Gideon Toury.

These approaches assess the quality of a translation with respect to the target language literature (*Routledge Encyclopedia of Translation Studies* 2004). The source text is not considered important in general, nor is it usually used when a translation is evaluated, although some researchers make exceptions (*Routledge Encyclopedia of Translation Studies* 2004). The problem with these approaches is the lack of evaluation criteria for translation quality assessment.

The third group of the text-based approaches includes approaches based on functional models of translation. Probably the most famous of these approaches is Reiss and Vermeer's (1984) skopos theory. Skopos theory considers that the most important issue in translating is the purpose of the translation, i.e. skopos (*Routledge Encyclopedia of Translation Studies* 2004: 235-237). The translation is evaluated on the basis of how well it is adapted to the target culture norms and target language norms (*Routledge Encyclopedia of Translation Studies* 2004: 235-238). Although this approach has been very influential, it too has some problems. The main problem is that it has not been clearly defined how the skopos of a translation can be assessed *Routledge Encyclopedia of Translation Studies* 2004: 198-199). Furthermore, focusing on the skopos also plays down the importance of the source text, considering it only as a source of information (*Routledge Encyclopedia of Translation Studies* 2004: 198-199).

2.2.4 The approach to translation quality assessment in the present study

Since the primary purpose of this study is not to develop a new method for translation quality assessment, the approach which will be selected here needs to provide somewhat precise guidelines for translation quality assessment. The anecdotal and subjective approaches do not seem to provide any definite set of criteria for translation quality assessment, and neither do the response-oriented approaches. Furthermore, the response-oriented approaches focus on target text and more or less forget the source text. I find this difficult to accept, because in my view a translation should be assessed in relation to the source text, in order to better understand the translation choices in the target text. The main problem with the text based approaches is that in many cases the models for translation quality assessment have not been developed far enough, and they do not explicate how the assessment is

carried out in practise. However, among the text based approaches there are some models which present both the criteria for translation assessment and the way the model can be used in practise. Such models have been proposed by House (1977, 1997) and Gerzymisch-Arbogast (1994). Gerzymisch-Arbogast's (1994) model might suit to the purposes of this study, but it is only available in German. That causes insurmountable difficulties to the present author, and the model must therefore be abandoned. Thus, House's (1997) model for translation quality assessment is chosen as the methodology which will be used in this study. The model will be explained in detail in Chapter 3.

3 HOUSE'S MODEL FOR TRANSLATION QUALITY ASSESSMENT

House (1997) discusses three issues which she considers important in translation evaluation. The first of them is the relationship between the source and target text. The second is the relationship between texts (or features of the texts) and the persons involved with them (author, translator, recipients) as regards how they perceive the texts. The third issue is the implications these relationships carry for determining which texts are translations and which belong to other texts. These questions are the starting point for House's (1997) model for translation quality assessment, and she considers these issues crucial to any approach dealing with translation evaluation. (House 1997: 1-24.)

3.1 Theories behind the model

House's model draws on pragmatics, functional and systemic linguistics, register theory, stylistics, discourse analysis, the notion of equivalence and the concepts developed in the Prague school of language and linguistics (House 1997: 29). In particular, the model draws on Halliday's (1973) view of the functions of language, as well as Crystal and Davy's (1969) situational dimensions of texts. In the following, I will first take a look at Halliday's functions of language and then move on to Crystal and Davy's situational dimensions, so as to explain the main theories and concepts behind House's model.

3.1.2 Halliday's language functions

Some theories entertain the view that language is a question of knowing. In Halliday's systemic-functional theory language is seen primarily as doing and social activity, and as such dynamic in nature (Pääkkönen and Varis 2000: 103). A central part of this activity is linguistic selection, which is done at all levels of a language system. This means that in any given situation there exists a group of expressions which can be used to convey meaning. From that group the language user chooses the expression s/he finds appropriate. The choice is made on the basis of language user's experiences, values and beliefs. (Pääkkönen and Varis 2000: 103.) Furthermore, the situation affects the way meaning is expressed (Halliday and Hasan

1976: 28). For example, if a person is dissatisfied with the behaviour of a child s/he might scold the child by saying “Naughty boy!”, but s/he probably would not use the same phrase to criticise a co-worker.

Halliday divides the ways in which people use language into three groups. According to Halliday and Hasan (1976: 26-27), the functions of language include the ideational, interpersonal and textual function. Firstly, the ideational function deals mostly with denotation, and it refers to the way we use language to “organize, understand and express our perceptions of the world and of our own consciousness” (Bloor and Bloor 2001: 9). The ideational function has two subfunctions, the experiential and the logical. The experiential part deals with the representation of experience, and the logical part is concerned with logical relations which are not directly drawn from experience (Halliday and Hasan 1976: 26). In other words, the experiential part deals with ideas or content, whereas the logical part is concerned with logical relations between the ideas (Bloor and Bloor 2001: 9).

The second language function, the interpersonal function, refers to how we use language to communicate with other people, assume roles, and express and understand attitude and feelings (Bloor and Bloor 2001: 9). It focuses, for example, on the relationship between a speaker and a listener. The interpersonal component “is concerned with the social, expressive and conative functions of language, with expressing the speaker’s ‘angle’: his attitudes and judgements, his encoding of the role relationships in the situation, and his motive in saying anything at all.” (Halliday and Hasan 1976: 26-27).

Finally, the textual function refers to the way language relates to the situation and the way language is used to connect things which are said or written to the real world (Halliday and Hasan 1976, Bloor and Bloor 2001: 9). The textual function entails the resources language has for text creation, in the sense that the text is “operationally relevant, and cohering within itself and with the context of situation” (Halliday and Hasan 1976: 27). According to the Hallidayan view, the textual component deals for example with thematic structure, which refers to how the speaker uses themes and rhemes in sentences. Theme covers the facts which are known, given in the context or taken for granted, and it does not carry much new information. Rheme contains the new information of an utterance. The textual component also includes the

information structure, which means the way a text is organized into units of Given and New information. Given information is information which the speaker presents as something the listener already knows. New information is information which the speaker assumes to be new, unexpected or important to the listener. The Given-New distinction operates independently above clause or sentence level. (Halliday and Hasan 1976: 27, Halliday 1985: 59.) The textual component also deals with cohesion. According to Halliday and Hasan (1976: 27), cohesion "is the means whereby elements that are structurally unrelated to one another are linked together, through the dependence of one on the other for its interpretation". Unlike information structure, cohesion is not a form of structure but means for relating elements of text to one another. However, information structure and cohesion are related to one another and overlap at some point. Without cohesion a text would not be a text, but a group of unrelated sentences. Cohesion is the linguistic means by which we bind the sentences together, creating a text, which is a single meaningful semantic unit, a "supersentence" (Halliday and Hasan 1976: 28-30, 291). Text, or supersentence, can be identified by searching for certain properties of cohesive relationships between words and sentences. These properties include reference, substitution, conjunction and ellipsis. (Halliday and Hasan 1976.) Usually when we read sentences, we can intuitively distinguish a text from a group of sentences by the way ideas develop from one sentence to another. We have learnt how cohesion is used in our language, and we expect that texts employ cohesive measures correctly. The cohesive measures and the amount of cohesion required may vary from one language to another, which has implications on translating. (Hatim and Mason 1990, Bloor and Bloor 1995.)

In the systemic-functional theory text is seen as a realisation of the three functions of language (Bloor and Bloor 2001: 9-10). Thus a thorough sentence and text analysis presupposes that all these three levels of language are taken into account (Pääkkönen and Varis 2000: 103). In grammatical description these three language functions are described by different terminology: transitivity system corresponds to the ideational function, modality system to the interpersonal function and thematic system to the textual function (Pääkkönen and Varis 2000: 103).

The purpose of this brief introduction to the language functions was to explain some Hallidayan notions in order to pave the way for the introduction of House's (1997)

model for translation quality assessment. For the same reason I will next take a look at Crystal and Davy's (1969) situational dimensions of texts.

3.1.3 The situational dimensions of texts

House's model contains several categories, which are based on Crystal and Davy's (1969) system of the situational dimensions of texts. Crystal and Davy break the notion of situation into dimensions of situational constraint (a.k.a. situational dimensions or variables) (Crystal and Davy 1974: 64). They divide situation into three groups which contain eight situational dimensions altogether. The first group contains individuality, dialect and time; the second group contains discourse which is further divided into medium and participation; the third group contains province, status, modality and singularity. (Crystal and Davy 1974: 66.) The following overview of the situational dimensions of texts is based on Crystal and Davy's book *Investigating English Style* published in 1969 (repr. 1974).

As to the first group, individuality refers to certain features which occur in a person's unselfconscious utterance and which identify the person as an individual and distinguish him/her from other users of the same language. These features include for example the pet words the person uses. Dialect entails features which indicate a person's place of geographical origin (regional dialect) or his location on a non-linguistically based social scale (class dialect). Time includes the features of utterance which indicate the time when the utterance was produced. These three situational dimensions (individuality, dialect and time) are relatively permanent. As such, they are background features which are stylistically less interesting than the others because they do not usually vary much. (Crystal and Davy 1974: 66-68.)

The second group of situational dimensions contains discourse. Discourse entails two variables: medium and participation (Crystal and Davy 1974: 68). Medium refers to the difference between speech and writing (Crystal and Davy 1974: 69). The distinction between the spoken and written language, speech and writing respectively, is noteworthy because each involves a different descriptive framework. From the situational point of view, there are functional differences between the two, for example speech is relatively transient whereas writing is relatively permanent;

speech implies personal contact of some kind, whereas writing usually does not (Crystal and Davy 1974: 69). Spoken language is usually meant to be heard and written language is often written to be read. These two types (spoken to be heard and written to be read) belong to the simple medium. (Crystal and Davy 1974: 69.) Participation**,** the second variable under discourse, refers to the difference between monologue and dialogue, a distinction resulting from the nature of participation in a language event (Crystal and Davy 1974: 68-69). Monologue is an "utterance with no expectation of a response" and dialogue is an "utterance with alternating participants, usually, though not necessarily, two in number" (Crystal and Davy 1974: 69). Other, mixed types of medium and participation also exist. They are called complex medium and complex participation respectively. (Crystal and Davy 1974: 70-71). An example of a complex medium would be a text which is written to be spoken.

The situational dimensions in the third group "refer to relatively localised or temporary variations in language, and provide the central area of stylistic study" (Crystal and Davy 1974: 71). Firstly, province is a dimension describing linguistic features and extra-linguistic variables which relate to the occupational or professional activity the person is engaged in. The features of province do not depend on the personality of the participants. The idea is that the linguistic forms a speaker uses depend on her/his occupational role. This and other dimensions (especially status and modality) form the stylistic basis of any language variety. Examples of province can be found in the language of public worship, advertising, or law. These contexts each have an intuitive coherence and identity, which can be defined in non-linguistic terms. All provinces may not have equally clear extra-linguistic correlates. (Crystal and Davy 1974: 71.)

Status, the second situational dimension in the third group, describes the systematic linguistic variations which correspond to the variations in the relative social standing of the participants, their physical location notwithstanding. (Crystal and Davy 1974: 73-74). The semantic field under status is complex, involving "a whole range of factors related to contacts between people from different positions on a social scale", i.e. factors associated with notions such as formality, informality, respect, politeness, deference, intimacy, kinship relations, business relations and hierarchic relations in general (Crystal and Davy 1974: 74). The next dimension in this group is modality.

The term modality is used here in a different sense than in systemic-functional linguistics. According to Crystal and Davy (1974: 74), modality is a dimension describing linguistic features which are related to the purpose of an utterance. Language user chooses a certain set of linguistic features on the basis of the purpose of her/his utterance, and produces a conventional utterance. Language user can make her/his choice regardless of status, occupational or professional role (i.e. province). (Crystal and Davy 1974: 74.) For example, in scientific English a person could write up a topic in the form of a lecture, report, essay or textbook (Crystal and Davy 1974: 75). Modality differences can cut across provinces (there can be a commentary about sport or cooking etc.) or occur within a province. (Crystal and Davy 1974: 75-76.)

The final situational dimension, singularity, covers features which are personal and occasional in nature. This is the only dimension which takes linguistic idiosyncrasy into account. Singularity features are typically short, temporary and they can be manipulated. They are often deliberately introduced into a situation to make a specific linguistic contrast. Singularity can also be thought as the style of a single author, style referring in this case to the linguistic features peculiar to the author. Crystal and Davy (1969) prefer talking about singularity, to avoid the overgeneral implications the word ‘style’ has. Singularity differs from individuality in that the features of individuality are relatively continuous, permanent, non-linguistic and difficult to manipulate, unlike the features of singularity. (Crystal and Davy 1974: 76.) Dividing textual features into singular and individual features presupposes that the analyst is familiar with other texts the language user has produced (Crystal and Davy 1974: 76-77).

Crystal and Davy (1969) emphasise that these dimensions are hypothetical in nature and may not cover all the necessary constraints. The writers also point out that a language has stylistically neutral linguistic features which all utterances in that speech community share to some degree. Situational dimensions do not have any effect on those features, and they are not stylistically significant, but it is necessary to be aware of them in order to be able to leave them out of stylistic analysis. In English, for example, the existence of concord between subject and verb is not stylistically significant, and neither is the fact that the article comes before the noun. However, if some neutral features are used in a text more than in texts in general,

these features are stylistically significant due to their frequency of occurrence. (Crystal and Davy 1974: 65).

This completes the review of the two basic theories behind House's model. Other relevant theories and concepts will be discussed later should the need arise. Next I will move on to Juliane House's model for translation quality assessment.

3.2 The model for translation quality assessment by House (1997)

House (1997) created the revised model for translation quality assessment on the basis of her earlier model published in 1977 which was developed for situational-functional text analysis and translation assessment. The model which will be used in the present study is the revised version, published in 1997.

The revised model adopts some of Crystal and Davy's categories (see situational dimensions above), categories which House created for her original model and some Hallidayan concepts (House 1997: 107). The revised model aims at generating a statement of the functional equivalence between the source and the target text, based on linguistic-pragmatic evidence. Before functional equivalence can be established, texts must be appropriately analysed. House (1997: 37) recommends that the source text is analysed prior to the translation. The reason for this is that only the source text analysis can give a precise idea of the equivalence which is to be searched for in the translation (House 1997: 37). The source text analysis results in a statement of the individual textual function of the text (House 1997: 110). In the following, I will first look into individual textual function and then describe the register categories (field, tenor and mode), and finally move on to genre.

3.2.1 Individual textual function

The model entertains the view that each text has an individual function which can be established through analysis. House calls it 'individual textual function' (i.e. the function of an individual text) and defines it as "the application or use which the text has in the particular context of a situation."(House 1997: 36). Establishing the function of an individual text requires that the text's textual profile is characterised by "...a systematic linguistic-pragmatic analysis of the text in its context of situation"

(House 1997: 36). The analysis of a text is thus finished off with the statement of the individual textual function of the text. The statement consists of an interpersonal and an ideational functional component, and it is derived from the register and genre analysis. (House 1997: 110.)

In the definition of the individual textual function above, "the particular context of a situation" (House 1997: 36) refers to the "immediate environment of a text", or "the context in which the text unfolds" (House 1997: 37). In other words, context of situation refers to things which are happening or prevalent outside the language, in the 'real world', and which have an effect on the text. Context of situation is a part of every text. House quotes Halliday (1989), saying that the context of a situation

> …"is encapsulated in the text, not in a kind of piecemeal fashion, nor at the other extreme in any mechanical way, but through a systematic relationship between the social environment on the one hand, and the functional organisation of language on the other". (Halliday 1989: 1, reported in House 1997: 37)

A distinction worth keeping in mind is that between the function of an individual text and the language functions. A given text may contain all the language functions, one of them being usually stronger than others, but it has only one individual textual function (see Chapter 3.1.2 for more details on language functions). Thus, language functions exist inside the individual textual function.

Next I will look into the way the individual textual function relates to register categories and situational dimensions of texts. As mentioned above, the situation surrounding a given text is unique in nature. Since each text is enveloped in one-of-a-kind situation, the situation surrounding the text should also be considered in analysis. However, the notion of situation is such a large entity, that it must be divided into parts which are easier both to grasp and to analyse. For this end, House adopted Crystal and Davy's (1969) system of situational dimensions as a starting point and modified it to better suit to translation assessment (House 1997: 37-39) (see Chapter 3.1.3 above for more details on Crystal and Davy's situational dimensions). House divides situation into "features of the context of situation", or "situational dimensions" which she places under the Hallidayan register categories of Field, Tenor and Mode for the most part, except for the features which she includes

in the category of Genre (House 1997: 37). Next, I will take a closer look at the register categories and the situational dimensions in them.

3.2.2 Register categories: field, tenor and mode

As mentioned in Chapter 2.1.3 (p. 16), register refers to functional language variation. Thus, register deals with how meanings are conveyed through words, grammatical constructs and textual choices in a particular situation. The aspects of a situation bearing linguistic consequences are field, tenor and mode.

House defines field in the following manner**:** "Field refers to the nature of the social action that is taking place, it captures 'what is going on', i.e., the field of activity, the topic, the content of the text or its subject matter." (House 1997: 108). House divides lexical items into 'specialized', 'general' and 'popular' on basis of their generality or specificity. Field corresponds to some extent to Crystal and Davy's 'Province'. (House 1997: 108.) Thus, the register category of field deals with the subject matter and social action of a text. Since House's (1997) model does not seem to differentiate subject matter and social action into separate situational dimensions, I will use the name Field of the situational dimension in this register category.

Tenor (House 1997: 38-42, 108-110) deals with the participants of the transaction, their relationship in regard to social distance and social power, and also with the emotional atmosphere surrounding the addresser and addressee. It contains the following situational dimensions: the author's provenance and stance, social role relationship and social attitude (House 1997: 110). The first situational dimension, author's provenance, includes the author's temporal, social, and geographical provenance (House 1997: 108-109). Author's temporal provenance corresponds to Crystal and Davy's dimension 'Time', which refers to features of a text which reflect the time when the text was written. The author's social and geographical provenance corresponds to Crystal and Davy's dimension 'Dialect'. (House 1997: 38-42, 108-109.) The author's social provenance refers to the author's "position on a social scale", realised by social dialect (House 1997: 38). A text produced by an educated middle class speaker is considered unmarked by House (1997: 38). Geographical provenance refers to features of a text which indicate where the writer is from.

Geographical provenance is realised by regional dialect and the national standard language is considered the unmarked case (House 1997: 38-42, 108-109). The second situational dimension under tenor, author's stance, contains author's personal stance, in other words her/his intellectual and emotional position in relation to the content of the text and in relation to her/his communicative task. This dimension corresponds to Crystal and Davy's (1969) dimension 'Individuality'. (House 1997: 38-42, 108-109.) The third situational dimension, social role relationship, is partly related to Crystal and Davy's dimension 'Status'. Social role relationship contains "the role relationship between addresser and addressees" (House 1997: 41). It can be detected in the linguistic choices made in the text which indicate the way the writer treats the reader. The writer may for example treat the reader as an equal or as someone in an inferior position. Social role relationship can be divided into symmetrical and asymmetrical relationships. If the social role relationship is symmetrical, evidence of solidarity or equality can be found in the text. However, if the relationship is asymmetrical, some sort of authority is present in the text. During the analysis of a text both the rather permanent position role (e.g. teacher) and the transient situational role (e.g. speaker at a certain situation) should be considered. (House 1997: 38-42, 108-110.) The last situational dimension under tenor, social attitude, deals with "the degrees of social distance or proximity resulting in relative formality or informality" (House 1997: 41). Social attitude is viewed on the scale formal – consultative – informal (House 1997: 109). Formal texts are elaborate, they use formal lexical items, and the reader participation is minimal. Informal style uses contractions (e.g. *I'm*, *don't*) and lexical items which can be considered informal. Consultative style is the most neutral style. It lacks markers of both formal and informal style. (House 1997: 41-42.)

Mode refers both to the channel through which the message is sent (spoken/written) and to the level of participation between the addresser and the addressees (House 1997: 109). The category of mode contains situational dimensions medium and participation, which correspond to the two parts of Crystal and Davy's parameter 'Discourse'. Medium is divided further into two parts: simple and complex. (House 1997: 38-40.) Simple medium contains texts that can be classified as "written to be read", or "spoken to be heard", in other words, texts where language keeps to one medium. Complex medium refers to texts which switch medium. Such a switch

occurs for example when a written text is spoken. Complex medium includes texts which can be described as “to be spoken as if not written”, “to be spoken” and if the text is not necessarily to be spoken it may be meant “to be read as if heard”. (House 1997: 38-40.)

The second situational dimension under mode is participation. Participation is divided into simple (monologue without addressee participation) and complex participation (text elicits addressee involvement). (House 1997: 39-40, 109.) For example, if a text does not involve the reader in any way, it is a monologue and thus it can be said that the participation in the text is simple. Participation is complex if a text has reader-involving features. Complex participation differs from simple participation linguistically in that texts with complex participation use for example pronouns and exclamations and they also switch frequently between different sentence patterns (declarative, imperative, interrogative) (House 1997: 40, 109.)

House uses Biber’s (1988) oral-literate dimensions to describe whether texts veer towards the spoken or the written medium (House 1997: 109-110). According to House (1997: 109), Biber has suggested that medium may be reflected in the linguistic choices of the addresser. The first dimension is ‘Involved’ vs. ‘Informational Text Production’, the second is ‘Explicit’ vs. ‘Situation-Dependent Reference’ and the third dimension is ‘Abstract’ vs. ‘Non-Abstract Presentation of Information’. Along the first dimension, written genres are at the ‘Informational Text Production’ end of the continuum while spoken genres are closer to the ‘Involved Text Production’ end. Along the second dimension, spoken genres contain ‘Situation Dependent Reference’, whereas written genres tend to use ‘Explicit Reference’. Along the third dimension, spoken genres do not carry much ‘Abstract Information’, whereas written genres use it in abundance. (Biber 1988, reported in House 1997: 109-110.) Although Biber’s dimensions describe differences between written and spoken genres, it cannot for example be claimed that all written texts have certain features, because texts may borrow features of spoken language, resulting in atypical discourse, such as described by complex medium and complex participation. (House 1997: 109-110.) After this short description of the register categories and the situational dimensions of texts in them, it is time to take a look at how the dimensions are realised in texts on the textual level.

Focusing on written texts, House's model (House 1997) analyses syntactic, lexical and textual means used in a text as to each of the situational dimensions. All these means may not always be at work on every situational dimension (House 1997: 43-44), so that every text does not necessarily always contain syntactic, lexical and textual means on every situational dimension. When House's model was first published, it differed from other contemporary models in that it included textual means in the analysis (House 1977, 1997: 44). The 1997 model also takes textual means into consideration. Next I will take a look at the textual aspects which realise the situational dimensions.

Textual aspects refer to the information structure of a text and the cohesive devices which are used to create a coherent text. The main textual aspects are theme-dynamics, clausal linkage and iconic linkage (House 1997: 44-45). Theme-dynamics has two parts. According to House (1997),

> Theme dynamics charts the various patterns of semantic relationships by which 'themes' recur in texts (e.g. repetition, anaphoric and cataphoric reference, pro-forms, ellipsis, synonymy, and near-synonymy) and takes account of 'functional sentence perspective'… (House 1997: 44).

As to the first part of theme-dynamics, repetition, anaphoric and cataphoric reference, pro-forms, ellipsis, synonymy and near-synonymy belong to the cohesive devices which may be used in a text (House 1997: 44). I would also count antonymy and enumeration in this group. These devices link sentences to each other and contribute to the text, creating a meaningful whole. Repetition refers to repeating a word or an expression. Anaphoric reference means using a word or other linguistic element to refer to an element used earlier in the same or another sentence, whereas cataphoric reference is used to refer forward (*Oxford Concise Dictionary of Linguistics* 1997). Pro-forms are pronouns, pro-verbs and other pro-forms which can be used to make explicit reference back to a previous form. Ellipsis refers to omitting words which are supplied by the context. Synonymy refers to two or more words which share the same meaning, whereas antonomy refers to words that have opposite meanings. (*Oxford Concise Dictionary of Linguistics* 1997.)

The second part of theme-dynamics is the functional sentence perspective (House 1997: 44). It refers here to the two basic parts of an utterance, theme and rheme (for definitions, see Chapter 3.1.2, p. 29ff). The theme-rheme distribution is mainly realised with word order: in normal, unmarked speech the theme comes before the rheme and in emotive speech the rheme comes before the theme. (House 1997: 44.) It should be noted that this interpretation of theme and rheme is slightly simplistic, since it equates thematic structure with information structure. In contrast, some linguists separate theme and rheme (topic-comment) from Given and New information, thus separating thematic structure from information structure. In that case, the theme is thought to contain the topic of a sentence, followed by what is said about that topic (rheme) (e.g. Hatim and Mason 1990). Given and New information refer to what is already known to the speaker and what can be considered as new information respectively (e.g. Hatim and Mason 1990). However, in the present study the simplistic interpretation seems to be enough for the purposes of analysis, since it seems that separating the two notions would not bring any notable benefit to the analysis.

The second textual aspect is clausal linkage. It contains the logical relations that exist between clauses and sentences in a text, e.g. additive, causal, explanatory, illative or alternative relation. (House 1997: 44.) Since House (1997) does not explain in detail how the different relations are realised in texts, I must turn to other resources. Thus, in the present study clausal linkage is thought to include a number of transitions (see e.g. Kies 2005). Transitions refer to occasions where a conjunction or a conjunctive adverb is used to "link sentences with certain logical relationships" (Kies 2005). Transitions include identity, opposition, cause and effect, addition, concession, exemplification and indefinites. Identity expresses sameness (e.g. *that is*), opposition expresses contrast (e.g. *but*, *however*, *whereas*), addition refers to continuation (e.g. *and*, *also*, *moreover*) and concession expresses "willingness to consider the other side" (e.g. *admittedly*, *of course*, *naturally*) (Kies 2005). Cause and effect refers to words or expressions that signal cause and effect, such as *therefore*, *because*, *as a result*. Exemplification indicates that an example or a more specific idea follows, e.g. *for example*, *in fact*, *indeed*. Indefinites indicate "a logical connection of an unspecified type" such as *now*, *indeed*. (Kies 2005.) This terminology related to transitions will be used in the analysis.

Iconic Linkage is the third and final textual aspect realising the situational dimensions. It is also known as structural parallelism. It takes place when "two or more sentences in a text cohere because they are, at the surface level, isomorphic"(House 1997: 45). Thus iconic linkage refers to cases where two sentences have a seemingly similar structure. Now that the register categories have been discussed from top to bottom, I will move on to genre.

3.2.3 Genre

Register refers to the context of situation, whereas genre refers to the context of culture. Genre can be viewed from several different angles, including linguistic, sociological, psychological and literary points of view and the term has many definitions. Bhatia (1993) defines genre as

> …a recognisable communicative event characterized by a set of communicative purpose(s) identified and mutually understood by the members of the professional or academic community in which it regularly occurs. Most often it is highly structured and conventionalised with constraints on allowable contributions in terms of their intent, positioning, form and functional value. (Bhatia 1993: 13)

Texts can thus be intuitively recognized as belonging to certain genres. Bhatia (1993) also remarks that although in principle a writer can use her/his linguistic resources in any way s/he likes, in practice the writer tends to comply with the demands and limitations imposed by the genre.

House (1997: 107) defines genre for the model as follows: "genre is a socially established category characterized in terms of occurrence of use, source and a communicative purpose or any combination of these". A text could belong for example to the genre of children's book, autobiography or academic text (House 1997). In House's model, genre is a category which links Register and Individual Textual Function. (House 1997: 107). Genre operates on the level of discourse structure. Readers are able to identify texts as belonging to certain genres on basis of their knowledge of texts. (House 1997: 107.) Since this study does not attempt to conduct an extensive genre analysis, the genre of a text will be described on basis of this intuitive knowledge. Thus I think that this cursory glance at genre will suffice for the purposes of the present study.

3.2.4 The complete model

The complete model for translation quality assessment can be seen below. House (1997: 108) presents a figure of the revised model, on basis of which the figure 1 below has been drawn.

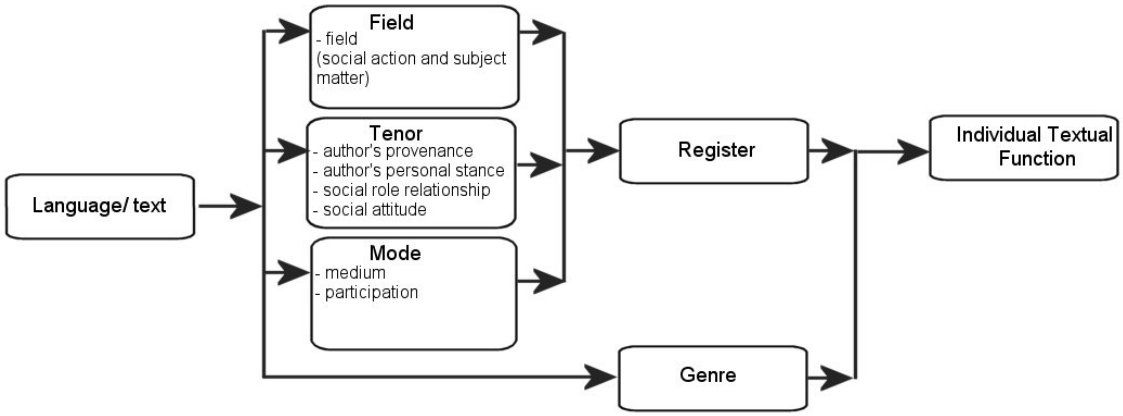

Figure 1. House's revised model for translation quality assessment.

Figure 1 shows the basic structure of the model. In sum, the model divides Language/text into Field, Tenor and Mode, which together form the Register. Register and Genre make up the Individual Textual Function.

3.2.5 More key concepts of the model: overt and covert translation and cultural filter

House (1997) divides translations into two major translation types: overt translations and covert translations. Covert translations can pass as original texts whereas overt translations cannot, because they are heavily bound to source language culture and society. A covert translation can and should preserve the function of the source text. It has a similar purpose and audience as the source text. (House 1997: 69, 111-114.) Thus, I would say that most contemporary technical texts, such as user guides and technical reports, call for covert translation. Overt translation cannot reach an equivalent function to the source text, because the new recipients live in a different cultural environment and possibly at a different period of time (House 1997: 111-115). For example, if Shakespeare's *Hamlet* was translated into Finnish, the translator would probably opt for overt translation and keep the original names for places and persons intact instead of replacing them with Finnish names.

Overt translation 'looks' like a translation. In overt translation, the translator can offer explanatory notes to the target readers when necessary, and readers know they are reading a translation (House 1997: 69). Texts which call for overt translation are texts which have certain worth or status in the source culture. Overt translation cannot have functional equivalence, as House remarks:

> …a **direct** match of the original function of the source text is not possible in *overt* translation, either because the source text is tied to a specific non-repeatable historic event in the source culture...or because of the unique status (as a literary text) that the source text has in the source culture. (House 1997: 67, emphasis original)

Instead of matching the original function of source text, the translator should try to match the secondary level function, that is, a function which embraces the contemporary addressees in the source culture, who are not the original addressees of the text either (House 1997: 68). The secondary level function can be used as a criterion for translation evaluation of an overt translation.

Covert translation mirrors the source text's function in a different cultural setting (House 1997). Covert translation "is translation which enjoys the status of an original source text in the target culture" (House 1997: 69). Covert translation has no pragmatic markers which would disclose that it is a translation. Moreover, the source text of covert translation is not tied to the source language and culture in any particular way. Instead, the source text is as relevant to the source language addressees as its translation is to the target language addressees. Source texts calling for a covert translation are texts whose original function can and should be kept equivalent in the translation. These texts include e.g. scientific texts, tourist information booklets, journalistic texts, etc. (House 1997: 69.) House also points out that "functional equivalence is, however, extremely difficult to achieve because differences in the socio-cultural norms of the two linguacultures have to be taken into account, and a *cultural filter* must be applied" (House 1997: 75, emphasis original). In other words, in covert translation the translator must also take the target culture into consideration. (House 1997: 70.)

In the context of cultural filter, a definition of the notion 'culture' is needed. House defines culture as "a group's dominant and learned sets of habits, as the totality of its non-biological inheritance involving presuppositions, values, and preferences"

(House 1997: 70). This definition is also embraced in the present study. According to House (1997: 70), the translator should apply a cultural filter in covert translation in order to achieve functional equivalence. Applying a cultural filter means that the translator must view the source text through the eyes of a target culture addressee and make allowances for cultural differences by using this 'cultural filter' between source text and translation. (House 1997: 70.) The cultural filter thus refers to the knowledge of the cultural differences between the source and target culture. Since language and culture are in my view inextricably intertwined, I will include lexical, syntactic and textual differences and preferences between two languages in those issues which may call for cultural filtering. According to House (1997: 73) cultural filter should be used with care, since if the translator applies cultural filter based on a false assumption of a cultural difference, the resulting translation may contain mismatches compared to the original. It is not only the use of a cultural filter that should be justified; also the analysis of the cultural filtering used in a translation should be justified by the results of contrastive pragmatic research. (House 1997: 73.) Unfortunately, there is a lack of objective research results on this area (House 1997: 75). A precious little contrastive pragmatic research has been conducted on the English-Finnish language-pair, especially in the field of computing. The present study will thus resort to research done on other expository texts. Issues related to cultural differences will be discussed during the analysis as they come up.

4 THE SET-UP OF THE PRESENT STUDY

In this chapter I will introduce the aims of the present study, the data selected as well as the analytic methods used in this study.

4.1 Aims

The main aim of the present study is to find out what the quality of Finnish computer programming book translations is like. In addition, I hope to discover whether the translations conform to the Finnish textual conventions, and if there are certain source text features which often cause problems to translators. The motivation for choosing this topic was the lack of research on the quality of Finnish computer programming book translations. My interest in this topic was initially triggered by IT-professionals who claimed that it is best to read original English books because Finnish translations of computer books are of dubious quality.

This study attempts to shed light on the quality of Finnish computer programming guide translations and the potential problems in translation in order to provide information about these issues to both translators and students, so that they would be aware of the potential problems relating to the translation quality. I think that such information could be of great help in creating high-quality translations. This study does not attempt to find or define a perfect translation, because there is no such thing. The reason for this is that a text or even a single sentence can be translated in several different ways and the resulting translations can be equally good in terms of conveying the original message to the reader in a natural target language.

4.2 Data

The material used in this study consists of three source text and three target text samples taken from three American computer programming guides and their Finnish translations. The programming guides were chosen rather randomly, on basis of what was readily available at the time the present study was undertaken. The main problem in finding computer programming books for data was that most books were published either in English or in Finnish. If a book was translated into Finnish, its English original was generally not imported into Finland. The three books chosen for

analysis were basically the only ones that both filled the criteria described below and could easily be obtained both in English and in Finnish at the time. There were three criteria the source books had to fulfil. Firstly, the source book had to deal with computer programming. This criterion was set so that the texts would be comparable with each other. Secondly, the English version of the book had to be written by a native English speaker, to guarantee that the source text the translator had worked with was idiomatic English. This criterion was set in the hope that it would give all translators approximately the same starting point. Thirdly, the translation of the book had to be published in the 2000s, so that the results of this study would give a more accurate view of the contemporary computer programming guide translations. As it turned out, the books available fulfilling these requirements were all American. Thus the scope of the present study was narrowed down to American computer programming guides.

The books chosen according to the above-mentioned criteria are: *Programming Perl, 3rd Edition* (2000) by Larry Wall, Tom Christiansen, and Jon Orwant; *XML Bible* (1999) by Elliotte Rusty Harold, and *Java & XML, 2nd Edition* (2001) written by Brett McLaughlin. In my view, these books are typical representatives of computer programming guides, as far as their content, treatment of topics and overall structure is concerned. They also seem relatively popular, since there is more than one edition of each book. Since each of the books has several hundred pages and conducting a detailed textual analysis of each book was not feasible, I selected one sample of text from each book at random. The selection was done as follows: the numbers of the chapters in a book were written on slips of paper, the slips were folded and placed in a container, and then one slip was drawn. The same procedure was repeated for every book. This method was used in order to lessen the bias introduced by the researcher. However, it may not guarantee a completely unbiased outcome, since I draw the slips myself. Each sample begins at the beginning of a chapter and is at least ten pages long. The minimum length was set at ten pages because a shorter sample might not be representative enough, and a longer sample would take too much time to analyse. These three samples are the source texts. The respective parts of the Finnish translations of these books make up the target texts. The target text books are: *Perl - tehokäyttäjän opas* (2002), translated by Juha Samela, *XML Tehokäyttäjän opas* (2000), translated by Pekka Saxberg, and *Java & XML* (2002) translated by Petri

Savolainen, Markus Eronen, Kai Kuikkaniemi and Ilkka Kosunen. The source and target texts will be referred to as Text 1, Text 2 and Text 3. Text 1 is an extract from *Programming Perl, 3rd Edition*, Chapter 18. Text 2 is an extract from *XML Bible*, Chapter 3 and Text 3 is from *Java and XML, 2nd Edition*, Chapter 12. The texts are judged as representatives of the expository text type (with instruction as the secondary text type), following Hatim and Mason's (1990) text typology (see Chapter 2.1.1 above, p. 10ff).

4.3 Analytic methods

The framework which is used for analysis in the present study is House's (1997) model for translation quality assessment. As House's (1997) model suggests, the source text will be analysed first. The results of the source text analysis will be presented with examples from the source text. After the source text analysis, the target text will be analysed. The target text will not be described here in its entirety. Instead, I will compare the source and target texts, give some examples of each significant feature found in the analysis and discuss the issues raised by the examples. I decided to use this approach because I find it more illustrative than presenting the source text analysis, target text analysis and discussion separately.

Each source and target text will be analysed using House's (1997) model for translation quality assessment. The model has been explained in Chapter 3.2 above (p. 35ff). The findings of the analysis will be placed under the headings of Field, Tenor, Mode and Genre. Under field, tenor and mode the findings will be further divided according to the situational dimensions (see Chapter 3.2.2 above). Moreover, under each situational dimension, the findings are divided into lexical, syntactic and textual means which realise the register categories in the text (see Chapter 3.2.2, p. 40ff). The instances of the features found in the text will not be counted, since the focus is on qualitative, not quantitative, analysis. Some examples of each feature found in the analysis will be given, but all instances of a certain feature will not be presented in this thesis, since it would result in long lists of quotations which would hardly add any new information into the discussion.

4.4 Limitations of the present study

Defining a text's individual textual function rests ultimately on the analyst's judgement which is often intuitive. House (1997: 46) points out, however, that this was the only feasible way of putting the model into practise, since any decision on the appropriateness of a linguistic element in a target text always contains a subjective element. Moreover, all intuitive judgements are argued, and "taken as hypotheses which are being validated as objectively as possible by the reasons given for them" (House 1997: 46). Since evaluations are justified by the evidence gathered in the analysis, the model has next to nothing in common with the neo-hermeneutic approach (House 1997: 46-47). House also argues that relying on a native speaker's judgement is legitimate, if it results in useful insights (House 1997: 47). Thus, although the model does not provide a completely objective method for translation quality assessment, it is objective enough to provide some valuable information about the quality of translations.

House's model belongs to the case study approach. That means that the amount of data analysed is relatively small and it is not feasible to make any far-reaching generalizations on basis of the results of one study. However, case studies contribute to the research on the field, and may provide valuable material for future research. That alone seems to justify the case study approach. Another purpose of the case study method is to acquire an extensive understanding of the phenomenon under study. Given the fact that this is a Master's thesis, this seems yet another valid reason to opt for the case study approach.

House does not explicitly list all the low-level concepts which she uses in the analysis. Therefore it is possible that the present study uses slightly different terminology in the linguistic analysis. However, the terminology and concepts used in this study are generally accepted and commonly used on the field of linguistics and as such should not cause any complications in relation to House's model.

The present study has other limitations, the model notwithstanding. Firstly, there is relatively little recent cross-cultural research on the communication differences between Finnish and Anglo-American culture available. There is research on the

differences between Anglo-American culture and other cultures available, which might provide some insights into Anglo-American culture. The present study will draw on this research whenever it seems useful. Secondly, there is a lack of contrastive pragmatic research on the English-Finnish language pair. Research has been conducted on for example English-German language pairs. This research may be of use in the present study also, and it is considered when deemed appropriate. Furthermore, it has been said that even if contrastive research is not available, translation assessment can be done (Ingo 1990: 284). Some corpus studies have been conducted on the language of Finnish translations (Mauranen and Jantunen 2005). The translations have been compared to texts written originally in Finnish and in some studies the English source text has also been taken into account. However, as far as I know, these corpus studies have not studied technical texts as of yet, and thus their applicability to the present study is limited. Thirdly, to my knowledge, the genre of Finnish computer programming guides has not been comprehensively studied, and therefore there are hardly any research results which would help in establishing the special features of the genre. The responsibility of determining texts' preliminary text type and genre thus rests on the shoulders of the analyst, and is more or less intuitive. However, since genre is a communicative event, which the members of a given community can identify (Bhatia 1993: 13), I will utilize the knowledge I have accumulated on computer science. As a member of the information technology (IT) community I should be able to identify texts which belong to the genre of IT texts, and more specifically, to computer programming guides.

Finally, the fact that distinguishing the singular features of a text from the individual features presupposes familiarity with the author's work, as discussed in Chapter 3.1.3 (p. 34), is noteworthy in the present study as well. Since I have not extensively studied other texts produced by the same translators, there may be some problems in distinguishing singularity from individuality. However, since the main emphasis of the present study is not on any single situational dimension, I do not consider this a major obstacle.Despite all these limitations, I believe the present study can still offer a useful insight into the state of contemporary Finnish computer programming guide translations, although the results may be only tentative, and are not representative of the Finnish computer guide translations in general. Bearing in mind the limitations discussed above, I will proceed to the analysis of the source and target texts.

5 ANALYSIS AND DISCUSSION

In this chapter, I will deal with each text pair separately, starting with Text 1. First I will present the source text analysis, followed by the definition of the text's individual textual function. Then I will compare the target text to the source text and explain my findings with the help of examples from source and target texts. Finally, I will sum up and discuss the findings. As to the examples, the features which will be discussed in the analysis are underlined when applicable. Now, without further ado, I will move on to the source text analysis of Text 1.

5.1 Text 1: *Programming Perl* and *Perl - tehokäyttäjän opas*

Text 1 consists of source and target text extracts. The source text extract is from a book called *Programming Perl, 3rd Edition*, written by Larry Wall, Tom Christiansen and Jon Orwant, published in 2000. The target text extract comes from the Finnish translation of the book, called *Perl - tehokäyttäjän opas*, translated by Juha Samela and published in 2002.

5.1.1 Analysis of Source Text 1

The extract analysed here has been taken from the beginning of Chapter 18, *Compiling* (p. 464-475). In the following, I will proceed according to House's (1997) model and deal first with field, then with tenor, and then with mode.

Field

The register category of field deals with the subject matter and social action of a text. Since House's (1997) model does not seem to differentiate subject matter and social action into separate situational dimensions, I will use the name Field of the situational dimension in this register category.

The above-mentioned book, *Programming Perl, 3rd Edition*, is aimed both at novices and experienced programmers who want to learn *Perl* programming and read about the ideas behind the *Perl* programming language. Thus the book has features of both the instructive and the expository text type. The excerpt chosen for analysis is mainly expository, with instruction as the secondary text type. The book starts from the

basics but also gives some in-depth information. However, readers are assumed to have some basic knowledge about computers and programming (example (1)). New *Perl*-related concepts are explained with the help of definitions, examples and metaphors (example (2)). This excerpt explains how *Perl* code is compiled and what happens during the compilation stage. The tone of the text is light and humorous (examples (3)-(6)), and it is relatively easy to read (examples (7)-(26)). Next I will explore these features in more detail with the help of some examples taken from the source text.

Lexical means realising the situational dimension of field

The fact that readers are assumed to have basic knowledge about computers and programming can be seen in the field-specific terminology used in the text. Some technical lexical items assumed familiar to the readers are listed in example (1).

(1) run, execute, code generator, data structure, interpreter

New concepts are explained with the help of examples and metaphors, which make the text easier to read and understand. Consider for instance example (2):

(2) Imagine that you're a conductor who's ordered the score for a large orchestral work. When the box of music arrives, you find several dozen booklets, one for each member of the orchestra with just their part in it. But curiously, your master copy with all the parts is missing. Even more curiously, the parts you *do* have are written out using plain English instead of musical notation. Before you can put together a program for performance, or even give the music to your orchestra to play, you'll first have to translate the prose descriptions into the normal system of notes and bars… Similarly, when you hand the source code of your Perl script over to *perl* to execute, it is no more useful to the computer than the English description of the symphony was to the musicians. (italics original)

In example (2) a *Perl* program is compared to a symphony, which the conductor has to put together before the orchestra can play it. This comparison has a two-fold purpose. Firstly, it highlights the effort that goes into creating an executable program from source code. Secondly, the phases of creating a program (described later in the source text) are similar to the ones described in example (2) in that source code must be compiled (*translated*) before it can be given to the interpreter (*orchestra*) and the program can run. Thus the comparison makes it easier to understand the steps that need to be taken before an executable program is finished.

Some light and humorous lexical items are used occasionally in the text, presumably in an attempt to make the text more easily approachable, little less technical and lighter to read. Some of these lexical items are listed in examples (3)-(6) below:

(3) the freeze-dried bytecodes,

(4) Generation of C code comes in two different flavors…

(5) Perl bails out in frustration,

(6) blazing fast

In example (3) the authors describe bytecodes with the metaphor *freeze-dried*. One would usually expect to encounter this adjective in connection with food. The unconventional usage of *freeze-dried* thus creates a humorous effect. In example (4), there is another food-related expression: *flavor*. In example (5) the writers discuss *Perl* as if it was a person. In this example, *Perl* seems to be capable of experiencing feelings and wants to escape from an unpleasant situation, like any human being. Treating a computer program as a person makes it more easily approachable and concrete. Again, the word choice aims at creating a humorous effect. In example (6), the authors use *blazing* to strengthen the adjective *fast*. Using *blazing* instead of *very* or *extremely* paints a more vivid picture of speed in the reader's mind, enhancing the overall light and humorous tone of the text.

Syntactic means realising the situational dimension of field

The text is relatively easy to read, resulting partly from the low density of long, difficult words and jargon in the text. Further, there are complex sentences, but they do not hinder readability because the vocabulary they employ is not difficult. The sentence length variation also contributes to the readability. Long, complex sentences are usually followed by short sentences. The longest sentences are usually lists, explanations or elaboration of some point. New or difficult issues are often explained using short sentences. Example (7) illustrates the sentence length variation:

(7) Although you can get by with thinking of both the compiler and interpreter as simply "Perl", understanding which of these two roles Perl is playing at any given point is essential to understanding why many things happen as they do. The perl executable implements both roles: first the compiler, then the interpreter.

Textual means realising the situational dimension of field

Strong textual cohesion is present in the text, contributing to the readability of the text. The cohesive devices found in the text include a) repetition of lexical items and phrases (examples (8) and (9)), b) anaphoric and cataphoric reference (examples (10)-(12)), c) enumeration (example (13)), d) iconic linkage (examples (14)-(18)), (e) transitions (examples (19)-(23)), and (f) a few cases of synonymy (example (24)).

Repetition of lexical items and phrases can be seen in examples (8) and (9):

(8) But curiously, your master copy with all the parts is missing. Even more curiously, the parts you do have are written out using plain English instead of musical notation.

(9) The compiler makes a temporary loop of opcodes, with the top node pointing to the first opcode to visit. When the top-level opcode is incorporated into something bigger, that loop of opcodes is broken, only to make a bigger loop with the new top node. Eventually the loop is broken for good...

Repetition is used throughout the excerpt. In example (8), *curiously* is repeated in two consecutive sentences. Here repetition seems to be a stylistic device designed to emphasise the strangeness of the situation described. In addition to heightening the effect of certain adverbs and adjectives, repetition is also used for other purposes in the text. One such purpose is to use repetition to make the referent more obvious. For example, the repetition of the noun *parts* in example (8), and the repetition of *loop of opcodes* in example (9) aim at making sure that the reader knows what the writers are talking about. If the writers used pronouns for reference, the resulting text would probably be more difficult to understand, and the possibility that the reader misinterprets the text would be higher. As discussed in Chapter 2.1.4 above (p. 21ff), clarity is very important in technical writing, and using quite a lot of repetition seems to be one way to achieve it. In example (9), the repetition of *is broken* catches the eye. It seems that using the same construction repeatedly may drive the point home more effectively.

In addition to repetition, there are also other cohesive devices at work in the text, such as anaphoric and cataphoric reference. Examples (10)-(12) show some instances of anaphoric and cataphoric reference found in the text:

(10) Lexical declarations are noted, but assignments to them are not executed.

(11) During compilation, Perl optimizes your code in many, many ways. It rearranges code…

(12) Inevitably there's going to be a certain amount of low-level detail in this chapter that some people will be interested in, and some people will not.

The text contains notably more anaphora than cataphora. Anaphora refers back to a previously mentioned issue, whereas cataphora refers forward. In example (10), *them* refers back to *Lexical declarations* and in example (11) *It* refers back to *Perl*. These are instances of anaphoric reference. Cataphoric reference is used in example (12): *there* refers forward to *this chapter*.

The next cohesive device to be investigated is enumeration. In the excerpt, enumeration is used on a few occasions. For instance, the phases of the life cycle of a Perl program are enumerated as example (13) below shows:

(13) 1. The Compilation Phase
2. The Code Generation Phase (optional)
3. The Parse Tree Reconstruction Phase (optional)

Iconic linkage is also used as a cohesive device in the excerpt. In example (14), repetition of similar clauses results in iconic linkage:

(14) Instead of a hardware program counter, the interpreter just keeps track of the current opcode to execute. Instead of a hardware stack pointer, the interpreter has its own virtual stack.

It seems that iconic linkage is used here to emphasise the point the writers are making. The similarity of the structures may also assist in remembering this issue. In example (15), similar clause structure helps in the comparison of two different "phases", thus making the text easier to understand:

(15) A given compile phase does mostly compile-time stuff, but it also does some run-time stuff via BEGIN blocks. A given run phase does mostly run-time stuff, but it can do compile-time stuff through operators like eval STRING.

Similar structures also highlight the similarity of actions in the excerpt. Consider examples (16)-(18) below:

(16) Before your program can run, Perl needs to compile…

(17) Perl must first reconstitute its parse trees from that bytecode sequence before the program can run.

(18) At the start of this phase, before your main program gets to run, all scheduled INIT blocks are executed in FIFO order.

The authors remind the reader that the program will run eventually, but there are certain things that have to be taken care of before it happens. There are still a few more cohesive devices at work in the text, the next being transitions.

Transitions refer to a technique of linking sentences by means of conjunctions or conjunctive adverbs. Transitions are used in the excerpt frequently. Examples (19)-(23) illustrate the most common transition types found in the text:

(19) Similarly, when you hand the source code…

(20) Lexical declarations are noted, but assignments to them are not executed.

(21) Although you can get by with thinking of both the compiler and interpreter as simply "Perl", understanding…

(22) CHECK blocks are installed by code generators, so this optional phase occurs when…

(23) Constant folding isn't limited to simple cases such as turning 2**10 into 1024 at compile time.

Example (19) shows how the transition of addition is used in the text. Examples (20) and (21) exemplify transition of opposition, whereas example (22) shows how transition of cause and effect is used in the excerpt. Example (23) demonstrates the transition of exemplification.

There are also a few cases of synonymy in the excerpt. Consider example (24):

(24) …assembling them into larger constructs, such as expressions and statements, based on the grammar of the Perl language. The optimizer rearranges and reduces these larger groupings into…

As the example (24) above shows, the writers use synonyms for some non-specialised words only, probably to avoid excessive repetition. Synonymy is used sparingly in the text. This may be caused by the fact that the writers of technical texts are often encouraged not to use synonyms much, because using them may lessen the clarity of the text and confuse the reader.

The text uses mainly theme-rheme sequences, thus securing the given-new information structure. Consider example (25) below:

> (25) Along with the standard parsing techniques, Perl employs a much more powerful one: it uses BEGIN blocks to guide further compilation. BEGIN blocks are handed off to the interpreter to be run as as soon as they are parsed, which effectively runs them in FIFO order (first in, first out).

In example (25), *BEGIN blocks* are introduced at the end of the first sentence, after an introduction which tells that what follows is a *parsing technique.* The notion of *parsing* has been introduced earlier in the text. Thus, the first sentence follows the given-new information structure: first it draws on acquired knowledge (theme) and then introduces a new concept (rheme). The second sentence begins with theme, which here is the concept introduced in the previous sentence, *BEGIN blocks*. Again, theme is followed by the rheme, and new information can be found at the end of the sentence. Thus, this sentence also conforms to the given-new ordering. There are however some rheme-theme sequences in the excerpt, although they are clearly in the minority. In example (26) below, the first sentence has theme-rheme sequence, whereas the second sentence has rheme-theme sequence:

> (26) In addition to the interpreter that processes the BEGIN blocks, the compiler processes your program with the connivance of three notional agents. The lexer scans for each minimal unit of meaning in your program.

In example (26), the first sentence follows the theme-rheme ordering, beginning with given information, which is then followed by new information. The second sentence begins with new information; the notion *lexer* has not been introduced earlier. New information is followed by given information, which tells what *the lexer* does. The second sentence uses thus rheme-theme ordering.

This concludes the analysis of the field of Source Text 1. Next I will move on to the tenor of Source Text 1.

Tenor

Author's temporal, geographical and social provenance

The authors do not use any notable social dialect. Neither are there any features in the text which would imply that the text was written in the past. However, as it comes to geographical provenance, the text shows certain signs of American English.

These features include the abundant use of the letter *z* (for instance *optimizing*, *recognizing*) and spelling certain words in a way usually connected with American English in dictionaries (e.g. *flavor*). It can be therefore concluded that the language used in the source text is unmarked, contemporary American English.

Author's personal (emotional and intellectual) stance

Next I take a look at the authors' intellectual and emotional position in relation to the content of the text and the communicative task. The authors go into details, and explain thoroughly how certain things work. They clearly care about their writing task and try to make sure that the readers understand what they are trying to say. The authors know a great deal about the topic and seem involved in sharing their knowledge with readers. Even though the writers seem to take their writing task seriously, they have chosen to use a bit less serious tone in the text. The text portrays the writers as easy-going persons, who treat their topic in a light-hearted and slightly humorous way. This is mainly due to lexical choice. However, certain seriousness can be detected underneath in the careful and thorough way the writers present information. Moreover, the humorous parts seem to be carefully placed in the text, as if to cheer up the reader and provide a breather amid new and difficult things.

Lexical means realising the situational dimension of author's personal stance

At the lexical level, the light-hearted and humorous tone of the text is realised by certain humorous lexical items. Consider example (27) below:

(27) …you may be pleased to know that we do also provide *code generators* (which some well-meaning folks call "compilers")…

In example (27), the author uses *well-meaning folks* to refer to persons who use the term *compiler* incorrectly. This benevolent reference has a humorous ring, and it sets the authors and the readers apart from those ignorant of the proper use of the term. Some other humorous lexical items include *the freeze-dried bytecodes* and *bails out*, which have already been discussed earlier in examples (3) and (5) respectively. The light-hearted tone the authors use in the text can also be seen in example (35) below (p. 62). The writers tell jokingly that the only reason for writing down a long list of stacks is to impress the reader. However, the fact that the authors have chosen to include short descriptions of Perl's stacks shows how seriously the authors take their task of parting knowledge to the readers. Even though knowing the stacks is not

necessary in the context of the book, the authors provide this information in case someone needs it or is interested in it. Thus the authors seem to write in a light, yet dedicated way.

Textual means realising the situational dimension of author's personal stance

The authors create the easy-going atmosphere mostly with the help of lexical choice. However, footnotes are sometimes also used for the same purpose. Consider footnote 3 in example (28) below:

> (28) We recommend that you stay out of the lexer, which has been known to induce eating disorders in lab rats.

Footnote 3 in example (28) tells a joke, which contributes to the light overall tone of the text. The footnote does not seem to carry much information value. It is preceded by quite a long stretch of text which has high information content. Therefore, it seems that the joke is designed to provide a breather to the reader, and lighten up the tone of the text.

Social role relationship

The authors of this book could be described as gurus on Perl programming. One of them is the developer of the Perl language, which makes him an undisputed authority on *Perl* programming. Another of the writers is the founder of the *Perl Journal*, which gives him credibility, and the third writer is a consultant on *Perl* training.

The writers aim at establishing a quasi-personal relationship with the reader. At the syntactic level it can be seen in the ample use of personal pronouns *we* and *you*. This direct reference to the authors and the reader (*we*) and the reader (*you*) creates a more intimate feeling than for example passive constructions would do. In addition, the attempt to establish a quasi-personal relationship with the reader can be seen at the in the use of rhetorical questions. Despite the fact that the writers have spent well over a decade developing and using the *Perl* programming language, and are undoubtedly well learned in the jargon of their field, they manage to bring their text close to the reader. They do it by using contractions, uncomplicated language and examples. Due to informal words and phrases as well as contractions, the writers come across as friendly, easy-going, unpretentious persons. The uncomplicated way

of writing shows that they are not trying to impress the reader with their authority and that the register of their text is not wholly 'serious' exposition.

The authors do not look down upon the reader, but come across as patient teachers. This can be seen in the thorough way they explain things. For instance, a *Perl* program is compared to a symphony in order to make it easier to understand, see example (2) above (p. 52). However, the writers' authority shows itself in the text every now and then in the way they use pronoun *we* (exclusive of the reader) and in the way they refer to the reader as someone with a lesser capacity to understand things. The writers' comments convey a feeling that the writers know what they are talking about, and they definitely know more than the reader, as is only appropriate for writers whose role in this situation is teacher. Despite of this, the social role relationship remains more on the symmetrical end.

Lexical means realising the situational dimension of social role relationship

Informal words and phrases (*stuff, blazing fast, neat trick*) create a feeling of friendly, easy-going and unpretentious persons. Since informal language is often a sign of a personal or intimate relationship, the usage of informal features in a text also brings the text closer to the reader. The friendliness that can be detected in the text is thus largely due to the informal features used in the text. There are also some formal or literary words in the text, for instance *idiosyncratic* and *nefarious*, but their occurrences are so rare that I am inclined to think they are the writer's pet words. Due to their rarity, these words do not seem to make the text more formal.

The writers come across as patient teachers, probably because they give plenty of examples and explain things thoroughly. Elaborate explanations of difficult issues seem to be designed to make certain that the reader understands everything correctly. Example (2) on page 52 demonstrates the degree to which issues are explained in the text.

Syntactic means realising the situational dimension of social role relationship

The writers use personal pronouns *we* and *you*, and the possessive form *your* abundantly. The purpose of that seems to be establishing a relationship with the reader. Consider example (29) below:

(29) If you came here looking for a Perl compiler, you may be surprised to discover that you already have one--your perl program (typically /usr/bin/perl) already contains a Perl compiler.

In the example (29) above, the writers refer to the reader constantly with the personal pronoun *you* and its possessive form *your*, thus involving the reader in the text. Roughly half of the occurrences of the first person plural *we* count as inclusive use of the pronoun. In example (30), *we* refers to both the writers and the reader:

(30) The presence or absence of a CHECK block determines whether we next go to phase 2…

As discussed above, the writers' authority shows in the way they use the first person plural, *we*. In roughly half of the occurrences, pronoun *we* excludes the reader and refers only to the writers. On these occasions, the writers seem to express their own views or opinions. Consider examples (31) and (32) below:

(31) But first we want to talk about what we think of as The Compiler.

(32) …we drew the root at the top, in the idiosyncratic fashion of computer scientists.

In example (31), the authors clearly state that they are going to tell their own opinion about the issue at hand. Thus, the pronoun *we* does not include reader on this occasion. In example (32), the writers seem to liken themselves to computer scientists. On this occasion, *we* excludes the reader.

Contractions (*wasn't, you'll, it's, you're*…) create a sense that the writers are friendly, easy-going and unpretentious persons. As noted above, informal language is often a sign of a personal or intimate relationship

In addition, the authors attempt to get the reader involved by using rhetorical questions. Another purpose for their use seems to be to raise issues for discussion. Example (33) contains a rhetorical question found in the excerpt:

(33) It's like bootstrapping a child's brain. Is it the DNA doing it or is it the neurons? A little of both, we think, with some input from external programmers.

The purpose of the question in example (33) seems to be to activate the reader to think and perhaps to elicit some response from the reader. If the question succeeds in

eliciting a response from the reader, then the text has succeeded in involving the reader.

Although the writers come across as patient teachers, on some occasions they use utterances which reflect authority over the reader. Sometimes their comments also convey a feeling that they definitely know more than the reader. Consider examples (34) and (35):

(34) You may think it odd that the Perl compiler does all these things at once instead of one after another, but…

(35) Perl maintains quite a few stacks, which you don't have to understand, but which we'll list here anyway just to impress you:…

The utterance in example (34) seems to say that the reader may think that the thing is strange, but the writers do not, because they know better. The use of second person singular seems to heighten the effect of this utterance. Example (35) shows how the writers occasionally treat the reader as someone who has lesser capacity for understanding things. However, the sentence ends with a joke, which takes the sting out of the utterance, and creates the feeling that the writers are only being considerate in telling what the reader does not need to strive to understand.

Textual means realising the situational dimension of social role relationship

The writers' teacher-like approach can best be seen in the thorough way they explain new or difficult things. Difficult issues are often explained with the help of examples. For example, as was discussed above, a computer program is compared to a piece of music, and what happens before a program can run is first explained in musical terms to make the process easier to understand.

Although much of the light-heartedness and humorousness in the text is created by lexical choice, there are a few instances in the excerpt which employ textual means for the same purpose. Compare examples (36) and (37):

(36) Compared with the Perl compiler, the Perl interpreter is a straightforward, almost boring, program. All it does is step through the compiled opcodes, one at a time, and dispatch them to the Perl run-time environment, that is, the Perl virtual machine. It's just a wad of C code, right?

(37) Actually, it's not boring at all. A Perl virtual machine keeps track of a great deal of dynamic context on your behalf so that you don't have to.

The examples (36) and (37) come from two consecutive paragraphs. In example (36), the authors suggest that *Perl* interpreter is a somewhat boring program, and that *Perl* virtual machine is *a wad of C code*. As the example (37) shows, in the next paragraph the authors contradict these claims and argue that what was said before is not true.

Social attitude

The social attitude of the excerpt can be described as consultative, friendly and conversational. The writers use colloquial lexical items as well as lexical items which indicate vagueness. Since they are often used in speech, they make the text seem conversational. The consultative style level is marked through contractions, colloquial lexical items and some humorous lexical items, which are avoided in the formal style. On the whole the style of the excerpt is rather neutral, even though there are some lexical items and syntactic markers which may be described as informal. The abundant use of the personal pronoun *you* creates a certain feeling of intimacy and friendliness. The usage of *you* was discussed in connection with social role relationship on page 59. There do not seem to be markers indicating great social distance in the excerpt. Thus it seems reasonable to conclude that the social distance between the writers and the reader is not very great.

Lexical means realising the situational dimension of social attitude

The consultative style the writers use differs from formal style in that the writers use colloquial lexical items and lexical items which indicate vagueness. Consider examples (38) and (39) below:

(38) This includes any use and no declarations; these are <u>really</u> just BEGIN blocks in disguise.

(39) A given compile phase does <u>mostly</u> compile-time <u>stuff</u>, but it also does <u>some</u> run-time <u>stuff</u> via BEGIN blocks.

In example (38) the writers use the adverb *really* to emphasise what they are saying. According to the *Longman Dictionary of Contemporary English* (2004), this usage is typical for spoken English. Thus it can be classified as a colloquial lexical item. The writers use *really* on several occasions in the excerpt. In example (39), the writers use the adverb *mostly* and the determiner *some*, which both indicate vagueness. They

also use the noun *stuff*, which is classified as informal by the *Longman Dictionary of Contemporary English* (2004). Due to these markers of colloquial and informal language usage, this excerpt can be described as consultative and conversational.

Syntactic means realising the situational dimension of social attitude

On the syntactic level, the text seems conversational because contractions (*wasn't, you'll, it's)* are frequently used in the text. In addition, complex sentence structures and complex noun phrases are not used very often.

Mode

Mode is divided into two situational dimensions: medium and participation. They will be discussed next.

Medium

On basis of the excerpt, the text seems to be written to be read. Therefore the medium can be described as simple medium, although the excerpt does contain some signals of spoken language, such as a few interjections. However, there are so few of these markers that they do not justify classifying the medium as complex medium.

Lexical means realising the situational dimension of medium

Only a few interjections appear in the excerpt. Examples (40) and (41) below show both of them:

(40) It's just a wad of C code, right?

(41) Assuming the parse goes well, the compiler deems your input a valid story, er, program.

Example (40) ends with the interjection *right*, which is used in speech to check if the thing said is correct. In example (41), the interjection *er* appears. *Er* is a sound made by a speaker when s/he is hesitating and thinking about what to say next. Since there are only two interjections in the excerpt, and very little other signs of spoken language, it seems justified to conclude that this text has been written to be read, not written to be spoken.

Syntactic means realising the situational dimension of medium

There are no common spoken language signals such as *you know, well, you see* in the excerpt, which indicates that the text is not meant to be spoken. Some elliptical clauses are present in the text, but since ellipsis is also used in written language, their presence does not give grounds to name the medium complex.

Participation

The participation is complex in the excerpt. It is monologue, with readers being directly addressed. In the excerpt, it is realised by using the personal pronoun *you* as well as the second person possessive pronoun *your*, which indicate interaction. The writers also use directives, which are speech acts aimed at influencing the reader's behaviour. The reader participation seems to be explicit; the text brings in the readers through the use of deictic pronouns.

Syntactic means realising the situational dimension of participation

As discussed above, the personal pronoun *you* and the second person possessive pronoun *your* are used constantly in the text. An example of their usage can be found in example (29) above, under Tenor (p. 61). Due to the use of deictic pronouns (*you, we*), reader participation is explicit in this text. Reader participation is also enhanced by the use of directives in the excerpt. Consider example (42) below:

(42) If you made an executable image, you can go directly to phase 4; otherwise, you need to reconstitute the freeze-dried bytecodes in phase 3.

In example (42), the writers give the readers directions on how they should proceed. In the excerpt directives are mostly given as suggestions, not as direct orders. This may enhance the readers' willingness to co-operate.

Genre

The book is a computer programming guide designed to be read by persons who want to learn *Perl* programming skills. The goals of programming guides are to teach readers the syntax of the given programming language, good programming practises, and the related terminology. Programming guides often contain large numbers of code examples and experienced programmers may use them as reference books. There are also programming reference books, but the difference between

programming guides and reference books is that programming guides tend to explain matters in detail, whereas reference books are aimed at professional programmers who want to look things up quickly and are not interested in explanations. In addition to these two types, there are also programming books which resemble textbooks. Programming textbooks differ from programming guides in their structure. Programming textbooks contain exercises and revision questions at the end of each chapter, and they may be used as course books.

The individual textual function of Source Text 1

The function of the text consists of an ideational and an interpersonal component. The function may be summed up by saying that the intention of the authors is to teach *Perl* programming and give a comprehensive view about the things that operate below the surface of the programming language. Thus the ideational function is primary in this text. The interpersonal component can be seen especially in the categories of field and tenor. Humorous lexical items, informal lexical items and the use of contractions signalling informal style all contribute to the interpersonal component. The particular genre, of which this programming guide is an example, determines that the primary function is the ideational function, since the aim of such texts is to provide new information to the readers.

5.1.2 Comparison of Source Text 1 and Target Text 1

The target text comes from the Finnish translation of *Programming Perl* called *Perl - tehokäyttäjän opas* (2002: 547-559), translated by Juha Samela. The target text analysis follows the method explained in Chapter 4.3 above (p. 48ff). As discussed above, the results of the target text analysis will be presented along with the comparison of the source and target texts. In the following, I will give examples of the lexical, syntactic and textual features found in the analysis of Target Text 1 and discuss the findings. Since source text plays an important role in the current approach, each target text example is paired with the corresponding excerpt from the source text. The reason for presenting the results of the target text analysis and the comparison of target and source texts in the same chapter is that I find it more illustrative than presenting the target text analysis and the comparison separately. Hopefully this approach also saves the reader the trouble of having to jump back and

forth on the pages of this study in search of previously presented examples. Next, I will move on to the comparison of Source Text 1 and Target Text 1.

The translated text reads fluently and at a normal reading pace the reader is likely to feel only on a few occasions that the text sounds a bit strange. Without the comparison to the source text there seems to be little wrong with the translation as such. However, when compared with the source text there are a lot of issues which catch the attention of the analyst, the most readily noticeable of which are certain omissions. An overview of the translated text (target text, TT) suggests that a notable amount of the original text (source text, ST) has been omitted in translation. These omitted portions of text include words, expressions, clauses and sentences. On some occasions the target text features a lengthier explanation (or paraphrase) than the source text, apparently inserted to clarify certain points. Whether these omissions and additions have their reasons in Finnish writing conventions or somewhere else, will be discussed later. I will now proceed to look into the differences between the source and target text, using the same categories as with the source text analysis above.

Field

Lexical differences

The usage of technical terms seems slightly arbitrary in the translation. On the one hand, some terms which are not explained in the source text, are explained or paraphrased in the translation, as can be seen in examples (43) and (44). On the other hand, some difficult concepts which might need paraphrasing are not explained (examples (47) and (48)). In addition, some words which may be essential have been omitted in target text (examples (49) and (50)). In some cases, extra lexical items have been added in target text (examples (51) and (52)). Consider examples (43) and (44):

(43) **ST**: BEGIN blocks are handed off to the interpreter to be run as as soon as they are parsed, which effectively runs them in FIFO order (first in, first out).

(44) **TT**: BEGIN-lohkot annetaan tulkille ajettavaksi heti jäsentämisen aikana. Käytännössä ne ajetaan siinä järjestyksessä kuin jäsentäjä ne kohtaa (FIFO, first in, first out).

In examples (43) and (44), the source text sentence has been split into two target text sentences and the term *FIFO* is explained by the paraphrase *siinä järjestyksessä kuin jäsentäjä ne kohtaa*. *FIFO* is a term which is probably familiar even to the less experienced programmers, since it is a basic principle in programming. Since this text is aimed at programmers, *FIFO* could be assumed to be part of reader's knowledge base, and as such could be treated as given information. It seems therefore unnecessary to use a long paraphrase to explain the meaning of the term. However, since *FIFO* is not Finnish, it needs some translation. The translation does not have to be as long as in example (44) above. Perhaps …*löytymisjärjestyksessä, FIFO (first in, first out)* would suffice. It seems best to keep the term FIFO in the translation for the sake of clarity.

Additions and paraphrases appear here and there in the target text. The next source text - target text pair shows a case where the target text is considerably longer than the source text due to additions and paraphrase. Consider examples (45) and (46) below:

(45) **ST**: It picks its optimizations carefully, not wasting time on marginal optimizations, because the Perl compiler has to be blazing fast when used as a load-and-go compiler.

(46) **TT**: Se valitsee optimoitavat kohdat huolellisesti eikä käytä aikaa optimointeihin, joiden vaikutus on pieni. Perl-kääntäjän on nimittäin selvittävä tehtävästään tosi vauhdikkaasti, koska sitä käytetään tuotantokäytössä olevien skriptien käsittelyyn eikä ennalta erikseen tehtävään kääntämiseen, kuten esimerkiksi C-kielen kääntäjää.

In example (46), *marginal* is translated by *joiden vaikutus on pieni*. Here the paraphrase seems to work well. A quick comparison of source and target text reveals that the clause *kuten esimerkiksi C-kielen kääntäjää* has been added to the target text. It seems that this clause has been included in order to clarify the matter at hand. The addition has its origins in the expression *load-and-go*. The source text assumes that the reader is familiar with the expression *load-and-go* and does not offer any lengthy explanation. The expression *load-and-go* does not have an established equivalent in Finnish, so the translator has to either invent a new expression or use a paraphrase to explain the meaning of the expression. In this case the translator has opted for a paraphrase, and the expression seems to require quite a lengthy explanation. However, the explanation seems somewhat vague, and without the addition of the

last clause, *kuten esimerkiksi C-kielen kääntäjää*, its meaning would be difficult to pin down. It is debatable whether this long paraphrase is better than a shorter one, such as …*koska se kääntää koodin lennossa* or …*koska se kääntää koodin juuri ennen ajoa*. On the basis of the source text it seems reasonable to assume that a shorter paraphrase would be enough, unless the target text audience of the translation differs from the source text target audience. The translation does not seem to carry enough evidence of being directed to a less experienced audience. Although creating an equivalent expression in Finnish is possible in theory, in practise the use of paraphrase cannot be avoided, since the translator cannot just invent a new word; s/he also has to offer an explanation of the meaning of the new word.

While some parts have been added to the target text, others have been left out. In the next source text - target text pair in examples (47) and (48), the target text omits some source text information.

(47) **ST**: …the Perl compiler converts your program into a data structure called a *parse tree*. (italics original)

(48) **TT**: … Perl-kääntäjä luo ohjelmakoodista *jäsennyspuun* (parse tree). (italics original)

Examples (47) and (48) show how the target text leaves out the explanation that the parse tree is a data structure. That information might be helpful in understanding the concept of a parse tree, which is not necessarily a familiar concept to a programmer. Adding the information that the parse tree is a data structure would hardly affect the concision of the target text, but it would add to the clarity of the text. Consider examples (49) and (50) next:

(49) **ST**: If you came here looking for a Perl compiler, you may be surprised to discover that you already have one--your *perl* program (typically */usr/bin/perl*) already contains a Perl compiler. (italics original)

(50) **TT***:* Perl-kääntäjää etsiessään saattaa kohdata yllätyksen, että kääntäjä onkin jo asennettu koneeseen. Perlin tavallinen jakelu nimittäin sisältää sen.

Here the target text (50) has omitted the path to the *Perl* program (*/usr/bin/perl*). In the source text (49) the function of this information seems to be to enable readers to check if they have the program installed. It provides the readers with a place to look for the program. The target text does not provide this information, thus depriving the readers of a concrete way of locating the *Perl* program, should the need arise. The

translation seems to assume that the readers already know where to find the *Perl* program, since the path has been omitted. The most probable reason for such an omission is that the information has been provided in an earlier chapter. However, flipping through the pages and searching for a fragment of information can be extremely annoying. So, even if the information has been provided elsewhere, repeating it here would not cause excessive redundancy.

The translation contains some lexical items which do not appear in the corresponding sentences in the source text. Consider examples (51) and (52):

(51) **ST**: Every time you define another subroutine or load another module, the particular virtual Perl machine we call an interpreter is redefining itself.

(52) **TT**: Aina kun ajon aikana ladataan aliohjelma tai paketti, tarvitaan kääntäjää tulkin rinnalle.

In example (52), the target text includes the expression *ajon aikana* and the noun *kääntäjä* which do not appear in the source text (51). However, the verb *define*, the expression *the particular virtual Perl machine* and the verb *redefine* have been omitted in the target text. It seems as if the translator has found the source text sentence excessively long and has decided to translate only the gist of the sentence, without bothering with all the detail. As to *the particular virtual Perl machine,* it does not seem necessary to include it in the translation, since the target text has mentioned earlier that the interpreter is a virtual *Perl* machine. Furthermore, *ajon aikana* partly compensates for the omission. The word *kääntäjä* may have been added in the target text to emphasise the point that the interpreter and compiler work together. Even though the translation is concise, I find it more general than the source text and not very accurate. The target text does not tell what the interpreter does. Furthermore, the target text mentions in the next sentence that the compiler and interpreter co-operate: *Näin ollen kääntäjä ja tulkki toimivat koko ajan vuorovaikutuksessa keskenään.…* It seems unnecessary to repeat the same information in two consecutive sentences. The problem with translating this sentence is that one should be very familiar with the *Perl* environment in order to be able to translate this sentence accurately.

Syntactic differences

It seems that English can tolerate long noun phrases. It is also possible to write long noun phrases and nominalisations in Finnish, but it often results in sentences which are difficult to read. Nominalisations and long noun phrases lessen the readability of an expository text and may make the text unclear (Nykänen 2002: 131). Since readability and clarity are important issues in technical translating, it might be better to use a short noun phrase followed by a subordinate clause. The resulting sentence might then be easier to read. Examples (53) and (54) below illustrate this point:

(53) **ST**: All eval BLOCKs, s///e constructs, and noninterpolated regular expressions are compiled here…

(54) **TT**: Kaikki eval-lohkot, s///e-rakenteet ja interpolointia edellyttämättömät säännönmukaiset lausekkeet käännetään.

In *Perl* programming interpolating means that the name of an expression is replaced by a value. The underlined noun phrase *interpolointia edellyttämättömät säännönmukaiset lausekkeet* in the above example is very long and therefore it is difficult to grasp its meaning. It could be suggested that a short noun phrase followed by a subordinate clause would enhance readability of the sentence. The sentence might then read: *Tässä vaiheessa käännetään eval-lohkot, s///e-rakenteet sekä säännönmukaiset lausekkeet, jotka eivät edellytä interpolointia.*

Textual differences

Repetition is reduced in the target text (examples (55) and (56)), but some additional cohesive devices are used elsewhere in the text (examples (65)-(68)). Iconic linkage has been lost in translation (examples (57) and (58)). Long source text sentences have been split into shorter sentences fairly frequently (examples (59)-(62)). On some occasions, source text sentences are conjoined and condensed in the translation (examples (63) and (64)). Moreover, source text sentences have been restructured in the target text (examples (69)-(72)). Sometimes paragraphs have also been restructured (examples (75) and (76)). Rheme-theme sequences have been changed into theme-rheme sequences (examples (73) and (74)). Furthermore, expressions, clauses and even whole sentences have been omitted in the translation (examples (77) and (78)). These issues will be discussed in the following.

On some occasions, repetition is reduced in the target text. Consider examples (55) and (56):

(55) **ST**: But curiously, your master copy with all the parts is missing. Even more curiously, the parts you do have are written out using plain English instead of musical notation.

(56) **TT**: Partituuria ei kuitenkaan laatikossa ole. Lisäksi nuottivihoissa ei olekaan nuotteja, vaan musiikki on kuvattu kirjoitetulla tekstillä.

The word *curiously* is omitted in the target text. The target text uses suffix *-kaan* instead: *kuitenkaan*, *olekaan*. Translating the adverb *curiously* with the suffix *-kaan* instead of an adjective or an adverb seems like a good translation solution, since Finnish style guides recommend leaving out words which do not carry much information value, such as adjectives and adverbs, when writing expository texts (Nykänen 2002: 139). However, in this case the repetition has been retained, since the suffix *-kaan* appears in both sentences, just like the adverb *curiously* in the source text. However, the noun *parts*, which is repeated in the source text, is not repeated in the target text. It has been omitted in the first sentence and replaced by *nuottivihkot* in the second.

The leaving out of some of the repetition seems to follow the Finnish textual conventions. In Finnish, unnecessary repetition of words or sentence structures is generally discouraged (Nykänen 2002: 138). However, in technical texts certain amount of repetition is necessary – especially with terminology – and is therefore tolerated (Nykänen 2002: 138). Although repetition is reduced in the target text, textual cohesion does not suffer from it. It is still cohesive enough for a Finnish expository text. Moreover, the word *lisäksi* in example (56) enhances textual cohesion.

In addition to omitting some of the repetition, iconic linkage has been left out of the target text as well. Consider examples (57) and (58):

(57) **ST**: Instead of a hardware program counter, the interpreter just keeps track of the current opcode to execute. Instead of a hardware stack pointer, the interpreter has its own virtual stack.

(58) **TT**: Koneessa on oma pino ja kirjanpito ajettavana olevasta käskystä, kuten fyysisessä suorittimessa.

The structure *Instead of* + noun used in example (57) has been omitted in the target text (58). Textual cohesion does not seem to suffer, even though iconic linkage has been lost.

Another textual difference is that target text sentences are often shorter than sentences in the source text. Long source text sentences have been split into two sentences in the target text. Consider examples (59)-(62):

(59) **ST**: Perl is always in one of two modes of operation: either it is compiling your program, or it is executing it--never both at the same time.

(60) **TT**: Perl on aina joko kääntämässä tai ajamassa ohjelmaan [sic]. Milloinkaan se ei tee molempia yhtä aikaa.

(61) **ST**: In this pass, the compiler descends back down the subtree it's just built to apply local optimizations, the most notable of which is *context propagation.* (italics original)

(62) **TT**: Tässä vaiheessa kääntäjä kulkee juuri muodostamaansa puuta alaspäin ja tekee optimointeja. Niistä tärkein on *kontekstin siirtäminen* (context propagation).

In the above examples, target text sentences seem concise and easy to read. The flow of thought does not seem to suffer from the division at all. Dividing long sentences into shorter ones is justifiable, since expository text should be both easy to read and easy to understand (Nykänen 2002: 10-12).

Apart from breaking sentences up, the target text sometimes joins two sentences and condenses them, as shown in examples (63) and (64):

(63) **ST**: Perl must first reconstitute its parse trees from that bytecode sequence before the program can run. Perl does not run directly from the bytecodes; that would be slow.

(64) **TT**: Perl ei aja suoraan tavukoodia vaihe vaiheelta, sillä se olisi hidasta, vaan ajamista varten rakennettaan [sic] jäsennyspuu uudelleen.

In example (64), two source text sentences (example (63)) have been restructured and conjoined. The target text sentence has swapped the order of the source text sentences and joined them with conjunction *vaan*. A part of the first source text sentence has been omitted (*from that bytecode sequence*), but since it is given information, the omission is justifiable.

While the number of some elements, such as repetition, has been reduced in the translation, as discussed in connection with examples (55) and (56), some cohesive elements have been added in the translation as well. Examples (65)-(68) show two such cases.

(65) **ST**: The compiler is now done, unless it gets called back into service later.

(66) **TT**: Näiden toimenpiteiden jälkeen kääntäjä on tehnyt työnsä, elleivät myöhemmät vaiheet kutsu sitä uudelleen.

(67) **ST**: This doesn't happen in independent stages, but all at once with a lot of cross talk between the agents.

(68) **TT**: Edellä mainittuja ohjelmia ei käytetä selkeästi tietyssä peräkkäisessä järjestyksessä, vaan rinnakkain.

In example (65) the source text uses the word *now*, whereas the target text in example (66) contains the phrase *Näiden toimenpiteiden jälkeen*. In example (68) the target text has combined source text words *This* and *the agents* (see example (67)) into *Edellä mainittuja ohjelmia*. It seems probable that the translator has aimed at clear and unambiguous translation by using explicit reference instead of mere pronominal reference. Referencing via repetition or synonymy is used throughout the target text wherever using pronominal reference might cause problems of interpretation. This seems like a good translation strategy for the current text. Since clarity is important in technical texts, it is more or less the translator's duty to improve it if necessary, even at the cost of concision. Elegant variation itself may cause problems in a technical text, but it seems that the translator has been very careful with synonymy, so as not to confuse the reader. For instance, important terms have not been given synonyms. As to other added cohesive devices, the transition of exemplification is also used in translation in places where it does not appear in the original: *Esimerkiksi*, *Esimerkkinä*, *Esimerkissä*.

The target text has also undergone a considerable amount of restructuring. Much of this restructuring is dictated by the structural differences between English and Finnish. For instance, of- and by-constructions can hardly be translated without restructuring the sentence because Finnish does not use prepositions for these purposes. Examples (69)-(72) illustrate this point:

(69) **ST***:* CHECK blocks are installed by code generators, so…

(70) **TT***:* Koodin muodostajat asentavat CHECK-lohkot, joten…

(71) **ST**: You can see the final result of the constructed parse tree after all optimization stages with *perl -Dx*. (italics original)

(72) **TT**: Jäsennyspuun viimeisen version saa nähtäville komennolla *perl -Dx*. (italics original)

In the above examples, source text uses prepositional phrases (examples (69) and (71)). In the target text (examples (70) and (72)), these phrases have been consistently moved to the beginning of the sentence. This restructuring seems to be caused by the structural differences between English and Finnish.

Other restructuring has also taken place in the target text. Rheme-theme sequences have often been changed to theme-rheme sequences. Examples (73) and (74) show how changes have been made:

(73) **ST**: However, if whatever were the last statement evaluated in a function called in a nonvoid context (as determined by the optimizer), you wouldn't see the warning.

(74) **TT**: Virheilmoitusta ei sen sijaan anneta, jos funktiota jotain kutsutaan muussa kuin void-kontekstissa kutsuttavan funktion viimeisenä lauseena.

In example (74), the source text clause *you wouldn't see the warning* (see example (73)) has been moved to the beginning of the sentence and translated as *Virheilmoitusta ei sen sijaan anneta.* Since *virheilmoitus* is given information, it is the theme. It is followed by the new information, that is, the rheme. This change has probably been made to enhance the clarity of the sentences. Moreover, it has been said that using theme-rheme sequences (what is the issue - what is said about it) also contributes to cohesion. In a Finnish technical text, it is preferable to proceed from given information (i.e. what the reader already knows) to new information for the sake of cohesion and concision (Nykänen 2002: 132, 135). This preference may have been another motivation for restructuring sentences in the target text.

In addition to sentences, also some paragraphs have been restructured. For instance, the clauses in one paragraph have been moved around, the paragraph has been condensed slightly and the information in the footnote has been integrated in the body of the text.

Consider examples (75) and (76) below:

(75) **ST:** But most Perl programs use only a single Perl interpreter to execute their compiled code. And while you can run multiple, independent Perl interpreters within one process, the current API for this is only accessible from C.[5] Each individual Perl interpreter serves the role of a completely separate process, but doesn't cost as much to create as a whole new process does. That's how Apache's mod_perl extension gets such great performance: when you launch a CGI script under mod_perl, that script has already been compiled into Perl opcodes, eliminating the need for recompilation--but more importantly, eliminating the need to start a new process, which is the real bottleneck. Apache initializes a new Perl interpreter in an existing process and hands that interpreter the previously compiled code to execute. Of course, there's much more to it than that--there always is. For more about mod_perl, see *Writing Apache Modules with Perl and C* (O'Reilly, 1999).

[5] With one exception, so far: revision 5.6.0 of Perl can do cloned interpreters in support of fork emulation on Microsoft Windows. There may well be a Perl API to "ithreads", as they're called, by the time you read this.

(76) **TT:** Kuitenkin useimmissa Perl-ohjelmissa käytetään yhtä tulkkia, joka ajaa yhtä ohjelmaa. Useiden tulkkien sisällyttäminen prosessiin ei yhtä poikkeusta lukuun ottamatta ole tätä kirjoitettaessa mahdollista kuin C-kielen rajapinnan kautta. Poikkeuksena on fork-toiminnon emulointi Microsoft Windows -käyttöjärjestelmissä Perlin versiosta 5.6.0 lähtien. Tulevaisuudessa tämä tulkkisäikeisiin perustuva tekniikka tullaan sisällyttämään myös muiden käyttöjärjestelmien Perl-versioihin. Jokainen Perl-tulkki toimii kuin itsenäinen prosessi, mutta käynnistäminen ei ole niin raskasta kuin kokonaan uuden prosessin luominen käyttöjärjestelmän alaisuuteen. Tähän perustuu myös Apachen mod_perl -laajennuksen hyvä suorituskyky. Käynnistettäessä CGI-skripti sen alaisuuteen otetaan käyttöön valmiiksi käännetty tavukoodi ja käynnistetään sen ajo olemassa olevan prosessin sisälle. Varsinkin prosessin käynnistämiseltä välttyminen säästää merkittävästi aikaa. Luonnollisesti CGI-skriptin käynnistämiseen tällä tavoin liittyy paljon muitakin asioita, joista saa tarvittaessa lisätietoja kirjasta *Writing Apache Modules with Perl and C* (O'Reilly, 1999).

Examples (75) and (76) show how the source text has been moved around and restructured. Sentences which have been moved are indicated by double underlining in the source text excerpt in example (75) above. Compared to the source text, the most notable change is the inclusion of footnote [5] in the bread text. The gist of the footnote appears in the third and the fourth sentences in the target text (see the first double underlining in example (76)). The sentence beginning with *Apache initializes a new Perl interpreter…* has been integrated with a sentence appearing earlier in the source text (see the second double underlining in target text example (76) above). In addition, some parts of the source text have been left out. They have been marked in the source text example (75) with single underlining. As a matter of fact, surprisingly little information has been lost in the translation, even though some of it appears only as implied information in the target text.

The reasons for the restructuring are not quite self-evident. Perhaps the translator has felt that the footnote contains very important information, which might go unnoticed in a footnote. Whatever the reason is, the inclusion of the footnote in the bread text seems to interrupt the flow of thought slightly. As I am not an expert on *Perl* programming, I cannot say whether the added information is worth the interruption. However, the second case of restructuring seems to add to the clarity and concision of the translation. It combines clauses *when you launch a CGI script under mod_perl, that script has already been compiled into Perl opcodes* with *Apache initializes a new Perl interpreter in an existing process and hands that interpreter the previously compiled code to execute.* The resulting translation is: *Käynnistettäessä CGI-skripti sen alaisuuteen otetaan käyttöön valmiiksi käännetty tavukoodi ja käynnistetään sen ajo olemassa olevan prosessin sisälle.* This translation seems to be as concise as it can be without losing new information.

The final textual difference between source and target text in the category of field is that a notable amount of source text has been omitted. In addition to the omission of lexical items discussed in Lexical Differences above, phrases, clauses and even whole sentences have been omitted in the translation. For instance, in one paragraph the last three sentences have been omitted, as shown in examples (77) and (78):

(77) **ST**: You can't really say that either the compiler or the interpreter is in control, because they're cooperating to control the bootstrap process we commonly call "running a Perl script". It's like bootstrapping a child's brain. Is it the DNA doing it or is it the neurons? A little of both, we think, with some input from external programmers.

(78) **TT**: Näin ollen kääntäjä ja tulkki toimivat koko ajan vuorovaikutuksessa keskenään eikä voida sanoa, että kääntäjä tai tulkki ovat [sic] yksin vastuussa tietystä vaiheesta, vaan vastuujako riippuu ohjelman sisällöstä.

The target text (example (78)) has left out the last three sentences of the source text (example (77)). These sentences provide additional information about the nature of cooperation between *Perl* compiler and interpreter through a comparison to the DNA and neurons. The target text seems to explain this issue well enough, and thus there does not seem to be a need for repeating the same matter with different words. As noted earlier, unnecessary repetition is to be avoided in Finnish expository texts. Omissions of phrases and clauses can be found throughout the text. The omitted stretches of text usually contain given information and repetition, which may be left

out of the translation to improve conciseness of the target text. The clarity of the target text does not usually suffer from these omissions. The possible reasons for the omissions are discussed further in Chapter 5.1.3 and Chapter 6.

Tenor

As discussed earlier, tenor is a register category which contains three situational dimensions: the author's provenance and stance, social role relationship and social attitude (House 1997: 110). (More information on tenor can be found in subchapter 3.2.2, p. 37ff) Next I will look into the differences between the source and target text found in the analysis in the category of tenor.

Author's personal stance

The first situational dimension under tenor is Author's personal stance. Some lexical differences were found in the comparison of the source and target text.

The easygoing, humorous tone of the original has either been transformed into somewhat forced humour, or it has disappeared altogether in translation, as will be seen in examples (79)-(82). On some occasions the humorous effect is reduced due to neutral lexical choices (see examples (83) and (84)). Examples (79) and (80) show how the leaving out parts of the source text has caused a loss of humour in the target text:

(79) **ST**: That might not be what you were thinking, and if it wasn't, you may be pleased to know that we do also provide *code generators* (which some well-meaning folks call "compilers"), and we'll discuss those toward the end of this chapter.(italics original)

(80) **TT**: Sen lisäksi jakelun mukana tulee koodia luovia ohjelmia eli koodin muodostajia, joista kerrotaan myöhemmin tässä luvussa.

The source text example (79) contains the clause *which some well-meaning folks call "compilers"* in parentheses, which sounds amusing thanks to its lexical choice. The noun *folks*, used especially in informal American English, creates an amiable overall tone in this sentence, while the word *well-meaning* sounds amusing in a sentence essentially designed to correct a misconception concerning the term *compiler*. The target text (80) leaves out the clause in parentheses along with other clauses, and retains only the essential information of the sentence. The target text sentence is thus

very factual, and not at all amusing. However, sometimes the target text attempts to retain the humour of the source text. Consider examples (81) and (82) below:

(81) **ST**: At this point, your program goes into suspended animation. If you made an executable image, you can go directly to phase 4; otherwise, you need to reconstitute the freeze-dried bytecodes in phase 3.

(82) **TT**: Seuraavaksi siirrytään suoraan vaiheeseen neljä, jos ohjelmasta on tehty ajettava ohjelmatiedosto. Muussa tapauksessa siirrytään vaiheeseen kolme, jossa muodostetaan pakastekuivatut tavukoodit.

In this case, the humorous expression *freeze-dried bytecodes* has been translated in the target text (82), but it appears unexpectedly and does not seem to have the same effect as the joke in the source text (81). In the first sentence of the above source text quotation, *suspended animation* carries the meaning of freezing, and justifies the use of *freeze-dried* for a humorous effect. The target text omits the first sentence, and thus the word *pakastekuivatut* does not have any referent and seems appear out of context. Instead of a humorous effect, the word *pakastekuivatut* may distract the reader and make him/her wonder what the writer is trying to say. The reader expects a factual and a primarily non-humorous expository text with an instructive undertone to make sense, following the Gricean maxims of relation and quantity, which state that information the speaker gives should be relevant and that the speaker should not give more or less information than necessary (Grice 1978). Therefore the word *pakastekuivatut* should also make sense. However, it appears so suddenly that it may leave the reader momentarily perplexed. If the reference to suspended animation is omitted in the target text, it might be better to leave out the translation of *freeze-dried* too. Retaining it does not seem to achieve a humorous effect in the target text. Examples (83) and (84) below show a case in which the translation is potentially humorous:

(83) **ST**: We recommend that you stay out of the lexer, which has been known to induce eating disorders in lab rats.

(84) **TT**: Neuvomme pysymään erossa sen muokkaamisesta, sillä muokkaaminen on aiheuttanut vatsavaivoja koe-eläimille.

In example (84), target text tries to retain the humour of the source text (83). However, the attempt at a joke seems to fall flat. It may be caused by the choice of words in the target text. The target text replaces *lab rats* with *koe-eläimet*, which meaning is vaguer than that of *lab rats*. In addition, *eating disorders* is toned down to

vatsavaivoja. The word choice in the target text thus seems to neutralise the humorous effect of the sentence. In addition, the humorous elements are far and between in the target text and the joke might not work even if the word choice was more lively. If the humorous elements cannot be integrated in the text in a natural way, leaving them out altogether might be preferable to retaining them.

The jokes seem to suit well in the informal tone of the source text, but the tone of the target text seems more formal, mainly due to the use of passive constructs. Thus fitting the jokes and humorous lexical items in the translation proves difficult. In the source text, the writers come across as persons who are funny. In the target text, the writer appears as someone who is trying to be funny, because the jokes are not funny due to flattened lexical items and the overall style of the text. It seems that translating humour partially does not work in this text.

Social role relationship

The second situational dimension under tenor is Social role relationship. Some syntactic differences between the source and target text seem to belong to this situational dimension. These differences will be discussed next.

The writers of the source text seem to aim at establishing a quasi-personal relationship with the reader. In the target text the relationship seems to remain on a more impersonal level. The reader is seldom addressed directly and many of the 'second person pronoun plus verb' constructions are translated as passive constructs. Examples (85)-(88) below illustrate this tendency.

The source text uses the active voice and personal pronouns in most part of the text, but in many cases the target text uses passive constructions instead. The Finnish passive voice is not strictly impersonal, since it implies that an unspecified person is behind the action (Ikola 2000: 56). For example, *ovi suljettiin* implies that someone closed the door as opposed to *ovi sulkeutui*. English uses the passive voice similarly. However, since the source text uses mainly the active voice and personal pronouns, whereas the target text uses mainly the passive voice, the target text seems less personal than the source text. Also the distance between the author and the reader seems greater in the target text. Consider examples (85) and (86).

(85) **ST**: If you came here looking for a Perl compiler, you may be surprised to discover that you already have one -- your *perl* program (typically */usr/bin/perl*) already contains a Perl compiler. (italics original)

(86) **TT**: Perl-kääntäjää etsiessään saattaa kohdata yllätyksen, että kääntäjä onkin jo asennettu koneeseen.

The source text in example (85) uses active voice and second person pronouns *you* and *your*. The corresponding pronoun in Finnish is *sinä*. However, the translator has chosen to change the sentence in the passive: *onkin…asennettu* (86). The subordinate clause containing a personal pronoun at the beginning of the source text sentence has been replaced with the participial construction *Perl-kääntäjää etsiessään*. The translator has thus been able to avoid personal pronouns in the target text. The tendency to avoid personal pronouns can also be seen in examples (87) and (88) below:

(87) **ST**: Imagine that you're a conductor who's ordered the score for a large orchestral work. When the box of music arrives, you find several dozen booklets, one for each member of the orchestra with just their part in it. But curiously, your master copy with all the parts is missing. Even more curiously, the parts you *do* have are written out using plain English instead of musical notation. (italics original)

(88) **TT**: Kuvittele olevasi kapellimestari, joka on ottanut tehtäväkseen suuren orkesteriteoksen johtamisen. Postissa saapuu laatikollinen nuottivihkosia, joissa jokaisessa on vain yhden orkesterin jäsenen osuus. Partituuria ei kuitenkaan laatikossa ole. Lisäksi nuottivihoissa ei olekaan nuotteja, vaan musiikki on kuvattu kirjoitetulla tekstillä.

The source text in example (87) uses second person singular pronoun repeatedly. However, the corresponding excerpt from the target text in example (88) contains only one second person form, *kuvittele*, created with personal suffix. The rest of the excerpt in example (88) avoids personal pronouns.

The personal suffix in example (88) fits well in its surroundings, but the personal pronouns are not always dealt with in an equally successful way in the target text. Sometimes the target text retains personal pronouns, but on some occasions they are used so that they seem to stand out of the rest of the text. Consider examples (89) and (90) below:

(89) **ST**: Perl maintains quite a few stacks, which you don't have to understand, but which we'll list here anyway just to impress you…

(90) **TT**: Perl pitää yllä varsin monia pinoja, joista sinun ei tarvitse olla perillä, mutta luettelemme ne kuitenkin tässä, jotta tekisimme sinuun vaikutuksen…

The target text in example (90) has retained the second person singular personal pronouns of the source text (89). The first person plural pronoun *we* appears in the target text as a personal suffix in *luettelemme*. While the suffix may not catch the attention of the reader, the pronouns *sinun* and *sinuun* do. In a text which uses personal pronouns very sparingly, two consecutive pronouns referring to the reader in the same sentence are bound to catch the attention. The reason for using second person singular personal pronoun suddenly in the text might be caused by the source language interference; looking at so many '*you*s' might have finally had its effect on the translator. However, such a lapse seems unlikely, since the second person singular personal pronoun is not used in the sentences which follow the sentence in example (90). If it was caused by interference, one would expect the same appear in the subsequent sentences and paragraphs, which it does not. Another reason might be that the sentence cannot be recast into Finnish by using an impersonal construction. This is not a probable reason either, since the translator has solved similar cases previously by translating *you* with *ohjelmoija*, and the same method would have worked here as well. The third and most likely reason for using second person pronouns is the attempt to retain the humour of the original, recreating the effect the original has on its audience. However, since much of the humour found in the original is left out of the translation, and the style of the translation seems more formal than the style of the original, the effect the translation has on its target audience cannot be identical to that of the original. The tone of the original is rather playful, but the tone of the translation is more serious and thus humorous bits stand out as strange and pointless.

As to the usage of the personal pronouns in the source text and target text in general, the source text is filled with pronominal references, which appear only here and there in the target text. It seems as if the translator has tried to avoid using personal pronouns in the target text as much as possible. This avoidance may be based on the general reluctance to use personal pronouns, and especially the second person singular pronoun, in Finnish exposition. For example, Finnish instructions of use tend to use the second person singular pronoun very occasionally (Ingo 1990: 194). Thus, even if the lack of personal pronouns seems to reduce the interpersonal

effectiveness of the target text, the target text seems to follow the Finnish textual conventions in this matter.

Social attitude

The style of the target text is less personal than that of the source text, and the distance between the author and the reader seems greater (see Social role relationship on page 81). Due to passive voice and certain lexical items and expressions, the translation seems more formal than the source text. Some of those lexical items and expressions will be discussed next, see examples (91)-(98) below. The use of the passive voice in the target text was discussed in connection with Social role relationship above.

(91) **ST**: Inevitably there's going to be a certain amount of low-level detail in this chapter…

(92) **TT:** Asian luonteen vuoksi luku sisältää teknisiä yksityiskohtia…

The style of the source text example (91) is rather informal. However, the target text in example (92) seems more formal than the source text. The change in the level of formality is mainly due to the lexical choice in the target text. The adverb *inevitably* at the beginning of the source text sentence has been translated by *asian luonteen vuoksi*, which is much longer than the original. There are shorter alternatives for *inevitably* in Finnish, such as *väistämättä* and *pakosta(kin)*. Moreover, the target text also carries a meaning of causality, which is not expressed in the source text. The progressive form *there's going to be* has been changed into *sisältää*, which sounds more formal than the progressive form of the verb *be* in the source text. The decision to make the target text more formal than the source text may conform to the expectations of the readers of technical texts, since Finnish expository texts prefer neutral style to informal style (Nykänen 2002: 138). However, there does not seem to be a need to add an element of causality in the target text by the postposition *vuoksi*. Postposition is also used in example (94) below:

(93) **ST:** There's no need for the interpreter to…

(94) **TT:** Tämän menettelyn ansiosta tulkin ei tarvitse…

The translator has chosen to use the postpositional phrase *tämän menettelyn ansiosta*, which refers back to the paragraph before it (example (94)). The phrase could have

been left out, since it does not appear in the source text. The use of postpositional phrase seems to make the sentence more formal, but it also clarifies the meaning of the sentence and pulls the paragraph together. Thus, in this case, using the postpositional phrase is justifiable.

(95) **ST:** You can break up the life cycle of a Perl program into four distinct phases…

(96) **TT:** Perl-ohjelman elinkaari on jaettavissa neljään osaan.

In example (96), the target text uses *on jaettavissa* instead of less formal *voidaan jakaa*. This translation choice makes this target text sentence slightly more formal than necessary.

(97) **ST:** You could think of the following correspondences:
(98) **TT:** Perlin ja luonnollisen kielen välille voi ajatella seuraavat analogiat:

Example (98) shows a case in which the translator has chosen to use a foreign loan word *analogiat* instead of more Finnish word *vastaavuudet*. The use of a foreign loan word makes the text seem rather formal. A Finnish word is always easier to understand than a foreign loan word. According to Nykänen (2002: 138), Finnish words should be used in expository texts instead of foreign words whenever possible. This is not to say that foreign loan words cannot be used in technical texts; technical terminology often comprises of foreign loan words which are commonly used on the respective field. Thus they may be used in translation if there is no equally exact Finnish term available. However, since the word *analogiat* in example (98) does not seem to be a field related term, the accuracy would not suffer if it was translated.

For the most part, informal and colloquial words and expressions have either been left out or translated with standard language expressions. Consider examples (99)-(102):

(99) **ST**: A given compile phase does mostly compile-time stuff, but it also does some run-time stuff via BEGIN blocks.

(100) **TT**: Esimerkiksi käännösvaiheen aikana ajetaan BEGIN-lohkot, jolloin käännösvaiheeseen sisältyy ajon aikaista toimintaa.

(101) **ST**: This pass also constructs the node visitation order used later for execution, which is a really neat trick because the first place to visit is almost never the top node.

(102) **TT**: Tässä vaiheessa määräytyy myös solmujen ajojärjestys. Se ei ole helppo tehtävä, sillä yleensä ylin solmu ei ole ensimmäinen ajettava solmu.

The informal word *stuff* in example (99) has been translated by the neutral *toimintaa* (100). The colloquial *a really neat trick* in example (101) appears in the target text (102) as *se ei ole helppo tehtävä*. Again, the target text has translated an informal expression with a neutral standard one. However, on occasion, the target text uses colloquial words, see examples (103) and (104) below.

(103) **ST**: …because the Perl compiler has to be blazing fast...

(104) **TT**: Perl-kääntäjän on nimittäin selvittävä tehtävästään tosi vauhdikkaasti…

The word *tosi* in example (104) is one of the few informal expressions in the target text. Considering the overall style of the target text, a more natural choice might have been *todella*. The target text has been written in a rather formal style, and *tosi* seems to cause a breach in style. Thus, for the sake of consistency, it might be better to continue on the chosen path and systematically leave out colloquialisms or translate them with neutral lexical items.

In sum, in the category of tenor, the most notable differences between the source and target text are the loss of humour in the translation, the increased formality in the target text and the increased distance between the reader and the writers, caused by passivisation and loss of personal pronouns. As mentioned above, these changes may be dictated by the Finnish textual conventions of expository texts. Now I will move on to mode, the final register category.

Mode

The register category of mode contains two situational dimensions: medium and participation. The differences between source and target text in these dimensions are presented in the following.

Medium

The medium of the target text remains written to be read. The few signals of spoken language in source text (see Medium in subchapter 5.1.1 on p. 64) have been almost completely omitted in the translation, thus making it even more firmly written to be read. The involvedness of the text seems reduced due to the lack of deictic pronouns

in the translation. The target text generally avoids direct address of readers and it seems to be less involved than the original. However, the Finnish mechanisms for involving the reader are probably different from those of English.

Participation

The translation is less dialogic than the source text due to lack of direct address of the readers. As discussed above (p. 81ff), readers are addressed directly via second person pronouns in the source text. In the target text, second person pronouns are virtually non-existent, see examples (85)-(88) under Social role relationship (p. 81ff). The interpersonal effectiveness seems reduced due to increased distance between the reader and the writers (see Social role relationship, p. 80ff). In the source text, the reader participation seems to be explicit, since the text brings in the readers through the use of deictic pronouns (see example (42) on p. 65). The lack of deictic pronouns in the target text makes the reader participation seems less explicit than in the source text.

Genre

The genre – computer programming guide – remains essentially the same. Whether the translation is geared more towards experienced programmers than the original remains unclear, as confirming this doubt would require a more extensive analysis – a task which is not feasible in the current study.

The individual textual function of Target Text 1

The individual textual function of Target Text 1 may be summed up by saying that the intention of the author seems to be the same as in the source text: to teach Perl programming and give a comprehensive view of the programming language. Thus the ideational function is the primary function also in the target text. The interpersonal component seems weaker in the translation than in the original, because there are fewer humorous and informal lexical items in the target text than in the source text. Furthermore, the lexical choice of the target text is more formal than that of the original.

5.1.3 Text 1 discussion

While the translation is clear and relatively easy to read, a notable amount of the source text has been omitted from it. These omissions raise a question as to the translator's motivation. Finnish textual conventions for writing expository texts may provide one reason. A style guide on Finnish expository texts and technical writing, written by Nykänen (2002), gives some guidelines for writing, and it seems justified to assume that these guidelines reflect Finnish writing conventions or at least the 'good practises' which the writers should follow. According to the style guide, the writer should leave out of everything the reader already knows, everything that is irrelevant and everything the reader can deduce from the context (Nykänen 2002: 138, see also Rainio 1988: 96).

It seems that most of the omissions in the translation can be substantiated by these Finnish writing conventions and preferences. However, some omissions seem unjustified. Consider examples (105)-(108) below:

(105) **ST**: Eventually, the nodes will be strung together linearly, one after another, to indicate the execution order in which the run-time system will visit those nodes.

(106) **TT**: Solmut asettuvat vähitellen peräkkäiseen järjestykseen, joka kertoo, miten ohjelmaa ajetaan.

Here the translation (106) seems less accurate than the source text (105), because the last clause provides information on a more general level. Thus the information is less accurate and opens the way for misinterpretations. The target text readers have to extract this information later, from a picture. In the following examples, the information content of the target text sentence (108) is lower than that of source text (107) due to omissions:

(107) **ST**: More importantly from the standpoint of the optimizer, they each have their own entry point, which means that while we know the execution order from here on, we can't know what happened before, because the construct could have been called from anywhere.

(108) **TT**: Alueilla on omat aloituskohtansa, mutta aloituskohtia ennen ajetusta koodista ei voida olla varmoja, sillä alueen koodia saatetaan kutsua eri paikoista ohjelmaa.

The informational content of the source text clause *which means that while we know the execution order from here on* (107) is not explicitly included in the translation (108). Deriving this information from the context requires that the reader pauses to

think about this issue. However, the aim of guides is usually to tell the reader how something works or how to do something, not so much to challenge their intellect.

As noted earlier, repetition has been reduced in translation. The reduction is necessary, because inflected languages, such as Finnish, often use inflections in places where English uses repetition (Herman 1993: 17). Furthermore, "... repetitions required by the source-language thought processes can be eliminated if the target language does not require them." (Herman 1993: 17-18). The reduction of repetition can therefore be seen as a prerequisite for a natural-sounding translation in Finnish.

Since correctness and accuracy of information are crucial in a technical text, there is no room for mistranslations. As to the present target text, however, mistranslations appear on some occasions, although not very often. Consider examples (109) and (110) below:

(109) **ST**: You may think it odd that the Perl compiler does all these things at once instead of one after another, but it's really just the same messy process you go through to understand natural language on the fly, while you're listening to it or reading it. You don't wait till the end of a chapter to figure out what the first sentence meant.

(110) **TT**: Aluksi tämä rinnakkaisuus saattaa tuntua oudolta, mutta se on sukua tavalle, jolla ymmärrämme luonnollista kieltä kuunnellessamme tai lukiessamme. Ensimmäisen lauseen koko merkitys saattaa avautua vasta kappaleen viimeisen lauseen jälkeen.

It seems that the meaning of the last source text sentence in example (109) has been reversed in the target text (110). The purpose of this sentence in the source text is to clarify the process of compiling by comparing it to the way people interpret language. *Perl* compiler interprets the code with the help of several programmes at the same time, just like the human brain deduces the meaning of a text based on syntax, semantics, situational variables etc, updating the interpretation as the reading proceeds. The source text sentence refers to this process, whereas the target text sentence seems to refer to the result. Changing a description of process into a description of result seems unjustifiable considering the purpose of the source text sentence. Further, it seems that the negative form *don't* has escaped the translator's notice. Although the translator uses the word *koko,* the resulting target text sentence does not seem to convey the exact meaning of the original, and may thus be seen as a mistranslation.

On some occasions the target text extends the imagery of the source text, as can be seen in examples (111) and (112):

(111) **ST**: Similarly, when you hand the source code of your Perl script over to perl to execute, it is no more useful to the computer than the English description of the symphony was to the musicians. Before your program can run, Perl needs to compile[1] these English-looking directions into a special symbolic representation. Your program still isn't running, though, because the compiler only compiles. Like the conductor's score, even after your program has been converted to an instruction format suitable for interpretation, it still needs an active agent to interpret those instructions.

(112) **TT**: Vastaavalla tavalla toimii Perlin kääntäjä, kun sille annetaan ohjelmakoodia. Ohjelmoijan antama koodi on kuin tavallinen teksti soittajalle. Se on käännettävä soittajan ymmärtämään muotoon. Varsinaista teosta ei vielä tässä vaiheessa voi esittää, sillä esittäjälle ei ole ohjeita. Myöskään ohjelmaa ei ajeta käännöksen aikana. Käännöksen valmistuttua tarvitaan soittaja. Perlin tapauksessa se on tulkki, joka alkaa ajaa käännettyä koodia.

The text seems to be translated rather freely (see example (112)). The translator continues to use the imagery introduced in the target text even in places where it is not used in the source text. I find that in a situation like the one above, the most important aim of translation is to transfer the idea of the source text, not necessarily the expressions. Thus, I would suggest that in the above case the translation is acceptable, because the purpose of the paragraph is to explain an idea with the help of imagery. The target text succeeds in relaying the message, although it may be slightly less detailed than the source text.

In a few cases source language interference may be detected. Consider examples (63) and (64) on page 73. There may be signs of source text interference in the target text in example (64). The target text says *Perl ei aja suoraan tavukoodia…*, following the source text word order: *Perl does not run directly from the bytecodes*. The word *suoraan* could also be placed after *tavukoodia*: *Perl ei aja tavukoodia suoraan…*. The side comment *sillä se olisi hidasta* also seems to follow the source text very closely and may thus show signs of source language interference. It seems that the source language word order has been carried over to the translation. However, it remains unclear why *vaihe vaiheelta* has been added to the target text, since its equivalent does not appear in the source text. Another possible occurrence of source text interference is presented in examples (113) and (114) below.

(113) **ST**: …because the construct could have been called from anywhere.

(114) **TT**: …sillä alueen koodia saatetaan kutsua eri paikoista ohjelmaa.

In example (114), *anywhere* has been translated as *eri paikoista ohjelmaa*. In Finnish it is more common to say *eri puolilta ohjelmaa* or *ohjelman eri osista*. A corresponding expression is *mistä tahansa* but it may be too vague to be of use here. It is true that *anywhere* refers to a place, but it seems that the translation *eri paikoista* is a result of source language interference. In this text instances of source language interference are however far and between. They are so few, that they probably do not attract much attention from the readers. In this respect the translation seems acceptable, despite of an occasional slip.

5.1.4 Statement of translation quality

To recap the results of the analysis I would say that many of the differences between Source Text 1 and Target Text 1 can be explained by the Finnish textual preferences. In the category of field, iconic linkage of the original has been lost in translation. Tenor has also undergone changes: humour is reduced in the target text mainly because humorous lexical items are translated by neutral words and expressions. Furthermore, the lack of personal pronouns and the use of passive constructs make the text less personal and involved than the source text. These changes may, however, have been motivated by Finnish textual preferences, such as the avoidance of redundancy, repetition and personal pronouns (see e.g. Chapter 5.1.2, p. 66ff). Thus it seems that the translator has been aware of the need of cultural filtering. However, not everything can be accounted for in this way. The comparison of the original and the translation shows that there are some mismatches especially on the area of field. For no apparent reason, some terms which are not explained in the source text are explained or paraphrased in the translation and vice versa. Some words, expressions and clauses which may be essential to the meaning have been omitted. Thus, in spite of the fact that the cultural filtering is often adequate, the translation still leaves something to be desired. On a scale of poor, fair, good or excellent, I would say that the quality of the translation is nevertheless good.

5.2 Text 2: *XML Bible* and *XML Tehokäyttäjän opas*

The second source text excerpt has been taken from a book called *XML Bible*, written by Elliotte Rusty Harold (1999: 49-58). The excerpt chosen for the analysis is from Chapter 3. The target text extract comes from the Finnish translation of the book, *XML Tehokäyttäjän opas* (2000: 71-79) translated by Pekka Saxberg. The book introduces the XML markup language and teaches how to use it to create Web pages. Although the book might not fit in the category of programming guides in the strictest sense — XML is a actually a markup language, not a programming language — the similarities with programming languages and programming guides seem strong enough so as to include the book in the present study. In this study the difference between programming languages, scripting languages and markup languages is thus not seen as significant. In all these cases, the method of learning these languages seems to follow essentially the same pattern: first one learns the basics and then more difficult things, building on the basic knowledge accumulated earlier, and the organisation of these books mirrors this pattern. Thus these books are all grouped together here under the heading of computer programming guides. Dividing the programming guides further into different genres according to the type of the programming language would not seem to bring any additional benefit to the analysis. Next, I will proceed to the analysis of Source Text 2.

5.2.1 Analysis of Source Text 2

Source Text 2 will be analysed in a similar manner as Source Text 1. However, I will not repeat those theoretical issues related to the Finnish textual conventions which have already been discussed in connection with Source Text 1, in order to avoid excessive repetition. Again, I will deal with each register category and their situational dimensions in turn, starting with field.

Field

This book is a computer programming guide which teaches readers XML markup language and CSS style sheet language, and explains how these two languages can be used to create web pages. Background knowledge of XML is not required, since the book starts from scratch. The book does not presuppose any in-depth knowledge about computers either; for example, the procedure of saving a file is explained in

detail. The reader needs to know only the basic computer terminology (e.g. *file*, *extension*, *code*). In the excerpt chosen for analysis, the author walks the reader through creating the very first XML document and its style sheet. In the following, I will look into the lexical, syntactic and textual means which realise the situational dimension of field in this particular text.

Lexical means realising the situational dimension of field

At the lexical level, this text is characterised by relatively easy vocabulary and lack of jargon. New terms are explained as they come up. Consider example (115) below:

> (115) The XML declaration has version and standalone *attributes*. An attribute is a name-value pair separated by an equals sign. The name is on the left-hand side of the equals sign and the value is on the right-hand side with its value given between double quote marks. (font usage for emphasis original)

In the above example (115), the author mentions the term *attribute* and then explains what it means in the context of the XML markup language. The vocabulary is kept easy, which shows that the text is aimed at novices.

The text seems factual. There are not many humorous items in it. It seems that the only lexical item which might be considered humorous in the excerpt is *dumb*, see example (116) below:

> (116) Computers, being relatively dumb machines, can't really be said to understand the meaning of anything.

The purpose of the adjective *dumb* in example (116) seems to be to strengthen the meaning of the sentence; the sentence would be comprehensible even without the comma-separated clause. Further, the writer could have provided some technical explanation on why computers do not understand the meaning of anything, but he has chosen a less technical explanation instead. In an otherwise factual text the informal word *dumb* seems humorous.

Syntactic means realising the situational dimension of field

At the syntactic level, short sentences and uncomplicated sentence structure contribute to the clarity and straightforwardness of the text. Consider example (117):

> (117) What you see will vary from browser to browser. In this case it's a nicely formatted and syntax colored view of the document's source code. However, whatever it is, it's likely not to be particularly attractive. The problem is that the

> browser doesn't really know what to do with the FOO element. You have to tell the browser what it's expected to do with each element by using a style sheet.

In example (117), sentences are relatively short and complicated sentence structures are not used. This is not to say that the text does not use compound and complex sentences. Different sentence structures (simple, compound, complex) are used in the text. However, the text avoids using overtly long sentences containing for example several subordinate clauses and spanning several lines. Further, the vocabulary used in the complex sentences is not difficult, and thus they do not hinder readability. The relatively short sentences contribute to the readability of the text; it is easy and fast to read.

Textual means realising the situational dimension of field

Source Text 2 uses theme-rheme sequences to ensure the logical flow of thought. An example of this theme-rheme sequencing can be seen in example (119) below. It has been mentioned earlier in the source text that there are three kinds of meaning. The first sentence in example (119) draws first on this acquired knowledge (theme) and then introduces a new concept, *style meaning* (rheme). The next sentence begins with the concept *style meaning*, which is now the theme since it was introduced in the previous sentence.

Strong textual cohesion also contributes to the readability of the text. The cohesive devices used in the text include repetition (examples (118) and (119)), iconic linkage (examples (120)-(124)), transitions (examples (125)-(128)), synonymy and antonymy (examples (129)-(131)) and anaphoric reference (examples (132) and (133)). These cohesive devices will be discussed next.

Repetition is sometimes used in the text to drive a certain point home. Furthermore, repetition ensures that there is not usually any misunderstanding about what the author discusses or refers to. See examples (118) and (119) below.

> (118) The problem is that the browser doesn't really know what to do with the FOO element. You have to tell the browser...
>
> (119) The third kind of meaning that can be associated with a tag is style meaning. Style meaning specifies how the content of a tag is to be presented on a computer screen or other output device. Style meaning says whether a particular element is…

In example (118), *browser* is repeated in two consecutive sentences. In the second sentence the noun *browser* could be replaced with the pronoun *it*. However, repeating *browser* in the second sentence makes the referent absolutely clear, leaving no room for speculation. Example (119) shows how repetition is used not only for clarity, but also to make the matter at hand easier to remember. The noun *style meaning* is repeated in three consecutive sentences, which probably leaves the reader with the impression that this term is important because it is repeated so often. The repetition of *style meaning* may also make it easier to remember the term and its meaning.

Another cohesive device, iconic linkage, also contributes to the readability of the Source Text 2. Consider examples (120)-(122):

(120) You'll learn how to write a style sheet for the document that describes how the content of those tags should be displayed. Finally, you'll learn how to load the documents into a Web browser so that they can be viewed.

(121) In this section, you'll learn how to create a simple XML document and save it in a file.

(122) In this section, you will learn how to type an actual XML document.

In example (120), the same structure (*you'll learn how to* + verb) appears in two consecutive sentences. The same structure also appears in examples (121) and (122), with the phrase *in this section* in front of it. The similarity of structure highlights the similarity of action. Using the same structure for the same purpose also makes the text faster to read. For example, if every section begins with *in this section, you'll learn how to* (examples (121) and (122)), the reader knows that s/he can skim through the beginning of the sentence and s/he only needs to pay attention to the end of the sentence. Another case of iconic linkage can be seen in examples (123) and (124):

(123) Now that you've created your first XML document, you're going to want to look at it.

(124) Now that you've created your first XML document and style sheet, you're going to want to look at it.

In this case, both sentences are almost exactly the same. The only difference is that the sentence in example (123) mentions only the *XML document*, whereas the

sentence in example (124) talks about *XML document and style sheet*. Again, the similarity of structure highlights the similarity of action.

In Source Text 2, transitions include transitions of addition, opposition, exemplification, cause and effect and there are also a few cases of transition of concession. Transitions of addition use mostly the conjunction *and*, transitions of opposition use mostly words *but, rather* and *however*. Transitions of cause and effect use mostly words *therefore*, *since* and *so*. Examples (125)-(128) show some of the most common transition types found in the source text:

(125) Since this chapter will teach you by example…

(126) And if you do encounter problems with the basic tools…

(127) However, do make sure that you save it…

(128) For instance, a Web browser that understands HTML…

Example (125) shows an instance of transition of cause and effect, realised by the conjunction *since*. In example (126) transition of addition is marked by the conjunction *and*. Transition of opposition appears at the beginning of example (127), realised by the conjunction *however*. In example (128), the phrase *for instance* indicates a transition of exemplification. Transitions are used in the excerpt frequently and they enhance the cohesion of the text.

Synonymy and antonymy also appear in the excerpt. Consider the following examples:

(129) In this section, you will learn how to type an actual XML document. Let's start with about the simplest XML document I can imagine. Here it is in Listing 3-1: … (Listing omitted) That's not very complicated, but it is a good XML document.

In example (129), the phrase *not very complicated* seems to strengthen the meaning of the adjective *simple*, which appears in its superlative form earlier in the text. It is as if the author wants to emphasise the fact that the matter at hand is actually really simple. In the above example, *simple* and *not very complicated* work as synonyms. Example (130) shows a case of antonymy:

(130) However, do make sure that you save it in plain text format, and not in the native format of some word processor like WordPerfect or Microsoft Word.

In example (130), *plain text format* is contrasted by its opposite *the native format of some word processor*. Contrasting the two different text formats clarifies the matter, and is probably included in order to make sure the readers understand what the author means. Antonyms are also used in the following example:

> (131) Collectively these three lines form a FOO *element*. Separately, <FOO> is a *start tag*;</FOO> is an *end tag*; and Hello XML! is the *content* of the FOO element. (italics etc. original)

In example (131), *collectively* is contrasted by *separately*, probably in order to emphasise that pieces of code are called by different names depending on whether they are viewed as parts or as a whole. Synonymy and antonymy seem to contribute to the readability of the text in that they make the text clearer and thus easier to understand.

The final notable cohesive device used in Source Text 2 is anaphoric reference. Example (132) shows how anaphora is typically used in the source text:

> (132) In this section, you'll learn how to create a simple XML document and save it in a file. We'll then take a closer look at the code and what it means.

In example (132) anaphoric reference is used inside the sentences. In the first sentence, pronoun *it* refers to *a simple XML document* mentioned in the previous clause of the sentence. In the second sentence, pronoun *it* refers back to the noun *code*. In the source text anaphoric reference is frequently used in this way, between the clauses of a sentence. However, anaphora is used less frequently between sentences. One such occasion can be seen in example (133) below.

> (133) What you see will vary from browser to browser. In this case it's a nicely formatted and syntax colored view of the document's source code. However, whatever it is, it's likely not to be particularly attractive.

Example (133) shows how anaphora is sometimes used between the sentences of the source text. In this example, the *it*-pronouns refer back to the phrase *What you see*, located at the beginning of the example. The source text often uses repetition instead of anaphoric reference, when it refers back to an earlier sentence. This choice has probably been made so as to enhance the clarity and to root out the potential ambiguities.

As noted in connection with the analysis of lexical means of field above, the text is factual and there are hardly any humorous items in the text. Despite its seriousness, it reads well. This is probably due to the fact that sentences are usually kept relatively short, and it is easy to find the main point of each sentence. The author has also included an occasional phrase or sentence to lighten the tone of the text and to give the reader a chance to rest. For instance, an adapted saying lightens the tone and clarifies the issue discussed, see example (134) below:

(134) Meaning, like beauty, is in the mind of the beholder.

In sum, the text is clearly written and easy to read, and short sentences also contribute to readability. The text seems factual and serious, with only a few informal expressions which could be seen as humorous. The text uses a variety of cohesive devices and the cohesion of the text seems strong. Furthermore, the repetition of terms creates a clear and unambiguous text. This concludes the analysis of the field of Source Text 2. Now it is time to move on to the register category of tenor.

Tenor

The first situational dimension under the register category of tenor is author's temporal, geographical and social provenance.

Author's temporal, geographical and social provenance

The author does not use any notable social dialect. There are no lexical, syntactic or textual signs which would imply that the text is older. On the contrary, the topic and the terminology used in the text indicate that it is a contemporary text. As to the geographical provenance, the excerpt does not contain any clear signs of the geographical origin of the text. Even though the author of the book is an American, there are no clear signs of American spelling (*theater*, *analyze*, etc.) in the text. The text does not seem British either, since the term *computer program* is not written in the British English way (*computer programme*). It seems that the author has wanted to write as a neutral a book as possible, since the text has been stripped of the signs of geographical origin. That also suggests that the book has been written for international publication. In sum, it can be said that the language used in the source text is unmarked, contemporary standard English.

Author's personal (emotional and intellectual) stance

The second situational dimension under tenor entails author's personal stance. The author's intellectual and emotional position in relation to the content of the text and the communicative task will be analysed next. The author appears to be committed to teaching the topic to readers. This can be seen in the careful way the text is written. Relevant details are explained thoroughly. The text has been constructed carefully and made as clear, unambiguous and easy to follow as possible. The author seems concerned with getting the message across effectively, so that the readers understand and learn what is being said. The careful construction of the text also suggests that the author is an expert on this topic, since he can organise the information logically and say things concisely. The author views the topic in an involved but yet relatively relaxed manner, even though the text has an undertone of seriousness (see examples (135) and (136)). The author also attempts to encourage the readers to study and read on. In Source Text 2, author's personal stance is realised through lexical and syntactic means. These means will be presented in the following.

Lexical means realising the situational dimension of author's personal stance

At the lexical level, the attempt to create a text which is easy to follow and easy to understand can be seen in the lexical choice. The author uses everyday language and avoids using jargon. There are a few informal lexical items which reduce the seriousness of the text. The use of informal lexical items has been kept to a minimum, however. Consider examples (135) and (136) below:

(135) Style meaning says whether a particular element is bold, italic, green, 24 points, or what have you .

(136) Of course, since you have almost complete freedom in creating tags, there's no way for a generic browser to anticipate your tags…

The phrase *or what have you* found in example (135) belongs to the spoken variety of English. The phrase *there's no way* in example (136) might also be seen as informal. In addition, the word *dumb* appearing in example (116) (see p. 92) is classified as an informal word by both the *Longman Dictionary of Contemporary English* (2004) and the *Collins Cobuild English Language Dictionary* (1993).

The writer tries to convince the reader that the issue at hand is not complicated or difficult and encourages the reader to read on. One sign of this is the frequent

repetition of the word *simple*. It appeared so often that I counted the occurrences. The adjective *simple* appears in the excerpt 13 times. Example (137) shows a few of these occurrences:

(137) In this section, you'll learn how to create a simple XML document and save it in a file. We'll then take a closer look at the code and what it means.

Creating a Simple XML Document
In this section, you will learn how to type an actual XML document. Let's start with about the simplest XML document I can imagine. Here it is in Listing 3-1…

The adjective *simple* is repeated three times in example (137). The constant repetition of the word *simple* should convince the reader that the matter discussed is not difficult at all.

Syntactic means realising the situational dimension of author's personal stance

The author's commitment to his communicative task can be seen in the structure of the text. The absence of complex and heavy constructions and the use of contractions create a text which is easy to read. Since the sentences are kept relatively short, reading does not require any extra mental effort from the reader. The fact that the writer has taken time to make the text as clear and unambiguous as possible also shows his commitment to teaching and explaining the XML markup language to readers.

Social role relationship

The third situational dimension under tenor is social role relationship. It will be examined next. The author of this book has written several programming books. He is also an adjunct professor of computer science. The book is aimed at both novice and advanced users of the XML markup language, and persons who know the HTML markup language but are not familiar with XML. In practise, those who already know the basics of XML would probably skip the chapter analysed here, because they already know the issues discussed in that chapter.

The writer aims at establishing a quasi-personal relationship with the reader. At the syntactic level it can be seen in the frequent use of the personal pronoun *you* and its possessive form *your*. The abundant use of *you* and *your* involves the reader in the text. The pronoun *we* and its object form *us* are used a few times in the excerpt. The

first person plural is used in the expressions *let's* (see examples (141) and (142) below) and *we'll* (e.g. *we'll get to that later in the book*) in the excerpt. All occurrences of the first person plural *we* count as inclusive use of the pronoun, giving the sense that the writer and the reader are equals. This sense is further enhanced by the fact that the first person singular pronoun *I* is used very sparingly in the text. Further, the direct reference to the reader (*you*) and the writer and the reader (*we*) creates an intimate feeling in the text.

The author comes across as a friendly and caring person, as examples (141)-(140) show. The relationship between the author and readers seems rather symmetrical. The author knows the topic very well, but treats the reader more or less as an equal. The writer seems to be concerned with getting the message across and adopts the role of a patient teacher, who holds the reader's hand and helps them overcome difficulties. There are some lexical and syntactic means which realise the situational dimension of social role relationship in the excerpt chosen for analysis. These will be discussed in the following.

Lexical means realising the situational dimension of social role relationship

The author uses words and phrases which encourage the reader to read on and do the exercises, as examples (138)-(140) show:

(138) Don't worry about these; you'll get to them…

(139) For the most part, you don't need to worry about the technical rules right up front.

(140) …I encourage you to follow along by typing in the examples…

The phrases *don't worry* in example (138) and *you don't need to worry* in example (139) seem to be included in the text in order to encourage the reader and to convince him/her to carry on with the book. In example (140) the author suggests that the best way to learn the issues discussed is to try the examples out on computer. The author uses the verb *encourage* for making that suggestion. Example (140) shows how the author attempts to encourage the reader in his/her studies. The author also attempts to influence the reader in such a way that they not only read the book, but also do the exercises. A few well-placed informal words and phrases (see examples (135) and (136) above on p. 98) create a sense of a friendly and unpretentious person.

Syntactic means realising the situational dimension of social role relationship

The role of a patient teacher adopted by the author and the care shown for the reader are indicated in the text by the use of construction *let's*. Consider examples (141) and (142) below:

(141) Let's start with about the simplest XML document…

(142) Let's examine the simple XML document…

The use of *let's* brings the author closer to the reader, see examples (141) and (142) above. The use of *let's* creates a feeling that the writer is by the reader's side and that the student and the teacher are in this together almost as equals. The author seems to be making kind suggestions, and not giving orders, as someone who feels superior might do.

As mentioned earlier, the second person singular pronoun *you,* and the possessive *your,* are frequently used in the text. They involve the reader in the text and create a sense of closeness and friendliness. Contractions (*you'll*, *let's*, *it's, don't*) are also a sign of informal language and they evoke a feeling of friendliness and unpretentiousness in the text.

Social attitude

Social attitude is the third and final situational dimension under tenor. The social attitude of this text is consultative and friendly. The text is also fairly conversational. The consultative style level is marked through contractions and some informal lexical items. In addition, there are some lexical items which indicate vagueness. The frequent use of the personal pronoun *you* creates a certain feeling of intimacy and friendliness, as discussed on the previous page. There does not seem to be any great social distance between the author and the audience. This situational dimension is realised by certain lexical and syntactic means, which will be discussed next.

Lexical means realising the situational dimension of social attitude

There are a few indications of the consultative nature of Source Text 2. In addition to the informal lexical items and phrases discussed in connection with the author's personal stance above (p. 98ff), there are a few lexical items indicating vagueness in the excerpt. Consider example (143) below:

(143) However, do make sure that you save it in plain text format, and not in the native format of some word processor like WordPerfect or Microsoft Word.

In example (143) above, the author uses the determiner *some* in front of the noun *word processor*. Determiner *some* indicates vagueness. The use of vague and informal lexical items suggests that the text has not been written in a very formal style. However, the text contains only a handful of informal lexical items and thus it seems consultative rather than informal.

Syntactic means realising the situational dimension of social attitude

On the syntactic level, the text can be viewed as consultative for two reasons. Firstly, contractions (*that's, you've, don't* etc.) are used throughout the text. Since contractions are not usually used in a formal text, it can be concluded that Source Text 2 is not formal. Secondly, there is also a lack of long and complicated sentences often found in formal texts. Instead, the sentences are often notably short. Thus, I suggest that the text is consultative rather than formal or informal. The text seems conversational mainly because of the frequent use of contractions. As to the social distance, the personal pronoun *you* and its possessive form *your* appear frequently in the text, indicating closeness of the participants. They also function as means to establish a quasi-personal relationship between the reader and the writer.

Mode

The register category of mode will be discussed next. The first situational dimension under mode is medium.

Medium

Source Text 2 is written to be read. The medium can thus be described as simple. The lexical and syntactic means realising the situational dimension of medium will be discussed next.

Lexical means realising the situational dimension of medium

The excerpt contains a few features of spoken language, namely *dumb*, *there's no way*, and *or what have you* (see example (116) on p. 92 and examples (135) and (136) on p. 98), but there are so few of these features that the text does not seem to be meant to be spoken. As to other lexical means realising the situational dimension of

medium, the lack of interjections and questions in the text seems to indicate that the text is meant to be read, not spoken.

Syntactic means realising the situational dimension of medium

The syntactic means realising the situational dimension of medium include the absence of common spoken language signals such as *you know, well, you see*. Some elliptical clauses are present in the text, but since ellipsis is also used in written language, their presence alone is not strong enough proof of complex medium.

Participation

The second situational dimension under mode is participation. In Source Text 2, the participation is complex; monologue with direct and frequent reader addresses. At the syntactic level, it is realised in the excerpt by the frequent use of the personal pronoun *you* and its possessive form *your*, which indicate interaction. In addition, the author involves the readers through the use of deictic pronouns. Thus, the reader participation seems to be explicit. The syntactic means realising the situational dimension of participation will be discussed next.

The author acknowledges the reader's presence and talks directly to him/her. As discussed above, the second person personal pronoun *you* and the second person possessive pronoun *your* are used constantly in the text. In addition, the writer uses the verb construction *let's*, inclusive of both the reader and the writer. Due to the use of *let's* and the deictic pronouns *you* and *we*, reader participation seems explicit in this excerpt. In addition, the author also asks the reader to perform certain tasks every now and then. That seems to enhance the reader participation. The requests often seem more like suggestions or wishes than direct orders. Consider example (144) below:

> (144) As with HTML, you can learn and do a lot by copying simple examples that others have prepared and modifying them to fit your needs.
>
> Toward that end I encourage you to follow along by typing in the examples I give in this chapter and loading them into the different programs discussed. This will give you a basic feel for XML that will make the technical details in future chapters easier to grasp in the context of these specific examples.

In this example, the author suggests that it would be beneficial to the reader to try out the examples. The author gives good reasons why the reader should follow his advice

and type in the examples. Thus it seems likely that a reader who really wants to learn XML also does as the author suggests.

Genre

This text is an excerpt from a computer programming guide. It has been written for persons who want to learn how to use the XML markup language. The text is both instructive and informative. It is instructive in that it teaches the readers the syntax of the XML markup language, good programming practises, and the related terminology. However, it also provides the readers with new information and is thus informative. Source Text 2 seems more instructive than the Source Text 1, but I would still say that it is predominantly expository. Although Chapter 3 analysed here seems rather instructive, a cursory inspection of the book shows that the book becomes more informative in later chapters.

The individual textual function of Source Text 2

The function of the text consists of an ideational and an interpersonal component. The function may be summed up as follows: the intention of the author is to provide information about XML and CSS and to teach how to write web pages with XML and CSS. The informative side of the text seems stronger than the instructive side. Thus, the ideational function is the primary function in this text. The interpersonal component is also present. It may be seen especially in the register categories of field and tenor. As to field, the lack of complicated clause and sentence structure, the absence of jargon, as well as the presence of redundancy caused by repetition and iconic linkage, all contribute to the interpersonal component since their purpose is to make the text easier to read. On tenor, the use of contractions and second person pronouns signals informal style and contributes to the interpersonal component.

5.2.2 Comparison of Source Text 2 and Target Text 2

The target text excerpt has been taken from the Finnish translation of *XML Bible*, called *XML Tehokäyttäjän opas* (2000: 71-79) translated by Pekka Saxberg. In what follows, Target Text 2 will be compared to Source Text 2 and the differences found on each situational dimension will be discussed. The analysis of Target Text 2 revealed some translation problems. They will also be taken up in the following. As

mentioned earlier, every single finding will not be presented in this paper. I will give a few examples supporting each finding instead. I will start the comparison with the category of field.

Field

Lexical differences

First I will investigate the lexical differences in the category of field. In Target Text 2, some lexical items seem to be mistranslated. Consider examples (145) and (146) below:

(145) **ST**: Once you've typed the preceding code…

(146) **TT**: Kun olet kirjoittanut edellisen tekstin…

In example (146), the source text (145) noun *code* is translated as *teksti*. Elsewhere in the text *code* is translated as *koodi*, and there do not seem to be grounds to change it here, since the sentence clearly refers to the snippet of code presented earlier in the chapter. I would say this is clearly a mistranslation. Some phrases can also be tricky to translate, as examples (147) and (148) illustrate.

(147) **ST**: This section follows an old programmer's tradition of introducing a new language…

(148) **TT**: Tämä kappale seuraa vanhojen ohjelmoijien käyttämää perinnettä esittelemällä uuden kielen…

The expression *an old programmer's tradition* in example (147) does not imply that the programmers are old, but that the tradition is old. However, the target text in example (148) translates it as *vanhojen ohjelmoijien käyttämää perinnettä*. Since the translation says that the programmers are old, the translation *vanhojen ohjelmoijien…* is not accurate. Instead, it should be something like *vanhaa ohjelmoijien perinnettä*. This is another case of mistranslation in the target text. Translating adverbs may also prove a problem, as examples (149) and (150) show:

(149) **ST**: We'll cover that shortly, but first let's look a little more closely at your first XML document.

(150) **TT**: Käymme lyhyesti tätä kohtaa läpi, mutta ensin tarkastellaan lähemmin ensimmäistä XML-dokumenttiasi.

In example (150), *shortly* is translated as *lyhyesti*, even though it actually means *soon* in the source text (149). This translation may have its roots in the fact that the adjective *short* is often translated as *lyhyt* in Finnish. The proper translation for *shortly* in the above example would be *kohta* or *pian*. It could be claimed that in the above sentence this mistake hardly matters, since it appears in a stretch of metatext and does not change the core message of the text. All the same, it is still a mistranslation.

It seems that the translator has been negligent in translating the sentences in examples (145)-(150). Albeit small and occasional, these mistranslations may tell something about the translation process and the translation environment. I suggest that negligence is most likely a sign of a looming deadline. Mistranslations signal that the translation has been made in a hurry. The translator has not probably had time to proofread the translation. Overly tight deadlines are rather a rule than an exception in the translation business. In my own experience, the translation deadlines of computer-related texts are almost always too optimistic. I think this is partly due to the customers' poor understanding of how much work actually goes into producing a good quality translation, and partly to the customers' haste to put their products on the market before their competitors. (Customer refers here to an organisation or company that orders the translation from a translation company or a translator.) Further, computer technology - and computing - advances in leaps and bounds, so publishers need to get their books on the shelves before they become outdated. The downside of meeting a deadline with a hurried translation is that it gives an incompetent picture of the translator and it does not do justice to the source text either.

It is generally recommended that if a term or a name has a Finnish translation, it should be used in translation (see e.g. Nykänen 2002: 138). In the Target Text 2, this is not always the case, as examples (151) and (152) show:

(151) **ST**: This document can be typed in any convenient text editor like Notepad, BBEdit, or emacs.

(152) **TT**: Tämä dokumentti voidaan kirjoittaa millä tahansa tekstieditorilla kuten Notepadilla, BBEditillä tai emacsilla.

In the above examples, the name *Notepad* appears both in the source and target text. However, in the Finnish versions of Microsoft Windows, *Notepad* is better known as *Muistio*. Since the name has a Finnish translation, it would seem advisable to use it in the target text instead of the English name. Then again, quite a few people may have the English version of Windows installed, and the translator might also want to cater for them. One possible translation solution is *Muistio (Notepad)*, although it is a bit long.

Another lexical issue which may catch the eye in example (152) is the translation of the noun *document*. This word is translated as *dokumentti (*see also *XML document – XML-dokumentti* in examples (149) and (150) on the previous page). In Finnish texts, the translation equivalent of *document* is usually *asiakirja*. *Asiakirja* is a well-established term in various Finnish computer-related texts. However, a brief look into other texts dealing with XML shows that some writers prefer to use the nouns *dokumentti* and *XML-dokumentti* while others use *asiakirja* and *XML-asiakirja*. Thus it seems that both translations are acceptable, as long as they are not used interchangeably in the same text. Using both in the same text might lead to confusion on the part of the reader. Target Text 2 uses the words *dokumentti* and *XML-dokumentti* throughout the excerpt, so the translation is acceptable in that respect.

The comparative forms of adjectives also seem to pose difficulties in translating. Consider examples (153)-(156) below:

(153) **ST**: Naturally, it's better to pick tags that more closely reflect the meaning of the information they contain.

(154) **TT**: On luonnollisestikin parempi valita merkintäkoodit, jotka vastaavat läheisesti sisältönsä merkitystä.

(155) **ST**: However if a style sheet is to be applied only to a single XML document it's often convenient to give it the same name as that document with the extension .css instead of .xml.

(156) **TT**: Jos tyylipohjaa käytetään kuitenkin vain yhdessä XML-dokumentissa, on usein miellyttävämpää antaa sille sama nimi kuin dokumentille ja vaihtaa laajennus .xml laajennukseksi .css.

In Finnish, the comparative form of adjective always indicates some sort of comparison between two things. (Ikola 2000: 40-42). In example (154), the English comparative *better* (153) has been translated word-for-word as *parempi*. Since the

comparative form indicates a comparison in Finnish, the reader of the translation is expecting a comparison and may be confused when it does not exist. A sentence such as: *Kannattaa valita merkintäkoodit, jotka…* might be clearer. In the second example (examples (155) and (156)), *convenient* is translated as *miellyttävämpää*. Firstly, according to *Longman Dictionary of Contemporary English* (2004), *convenient* means "useful to you because it saves you time, or does not spoil your plans or cause you problems". Thus, *convenient* could be translated for example as *käytännöllinen* or *kätevä*. Secondly, the use of a comparative is again problematic, because in Finnish there should be two things which are compared. Since an actual comparison does not exist, the translation cannot really use a comparative. Instead, one could switch it to superlative: *…on kätevintä antaa sille….*

Some words have been omitted in the translation. However, compared to Target Text 1, Target Text 2 leaves out relatively little of the source text. The omitted lexical items include for example: *convenient*, *really*, *of course*, *almost*, *real* and *happy*. Only a few longer stretches of text are omitted in the translation. The longest omission can be seen in examples (157) and (158) below.

(157) **ST**: This will give you a basic feel for XML that will make the technical details in future chapters easier to grasp in the context of these specific examples.

(158) **TT**: Näin saat perustuntuman XML:ään, mikä helpottaa tulevissa luvuissa esiteltävien teknisten yksityiskohtien omaksumista.

In example (158), the target text has omitted the source text phrase *in the context of these specific examples*. This omission seems acceptable, since it is clear from the previous sentence that the author is referring to examples. Most other omissions found in Target Text 2 also seem acceptable. However, the low number of omissions raises the question of whether more of the source text could be left out without changing the meaning of the target text.

Syntactic differences

In Target Text 2 there are some cases in which the translation of pronouns results in questionable reference. Examples (159) and (160) below illustrate this issue:

(159) **ST**: Many disciplines like math and chemistry are working on creating industry standard tag sets. These should be used when appropriate.

(160) **TT**: Monet tieteen alueet, kuten matematiikka tai kemia, pyrkivät luomaan toimialakohtaista, standardoitua joukkoa merkintäkoodeista. Näitä tulisi käyttää, milloin se on vain mahdollista.

In Finnish, the use of pronouns *tämä* and *nämä* signals that there are two possibilities the pronoun could refer to (Ikola 2000: 49). If *tämä* or *nämä* is used instead of pronoun *ne*, it focuses the reference clearly to the referent which has been mentioned last in the preceding sentence. In example (160), *näitä* is used for reference, although there is only one possible referent in this sentence. Thus the resulting sentence does not comply with the common language usage and it does not sound natural. Furthermore, the pronoun *näitä* in the second target text sentence refers to the phrase *toimialakohtaista, standardoitua joukkoa merkintäkoodeista*. Since the noun *joukko* is in the singular form, the reference made to it in the next sentence should also be singular. However, a look at the source text (159) shows that there are more than one tag set: *industry standard tag sets*. It seems as if the flow of thought has been interrupted, and the singular and plural forms have got mixed up in the translation. The target text has lost some of the clarity of the original: it is not completely clear whether there are one or many industry standard tag sets.

The above example shows that the source text may easily have an impact on the translation. In example (160), *these* has been translated with its dictionary equivalent *nämä* (*näitä*), which does not fit in with the earlier sentence. This example demonstrates that it is important to keep both the context and the previous sentences in mind when translating. A sentence cannot be translated in isolation, because in a text, it is not alone. It is also necessary to pay attention to both the grammatical and anaphoric agreement, and to check that the coreference between a pronoun and its antecedent agree in number.

There are also other cases in which the translation of pronouns seems to miss the mark. Consider examples (161) and (162) below:

(161) **ST**: That's not very complicated, but it is a good XML document.

(162) **TT**: Se ei ollut kovin monimutkainen, mutta täysin toimiva XML-dokumentti.

The pronoun *that* in example (161) and the pronoun *se* in example (162) refer to a listing of code above them. In this target text sentence the referent of *se* is rather

vague. It might refer to the listing of code above it, or it might refer to *XML-dokumentti* at the end of the sentence. In this case, the referent could be stated more explicitly to enhance the clarity of the sentence. For example: *Edellisessä listauksessa on yksinkertainen, mutta silti täydellinen XML-dokumentti*, or *Edellinen XML-dokumentti näyttää yksinkertaiselta, mutta se on täysin toimiva*. According to the *English-Finnish General Dictionary* (1993), pronouns *that* and *those* are often omitted in translation. Thus it is not necessary to translate every instance of *that* and *those*.

On one occasion a source text sentence has been changed into a question, see examples (163) and (164) below.

(163) **ST**: You may be asking what the <FOO> tag means. The short answer is "whatever you want it to."

(164) **TT**: Mitä merkintäkoodi <FOO> merkitsee? Lyhyt vastaus on: "Mitä tahansa haluat sen merkitsevän."

It seems that the translator has translated the first source text sentence in example (163) with an interrogative sentence (164) because it is the easiest way to translate the sentence. The question is followed by an answer in inverted commas. Since this kind of usage of questions and answers in a text may easily be considered bad style in Finnish, the sentences could be restructured. For example, the sentences could be combined: *Merkintäkoodi <FOO> merkitsee mitä tahansa haluat sen merkitsevän*, or *Ohjelmoija määrittää merkintäkoodin <FOO> merkityksen itse*.

Textual differences

The target text seems to have retained much of the repetition of the source text. Example (165) below shows the translation of the source text excerpt introduced in example (119) above (see p. 93).

(165) **TT**: Kolmas merkintäkoodiin liitettävissä oleva merkitys on tyyli. Tyyli määrittelee, miten merkintäkoodin sisältö tulisi esittää tietokoneen näytöllä tai muilla tulostusvälineillä. Tyyli kertoo, esitetäänkö jokin yksittäinen elementti …

In example (165), the noun *tyyli* is repeated as many times as *style meaning* is repeated in the source text (119). The target text has retained the repetition of the source text in most cases, omitting it only occasionally. However, there is sometimes

even more repetition in the target text than in the source text. Consider examples (166) and (167):

(166) **ST**: Toward that end I encourage you to follow along by typing in the examples I give in this chapter and loading them into the different programs discussed.

(167) **TT**: Tästä syystä kannustan sinua käymään tätä lukua läpi kirjoittamalla luvussa esitetyt esimerkit ja lataamalla ne esiteltäviin ohjelmiin.

The noun *chapter* appears once in the source text sentence (166), but in the target text sentence (167) the noun *luku* is repeated. It seems that the translator has used repetition in order to ensure the clarity of the target text. Since there is quite a lot of repetition in the text already, adding extra repetition does not make the text suit the Finnish textual conventions any better.

Unlike Target Text 1, Target Text 2 seems to have undergone very little restructuring. The target text sentences seem to follow the source text sentence structure relatively closely; consider for instance the second sentence in example (169) below: *Opit, miten kirjoitetaan dokumentin tyylipohja, joka kuvaa, miten merkintäkoodien sisältö tulisi näyttää*. Further, no restructuring has been done at the paragraph level. Next I will move on to discuss the differences found in the register category of tenor.

Tenor

The situational dimensions under tenor include author's personal stance, social role relationship and social attitude. Since no notable differences were found on the situational dimension of author's personal stance, I will go directly to social role relationship.

Social role relationship

Some syntactic and textual differences were found on the situational dimension of social role relationship. They will be presented in the following.

Syntactic differences

In the target text, some sentences have been changed from the second person into generic third person or the passive, while others have not. In this respect the translation seems inconsistent; it seems as if the changes have been made randomly. The target text switches between direct and indirect forms of address constantly. At

best there are two or three consecutive sentences written in the same manner; at worst the form of address changes in every sentence. The constant switches between direct and indirect forms of address result in a strange-sounding translation. Consider examples (168)-(171):

(168) **ST**: This chapter teaches you how to create simple XML documents with tags you define that make sense for your document. You'll learn how to write a style sheet for the document that describes how the content of those tags should be displayed.

(169) **TT**: Tämä luku neuvoo, miten luodaan yksinkertaisia XML-dokumentteja, joihin määritellään kyseiselle dokumentille mielekkäitä merkintäkoodeja. Opit, miten kirjoitetaan dokumentin tyylipohja, joka kuvaa, miten merkintäkoodien sisältö tulisi näyttää.

The source text in example (168) uses the direct form of address; the personal pronoun *you* (and the possessive *your*) are used consistently throughout the example. The target text (169), however, uses the second person singular form *opit* and the passive *määritellään*. These switches between the direct and indirect forms of address create somewhat turbulent and disquieting mood in the text. The calm and composed teacher of the source text does not seem to exist in the target text. The personification in example (169) (*tämä luku neuvoo*) will be discussed later, in Chapter 5.2.3. Below is a further example of how direct and indirect forms of address are used in the target text (examples (170) and (171)).

(170) **ST**: XML allows you to create any tags you need. Of course, since you have almost complete freedom in creating tags, there's no way for a generic browser to anticipate your tags and provide rules for displaying them. Therefore, you also need to write a style sheet for your XML document that tells browsers how to display particular tags.

(171) **TT**: XML sallii sinun luoda mitä tahansa tarvitsemiasi merkintäkoodeja. Koska tekijällä on vapaat kädet luoda mitä tahansa merkintäkoodeja, yleiskäyttöinen selain ei mitenkään voi ennakoida tällaisia merkintäkoodeja tai muodostaa sääntöjä niiden esittämiseksi. Siksi sinun on kirjoitettava XML-dokumentillesi tyylipohja, joka kertoo selaimelle, miten kukin merkintäkoodi esitetään.

Again, the source text addresses (170) the reader directly with second person pronouns. The target text (171) addresses the reader first directly through the second person form *sinun*, then uses the noun *tekijä*, and finally uses second person again. The target text seems to change or keep the second person pronouns fairly unsystematically. I do not see any reason why the second person should be retained in the sentences in the above example.

In fact, the frequent use of second person pronoun *sinä* may attract reader's attention. The word *sinä* tends to be avoided in Finnish texts and it is usually used only when the issue at hand really requires it (Korpela 2005: 3.3). If reference to the second person is needed, it is often attached to the verb, for example *kirjoitat* and *tallennat*. Further, a clause such as *sinun on kirjoitettava XML-dokumentillesi tyylipohja* in example (171) might be rephrased as: *XML-dokumentille on kirjoitettava tyylipohja*. According to Yli-Vakkuri (1989), Finnish has a tendency to keep the hearer or the reader in the background. The generic third person is commonly used in Finnish for that end (e.g. *voi tehdä*, *saa mennä*). Also the passive can be used for indirect addressing. (Yli-Vakkuri 1989: 58-59.) However, whatever form or forms of address are chosen, it is important to use them in a consistent manner. It is not pleasant to read a text which switches constantly between different forms of address, as in the examples (169) and (171) above.

Furthermore, the word *kukin* in example (171) seems strange, since it is derived from the word *kuka*, which usually refers to an animate object. However, its referent, *merkintäkoodi* is inanimate, and thus the proper word in this case would be *mikin,* derived from the word *mikä*.

Another issue related to the syntax is the way the active and passive voice is used in the target text. Sometimes the voice changes in the middle of the sentence, as can be seen in the example below:

(172) **ST**: We'll cover that shortly, but first let's look a little more closely at your first XML document.

(173) **TT**: Käymme lyhyesti tätä kohtaa läpi, mutta ensin tarkastellaan lähemmin ensimmäistä XML-dokumenttiasi.

In the above example (172), the source text keeps to the active voice and the first person plural pronouns: *we'll cover*, *let's look*. In the target text (173), the sentence begins with the active voice (*käymme*), but the second clause is in the passive (*tarkastellaan*). The reasons for this kind of voice-switching are difficult to fathom. Perhaps the translator has felt that using the first person plural *tarkastelemme* would be too intrusive for the Finnish audience. If that is the case, then why translate the first clause with the first person plural in the first place? These switches between the

active and passive voice within a sentence, or between the sentences make the text seem inconsistent.

Textual differences

One textual issue which attracts the attention in the target text is the sentence structure, as examples (168) and (169) on page 112 show. On the one hand it is a good idea to avoid using participial constructions, because they may easily make a sentence difficult to understand. On the other hand, using several comma-separated clauses may be seen as a stylistically awkward translation solution. According to Ingo (2000: 235), Finnish prefers smoothly progressing sentences, which are not interrupted by additional remarks. All those commas in example (169) seem to disrupt the flow of the text: *Opit, miten kirjoitetaan dokumentin tyylipohja, joka kuvaa, miten merkintäkoodien sisältö tulisi näyttää.* This said, I am aware that clauses containing *how to* are a translation problem which is not always easy to solve. In this particular case, the *how to* construction in sentence *You'll learn how to write a style sheet for the document…* could be translated as *Opit kirjoittamaan dokumentille tyylipohjan, joka….*, if one wanted to keep the sentence in the second person.

Social attitude

The final situational dimension under tenor is social attitude. As to the differences between the source and target text, the translation seems slightly more formal than the source text. It is largely due to certain lexical choices. For example, phrases *let's examine* and *let's take a look* are translated as *tarkastelkaamme*. Since *let's* is a contracted form of *let us*, it seems more informal than the rather formal form *tarkastelkaamme*. The target text has left out some of the direct references to the reader, but it still uses second person pronouns quite a lot. Thus it is only slightly more formal than the original. It seems that the social attitude has not changed much in translation, remaining consultative and friendly.

Mode

While the medium remains the same as in the source text, written to be read, the participation changes slightly in the translation. The translation leaves out some of the direct references to the reader, namely second person personal pronouns. The text thus involves the reader slightly less than the original. However, since Finnish

expository texts tend to avoid direct reference to the reader, this can be seen as a case of cultural filtering, and thus acceptable. However, it is debatable whether there are still too many direct references to the reader in the translation, considering the Finnish writing conventions. Example (175) shows how second person pronouns are used in the target text.

(174) **ST**: Rather than relying on a few hundred predefined tags, XML lets you create the tags that you need. The <FOO> tag therefore has whatever meaning you assign it.

(175) **TT**: XML ei perustu muutamaan sataan ennalta määriteltyyn merkintäkoodiin vaan sallii sinun luoda tarvitsemasi merkintäkoodit. Niinpä <FOO>-merkintäkoodilla on mikä tahansa sinun sille määrittelemä merkitys.

In example (175) the pronoun *sinun* is used twice. Such a frequent usage seems uncalled for, since there are other ways to formulate these sentences. For instance, the translation of the first source text sentence (174) could be reformulated as …*vaan käyttäjä voi luoda tarvitsemansa merkintäkoodit*, and the second sentence could read ...*mikä tahansa sille määritelty merkitys*. It seems to me that it is best to use the second person personal and possessive pronouns only when necessary. In example (175) they could be left out without leaving out any essential information.

Genre

The genre of the target text seems to remain essentially the same as that of the original. The text is still an excerpt from a computer programming guide, and it is aimed at persons who want to learn the XML markup language.

The individual textual function of Target Text 2

The individual textual function of Target Text 2 may be summed up by saying that the intention of the author seems to be the same as in the source text: to provide information about the XML markup language and CSS and to teach the readers to write web pages with XML and CSS. The ideational function seems to be the primary function also in the target text. The interpersonal component seems weaker in the translation than in the original, because the target text is slightly more formal than the source text (see e.g. Social attitude on p. 114).

5.2.3 Text 2 discussion

Now that the findings in the register categories have been presented, it is time to draw the strings together. In the register category of field it was found that certain lexical items are mistranslated in the target text. Also the comparative forms of adjectives and pronominal reference seemed to cause problems in translation. These mistakes could be caused by source text interference, overly tight deadline or some other, unknown factor. However, it seems unlikely that the real reasons could be unveiled through speculation, because only the end product of translation is available, but not the process.

In the register category of tenor, it was found that although some sentences have been changed from the second person into generic third person or the passive, the translation still seems to contain second person pronoun *sinä* in excess. This conclusion is based on the observations that the pronoun *sinä* tends to be avoided in Finnish texts (Korpela 2005: 3.3), and that Finnish has a tendency to keep the reader in the background Yli-Vakkuri (1989). It was also found that the target text uses active and passive voice in somewhat indecisive manner. The method of using successive comma-separated clauses atypical for Finnish also contributes to the feeling of restlessness and 'foreignness' in the target text. It was also found that the target text is slightly more formal than the original.

As to the register category of mode, it was found that the target text involves the reader slightly less than the original. However, this was seen as a case of cultural filtering, and thus acceptable. It remained debatable whether there should be even fewer direct references to the reader in the translation.

When the translation is compared to the original, it seems as if the target text has been carefully translated, almost word-for-word. Hardly anything has been left out of the translation. Even the metatext has been translated. While it is good that the information of the source text has been transferred into the target text, the near word-for-word translation leaves a lot to be desired. That approach does not really seem to work in English-Finnish translation, since it results in unnatural, clumsy and cluttered sentences. The grammatical structures and the thought patterns of English

and Finnish are so far apart that achieving a truly natural sounding translation sometimes calls for a drastic restructuring of sentences. Consider examples (176) and (177) below:

(176) **ST**: XML has special terms for documents that it considers "good" depending on exactly which set of rules they satisfy.

(177) **TT**: XML:ssä on erityiset termit dokumenteille, joita se pitää "hyvinä" riippuen tarkasti siitä, mitkä säännöt kyseinen dokumentti täyttää.

As noted above, very little has been left out of the translation. As a result, some unnecessary lexical items seem to appear in the translation. The basic rule in Finnish expository writing is to leave out lexical items which carry very little meaning, as noted earlier. The concision of the translation could be improved by omitting the words that do not contribute to the text. In example (177), the word *tarkasti* seems superfluous since it does not actually provide any new or important information. Thus it could be omitted. The structure of the sentence in example (177) also seems somewhat confusing due to multiple relative clauses. The sentence could be rephrased for example in the following way to enhance clarity: *XML-standardissa on erityiset termit dokumenteille, joita pidetään "hyvinä". Käytettävä termi riippuu siitä, mitkä säännöt dokumentti täyttää.* Here the sentence has been split into two sentences. The term *XML:ssä* has been changed to *XML-standardissa* in order to enhance clarity and to reduce ambiguity. Furthermore, the phrase *se pitää* has been changed into *pidetään* because XML is an inanimate object (a standard), and as such is not able to pass judgement on the quality of XML documents. The body behind judging the quality is W3C, who has created the standards for the XML markup language. Since the standards are embraced widely around the world, and because most professionals in this field know that the organisation behind the standards is W3C, it seems best to use a passive construction here. Personification - giving an inanimate object features usually possessed by living organisms - will be discussed later in this chapter. But first, I will give another example of a sentence which would benefit from restructuring. Consider examples (178) and (179) below:

(178) **ST**: Like tag sets, style sheets can be shared between different documents and different people, and the style sheets you create can be integrated with style sheets others have written.

(179) **TT**: Kuten merkintäkoodijoukkoja, eri dokumentit ja henkilöt voivat käyttää samoja tyylipohjia, ja luomasi tyylipohjat voidaan liittää yhteen muiden kirjoittamien tyylipohjien kanssa.

There seems to be several problems in the target text sentence in example (179). Firstly, the target sentence does not start off very fluently. The beginning of the sentence mirrors the structure of the source text, but this structure does not seem to work well in Finnish. The primary reason for this is probably the Finnish tendency to avoid fragmented sentences. Since additional remarks which interrupt the flow of the sentence are not commonly used, their presence in a translation may leave a reader with the impression that the text 'sounds foreign'. In example (179), an additional remark *kuten merkintäkoodijoukkoja* begins the sentence, but its information value seems rather small. One possible translation solution is to omit the phrase *like tag sets* altogether. It is repetition, a reminder of what has been said earlier in the text. The second problem in the above sentence is the way the target text draws a parallel between documents and people: *eri dokumentit ja henkilöt voivat käyttää samoja tyylipohjia*. This usage seems strange because documents are inanimate and people are animate. Furthermore, in Finnish using something (*voivat käyttää*) is an action usually attributed to living creatures. The target sentence may also be a bit too long to be clear or easy to understand. Dividing it into two parts might render it more readable. One way of translating the source text sentence could be for example the following: *Samaa tyylipohjaa voidaan käyttää eri dokumenteissa ja se voi olla useamman henkilön yhteisessä käytössä. Tyylipohjia voidaan myös yhdistellä toisiinsa*.

In connection with example (179), I would also like to raise the issue of personification. According to a dictionary definition, personification is "the representation of a thing or a quality as a person" (*Longman Dictionary of Contemporary English* 2004). There are some instances of personification in Target Text 2 which do not seem necessary. Consider examples (180)-(183):

(180) **ST**: This chapter teaches you how to create…

(181) **TT**: Tämä luku neuvoo, miten luodaan…

(182) **ST**: Since this chapter will teach you by example…

(183) **TT**: Koska tämä luku opettaa esimerkein…

The reason why personification is not necessary in example (181) is that there are ways to translate it without using personification. The phrase *tämä luku neuvoo* could be rephrased as *tässä luvussa kerrotaan*. Similarly, the example (183) could be changed to *Tässä luvussa asiat opetetaan esimerkkien avulla. Siksi…*. Thus, personification could easily be avoided in these sentences.

5.2.4 Statement of translation quality

In sum, the outright mistakes in the target text (e.g. *vanhojen ohjelmoijien*), personification, unnecessary lexical items and different structural issues lessen the readability of the target text. Although there are traces of cultural filtering here and there in the text (e.g. second person personal pronouns are sometimes left out), it seems that it could have been used more. The translation does not seem to suit very well Finnish writing conventions or linguistic preferences due to the problems listed at the beginning of this paragraph. The reader of the target text is likely to notice that s/he is reading a translation because of the deviation from norms of language usage. Thus, the quality of translation is not as good as that of Target Text 1. I would say that the quality of Target Text 2 is fair on a scale of poor, fair, good or excellent.

The problems found in the target text might indicate that the translation has been made in a hurry and it has not been proofread. Unfortunately, technical translators must often meet overly tight deadlines and since haste makes waste, the quality of the translation may sometimes be compromised in the process. This is sad, because I believe that in the long run, good quality translations would benefit all parties.

5.3 Text 3: *Java & XML 2nd Edition* and *Java & XML*

The text which will be analysed next is an excerpt taken from a book called *Java & XML, 2nd Edition* written by Brett McLaughlin (2001: 323-332). The target text extract comes from the Finnish translation of the book, also called *Java & XML* (2002: 360-369), translated by Petri Savolainen, Markus Eronen, Kai Kuikkaniemi and Ilkka Kosunen. The excerpt consists of the first ten pages of Chapter 12; SOAP. Chapter 12 provides an introduction to the Simple Object Access Protocol (SOAP). Briefly put, SOAP is the means for sending information from one Web server to another. In the excerpt chosen for analysis, the author explains the basic concepts of

SOAP, briefly discusses the different SOAP toolkits available for programmers and then explains how the reader can set up an environment to test SOAP on his/her computer.

5.3.1 Analysis of Source Text 3

Source Text 3 will be analysed in a similar manner as Source Text 1 and Source Text 2 above. I will not repeat those theoretical issues related to the Finnish textual conventions which have already been discussed in connection with Source Text 1 or Source Text 2, in order to avoid excessive repetition.

Field

This book is aimed at programmers who have at least some experience in *Java* programming and who want to learn to use the XML markup language together with *Java* applications. The reader is not expected to know much about the XML markup language, as the book also covers the basics of XML. The text is also clearly written and relatively easy to read, if the reader is familiar with the IT-related terminology, as the author assumes (see examples (184) and (185) below). Strong textual cohesion evident in the text also contributes to the readability of the text (examples (187)-(193)).

Lexical means realising the situational dimension of field

The fact that the book is aimed at relatively experienced programmers can be seen in the lexical choices the author has made. Some of these lexical items are listed in example (184) below:

(184) protocol, distributed architecture, HTTP, firewall, sockets, ports, encoding rules, error handling

These technical terms are not explained in the text. They are apparently considered to be common knowledge to the readers of this book.

Textual means realising the situational dimension of field

Chapter 12 begins with the sentences presented in example (185) below:

(185) SOAP is the Simple Object Access Protocol. If you haven't heard of it by now, you've probably been living under a rock somewhere.

Leaving aside the humorous effect, this statement (185) reveals certain assumptions the author makes about the reader of the book. The author expects that the reader has heard about SOAP. Since SOAP has to do with computers, programming and Web services, the author assumes that the reader is familiar with computers, computing and programming. The author also expects the reader to be familiar with Web services. If the reader did not know anything about Web services, it would be inappropriate to assume that the reader has heard of SOAP.

The author seems to use metatext in order to make sure that the reader can follow the text with ease. One instance of such use can be found in example (186) below:

> (186) This chapter describes how to write an RPC service, and then an RPC client, and put the system in action.

As the example (186) shows, metatext contributes to the readability of the text, guiding the reader along. Metatext may also provide a breather to the reader, when it appears in between issues that are new and possibly difficult to understand.

The text has a rather strong textual cohesion, which contributes to the readability and clarity of the text. The most notable cohesive devices used in the excerpt include repetition, anaphoric and cataphoric reference and transitions. These cohesive devices will be discussed in the following.

The repetition of lexical items enhances the clarity and readability of the text. Consider example (187):

> (187) Before an application goes forward with processing a message, the application can determine information about a message, including whether it will even be able to process the message. (underlining added)

In example (187), the repetition of nouns *application* and *message* render the sentence much clearer than it would be if the recurrences of these nouns were substituted with pronouns. Repetition also makes the text more unambiguous.

The next cohesive device to be discussed is anaphoric and cataphoric reference. The excerpt seems to contain considerably more anaphora than cataphora. Examples of

anaphoric reference appear in examples (188) and (189), and cataphoric reference can be seen in example (190):

(188) The SOAP envelope is analogous to the envelope of an actual letter. It supplies information about the message…

(189) The best way to understand how SOAP invocation works is to compare it with something you already know…

In example (188), the pronoun i*t* refers back to the phrase *the SOAP envelope*, and is thus anaphoric reference. Similarly, pronoun *it* refers back to *SOAP invocation* in example (189). An instance of cataphoric reference can be found in example (190):

(190) There's not one but two SOAP implementations going on over at Apache…

In example (190), pronoun *there* refers forward to the proper noun *Apache*, and is thus cataphoric reference.

The next cohesive device I will take a look at is enumeration. There are no enumerated lists in the excerpt, but another kind of enumeration is used. Consider example (191):

(191) There are two forms of installation with regard to SOAP. The first is running a SOAP client, using the SOAP API to communicate with a server that can receive SOAP messages. The second is running a SOAP server…

Example (191) shows how enumeration is used in Source Text 3. The first sentence mentions the number *two*, and it is followed by *the first* in the second sentence and *the second* in the next sentence. Enumeration binds the sentences together, and enhances the readability and the clarity of the text. On another occasion, the structure *first – then – (finally)* is used in the text. This usage clarifies the order the tasks need to be done.

The next cohesive device found in the text is transitions. Transitions are used frequently in the text. Transitions of addition, cause and effect, opposition and exemplification are the most often used transitions in this excerpt. Transition of identity is not used in this excerpt, but it appears twice in the rest of the chapter. The indefinites are used only in a few cases; they indicate an unspecified logical connection. In this excerpt, indefinites include *in fact* and *now*. Transition of

concession is also seldom used; there are a few occurrences of the adverb *of course*. Examples (192) and (193) show some instances of the most used transitions in the excerpt:

(192) Additionally, the naming of SOAP was apparently going to change, from SOAP to XP and then to XMLP. As a result, the name of this new SOAP project was uncoupled from the specification name; thus, you have "Axis."

In example (192), the adverb *additionally* is a transition of addition, indicating continuation. Moreover, the phrase *as a result* and the adverb *thus* are transitions of cause and effect. Next, consider example (193):

(193) …I just cover the Tomcat installation here. However, installation instructions for several other servlet engines are available online at…

The adverb *however* indicates a transition of opposition in example (193). The frequency of different transitions contributes to the clarity of the text in that it is easier to follow the text when the logical relationships are clearly marked. Next I will move on to consider the thematic progression of Source Text 3.

As to thematic progression, the author seems to prefer theme-rheme sequences and given-new ordering of information. On occasion there are however exceptions to this sequencing. Consider example (194) below:

(194) There are three basic components to the SOAP specification: the SOAP envelope, a set of encoding rules, and a means of interaction between request and response… Additionally, it's these three key components that make SOAP so important and valuable. Error handling, support for a variety of encodings, serialization of custom parameters, and the fact that SOAP runs over HTTP makes it more attractive in many cases than the other choices for a distributed protocol.

In example (194) above, the first and second sentences consist of a theme followed by a rheme. The third sentence starting with *Error handling* begins with a rheme, since its topic has not been presented earlier in the excerpt. This concludes the presentation of the findings in the register category of field. Next I will move on to the register category of tenor.

Tenor

Author's temporal, geographical and social provenance

The author does not use any notable social dialect. Neither are there any features in the text which would imply that the text was written in the past. The topic and the terminology used in the text indicate that it is a contemporary text. As to the geographical provenance of the text, it shows certain signs of American English. One sign is the use of the letter '*z*' in certain words, for instance *serialization* and *finalize*. In sum, the language used in the source text is unmarked, contemporary American English.

Author's personal (emotional and intellectual) stance

The author views the topic in an involved and professional way. The writer does not hold the reader's hand at every stage, but helps the reader over the most difficult parts. The writer assumes that the reader has rather a good background knowledge about programming and web services, and trusts that the reader is capable of understanding the new information provided in the text without long and thorough explanations. The text seems readable and slightly humorous, as the following examples show.

Lexical means realising the situational dimension of author's personal stance

Occasional humorous lexical items lighten the text, making it more enjoyable to read. The use of informal lexical items also has a similar effect, adding to the readability of the text. As to the lexical means, a few humorous lexical items appear in the excerpt chosen for analysis. Consider for instance example (185) on page 120, taken from the beginning of Chapter 12. The first sentence of the example explains the meaning of the acronym SOAP. The second sentence states humorously that SOAP has been discussed a lot. The second sentence has a humorous effect, and it seems to set the tone for the chapter with the expression *…you've probably been living under a rock somewhere.* The following sentence in example (195) also seems humorous:

> (195) Begin to think about a SOAP message as an actual letter; you know, those antiquated things in envelopes with postage and an address scrawled across the front?

In this sentence (195), there is no real need to explain to the reader what an actual letter is; the reader already knows it. However, the explanation lightens up the tone of the text and adds humour to the text. The choice of words (*antiquated*, *scrawled*) also adds to this effect, and signals to the reader that this is not meant to be taken seriously. Next, consider example (196):

(196) There are a number of issues with SOAP and Xerces 1.3(.1), so I'd avoid that combination like the plague.

In example (196), the playful expression (or cliché) *avoid… like the plague* may help the reader to remember the author's warning longer than usual. Although there are only few humorous items in the text, they seem to be enough to keep the tone of the text light and somewhat playful, together with the informal lexical items used in the text. The informal lexical items will be discussed in connection with Social role relationship below.

Syntactic means realising the situational dimension of author's personal stance

As to the syntactic means realising author's personal stance, the variation in the sentence construction makes the text more enjoyable to read. In addition to declarative and imperative sentence structures, which might be thought of as the most commonly used structures in programming guides, the author also uses interrogative and exclamatory structures. There are a few occurrences of the interrogative in the excerpt, some of which are found in headings, for example *What's Axis?* and *Isn't Microsoft a player?* (both headings). There are also a few instances of exclamatory structures in the excerpt, for example *That's it!* (see example (201) on page 128 for a longer extract).

Social role relationship

The writer is an authority on the topic of the book, *Java* and XML programming. However, he manages to bring the text to the level of the supposed reader and aims at establishing a friendly relationship with the reader. In spite of the fact that he uses terms that are not explained, the text is rather uncomplicated and easy to read if the reader belongs to the target group of the text. As the following discussion will show, the writer comes across as a friendly and unpretentious person. He treats the reader more or less as an equal. The author seems to be more like a colleague telling about

new things than a teacher. The social role relationship is thus rather symmetrical. These issues are explained more thoroughly below.

Lexical means realising the situational dimension of social role relationship

The author's attempt to establish a friendly relationship with the reader can be seen in the ample use of personal pronouns *I* and *you* in the text. However, the writer hardly ever uses the pronoun *we*, and thus seems to keep the reader at arm's length. The excessive use of pronoun *we* might make the text sound patronising, and the author probably wants to avoid that, so as not to drive away his readers, who are most likely professionals on their own fields. Thus the author-reader relationship seems to be similar to colleague-to-colleague relationship: the author appears friendly and also seems to respect the reader. Example (197) shows the author's attitude towards the reader. It also contains one of the few occurrences of the pronoun *we*:

> (197) However, Microsoft (despite the connotations we developers tend to have about the company) is doing important work in web services…(underlining added)

Example (197) shows that the writer seems to consider himself equal with the reader, since he refers to himself and the reader as *we developers*. The same tone seems to come through in other parts of the text too, although it is not spelled out quite so clearly. The social role relationship is thus rather symmetrical.

Syntactic means realising the situational dimension of social role relationship

As to the syntactic means realising social role relationship, it seems that the writer uses simulated direct speech to bring himself closer to the reader. Consider example (198) below:

> (198) It's not a beta, or even an alpha, really; it's very early on. While I'd love to cover all the new Axis features, there's no way your boss is going to let you put in a pre-alpha release of open source software in your mission-critical systems, now is there?

Here it seems as if the author is actually talking directly to the reader. This impression is strengthened by the tag question *now is there* at the end of example (198). In addition, words and expressions *really, no way* and *boss* are common in spoken language, which further enhances the impression of simulated direct speech.

Social attitude

The social attitude of the text seems friendly, consultative and conversational. There does not seem to be any great distance between the author and the audience. The lexical and syntactic means realising the situational dimension of social attitude will be discussed below.

Lexical means realising the situational dimension of social attitude

At the lexical level, the friendly, consultative and conversational attitude is realised by informal lexical items and informal phrases. Some of these items are listed in example (199) below:

(199) fun stuff, awfully tough, there's no way), a piece of cake

All the phrases in example (199) may be classified as informal. According to the *Longman Dictionary of Contemporary English* (2004), the word *stuff* is informal. Similarly, *there's no way* is classified as spoken language and the phrase *a piece of cake* as informal. The adverb *awfully* replaces the word *very* in the phrase *awfully tough*, creating an impression of informal language usage, even though neither word is informal alone.

Syntactic means realising the situational dimension of social attitude

At the syntactic level, the situational dimension of social attitude is realised by the frequent use of contractions, see example (200) below:

(200) It's a simple protocol (to use, not necessarily to write), based on the idea that at some point in a distributed architecture, you'll need to exchange information.

Contractions *it's* and *you'll* appear in example (200). Contractions create a conversational and informal effect in the text. I also see them as markers of consultative style, since contractions are often avoided in the formal style. This concludes the analysis of the situational dimensions in the register category of tenor. Next I will move on to the register category of mode.

Mode

Mode is the third register category. As earlier, I will take a look at medium and participation, the two situational dimensions under mode.

Medium

As was seen in connection with tenor, there are certain signs of spoken language in the excerpt. Despite of the spoken language signals such as contractions, informal lexical items, questions and exclamations, I would suggest that the medium of the text is written to be read (simple medium). One sign of this is the frequent use of metatext. Metatext guides readers and tells for example what to expect in the present or the next chapter. Thus the text seems to be well thought out in advance, unlike spoken language. Furthermore, if the text was written to be read as if spoken, then the author would probably have left out the metatext. Moreover, the text is unambiguous, which can be seen as a sign of advance planning typical for the written mode. In addition, the text frequently employs cohesive devices, also typical for the written mode.

Participation

In this excerpt, participation is complex: it is basically monologue, but it also contains direct and frequent reader addresses. From the syntactic viewpoint, the predominant use of first and second person pronouns indicates interaction between the author and the reader. Further, the ample use of deictic pronouns draws readers into the text. The text uses imperative, interrogative and exclamatory sentences, which creates the effect that the writer is taking the reader into consideration and aiming his words to the reader. This can be seen in example (201) below:

> (201) Installation under Tomcat is a piece of cake; you simply need to take the `soap.war` file located in the `soap-2_2/webapps` directory, and drop it in your `$TOMCAT_HOME/webapps` directory. That's it! To test the installation, point your web browser to…

Example (201) entails an exclamatory sentence (*That's it!*) and an imperative sentence (*To test the installation, point your web browser to…*). These structures indicate that the author is directing his words to the reader. Thus, the text seems instructive. However, since the text also presents information in a mostly non-evaluative manner, it is also expository. A cursory inspection of the rest of the book suggests that as a whole the book seems to focus more on information than on instruction, even though the instructive side is also relatively strong. Thus it seems that the book is predominantly expository, with the instructional text type as the secondary text type.

Genre

This text seems to belong to the genre of computer programming guides. The goals of these kinds of texts have been described in connection with Source Text 1, see Genre in Chapter 5.1.1 above (p. 65). Unlike Source Text 1 and Source Text 2, this text is first and foremost aimed at experienced programmers.

The individual textual function of Source Text 3

The individual textual function of this text, consisting of both ideational and interpersonal functional component, can be summed up as follows: the author's intention is to teach experienced (*Java*) programmers how they can exploit the different aspects of XML in their work. Due to the target audience, the text is somewhat technical, but nevertheless highly readable. The ideational component is strong, and while the interpersonal component remains at the background, its presence is easily noticeable especially in the category of tenor. As to field, the amount of technical terminology contributes to the ideational functional component. In terms of tenor, the consultative style level is marked through contractions, informal lexical items and some humorous lexical items, which all contribute to the interpersonal component. In terms of mode, the fact that the text is written to be read feeds into the ideational component, while the reader-involvement on the situational dimension of participation contributes to the interpersonal functional component.

5.3.2 Comparison of Source Text 3 and Target Text 3

The target text comes from the Finnish translation of *Java & XML*. The translation is also called *Java & XML* (2002: 360-369) and it has been translated by Petri Savolainen, Markus Eronen, Kai Kuikkaniemi and Ilkka Kosunen. The source text provides the translator with some challenges. The translator who translates this kind of a text should be familiar with the terminology and the subject matter. Since the source text contains field-specific terms which are not defined in the text, the translator does not get much help from the source text itself. Moreover, since this text is aimed at experience programmers, there is no room for terminological blunders. Of course there never is, but professionals are more likely to notice even the slightest error in terminology than the uninitiated. Terminological errors may

discredit the whole text in the eyes of a professional and that may have serious consequences to both the translator's and the publisher's reputation.

There are some features in the target text which may give away the fact that it is a translation. One issue which may attract reader's attention in the target text is the amount of foreign loan words, that is, English words which have been transferred into Finnish without actually translating them. The target text includes for instance the words *socketti*, *enkoodaus* and *installointi*. There are also some syntax related problems in the target text. However, they cannot be linked directly to the fact that the text in question is a translation, since I have seen original Finnish texts which have had similar problems. These issues, as well as other findings, will be discussed below.

Field

As before, I will begin with field. There are some lexical, syntactic and textual differences between the source and target text. These differences will be discussed next.

Lexical differences

There are some foreign loan words in the target text. It seems that a number of terms have been transferred to the target text instead of translating them. Some of them are listed in example (202) below.

(202) hype, socketti, enkoodaus, analogia, header, integraatio, implisiittinen, eksplisiittinen and installointi

Most of the terms in example (202) do have established translation equivalents in Finnish; thus it seems odd that these terms appear in the target text in their English form. It would seem preferable to use the Finnish equivalents where possible, as the Finnish authority on computer terminology issues, Tekniikan sanastokeskus, also suggests (see also Nykänen 2002: 138). Someone might claim that since this book is aimed at professionals, it is acceptable to use the English terms, since most readers know what they mean anyway. However, I do not find that a valid argument in cases where there already are translation equivalents available. If there is no translation equivalent available, or if the English term is used extensively in the Finnish media,

then it might be acceptable to loan the English term to the Finnish text. For example, there is no established equivalent for *hype*, and it has been used in Finnish texts before. Therefore it is justifiable to use the word *hype* in the target text. However, there is an established translation equivalent for the term *installation* in Finnish, namely *asennus*. The term *socket* is often used in Finnish texts in an adapted form, *soketti*, but it could also be translated as *kahva*, since in essence, it is *a handle*.

If a translator wants to make sure that everybody understands what the translated term refers to, s/he can mention the English term in parentheses. This seems like a good practise especially when the English term has already been used in Finnish texts. Those who know only the English term are then able to link it to its Finnish equivalent.

There is also a semi-translated expression in the text: *peer-to-peer-vallankumouskin*. In the source text it is: *peer-to-peer "revolution"*. Although most readers probably know the term peer-to-peer, I find this translation solution somewhat questionable, since there is a perfectly good and well-established term available in Finnish: *vertaisverkko*. Thus the phrase *peer-to-peer "revolution"* could be translated as *vertaisverkkovallankumous*. The term *vertaisverkko* was already extensively used in the media at the time this text was being translated.

The terms *implisiittinen* and *eksplisiittinen* are direct translations of source text words *implicit* and *explicit*. However, in Finnish they sound more formal than in English, since they are foreign loan words, and as such they enjoy higher status in Finnish. Furthermore, with this kind of word pairs there is always the possibility that the readers mix up their meaning. And since the emphasis of technical texts is on unambiguous information, this possibility should not be overlooked. Therefore it might be better to translate foreign words and especially word pairs, if possible. Another word pair which would benefit from a clear translation in the target text is the pair *encode - decode*. In the target text they are translated as *enkoodata* and *dekoodata* respectively. It is easy to confuse one with another, especially when one is not a native speaker of English. These were the lexical issues found in the analysis. Next I will move on to the syntactic issues.

Syntactic differences

As to the syntactic issues, there are some instances of dubious word order in the target text. However, since such instances are rare, they probably do not annoy the reader much. Consider examples (203) and (204):

(203) **ST**: It is more flexible than the XML-RPC methodology, allowing you to explicitly set the various parameters that are determined implicitly in XML-RPC.

(204) **TT**: Se on joustavampi kuin XML-RPC:n kutsu, joka implisiittisesti määrittelee monet asiat, jotka ohjelmoija voi SOAPissa eksplisiittisesti määritellä.

Example (204) shows how the translator has moved the parts of the sentence around. Yet it seems that the translator has been influenced by the source language structure, since he has used the construction *explicitly/implicitly* + verb used in the source text. Thus this may be a case of source language interference. In Finnish the phrase *määrittelee implisiittisesti* would sound more natural, because in Finnish adjunct to a verb usually comes after the verb (Ikola 2000: 177).

Textual differences

The target text uses considerably less metatext than the source text. Examples (205) and (206) show how the target text omits a part of the metatext of the original. The omitted parts of the source text are underlined.

(205) **ST**: This chapter is not meant to be the complete picture on SOAP; the next chapter, Chapter 13, fills in lots of gaps. Take this as the first part of a miniseries; many of your questions at the end of this chapter will be answered in the next.

(206) **TT**: Tämän luvun ei ole tarkoitus olla kaikenkattava esitys SOAPista, vaan seuraava luku täyttää monia tämän luvun vielä avoimiksi jättämiä aukkoja.

As a comparison of examples (205) and (206) shows, the target text omits the sentence starting with *Take this as the first part…* completely. The translator may have considered that the reader of the target text can derive this information from one sentence. This omission seems well grounded, since, as said before, the Finnish style guides encourage writers to leave out all unnecessary repetition. Furthermore, stating the obvious is also considered unnecessary. Since the Finnish readers are accustomed to reading texts without much repetition, they may get bored or annoyed if there are a lot of such elements in the text.

In example (206), the explicit reference to the next chapter has been left out as well. In example (205) above, the source text refers to the next chapter by stating the number of the chapter: *Chapter 13*. The target text refers to the next chapter by the expression *seuraava luku*, leaving out the number of the chapter. This translation choice has probably been triggered by the Finnish writing conventions as well. Finnish writers tend to show respect to readers' intelligence by not stating the obvious. In this case, the reader certainly knows which chapter s/he is reading, since the number of the chapter has been printed on top of every second page. Thus, in Finnish, there is no need to tell the reader the number of the next chapter.

Some further examples of omitted metatext are presented in examples (207)-(209):

(207) **ST**: Additionally, SOAP provides a high degree of interoperability with other applications, which I delve into more completely in the next chapter. For now, I want to focus on the basic pieces of SOAP.

(208) **TT**: Lisäksi SOAP mahdollistaa laajan sovellusten välisen yhteistyön, josta kerrotaan enemmän seuraavassa luvussa.

As examples (207) and (208) show, the target text omits the metatext which tells what to expect next. However, the reader has been informed of what comes next earlier in the paragraph, so the omission of the sentence beginning with *For now, I…* is justified on that basis alone. Example (209) comes from the end of section called *Invocation*. In the target text this heading is translated as *SOAP-kutsu*.

(209) **ST**: With that brief introduction, you probably know enough to want to get on with the fun stuff. Let me show you the SOAP implementation I'm going to use, explain why I made that choice, and get to some code.

In the source text, these lines form a paragraph. In the target text, they have been omitted altogether. Apparently they have been considered unnecessary. When one reads the target text, nothing seems to be missing; thus leaving these sentences out may be a good idea. Furthermore, the information contained in the paragraph can be deduced from the text later. These examples are by no means exhaustive, as there are many more cases of omitted metatext in the target text. However, listing them all here would not bring anything new into the discussion.

As to other textual differences, the source text uses transitions frequently to create cohesion. Sometimes the target text retains them, sometimes omits them and

sometimes the target text replaces them with other words. Consider examples (210) and (211):

(210) **ST**: With SOAP (the specification, not a specific implementation) undergoing fairly fast and radical change these days, tracking it is difficult. Trying to build a version of SOAP that meets current requirements and moves with new development is also awfully tough. As a result, the current Apache SOAP offering is somewhat limited in its construction. Rather than try to rearchitect an existing toolkit, the Apache folks started fresh with a new codebase and project…

(211) **TT**: Koska SOAP-spesifikaatio vielä hakee muotoaan, on vaikea kirjoittaa SOAP-toteutusta, joka sekä täydellisesti toteuttaisi senhetkisen spesifikaation että mukautuisi spesifikaation muutoksiin. Nykyinen Apachen SOAP-toteutus on tässä mielessä melko rajoittunut. Sen sijaan, että ohjelmoijat olisivat yrittäneet muuttaa vanhan projektin arkkitehtuurin, he aloittivat kokonaan uuden projektin.

In example (211), the first source text transition, *as a result,* has been left out of the translation, while the second one (*rather than)* has been retained and translated. Omitting the transition *as a result* seems to be justifiable, because it is not necessary in the text since the previous sentence begins with the word *koska*. It seems that the transition has shifted to the previous sentence. If the phrase *as a result* was translated, and it appeared in the same sentence as in the source text, then there would be three consecutive sentences beginning with a transition. That might be a bit too much in a Finnish text. In the third sentence of the example (211), the transition *rather than* has been translated with the phrase s*en sijaan*. This sentence may seem a bit long and the structure of the sentence may seem a bit dubious. However, while the sentence could be rephrased as *Vanhan projektin arkkitehtuurin muuttamisen sijaan ohjelmoijat aloittivat kokonaan uuden projektin*, the existing translation is easier to read and to understand because its structure is less complicated. Next, consider examples (212) and (213):

(212) **ST**: However, in larger systems that are exchanging data rather than performing specific business functions on request, SOAP's messaging capabilities may be a better match.

(213) **TT**: Jos taas kyseessä on isompi, tiedon siirtämiseen perustuva järjestelmä, kannattaa harkita viestien käyttöä.

In example (213) the source text word h*owever (*example (212)) has been translated with the if-clause j*os taas*. This seems like a clear way to translate it in this case.

In addition to metatext and transitions, the target text sometimes also omits some information provided in the source text. Consider examples (214) and (215) below:

(214) **ST**: That brings us to open source projects. In that realm, I see only one available: Apache SOAP. Located online at http://xml.apache.org/soap, this project seeks to provide a SOAP toolkit in Java. (underlining original)

(215) **TT**: Avoimen lähdekoodin SOAP-projekteista tunnetuin on Apache SOAP, joka on ladattavissa sivuilta http://xml.apache.org/soap.

In example (215), three source text sentences (example (214)) have been merged together and the last source text clause beginning with *this project…* has been left out. The translator seems to have translated the first two sentences rather freely; the source text does not mention that Apache SOAP is the best-known open source project. However, although the word *tunnetuin* does not correspond to the phrase *only one available*, the change in the meaning does not seem very significant when considering the text as a whole. Moreover, the translator may have checked from other sources that Apache SOAP is the best-known SOAP-project. The fact that Apache SOAP is the only feasible choice in the book comes up later in the target text, and thus the reader of the target text is not deprived of that information.

The clause which has been left out of target text in example (215) tells the reader that the Apache SOAP project provides a toolkit in the *Java* programming language. On the one hand the reader should already know this, since it has been said in the previous paragraph (and on the book cover) that the book deals with *Java*. On the other hand, not saying explicitly that Apache SOAP provides a *Java* toolkit for SOAP may confuse some readers. However, in this case, leaving out this information is acceptable, since the reader ought to know s/he is reading a book which deals with *Java*. The translation in example (215) is shorter than the original passage. That contributes to concision. As to clarity, the sentence structure could be improved by replacing the phrase *joka on ladattavissa* by *jonka voi ladata*. This change might make the sentence a bit easier to read.

Another example of omitted text can be found in the section called *Installation – The client*. In the source text, the installation process is described very closely, and the source text gives examples of possible installation paths on different platforms, e.g. (`c:\javaxml2` *on my Windows machine,* `/javaxml2` *on my Mac OS X machine*). The target text has omitted this information altogether. The most probable reason for these omissions is that the readers of this book are expected to be familiar with computers,

and if they are familiar with computers, they know how to install programs on their computer. This is of course a very good argument in favour of omitting this information. However, if the reader for some reason or another does not know this information, then s/he will not be able to try out the exercises presented in the rest of the book. That would be a very unfortunate situation, since the aim of the book is to teach programming. Therefore it might be better to include the installation information in the translation, even if the translator considers it trivial, so that it can be guaranteed that every reader can try out the examples on her/his computer. This was the only potentially serious omission of information found in the target text excerpt. Other bits and pieces of information are omitted here and there, but they usually come up elsewhere in the text. This concludes the presentation of findings in the register category of field. Next I will move on to tenor.

Tenor

The first situational dimension I will deal with here is the author's personal stance.

Author's personal stance

It seems that in the target text the humorous undertone of the original has been lost and the target text appears to be more serious than the original. This shift in author's personal stance seems to be due to certain lexical and syntactic issues. These issues will be discussed next.

Lexical differences

The following examples shed light on why the target text seems more serious than the original. Consider examples (216)-(221):

(216) **ST**: SOAP is the Simple Object Access Protocol. If you haven't heard of it by now, you've probably been living under a rock somewhere.

(217) **TT**: On suoranainen ihme, jos on tietotekniikkapiireissä välttynyt kuulemasta termiä SOAP. Se on lyhenne sanoista…

(218) **ST**: There are a number of issues with SOAP and Xerces 1.3(.1), so I'd avoid that combination like the plague.

(219) **TT**: SOAPin ja Xercesin versio 1.3(.1):n yhteistoiminnassa on havaittu niin paljon ongelmia, että yhdistelmää kannattaa välttää.

(220) **ST**: Begin to think about a SOAP message as an actual letter; you know, those antiquated things in envelopes with postage and an address scrawled across the front? That analogy helps SOAP concepts like "envelope" make a lot more sense.

(221) **TT**: SOAP-viestien hahmottaminen perinteisinä kirjeinä on hyvä tapa omaksua SOAPin keskeiset käsitteet, kuten “kirjekuori”.

The translation in examples (217) and (219) is less vivid than the expressions used in the source text in examples (216) and (218). The humour seems to be gone due to the commonplace expressions of the target text. The loss of humour sets a slightly different tone for the target text. Examples (220) and (221) demonstrate the way the humorous description of an actual letter has been omitted in the translation. Instead of a long description, the target text (221) states the message of the source text in a very factual fashion and without any hint of humour. Whether the loss of humour is significant or not in this text is a matter of how the issue is viewed. On the one hand, humour might make the text more pleasant to read. On the other hand, it is questionable whether a book written in Finnish and directed at experienced programmers should be humorous. Perhaps the readers would feel that the writer is not taking her/his teaching task seriously. Since, to my knowledge, the language used in Finnish computer programming guides has not been recently studied, it remains uncertain whether or not humour is tolerated in these books. In any case, the author of the translation seems more serious than the author of the source text.

Syntactic differences

As to syntactic differences, the number of interrogative sentences has been reduced in the target text. Headings which were questions in the source text have been changed into ordinary headings, for example the heading *Isn’t Microsoft a player?* has been translated as *Microsoft*. Further, there are no exclamatory sentences in the target text. These changes have probably been made in order to adapt the target text to the Finnish textual conventions, and thus these changes seem justified. Next I will move on to the situational dimension of social role relationship.

Social role relationship

The author appears slightly more authoritative in the target text than in the source text. This probably results from the omission of direct personal reference to the reader (*you*) in the target text. In the original, the author seems like a close colleague, whereas in the translation the social distance appears slightly greater. Thus the social

role relationship of the target text seems more asymmetric than that of the source text. The syntactic and textual issues realising this change will be discussed in the following.

Syntactic differences

The source text uses plenty of personal pronouns (*you, I*), but in the target text they are virtually non-existent. This distances the author from the reader to some extent. But, as noted before, a writing style which keeps the reader in the background is generally preferred in the Finnish expository writing. However, instructions for use are often written using the imperative forms and using the second person singular pronoun also in Finnish. In the target text, the installing instructions are not in the imperative. Instead of imperative forms such as *pura*, *lataa* and *lisää*, the target text use forms such as *on purettava*, *voi ladata* and *kannattaa lisätä*. It cannot be said that this translation approach has anything wrong with it, since this is, after all, a predominantly expository text. I would rather say that if an expository text has parts which could be viewed as instructions of use, those parts could also be translated by imperative forms, since that seems acceptable considering the Finnish textual norms (compare e.g. to cookbooks). Imperative forms might make the parts of text giving instructions stand out in the text, and it might be easier to locate them later in the text.

One further difference is that unlike the source text, the target text does not use simulated direct speech. For instance, the source text excerpt introduced in example (198) on page 126 is translated as follows:

(222) **TT:** Siitä ei vielä ollut julkaistu edes alpha-versiota, joten sen käyttäminen todellisessa ohjelmoinnissa olisi ollut mahdotonta.

Example (222) shows the translation of the source text excerpt presented in example (198) in its entirety. The translation is much shorter than the original, since both the reference to the reader's boss and the simulated direct speech have been left out of the target text. However, leaving out any unnecessary and irrelevant parts of the text seems justified, since the Finnish textual conventions call for conciseness.

Textual differences

The text also seems less personal because the phrases referring directly to the reader have been left out. The source text has for example the following reference: …*since we're all Java pros here*.… This and other similar references are omitted in the target text probably due to the cultural filtering of metatext. However, when one reads the text, nothing seems to be missing. Thus the omissions seem justified.

In sum, the social role relationship of the target text seems slightly more asymmetric than that of the source text.

Social attitude

As to the situational dimension of social attitude, the target text seems less personal and more formal than the source text and the distance between the author and the readers seems greater. The lexical and syntactic issues found in the excerpt will be discussed below.

Lexical differences

The informal words and expressions of the original have been either translated by more formal expressions or left out altogether. For example *awfully tough*, has been translated as *vaikea* and *there's no way* has been translated as *mahdotonta*. The loss of informal style may also partly contribute to the loss of humour discussed earlier.

The lexical choices of the translation seem also otherwise more formal. This may be due to the fact that the translation uses foreign loan words frequently. For example, *analogia* is a foreign loan word. In Finnish it sounds more formal than in English. Thus in the target text, *analogia* seems more formal than *analog* (i.e. analogy) in the source text. Some other examples of foreign loan words in the target text include: *enkoodata, integraatio, installointi* and *implisiittinen*. The use of foreign loan words was also discussed in connection with the lexical differences of field above (p. 130ff).

Syntactic differences

The fact that there are hardly any personal pronouns in the translation, as noted in connection with the social role relationship above, also makes the text seem more formal and more impersonal. Moreover, the passive constructions used in the

translation make the author seem more distant; thus the distance between the writer and the reader is greater in the target text than in the source text.

In sum, in the category of tenor, the most notable differences between the source and target text are the increased formality of the target text, the increased distance between the reader and the writer in the target text, caused by the loss of personal pronouns, and the loss of humour in the target text. As mentioned earlier, these changes may be dictated by the Finnish textual conventions of expository texts. Now I will move on to mode.

Mode

Mode is the next register category to be looked at. The two situational dimensions under mode, medium and participation, will be presented next.

Medium

As to the medium of the target text, it seems to remain the same as that of the source text, written to be read. Since the lexical items are more formal in the target text than in the source text, the target text seems even more clearly to be written to be read.

Participation

Participation seems to have changed in the translation to some extent. The translation leaves out almost all direct references to the reader. The text thus involves the reader less than the original. However, as noted earlier, since Finnish expository texts tend to avoid direct reference to the reader, this can be seen as a case of cultural filtering, and as such it is acceptable and even desirable. However, it remains debatable whether the text would be clearer if those parts of text which contain instructions used direct pronominal reference.

Genre

The genre remains essentially the same. The target text is also a computer programming guide. Its purpose is to teach *Java* and XML programming and to provide information on related issues, just like the original.

The individual textual function of Target Text 3

The individual textual function of Target Text 3 may be summed up by saying that the intention of the author seems to be the same as in the source text: to teach experienced *Java* programmers how they can use XML in their work and give a comprehensive view of the programming languages and issues related to them. Thus the ideational function is the primary function also in the target text. The interpersonal component seems weaker in the translation than in the original, because there are fewer humorous and informal lexical items in the target text than in the source text.

5.3.3 Text 3 discussion

On the register category of field it was found that the target text uses English loan words quite often (see example (202)). Most of these words have established translation equivalents in Finnish. Since translation equivalents exist, I would say using them is preferable to using English loan words. Furthermore, English loan words may disrupt the way the short-term memory creates connections between things (In Wiio 1992, as reported in Nykänen 2002: 13). At the syntactical level, some instances of questionable word order were found, but since these instances are relatively rare, they may pass unnoticed when the text is read. At the textual level it was found that the target text has omitted quite a lot of the repetition found in the source text. The target text has also omitted a lot of the metatext of the original (examples (205)-(209)). However, as Finnish seems to use less metatext than English, the reader probably does not even notice that something has been removed (cf. Mauranen 1993). The Anglo-American writing style seems to prefer a more explicit approach than the Finnish. The source text reader seems to be guided through the book carefully with the help of the metatext.

On the register category of tenor it was found that the slightly humorous, casual style of the original has been turned into a very factual treatment of the topic. This change may have been dictated by the Finnish writing conventions. Thus it may be seen as a case of successful cultural filtering. However, since comprehensive studies on the tolerance of humour in Finnish programming guides have not been conducted, the above claim cannot be scientifically substantiated. It was also found that the social

distance between the author and the reader seems greater in the target text than in the source text. This change seems to be caused by the use of more formal lexical items in the target text and the omission of personal pronouns. However, as noted before, these changes may be dictated by the Finnish textual conventions. The use of foreign loan words also makes the text more formal than the original, but that is a change I do not consider necessary, since using Finnish word in a Finnish text would make the text more readable.

On the register category of mode, it was found that the target text involves the readers slightly less than the original. This change in participation seems to have been caused by the lack of direct reference to the reader. However, as said before, this change seems to fall into the category of cultural filtering.

5.3.4 Statement of translation quality

The target text seems to conform to Finnish textual conventions rather well as a whole. The Finnish textual conventions for expository texts have been discussed earlier in connection with texts 1 and 2. At the syntactic and textual levels, there are a few instances which may betray that this is a translation. However, the use of English loan words is so frequent that the reader probably notices that this text is a translation. Cultural filter has been applied successfully most of the time, and since there are not many outright mistakes and un-Finnish sentence constructions, I would say this translation fills its purpose rather well. Thus, on a scale of poor, fair, good or excellent, I would say that the quality of the translation is good.

6 CONCLUSION

The main aim of the present study was to find out what the quality of Finnish computer programming book translations is like. In addition, I hoped to discover whether there are certain source text features which often cause problems to translators, and whether the translations conform to the Finnish textual conventions.

Hatim and Mason's (1990) text typology provided the framework for text categorisation in the present study. It was chosen because it was considered conceptually closest to House's (1997) model for translation quality assessment. House's (1997) model was chosen as the means of analysis for two reasons. Firstly, it seemed to be one of the few models for translation quality assessment which present both the criteria for translation assessment and the way the model can be used in practise. Secondly, it does not analyse the target text in isolation, but takes the source text into consideration as well. House's (1997) model divides text into three register categories: field, tenor and mode. In addition, genre is also considered in analysis. The register categories consist of situational dimensions. Each situational dimension may be realised in a text by lexical, syntactic and textual means. Thus the examples of each situational dimension were divided into lexical, syntactic and textual means in the present study. Since House (1997) did not meticulously specify the textual features that need to be considered, I turned to other sources. House (1997: 44) mentions repetition, anaphoric and cataphoric reference, pro-forms, ellipsis, synonymy and near-synonymy as some of the cohesive devices to be considered as the textual aspects realising the situational dimensions. I included antonymy and enumeration in this group as well. As to another textual aspect, clausal linkage, I adopted a view that clausal linkage is realised by a number of transitions (see e.g. Kies 2005). These transitions were labelled as transitions of identity, opposition, cause and effect, addition, concession, exemplification and indefinites (see p. 41 above).

Transferring the meaning of the original text using idiomatic target language was seen as the primary goal in translation in general. Further, accuracy, clarity and concision were considered crucial issues in technical translation. It was further

concluded that cultural issues, such as the textual conventions of the target culture and the preferences of the target audience should also be considered in technical translation.

The data consisted of three source and target text excerpts taken from American computer programming guides. The source text samples were selected randomly, and each source text sample was at least ten pages long. The target text was the corresponding excerpt taken from the Finnish translation of each book. The translations were published in the 2000's. Each text was analysed and the source and target texts were compared following the register categories and the situational dimensions suggested by House (1997).

In sum, the results of the analysis showed that the quality of two of the translations (Target Text 1 and Target Text 3) was relatively acceptable, and they seemed to conform to the Finnish textual conventions rather well, while one text (Target Text 2) seemed to require more work in order to fit into the Finnish textual conventions of expository texts. As to the source text features which cause most problems to translators, the results were inconclusive. There were some features which seemed to cause some problems in translation. These features included humour of the source text, pronominal reference (especially the second person personal pronoun *you*), active voice, metatext and parenthetical information. However, each translator seemed to deal with these features in their own way. Thus, given the limited amount of data studied here, it is not possible to draw any far-reaching conclusions about the features which cause the biggest problems in translation. As to the different categories of translation problems introduced in Chapter 2.1.3 (p. 14ff), there seemed to be some linguistic and cultural translation problems. Linguistic problems included mostly lexical problems (e.g. translating terms like *hype* or *socket*), syntactic problems (pronominal reference, active and passive voice) and textual problems (given information and repetition). Cultural problems included the problems caused by the Finnish textual conventions and textual preferences. As discussed earlier, for instance excessive metatext and parenthetical information are not well received by the Finnish readers.

Next I will discuss the results of the analysis in greater detail. The analysis revealed that two of the target texts (Target Text 1 and Target Text 3) omitted much of the metatext found in the source text. These target texts were also the ones which seemed the most readable. They were also clearer and more concise than Target Text 2, which retained the metatext of the original and followed the source text very closely. This assessment of readability leans heavily on my judgement as a native speaker (on the legitimacy of a native speaker's judgement, see House 1997: 47). Nevertheless, the findings on the use of metatext in Target Text 1 and Target Text 3 seem to correlate with Mauranen's (1993) findings on academic texts, which indicated that Finnish texts tend to use less metatext than Anglo-American texts. Mauranen (1993) has studied the cultural issues behind writing conventions. Although her studies included only academic texts, it seems to me that some of the findings may apply to technical texts as well. The differences in the use of metatext may be due to different reader images and views of politeness in Finnish and Anglo-American culture (Mauranen 1993). In the next paragraph, I will look briefly in Mauranen's (1993) findings.

Mauranen's (1993) studies show that Anglo-Americans have a writer responsible culture. They assume that the responsibility for successful communication is on writer's shoulders. Moreover, Anglo-American writers show respect for the reader's time and effort. Thus the textual etiquette requires writers to be as explicit as possible and to guide the reader along the way, to save the reader's time and effort. Finns, however, have a reader responsible culture. They assume that the reader is responsible for the success of communication. Finnish writers show respect for the reader's intelligence, knowledgeability and privacy. Thus it is considered polite to leave out elaborate explanations, and the writer leaves out everything s/he considers to be obvious to the reader. Stating the obvious is seen as patronising in Finnish culture. (Mauranen 1993.)

In the light of Mauranen's (1993) studies, it is easy to see why it is desirable to omit certain parts of the source text in translation. Furthermore, Finnish style guides dealing with expository texts encourage the writers to leave out everything which does not have informational value (see e.g. Nykänen 2002, Rainio 1988). Since Finnish textual etiquette actually calls for omitting unnecessary parts of a text,

translations which faithfully reproduce the Anglo-American source text often ‘sound foreign’, as Target Text 2 showed. Thus, a translator should apply a cultural filter when translating Anglo-American texts into Finnish. It may also be concluded that the correct application of the cultural filter presupposes that at least some, possibly quite a lot of the metatext is omitted in the target text.

It was also found that Target Text 1 and Target Text 3 omit much of the repetition of the original. However, it does not seem to lessen the readability of the text. Finnish textual conventions seem to justify the omission of repetition, since writers of expository texts are encouraged to leave out everything the reader already knows, everything that is irrelevant and everything the reader can deduce from the context (Nykänen 2002: 138, Rainio 1988: 96). According to Finnish style guides, unnecessary detail and straying from the topic is to be avoided in expository texts as they often distract the reader (Nykänen 2002: 12). Phrases and clauses with no informational content should also be avoided (Nykänen 2002: 132). In addition, words which do not carry information value, such as adjectives and adverbs can be left out (Nykänen 2002: 139). Furthermore, there should not be unnecessary metatext at the beginning of a sentence (Rainio 1988: 97). Thus it seems that Finnish expository texts do not tolerate much repetition or redundant elements. The above-mentioned Finnish textual preferences may explain why some parts of the source text have been omitted in the translation. The translators of Target Text 1 and Target Text 3 may have followed these guidelines when translating the source text, in a bid to make the target text more acceptable to the Finnish audience. Accommodating cultural differences, including the differences in textual conventions, is nowadays seen as a key issue in translating. Unnecessary elements can be left out in translation, since it makes the text more acceptable to the target language audience. Thus, most of the omissions found in the target texts were considered justifiable and necessary. However, omissions which change the message or reduce the clarity of the text are not justified, because the main function of a technical text is to provide information (i.e. the ideational function). This is naturally an area which cannot be analysed completely objectively; each person views a text differently and thus what seems unimportant information to one person may seem important to another person. The results of the analysis seem to indicate that repetition can be reduced quite a lot when translating Anglo-American computer programming guides into Finnish. Even

though Target Text 1 and Target Text 3 contain much less repetition than Source Text 1 and Source Text 3, they are still very readable. In sum, the reduction of repetition can be seen as a prerequisite for a natural-sounding translation in Finnish.

Another issue that arose in the analysis was the use of parentheses for comments and additional information. The use of parentheses is generally disliked in Finnish texts (Ingo 1990: 265-266). It might be claimed that everything that has been put in parentheses in a source text is unimportant and may therefore be left out in translation, since Finnish expository texts do not tolerate unimportant or irrelevant information (Nykänen 2002: 12, 138). However, in my view, the value of the information in parentheses should be assessed separately in each case. It is only after this assessment that the translator can decide whether the information should be omitted or preserved. For example, Source Text 1 seems to use parentheses as a way of enhancing comprehensibility of the text. If everything that has been said in the parentheses was left out, some of the information would be lost. On some occasions, Target Text 1 has opted to remove the parentheses, adding the parenthetical information in the run of the text. On other occasions the translation has retained the parentheses. It is debatable whether this method is the best possible, or whether it would be better to leave out information which cannot be expressed without parentheses in the target text. A case of omitting a potentially important piece of information by leaving out the information in parentheses was discussed for instance in connection with examples (49) and (50) on page 69. Since Finnish textual conventions do not encourage the use of parentheses, it might be a good idea to try and express the important pieces of information without them and leave out information which cannot be expressed without parentheses. However, these issues approach the borders of taste and personal preferences, and thus subjectivity.

It was also found in the analysis that humour may create translation problems. Target Text 1 seemed to struggle with the humour of the original considerably. Sometimes the humorous lexical items were translated, sometimes they were not, with the result that the translation failed to achieve the same effect as the source text. It was thus concluded that translating humour partially does not work. There seems to be two possible solutions in translating this kind of text. Either you retain the informal style of the original and systematically translate all the humour in the text, or leave it all

out. These two methods have both their pros and cons. Firstly, if all the humour is translated, it may be a bit too much for the Finnish readers who may complain that the text sounds too 'American'. Finnish expository texts are not usually funny, and parts of text which are not relevant to the matter at hand may seem distracting and frustrating to the reader. Further, the readers may also feel that the writer is not taking her/his task seriously if s/he makes jokes. All the same, the style will mirror the style of the source text. Secondly, if all humour is omitted, the style of the target text is different from the style of the source text, but the resulting translation may be closer to the Finnish factual expository style and thus more palatable to the readers. Since, to my knowledge, the language used in Finnish computer programming guides has not been recently studied, it remains uncertain whether humour is tolerated in these books. However, according to Nykänen (2002), neutral style is generally preferred in Finnish expository texts. As seen above, Target Text 3 omitted the humour of the original altogether. That translation solution seemed to work rather well; the text remained readable and there did not seem to be anything missing in the target text.

Expository text should be both easy to read and easy to understand (Nykänen 2002: 10-12). The limitations of human memory step into the picture here. Long and complex sentences are difficult to understand because they overload the short-term memory (Wiio 1992, as quoted by Nykänen 2002: 13). This means that using short sentences and simple clause constructs is preferable to using long and complex sentences. According to Nykänen (2002: 132), a rule of thumb in Finnish expository writing is that one sentence should contain only one idea, and a sentence should not be longer than three clauses, due to the limitations of short-term memory. Longer sentences are tiresome to read and it is more difficult to grasp their meaning. (Nykänen 2002: 132). Target Text 1 divided long sentences into shorter sentences making the target text more readable. Since the English source text also seemed rather readable, it was suggested that English might tolerate longer sentences than Finnish. Thus it seems worthwhile to pay attention to the sentence length while translating.

The analysis also showed that Target Text 1 and Target Text 3 replace personal pronouns with less direct reference fairly consistently, while Target Text 2 uses both

direct and indirect reference in a rather haphazard manner. Target Text 1 and Target Text 3 seem more readable in this respect. Even though I cannot present any general conclusions on this matter due to the limited sample of texts analysed here, it seems that the generic third person and passive constructs may be favoured over deictic pronouns in Finnish computer programming guides. I base this inference on the amount of sentence restructuring the translators have done to Target Text 1 and Target Text 3. It seems that personal pronouns are used only in situations they cannot be avoided, such as giving direct instructions to the reader. Thus it seems that the changes in Target Text 1 and Target Text 3 have been dictated by the Finnish textual conventions of expository texts. However, the lack of deictic pronouns in the target texts makes their reader participation less explicit than that of the source texts. The lack of direct address and deictic pronouns as well as the different distance between the participants may well be a characteristic of the Finnish factual expository style.

Target Text 1 and Target Text 3 were translated rather freely, whereas Target Text 2 was translated almost word-for-word. The word-for-word translation fared poorly as to the quality of the translation. On basis of these three target texts it seems that computer programming guides written in English need considerable sentence restructuring when they are translated into Finnish. The Finnish and the Anglo-American textual conventions and preferences seem so different, that a translation keeping very close to the source text does not sound idiomatic, as Target Text 2 showed.

It was also found in the analysis that while transitions are used abundantly in the source texts, their number is reduced in translation. This might indicate that the Finnish computer programming guide translations do not need to use as many transitions as their Anglo-American counterparts do. It seems that at least some transitions can be omitted without it having much effect on the cohesion of the target text.

During the comparison of source and target texts it was also discovered that the source language interference presents an additional challenge to translators. All three target texts showed at least some signs of source language interference. Only a few instances of interference were found in Target Text 1 and Target Text 3, whereas

Target Text 2 seemed to have suffered from the source text interference a lot. Since all three translations showed some signs of source text interference, it seems that translators should be very wary of the English sentence structure.

Furthermore, it seems that target texts may sometimes use foreign loan words and postpositional phrases to make the text seem more authoritative and more credible in the eyes of the Finnish readers. For instance, Target Text 3 contains quite a few English loan words (example (202), p. 130).

In this study I set out to discover the quality of Finnish translations of computer programming guides. I chose Juliane House's (1997) updated *Model for Translation Quality Assessment* as the tool of analysis, since it seemed well suited for the task. I also liked the way House (1997) emphasised the meaning of cultural filter in translation and translation quality assessment. However, it soon became evident that there was not much information available about the cultural filtering between English and Finnish as to factual exposition. Translation agencies may have their own guidelines for English-Finnish translation of technical texts, but that information is considered a trade secret and as such was unavailable for the present purpose. It was surprising that not much research was conducted on Finnish translations of Anglo-American technical texts. I had the impression that technical texts make up a big portion of English-Finnish translation work. Yet their features have not been studied much. There were even less studies about English-Finnish translation and computer-related texts. There were a couple of studies dealing with computer user interfaces and computer user manuals, but they concentrated more or less on usability issues and did not provide much insight into cultural filtering. Due to lack of research I gathered information about the Finnish textual conventions and textual preferences from various sources, such as style guides dealing with expository writing.

In retrospect, it might have been a good idea to conduct a study about the features of computer programming guides written originally in Finnish first, before embarking on a research dealing with the quality of computer programming guide translations. This way I would have had tangible evidence on what the translation should look like in order to pass as an original, idiomatic Finnish text. That would have also helped to make the present study more objective. However, I believe that the present study has

shed at least some light on the quality of recent computer programming guide translations. The present study remains a case study, since only three texts were analysed. Even so, it contributes to the research on the field and will hopefully be of use in future research. I also believe that the comparison of source and target texts presented above, as well as the results of the present study, may provide translators with information about the pitfalls of the English-Finnish translation. Once translators are aware of them, it is easier to avoid falling into the same pitfalls.

There are some suggestions I would like to make to translators. On the basis of the results of the analysis, it seems reasonable to suggest that when one translates computer books from English into Finnish, quite a lot of cultural filtering is required when it comes to metatext, meaning that much of the metatext can be omitted. In addition, unnecessary repetition may be left out without losing the readability of the target text. However, it should be kept in mind that in technical translation it may sometimes be necessary to retain some of the repetition for the sake of clarity and unambiguity. As discussed above, short sentences are generally preferred in Finnish expository writing. They are often also more accurate than long and winding sentences (Nykänen 2002: 11). Thus, I suggest that very long source text sentences should be divided into shorter sentences whenever possible, in order to enhance the readability of the target text. However, this is not to say that all sentences should be of equal length and structure. On the contrary, sentence length and structure ought to vary (Nykänen 2002: 132), otherwise reading the text may become tedious and boring.

Another issue which translators should take notice is accuracy. As discussed earlier, accuracy of information is often considered crucial in technical translation (Ingo 1990: 42-43, Herman 1993, see also Nykänen 2002 on technical writing). Thus I find it important that the translation retains the accuracy of the source text, or maybe even enhances it. Sometimes parts of the source text need to be omitted for the sake of concision. However, they should not be left out at the expense of the accuracy of the information. There are usually many different ways to translate a sentence. Each translator has a slightly different view of the best translation solution on each occasion. Thus the choice of words in a sentence is sometimes an issue of personal taste. Knowing what needs to be retained and what can be omitted seems to be a

great challenge when translating from English to Finnish, as examples (47)-(50) (p. 69), (57) and (58) (p.72), as well as (77) and (78) (p. 77) showed. Even though stylistic issues should also be considered in technical translation, they are secondary to accuracy of information, as discussed above. Since correctness and accuracy of information are crucial in a technical text, there is no room for mistranslations. Therefore, in technical translation, knowing the topic of the source text is a key factor in creating an accurate, concise and readable translation.

Technical translators should also pay attention to the use of personal pronouns in the target text. The analysis showed that in English, the reader is often addressed directly (*you*). It seems that Finnish prefers a more indirect approach. In Finnish, it is common to refer to the reader through generic third person (e.g. *voi tehdä*, *saa mennä*) (Yli-Vakkuri 1989: 58-59). The passive can also be used for indirect addressing (Yli-Vakkuri 1989: 58-59). Indirect addressing may also sound more polite than direct addressing and therefore less intrusive. However, direct address is used for example in operating manuals for giving instructions to the reader. Even though the Finnish audience of computer-related texts may be becoming gradually more tolerant of direct addressing due to the exposure to Anglo-American texts, it seems that expository texts cannot rely entirely on direct forms of address as yet. However, whatever form or forms of address are chosen, it is important to use them in a consistent manner. It is not pleasant to read a text which switches constantly between different forms of address, as the examples (168) and (169) above showed (see p. 112). Finally, a sentence cannot be translated in isolation, because in a text, it is not alone. Thus it is important to keep both the context and the previous sentences in mind when translating. It is also necessary to pay attention to both the grammatical and anaphoric agreement, and to check that the coreference between a pronoun and its antecedent agree in number (see examples (159)-(160), p.108-109).

Additions and paraphrases appear here and there in the target texts, see examples (45) and (46) (p.68). Although they may be sometimes too lengthy, their purpose seems to be to make the text clearer, which is always a good thing in technical translation, even if the concision of the text suffers a little. However, I would suggest using as concise a paraphrase as possible, even if that might sound like a contradiction in

terms, in order to keep the text concise. As discussed earlier in Chapter 2.1.4 (p. 22), Finnish expository texts tend to prefer conciseness (Nykänen 2002: 12, 138-139).

The analysis of Target Text 2 raised the issue of personification. Personification is yet another issue a translator should pay attention to when translating a technical text. Personification has been used in Finnish poetry, literary texts and fables to a great extent. However, expository texts are based on facts and they attempt to describe real-world objects or events (Nykänen 2002: 10). In the real world, tables, chairs and documents are not animate beings. Neither are computers and computer programs, although it may sometimes seem as if they were. In reality, computers or computer programs only do what they are programmed to do. Since expository texts should describe things as they are in the real world, it could be concluded that personification should be avoided in those texts. There is however another side to this issue. Anglo-American IT-related texts tend to talk about computers and computer programs as if they were alive and even had human qualities. This language usage seems to have trickled into the Finnish computer literature as well. Shunning personification altogether might not be the right solution, as there may be instances when using personification may be the only concise way to translate a sentence. It seems to me that the best way to solve the translation problem of personification is to avoid using personification whenever possible and to use it only when absolutely necessary.

As to suggestions for further study, the same methods could be used to study other computer-related texts. After several such studies have been carried out, then there may be enough data to draw credible conclusions about the quality of Finnish computer book translations. Several other interesting research topics also emerged during the writing of the present study. One of them is the role of humour in computer-related books of Finnish origin. It would also be interesting to compare them with computer books translated into Finnish and to see whether the translations deal with humour differently. Another research topic would be the features of computer books written originally in Finnish. A further study could then compare the features of the Finnish computer books to those of translated books and analyse the quality of the translations. It would also be interesting to compare translations made

by large translation agencies to those done by individual translators, and see if there are notable differences in the quality of the translations.

In sum, House's (1997) model for translation quality assessment seemed to work rather well as a tool for analysis, although it was sometimes difficult to decide where certain findings belonged in the model. The model could be developed further. For instance, the categories of translation problems suggested in this study (p. 14ff) could be incorporated in the model. A summary of the most common translation problems encountered in each source text could be presented for example at the end of the analysis of a text. Such a summary might be more illustrative than a mere statement of translation quality, and it could provide valuable information for further research and pedagogical purposes.

The research problem introduced in the present study proved to be more problematic than anticipated. The scarcity of earlier research on computer programming guides and features of technical texts presented challenges during the research. In addition, due to the lack of earlier research, the study is not quite as objective as I had hoped. The data chosen for analysis seemed to suit the purposes of this study rather well. The excerpts were long enough to provide an adequate amount of material for analysis. However, it might have been a good idea to take more than one excerpt from each of the books. Then the analysis would have given a more accurate view of each source and target text. On the positive side, I learnt a great deal about the potential problems in technical translation, and in computer programming guide translation in particular, in the process. In addition, I can put the findings of this study to good use in my pursuit of becoming a good technical translator.

THE BIBLIOGRAPHY

Primary sources

Harold, E. R. 1999. *XML Bible*. (p. 49-58). Foster City: IDG Books.
Harold, E. R. 2000. *XML Tehokäyttäjän opas*. (p. 71-79). Helsinki: Satku.
McLaughlin, B. 2001. *Java & XML, 2nd Edition*. (p. 323-332) Sebastopol: O'Reilly.
McLaughlin, B. 2002. *Java & XML*. (p. 360-369) Helsinki: Satku.
Wall, L., T. Christiansen and J. Orwant 2000. *Programming Perl, 3rd Edition*. (p. 464-475). Sebastopol: O'Reilly.
Wall, L., T. Christiansen and J. Orwant 2002. *Perl - tehokäyttäjän opas*. (p. 547-559) Helsinki: Satku.

Secondary sources

Baker, M. 1992/2000. *In other words: a coursebook on translation*. London: Routledge.
Beaugrande, R. and W. U. Dressler 1981. *Introduction to text linguistics*. London: Longman.
Bell, R.T. 1991/2001. *Translation and translating: theory and practise*. London: Longman.
Bhatia, V. K. 1993. *Analysing genre: language use in professional settings.* London: Longman.
Biber, D. 1988. *Variation across speech and writing*. Cambridge: University Press.
Bloor, T. and M. Bloor 1995/2001. *The functional analysis of English: a Hallidayan approach*. London: Arnold.
Bühler, K. 1965. *Sprachtheorie: die Darstellungsfunktion der Sprache*. Stuttgart: Fischer.
Catford, J.C. 1965. *A linguistic theory of translation: an essay in applied linguistics*. London: Oxford University Press.
Collins Cobuild English language dictionary 1987/1993. London: Collins.
Cruse, D. A. 1986. *Lexical semantics*. Cambridge: Cambrige University Press.
Crystal, D. and D. Davy 1969/1974. *Investigating English style*. London: Longman.
English-Finnish general dictionary 1990/1993. Juva: WSOY.
Gerzymisch-Arbogast, H. 1993. Contrastive scientific and technical register as a translation problem. In S. E. Wright and L. D. Wright (eds.), *Scientific and technical translation*. Amsterdam: John Benjamins, 21-51.
Gerzymisch-Arbogast, H. 1994. *Übersetzungswissenschaftliches Propädeutikum*. Tübingen: Francke.
Grice, P. H. 1978/2003. Logic and conversation. In He Zhao Xiong (ed.), *Selected readings for pragmatics.* Shanghai: Foreign Language Education Press, 365-388.
Halliday, M. A.K. 1973. *Explorations in the functions of language*. London: Arnold.
Halliday, M. A.K. and R. Hasan 1976. *Cohesion in English*. London: Longman.
Halliday, M. A.K. 1985. *Introduction to functional grammar*. London: Arnold.
Halliday, M. A.K. 1989. *Spoken and written language*. Oxford: Oxford University Press.
Hatim, B., and I. Mason 1990/2001. *Discourse and the translator*. London: Longman.

Herman, M. 1993. Technical translation style: clarity, concision, correctness. In S. E. Wright and L. D. Wright (eds.), *Scientific and technical translation*. Amsterdam: John Benjamins, 11-19.

House, J. 1977. *A model for translation quality assessment*. Tübingen: Narr.

House, J. 1997. *Translation quality assessment: a model revisited*. Tübingen: Narr.

Hurtado Albir, A. and N. Martínez Melis 2001. Assessment in translation studies: research needs. *Meta* XLVI (2), 272-287.

Ingo, R. 1990. *Lähtökielestä kohdekieleen: johdatusta käännöstieteeseen*. Porvoo Helsinki Juva: WSOY.

Ingo, R. 2000. *Suomen kieli vieraan silmin*. Vaasan yliopiston käännösteorian ja ammattikielten tutkijaryhmän julkaisut N:o 26. Vaasa: University of Vaasa.

Ikola, O. 2000. *Pieni nykysuomen opas*. Publications of the Department of Finnish and General Linguistics of the University of Turku 66. Turku: University of Turku.

Katan, D. 1999/2004. *Translating cultures: an introduction for translators, interpreters and mediators*. Manchester: St Jerome.

Kies, D. 2005. Coherence in writing**.** *The hypertextbooks*. College of DuPage: Department of English [online]. (20 Jun 2005) http://papyr.com/hypertextbooks/comp1/coherent.htm.

Korpela, J. 2005. *Nykyajan kielenopas*. *Tyylilajin ja vaatimustason valinta: Käytännön oikeakielisyyden perusteet* [online]. (17 Aug 2005) http://www.cs.tut.fi/~jkorpela/kielenopas/3.3.html.

Longman dictionary of contemporary English 2004. Harlow: Pearson Education Limited.

MacNamara, J. 1967. The bilingual's linguistic performance: a psychological overview. *Journal of Social Issues* 23, 58-77.

Mauranen, A. 1993. *Cultural differences in academic rhetoric: a textlinguistic study*. Frankfurt am Main: Lang.

Mauranen, A. and J. H. Jantunen (eds.) 2005. *Käännössuomeksi tutkimuksia suomennosten kielestä*. Tampere studies in language, translation and culture, Sarja A Vol. 1. Tampere: Tampere University Press.

Newmark, P.1981. *Approaches to translation.* Oxford: Pergamon.

Newmark, P. 1988/2001. *A textbook of translation*. New York: Prentice Hall.

Nida, E. A. 1964. *Toward a science of translating: with special reference to principles and procedures involved in bible translating*. Leiden: Brill.

Nida, E. A. and C. R. Taber 1969. *The theory and practise of translation*. Leiden: Brill.

Nord, C. 1997/2001. *Translating as a purposeful activity: functionalist approaches explained.* Manchester: St. Jerome.

Nykänen, O. 2002. *Toimivaa tekstiä – opas tekniikasta kirjoittaville*. Helsinki: Tekniikan Akateemisten Liitto TEK.

Oxford concise dictionary of linguistics 1997/2000. New York: Oxford University Press.

Pedersen, J. B. 2005. *The Technical English register*. University of Southern Denmark [online]. (19 Oct 2005) http://www.humaniora.sdu.dk/te/JPINT.htm.

Pinchuck, I. 1977. *Scientific and technical translation*. Chatham: André Deutsch Limited.

Pääkkönen, I. and M. Varis 2000. *Kriitinen lukutaito*. Tampere: Oy Finn-Lectura Ab.

Rainio, R. 1988. *Asiatyyli ja viestintä*. Revised 8th edition. Helsinki: Finnish Literature Society.

Reiss, K. 1971. *Möglichkeiten und Grenzen der Übersetzungskritik : Kategorien und Kriterien für eine sachgerechte Beurteilung von Übersetzungen*. Munich: Max Huber.

Reiss, K. and H. J. Vermeer 1984. *Grundlegung einer allgemeinen Translationstheorie*. Tübingen: Niemeyer.

Reiss, K. 2000/2004. *Translation criticism - the potentials and limitations*. Manchester: St. Jerome.

Routledge dictionary of language and linguistics 1996/2000. London: Routledge.

Routledge encyclopedia of translation studies 1998/2004. London: Routledge.

Varantola, K. 1993. Tekninen viestintä ja kääntäjä. In P. Kukkonen (ed.), *Tiedon ja taidon dialogia kääntämisen ja tulkkauksen opetuksessa ja tutkimuksessa*. Kouvolan kääntäjänkoulutuslaitoksen julkaisuja, Sarja A N:o 7. Helsinki: Helsinki University Press, 135-146.

Werlich, E. 1976. *A text grammar of English*. Heidelberg: Quelle & Meyer.

Wiio, O. A. 1992. *Viestinnän tutkimussuuntia*. Helsinki: Helsinki University Press.

Wilss, W. 1982/2001. *The science of translation: problems and methods*. Tübingen: Narr.

Wright, S. E. 1993. The inappropriateness of the merely correct: stylistic considerations in scientific and technical translation. In S. E. Wright and L. D. Wright (eds.), *Scientific and technical translation*. Amsterdam: John Benjamins, 69-85.

Yli-Vakkuri, V. 1989. Suomalaisen puhuttelun piirteitä. In A. Kauppinen and K. Keravuori (eds.), *Kielen käyttö ja käyttäjä*. Helsinki: Äidinkielen opettajain liitto, 43-74.