TRANSLATING SOFTWARE INSTRUCTIONS

A Case Study on the Translation Process of Instructions for a Subscription Software, with Special Attention to Translation Problems

Master's thesis

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Tiivistelmä – Abstract

Tutkielman tavoite oli selvittää teknisen tekstin kääntämisessä esiintyviä käännösongelmia ja prosessin yleistä luonnetta. Aineistona käytettiin lehtitalojen käyttöön tarkoitetun jakeluohjelmiston suomenkielistä käyttöopasta, siitä itse tehtyjä käännöksiä englanniksi, sekä kääntämisen ohella kirjoitettua käännöspäiväkirjaa. Käännökset tehtiin osana kääntäjäharjoittelua ja ne tulivat kaupalliseen käyttöön. Tutkimuskysymykset olivat: 1) Mitä käännösongelmia prosessin aikana ilmeni? 2) Miten hyödyllisiä käytetyt käännöstyökalut olivat? 3) Miten tekstityypin ominaisuudet ilmenivät alkuperäisessä tekstissä ja kuinka hyvin ne onnistuttiin siirtämään käännöksiin? Tutkielma on tapaustutkimus ja luonteeltaan pääosin laadullinen.

Käännösongelmien tutkimiseen käytettiin Nordin (2001) käännösongelmien kategorisointia pragmaattisiin, kulttuurisiin, kielellisiin ja tekstikohtaisiin ongelmiin. Nordin kategoriat pohjaavat yleisemmin teoreettiselta taustaltaan skoposteoriaan ja funktionalistinen lähestymistapaa kääntämiseen, jotka muodostavat myös tämän tutkimuksen teoreettisen viitekehyksen. Näiden suuntausten perusperiaatteena on, että tärkein lähtökohta tekstin kääntämisessä on tekstin funktio eli se, mihin tarkoitukseen se käännetään. Prosessissa ilmenneiden käännösongelmien syitä ja ratkaisukeinoja analysoitiin. Tekstityypin ominaisuuksia tutkittiin sekä funktion että teknisten tekstien ominaispiirteiden kannalta, kiinnittäen erityisesti huomiota selkeyteen, ymmärrettävyyteen, tiiviyteen ja johdonmukaisuuteen.

Tutkimuksessa havaittiin, että kyseisessä käännöstehtävässä erityisesti kielellisiä käännösongelmia kohdattiin paljon ja ne olivat paikoin vaikeita ratkaista. Myös pragmaattisia ongelmia ilmeni paljon. Sen sijaan tekstikohtaisia ongelmia oli melko vähän ja kulttuurisia ongelmia ei ilmennyt lainkaan. Myös subjektiivisia käännösvaikeuksia ilmeni huomattava määrä, varsinkin liittyen kääntäjän erityissanasto-osaamiseen. Muut ongelmat liittyivät eniten alkuperäisen tekstin ongelmakohtiin. Joitain poikkeuksia lukuun ottamatta alkuperäinen teksti ilmensi tekstityypin ominaisuuksia hyvin ja myös käännöksen koettiin onnistuvan ilmentämään tekstityypin ominaisuuksia. Käytetyistä käännöstyökaluista varsinkin käännösmuisti koettiin hyödylliseksi.

Asiasanat – Keywords kääntäminen, tekninen kääntäminen, käännösongelmat, erikoiskielet, translation, technical translation, translation problems, languages for specific purposes

Säilytyspaikka – Depository

Muita tietoja – Additional information

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1 INTRODUCTION

Traditionally, the word "translation" probably first brings to mind literary texts, artistic expressions, and use of poetic language. However, this of course is not the sole form of translation, as there are different non-literary text types that differ greatly in terms of their purpose, content, and style. Instructions are one of these more functional and less literary text types.

This thesis is a case study that investigates what special requirements translating a technical text involves, what problems arise in the translation process, and how they are solved. The aim of this study is, firstly, to chart problems that technical translators specifically may encounter in their jobs and secondly, to report the overall progress of a translation task in order to describe the nature of translation work in the technical field. The answers to these research questions were sought by documenting and reporting the progress of the translation of computer software instructions. Specifically, since this study concerns the translator's first extensive translation job, it offers an example of how a translation task is observed by a beginner translator. Data for the present study consists of the original texts, the translated texts as well as an introspective translation diary, with emphasis on investigating the latter. The documentation of the process aims at classifying and illustrating the different types of problems and difficulties that arose during the translation process, paying attention to where they may apply to technical translators in general and where they were personal difficulties of the specific translator.

The data for this study comprises the translations I did during my time as a technical translator intern for a small IT company located in Jyväskylä, Finland. My assignment was to translate the instructions for the company's software product (more specifically SaaS, "Software as a Service"), which is a circulation and distribution system for businesses in print and digital media. The instructions were in Finnish and they were to be translated into English. The translation task is explained in more detail in chapter four of this study.

The theoretical framework of this study builds on concepts established by linguists for the field of translation studies, the main focus being on Reiss and Vermeer's (1986) skopos theory and the functionalist approach to translation. Skopos theory and functionalism focus on the function of the text as the main force that should direct how the translation is made. This approach is very practical in nature, which is why it is most ideal for a study that focuses on analysing the translation of a pragmatic text type, in other words, a text that is produced for a specific use and aimed at a specific audience. For analysing the translation problems that emerge, I use Nord's categorisation of translation problems and difficulties. While the pre-translation analysis and the translation diary were written during the translation task, analysis was carried out after the translations were finished and delivered to the employer and end users. In practice, this means that changes can no longer be made to the texts during the analysis, even if mistakes are noticed. Hence, the analysis of the translation process and translation problems is descriptive rather than prescriptive, which also helps in understanding the nature of the work of a technical translator.

The present study begins with a look at translation and translation studies in general, glimpsing at the history of translation, moving on to exploring different theories of and approaches to translation, and finally going into the main theoretical framework of this study, skopos theory and functionalism. In chapter three, translation as a process is discussed, with special attention to technical translation and its special features and requirements. In chapter four, the present study, its data, and methods are presented in more detail. Chapters five and six contain the data analysis: chapter five concerns the pre-translation stages, while chapter six explores the translation process, answering the research questions that were set. Finally, the findings of the study are discussed in chapter seven, which also concludes the study.

2 TRANSLATION THEORIES

The following chapter introduces the main theories of translation. First, translation studies as a field of study is discussed briefly. Then, different approaches to translation as well as

theories that compare these approaches are presented. Finally, the main theoretical framework of the present study, skopos theory and functionalism will be presented.

Some established terms that describe basic concepts in translation studies will be repeated very often in this study, which is why it is most convenient to abbreviate them on most occasions, especially when presenting examples. The language of the original text, in other words, the text to be translated, is called a *source language,* which will be abbreviated to SL. The language of the translation is a *target language* which will be abbreviated to TL (used by e.g. Wilss 1982). In the data that is examined in this study, the source language is Finnish and the target language is English. Similarly, the text to be translated is called a *source text* (abbreviation: ST), while the product of a translation is called a *target text* (abbreviation: TT; used by e.g., Reiss and Vermeer 1984:13).

2.1 Translation as a field of study

Translation studies is an interdiscipline that relies on the concepts of various other fields of study. Indeed, Nida (1991: 21) argues that translation is a technology that is built upon a number of scientific disciplines, including psychology, linguistics, communication theory, cultural anthropology, and neuropsychology. Reiss and Vermeer (1986: 7) categorise the study of translation as part of applied linguistics, which is also an interdisciplinary field.

Translation studies was not really separated from other fields of applied linguistics before the 1950s. Historically, translators have embraced many different approaches to translation, ranging from favouring a translation that is faithful to the source text to adapting translation that aims at conveying the meaning of the source text while trying to adapt it to the target audience. However, the most profound theories were not explicitly outlined until the 19th and 20th century. According to Nord (2001: 6), linguistics in general was probably the most dominant humanistic discipline in the 1950s and 1960s, which explains the influx of translation theories that were formed during the decades that followed. Gentzler (1993: 46, as quoted in Nord 2001: 5-6) considers Nida's sociolinguistic theories of translation in the 1960s as the basis for the "new" field of the science of translation that had started to form in the twentieth century. Reiss and Vermeer's

functional approach to translation, which is also the main theoretical framework this study relies on, was formulated in the 1980s.

The level of faithfulness to source text has been one of the most disputed topics throughout the history of translation. This becomes evident in the next sections, where different theories of and approaches to translation are explored. First, the difference between literal translation and free translation is summed up briefly, after which different approaches to translation are presented.

2.2 Literal translation versus free translation

Traditionally, translation theory makes the distinction between literal translation and free translation, which is probably the simplest line to draw between different methods of translation. Many authors acknowledge that it is impossible to translate a text perfectly. Von Humboldt (as quoted in Wilss 1982: 35) argues that a medium between two languages is not only difficult but downright impossible: the translator either stays too close to the original, losing the essence of the target language, or will adhere too closely to characteristics of target language at the cost of the original. This problem was also addressed by Reiss and Vermeer. Reiss and Vermeer (1986: 24) bring attention to the fact that it seems to be nearly impossible to do justice to all aspects of the source text at the same time. If a text is translated word-for-word, its style, syntax, and intelligibility suffer; A translation that is "faithful to the text mind" forces the translator to change the form of the text; And finally, a translation that is "faithful to the effect" leads to a more semantically free translation, thus risking to stray too far from the original (Reiss and Vermeer 1986: 24). In light of these views, there is really no right or wrong way to translate as long as linguistic rules are abided by.

Different authors also offer different descriptions of transfers that exist on the line segment between literal and free translation. According to Nord (2001: ch 1), translation moves between two extremes: a faithful reproduction of formal source text qualities and an adjustment to the target audience. Reiss and Vermeer (1986: 53-54) call faithful, word-for-word translations *imitating transfers,* partial adaptations from the source text *free*

translation, and translations that are completely untraceable to the source text *paraphrases*. Reiss (1971, as quoted in Nord 2011) argues that normally, the standard is to try to achieve equivalence, but that sometimes the functional purpose of the text calls for an adaptation (a transfer). Wilss (1982: 28) even associates the conceptual overlaps in translation theories through history to the fact that translation procedures range from *literal translation* to *free paraphasing*. The translator decides what the best approach for each translation unit is based on various task-dependent factors. These factors will be discussed in the following sections as well as chapter three.

2.3 Approaches to translation

A translator chooses a specific approach to translation. Not only is the choice of approach personal and/or task-dependent, but the surrounding community of translators and linguists have always affected what approaches to translation are considered the best at any point in time. This study utilises skopos theory and the functionalist approach to translation as its main theoretical framework. This approach was taken because these theories support the pragmatic nature of the aims and data of the study in the best way. However, it is also important to review other approaches to translation to see why exactly the selected approach is most relevant. For this purpose, an overview of how the communities dealing with translation have developed and reviewed different approaches is presented next.

Naturally, approaches to translation have been labeled with differently coined terms throughout history. However, when inspected more closely, approaches that are differently named can be identified as similar, boiling down to mainly two opposing approaches: source-text-oriented approaches and target-audience-oriented approaches. In short, source-text-oriented approaches focus on preserving the qualities of the source-text (literal translation), while target-audience-oriented approaches focus on adapting the text for the target audience. Ruokonen (2004) discusses the use of two different approaches through history: domestication and foreignisation (the terms domestication and foreignisation were borrowed from Lawrence Venuti's book from 1995). Foreignisation aims at recreating the source text in the target language by changing as little as possible, to

preserve the foreign origin, while domestication aims at recreating the meaning of the source text in the target language so that the target text abides by the style of target culture texts (Ruokonen 2004). In other words, foreignisation is a source-text-oriented approach, while domestication is a target-audience-oriented approach. Similarly, Nida (1964, as quoted in Nord 2001: 4-5; Ruokonen 2004: 68) distinguished between formal and dynamic equivalence: 'formal equivalence' referred to a faithful reproduction of the source text, while 'dynamic equivalence' aims at "naturalness of expression" in terms of the target culture. Again, formal equivalence puts emphasis on the source text, while dynamic equivalence puts emphasis on the target audience. The main theoretical framework used in this study is Vermeer and Reiss' skopos theory and functional translation theory. The functional approach is heavily target-audience-oriented, and Ruokonen (2004: 68) even categorises it as a "semidomesticating" approach to translation (translation of the term my own). To sum up, we can group the foreignisation approach and the concept of formal equivalence as source-text-oriented approaches, while domestication, dynamic equivalence, and functional translation theory can be categorised as target-audience oriented approaches.

The use and opinions about source-text-oriented and target-audience-oriented approaches to translation have varied through history. Already in Ancient Rome, Cicero, who is considered the founder of Western translation theory, and Horace were advocates for free translation, for translating texts "meaning for meaning" rather than word for word (Ruokonen 2004: 64; Wilss 1982: 30). However, later, especially in Christian translation traditions, the opinions about this altered: on the one hand, central figures in Christian translation tradition like Jerome and Augustine supported the idea that translating the meaning is more important than translating the exact words; on the other hand, Jerome also simultaneously stated that holy texts were so sacred that their translation should stay as close to the original as possible (Ruokonen 2004: 64-65). Also Nord (2001: 4) describes that many Bible translators advocated faithful reproductions of the source text in some situations and an adjustment to the target audience in other situations. Indeed, faithfulness to source text was a central issue in the translation communities of the 17th and 18th century and an especially crucial issue for Bible translations (Nida 1991: 21-23).

However, during Renaissance and the Reformation, the target-audience-oriented domestication approach was used more frequently (Ruokonen 2004: 65). Indeed, by the 18th century, the domesticating approach to translation was already a grounded tradition in Western countries, even though some advocates of romantic foreignisation rose to oppose it in the 19th century (Ruokonen 2004: 65). In summary, the different approaches have had their advocates throughout history, however, slowly shifting the translation community to favour the audience-oriented approaches.

As was mentioned earlier, translation studies as a field started to flourish especially in the latter half of the 20th century. This resulted in a rise in translation theories. Interestingly enough, there still seemed to be no clear consensus about a unified theory of translation: especially at the beginning of the 20th century, some translators, theorists, and authors still valued foreignisating, source-text-oriented approaches, for example Walter Benjamin and Ezra Pound (Ruokonen 2004: 68). However, more theories that emphasise the target audience reception started to emerge and gain popularity. Also theories that openly compared the two approaches, like Nida's equivalence theory, started to form.

The field of translation studies also experienced a rise in the popularity of structuralist approaches to translation in the 1950s and 1960s. Structuralist linguists believed that language and translation could be investigated strictly scientifically in a manner similar to natural sciences (Nord 2001: 6). Structuralist linguism brought along the earliest experiments with machine translation, which started in the 1950s and were then viewed in a very positive light (Nord 2001: 6; Wilss 1982: 11). Similarly, Catford's *Linguistic Theory of Translation* from 1965 bears the idea that language use situations can be put into categories according to distinctive features, although it is not considered a structuralist approach per se (Tirkkonen-Condit 2000: 127). However, the theoretical foundation of structuralism was eventually found mainly untenable in philosophy, linguistics, and psychology (Tirkkonen-Condit 2000: 130). The pragmatic reorientation in the 1970s switched the focus from the word- or phrase-level to the text as a unit of translation, but the linguistic trend of basing translation on equivalence, like structuralism does, was never really questioned (Nord 2001: 7; also in Tirkkonen-Condit 2000: 128). However, the concept of equivalence has had

new dimensions added to it, taking it to a more pragmatic direction from its structuralist origins (Tirkkonen-Condit 2000: 128).

2.4 Contrastive translation theories

In addition to translation theories that embrace one approach or the other, there are also theories that compare different approaches to translation. These will be presented now. Nida's equivalence theory was already discussed, but will now be visited again. Additionally, Toury's descriptive translation theory and Nida's later categorisation of approaches to interlingual communication will be presented.

Nida's equivalence theory from the 1960s was already briefly summarised earlier. As said, Nida's equivalence theory separates the concept of *formal equivalence,* which refers to a faithful reproduction of the source text, from *dynamic equivalence,* which aims at fitting the style of expression in the target culture (Nord 2001: 4-5). While contrasting may be the focus of the theory, the concept of dynamic equivalence is perhaps the most important insight of the theory. Indeed, many authors, for example Nord (2001), Tirkkonen-Condit (2000: 129), and Ruokonen (2004: 68), view the concept of dynamic equivalence as especially valid and usable even after many decades have passed. Furthermore, Nida's own recommendation was to strive for dynamic equivalence. Nord (2001: 8) also draws attention to the fact that even advocates of faithful equivalence between source text and target text tend to accept non-literal translation procedures more readily in the translation of pragmatic texts, such as instructions for use, than in literary translation. Therefore, since the translations that are studied in this thesis are instructions for use, aiming at dynamic equivalence was a better approach in the present translation task than striving for formal equivalence.

Toury (as quoted in Ruokonen 2004: 69) started developing his descriptive translation theory in the 1980s. Similarly to Nida, his theory also contrasts two approaches to translation and does so in an almost identical way. Toury (as quoted in Ruokonen 2004: 69) outlines that a translator may either try to achieve an "*adequate translation*", which means attempting to preserve the norms and structures of the source culture and

language, or he or she may try to achieve an "*acceptable translation*", which means attempting to adapt to the norms and structures of the target culture and language. According to Ruokonen (2004: 69), Toury does not make a statement about which approach should be preferred, but in Ruokonen's view, Toury's theory is more target-audience-oriented while also viewing the source-text-oriented approaches in a more favourable light than for example Nida.

In 1991, Nida distinguished four approaches to interlingual communication in general, which can be seen as a sort of an expansion of or addition to his equivalence theory. Nida's four different perspectives were philological, linguistic, communicative, and sociosemiotic. In Nida's view, these different approaches to interlingual communication also reflect the historical development from emphasising the source text to emphasising how the text is understood by the target audience. The philological approach, which has been practiced throughout history, mainly focuses on the translation's faithfulness to the source text; this approach, in Nida's view, can have radically different results, varying from terrible "butcherings" of language to very successful translations that are both sensitive to style and faithful to content. However, Nida (1991: 23) draws attention to the fact that practitioners of philological approach have increasingly recognised that other factors in addition to faithfulness have to be given greater attention. The linguistic approach focuses on the corresponding features of the structures of the source and target languages (Nida 1991). Nida compliments the approach for its focus on formal and semantic processes, but views that pragmatic features of the original text and the circumstances regarding the use of the translation should receive more attention. The communicative approach emphasises the importance of elements of communication theory, namely source, message, receptor, feedback, noise, setting, and medium. In the communicative approach, attention is also given to the paralinguistic and extralinguistic features, which in written texts include style of type, format, quality of paper, and type of binding (Nida 1991). Of course, in regard of the present study, the latter two are absent in digital texts, which in turn contain their own extralinguistic features, such as hyperlinks. Most significantly, Nida (1991: 25) draws attention to the fact that form of the text is significant to creating an effective impact, and attention should be paid to text form and

function, because they may be more prominent in the use of language than content itself. Emphasis on function consequently puts emphasis on discourse structures, meaning that the validity of translation should be judged based on how the corresponding source text and target text adequately fulfill their respective purposes (Nida 1991). Furthermore, requirements of equivalent response from the target audience bring forth certain possibilities and limitations of translating different text types that have diverse functions (Nida 1991). Nida also points out that Reiss' theories, which also form the nucleus of the theoretical framework in the present study, call attention to the issue of functional equivalence. Finally, Nida (1991) presents the fourth and newest approach, the sociosemiotic approach which focuses on all the different codes involved in any verbal communication in addition to words. These codes are always present and affect the reception of message significantly.

In 1979, Kelly (as quoted in Nord 2001: 8; also in Wilss 1982: 27) summed up the history of different approaches to translations rather poetically:

> A translator moulds his image of translation by the function he assigns to language; from function, one extrapolates nature. Thus those who translate merely for objective information have defined translation differently from those for whom the source text has a life of its own.

This statement brings attention to the fact that while approaches have differentiated through the course of history, another defining factor that affects which approach to use is the type and purpose of the text. This important insight will be discussed in more detail when we view text types and their effect on translation in chapter 3. Historically speaking, Nord (2001: 8) brings this statement up mainly because it shows how at the end of the 1970s translator scholars slowly started leaning more towards functionalist approaches to translation instead of equivalence-based, which explains why Reiss and Vermeer's theories gained such appreciation among translators and translator scholars. The major principles of functionalism have remained valid until this day (e.g., Ruokonen 2004: 68) and are especially relevant for pragmatic text types, such as the instructions translated in this study.

2.5 Skopos theory and the functionalist approach to translation

As the previous sections revealed, the emphasis in translation has slowly moved from source-text-equivalence to function. The most central translation theories in function-orientation are skopos theory (often also written *Skopos theory*; originally *Skopostheorie* in German), developed by Hans Vermeer and expanded together with Katharina Reiss, and the functionalist approach to translation, which is a larger entity relying on both skopos theory and action theory. Both the original skopos theory as well as additions to the functionalist approach to translation were used both as guidance in completing the present translation task and as tools in assessing the gathered data. In other words, they form the main theoretical and methodological framework of the present study. The following section presents the core features of these theories.

2.5.1 The principles of skopos theory and functionalism

Reiss and Vermeer (1986) originally set out to establish the basics of a general translation theory that was to be expanded by others. Their theory came to be generally known as *skopos theory*. According to skopos theory, the meaning of the text, i.e., what the text is meant to achieve, is the most determining aspect of translating (Reiss and Vermeer 1986: 54-55). Reiss and Vermeer (1986: 57-58) summarise the basic idea of skopos theory in the statement that the function of an action is higher in the hierarchy than how something is done: the meaning of an action defines if something needs to be done, what is done, and how it is done. Reiss and Vermeer (1986: 55) use the terms *goal, meaning, function*, and *skopos* interchangeably, which gives an idea of what is the core of skopos theory.

The function of a text, in other words, what purpose for which the text is written, is an important aspect of translation. Nord (1991, as quoted in MacKenzie 2004: 158) argues that the translator needs to know the function of the text in order to decide what criteria the target text will have to meet so that it can perform its function in the best possible way. Function is perhaps especially important in user guidance, because on basis of a user guide, the user needs to clearly understand what he or she is supposed to do. The function of a user manual is to guide the user in the use of a product, and at its best a manual is clear, self-explanatory, and inclusive, in other words, the user does not feel the need to

seek further assistance. For these reasons, skopos theory and functionalism provide an excellent framework for the present translation task.

Functionalism is a methodological approach to translation based mainly on skopos theory. In functionalism, the intended function of the target text guides the translator's decisions (Nord 2001: 138). More specifically, the concept of functionalism in this study is mainly based on Nord's (2001) account of it, which in itself is based on what is generally called "the German school of functionalist translation theory" (Nord 2001: 4-14). In addition to skopos theory, this school of theories includes Reiss' functional category of translation criticism (1971, as quoted in Nord 2001: 9-10), Holz-Mänttäri's theory of translational action (1984, as quoted in Nord 2001: 12-13; also in MacKenzie 2004) as well as other theories. In short, all of these theories emphasise the role of function and purpose in translation.

Nord presents models for analysing extratextual and intratextual factors in establishing what the function of the target text is (Nord 2001: 14; also in Mackenzie 2004). Nord discusses translation as a purposeful activity and presents functionalist approaches to translation. Her book explores different ways in which the audience, the commissioner of the text, text type, and other such aspects define how a text needs to be translated. Nord also argues that while the conventions of Reiss and Vermeer's skopos theory are restricted to only genre conventions, a number of other types of conventions need to be taken into account as well (Nord 2001: 53). These include style conventions, conventions of nonverbal behavior (even in written language), and translation conventions.

2.5.2 *Skopos theory and the functionalist approach in practice*

In the preceding section, the principles of skopos theory and functionalism were presented. However, it was not yet established how exactly these theories can be realised in the everyday work of a translator or a translator trainee. This will be explored in the following section.

2.5.2.1 Components of skopos

The skopos of a text consists of various components, or subsets, as Reiss and Vermeer (1986: 58) put it. First of all, Reiss and Vermeer (1986: 58) define the primary rule of translation to be that *Action is defined by its aim*. They call this rule *the skopos rule*. The secondary rule they set is that skopos also depends on the receivers of the text, including the intended audience as well as the commissioner or the publisher. To sum up, the skopos of a text depends on 1) the aim of the text, 2) the receiver of the text, and 3) the commissioner or the publisher of the text (when present).

Furthermore, Reiss and Vermeer (1986) also suggest certain phases of a skopos-centred translation based on Hella Kirchoff's proposition of the decision-making process that the translator makes in regards of skopos. According to Kirchhoff (1981, as quoted in Reiss and Vermeer 1986: 59), this process can be divided into three parts: 1) defining the skopos 2) putting the source text into hierarchy according to the definition, and 3) realising the skopos. The first step, defining the skopos, is only possible if the receiver of the text is known. The second step, putting the source text into hierarchy, means evaluating if certain parts of the source text need to be emphasised in some way. The final step, realising the skopos, means transferring the source text by taking the evaluation of the receivers into account. Reiss and Vermeer (1986: 59) add that all these steps require knowledge of the target culture and the third step naturally also requires command of the target language.

Nevertheless, the ways in which Reiss and Vermeer suggest that the function of the text is taken into account are still quite general: they do not offer straightforward instructions for making sure that the function of the text directs the translation. Nord (2001), on the other hand, sheds more light on the ways in which functionalist approach to translation can be put into practice. There are, of course, other ways to practice functional translation, but Nord's methods were considered best for the aims of the present study. The guidelines that Nord gives for the pre-translation phases as well as for identifying translation problems were specifically beneficial for this thesis. These will be presented in the following.

2.5.2.2 Translation brief

One important aspect emphasised in skopos theory is defining and understanding the qualities of the source text and the target text. Nord (2001: 59) stressed the importance of these definitions by stating that the source text alone does not give enough instructions about how it should be translated. While experienced translators may rely on their routine and previous experience in interpreting the function that the target text needs to achieve, translator trainees usually require more instructions to interpret the function (Nord 2001: 59). For this purpose, Nord recommends accompanying the translation task with a translation brief.

The translation brief specifies what kind of translation is needed, in other words, it summarises the skopos of the translation (Nord 2001: 30). The term itself, 'translation brief', is Nord's translation of the term coined by Reiss, 'Übersetzungsauftrag'. The translation brief is rarely explicitly provided by the client, but the skopos is often negotiated between the client and the translator (Nord 2001: 30). In Nord's view, the translation brief should contain the following information, either explicitly or implicitly:

1. the intended text function/functions
2. the target-text addressee/addressees
3. the prospective time and place of text reception
4. the medium over which the text will be transmitted, and
5. the motive for the production or reception of the text (Nord 2001: 60)

The first two factors in Nord's proposition for the translation brief clearly reflect what Reiss and Vermeer stressed in taking the skopos into account: they set the function as the primary factor that guides the translation and also emphasised the role of the receivers of the text. However, Nord also names three more equally important text qualities to regard: context, medium, and motive. Nord (2001: 62-63) also emphasised that the translator should define these same qualities with both the source text and the target text. An analysis of the source text qualities allows the translator to make decisions about a) the feasibility of the translation assignment, b) which source-text units are relevant to a

functional translation, and c) which translation strategy leads to a target text that meets the requirements of the translation brief (Nord 2001: 62).

2.5.2.3 Nord's model of translation problems and translation difficulties

Since the aim of the present study is to assess the problems that emerged during the translation process, a theoretical approach was needed for categorising these translation problems. For this purpose, I have used Nord's (2001, 2005) systematic approach to translation problems and difficulties.

Nord (2001: 64-67; also in Nord 2005: 174-177) proposes four categories of translation problems: pragmatic, cultural, linguistic, and text-specific. An important aspect of this categorisation is that Nord separates *translation problems* from *translation difficulties*. The difference between these two is that translation problems are objective, or at least intersubjective, while translation difficulties are subjective (Nord 2001: 64). Nord (2001: 64) specifies that translation problems will always remain problems despite an individual translator learning how to deal with them effectively, while translation difficulties are difficulties that an individual translator encounters due to lacking linguistic, cultural, or translational competence or because appropriate documentation is not available to the translator (Nord: 2001: 64). In other words, translation difficulties are more contextual in nature and will ideally be learned from immediately, while translation problems manifest themselves in different forms from text to text. With the kind of translation task that this study deals with, translation difficulties can be expected to consist mainly of difficulties related to unfamiliarity with the technology involved as well as the special terminology used.

Pragmatic translation problems are caused by differences between the source-text and target text situations (Nord 2001: 65). These problems can be identified by looking at different extratextual factors, like the sender, receiver, medium, time, place, motive, and text function (Nord 2001: 65). When we inspect these factors, we notice that they are the same factors that Nord suggests the translation brief should disclose. According to Nord, pragmatic translation problems are present in every translation task, which is why they can be generalised regardless of languages and cultures in question and even regardless of

whether the translation is made into or from the native language of the translator. Nord also views pragmatic translation problems as the most important problems to deal with at the start of translator training. Nord gives the following example of a pragmatic translation problem and its solution:

> A German brochure for the University of Heidelberg uses the Latin name of Heidelberg University: *Ruperto Carola*. However, this German habit of using the Latin name is not familiar to English-speaking readers, which is why the translator chooses to use simply "University of Heidelberg" instead of *Ruperto Carola* in the English translation of the same brochure (Nord 2001: 65-66).

Cultural translation problems (also called *convention-related translation problems* in Nord 2005: 175) are caused by the differences in norms and conventions that guide verbal and non-verbal behaviour in the cultures of the source text and target text (Nord 2001: 66). According to Nord, these problems are faced with every type of text, but specifically in instrumental translations, like the ones present in this study (the domain of instrumental translation will be discussed in the following chapter). The relevance of a specific cultural translation problem, however, depends on the particular cultures involved in each case. Nord's example of a cultural translation problem and its solution is:

> The translations of the German slogan 'Aus Tradition in die Zukunft' will not be functional as slogans unless they sound like a target-culture slogan. This is why, for example, the French translation, 'Tradition et modernisme' required a complete restructuring of the source-text form in order to sound like a French slogan (Nord 2001: 66).

Linguistic translation problems arise from the structural differences in the vocabulary, syntax, and suprasegmental features of the source and target language (Nord 2001: 66). It is a little bit unclear what Nord means here by 'suprasegmental features', as this usually refers to the prosody in spoken language and is not a feature of written language. However, this can perhaps be interpreted as referring to how a sentence is built so that the emphasis is on a certain term or clause, which certainly differentiates between languages. Nord (2001: 66) stresses that the nature of some linguistic problems is bound to the specific language pairs in question: for example cognates (words that have a common etymological origin), false friends (words that look similar but have different meanings), and one-to-many and one-to-zero equivalences (one-to-many equivalence means that a word has several equivalent words in the target language, while one-to-zero equivalence means that there is no equivalent word in the target language). However, many linguistic

translation problems are common to several or even all language pairs that include one particular language, depending on the linguistic qualities of the one language involved (Nord 2001: 66). Nord refers to contrastive grammar and comparative stylistics as providing help in solving these problems. Nord presents this example of a linguistic translation problem and its solution:

> When translating from German to certain languages, nominal compounds such as *Jubiläumsjahr* and *Informationsverarbeitung* can be problematic. One way to deal with these problems is to use transfer procedures, such as modulation, transposition, or paraphrasing. Even reduction can be used, if it is more functional than a long, detailed translation. For example, *Jubiläumsjahr* could be transposed into "1986, the 600th anniversary of Heidelberg University" in English (Nord 2001: 66-67).

Finally, Nord proposes the category of *text-specific translation problems*, which are the problems that are bound to one source text in particular. These problems can be, for example, translating puns, neologisms, or figures of speech. The solutions to these problems cannot be generalised, which is why the translator must simply act creatively with these problems. This is in line with Catford's (as quoted in Tirkkonen-Condit 2000: 128) examples of situations where no absolute equivalence can be found; in this case, no equivalent form exists because the interpretability of the text is based on a specific linguistic format such as play on words. Nord draws attention to the fact that these problems are rarely present in conventional text types, which is why they are most likely rare in my data as well.

3 TRANSLATION AS A PROCESS

In this section, the translation process is explored in more detail. In the previous chapter, translation studies as a field and different approaches to translation were introduced. The importance of selecting a specific approach was emphasised, and on the basis that the present translation task is a pragmatic text, skopos theory and functionalism was selected as the main theoretical approach to the present translation task and then presented in detail. But what qualities do pragmatic texts, or different text types in general possess and why are they vital to recognise when translating? What is the role of the translator in translation? This chapter explores how the features of the text and the surrounding

translation task affect how the translation process is carried out, with special focus on the features of the present translation task.

First, the role of the translator is examined briefly. Second, the importance of dividing translation to separate work phases is discussed. Then, a brief glimpse at modern translation technologies is provided. Fourth, text types, text type features, and their importance to the translation process are examined with the help of some translation-oriented text typologies. Then, the domain of the present translation task, technical language and technical translation, is defined, with attention to the special features of technical language and challenges to translation. Finally, some case studies that explore types of text and themes similar to this study will be examined briefly before moving on to introducing the present study.

3.1 The role of the translator

A translator is a type of artist, possessing artistic freedoms and one's own style. However, certain requirements apply to translators, especially in regards of analytical skills and problem-solving. The following is a brief look at what translation work requires from the translator in general. Specific requirements that apply to technical translators in particular will be discussed in detail in section 3.5.3.

Translation is a complex process that requires many skills from the translator. MacKenzie (2004: 159) outlines that in order to function as intercultural communicators, translators need the analytical and deductive skills to analyse the situation surrounding the translation assignment and to specify what features are required from the target text, as well as research skills in order to solve problems that may arise, and finally, writing skills to produce the target text. Furthermore, Reiss and Vermeer (1986: 18) and also Nord (2005: 12) argue that a translator needs to be bicultural, in other words, be familiar with both the source text culture as well as the target text culture. Nord (2005: 12) adds that in addition to being bicultural, the translator needs to be competent in transferring the text, which includes skills and synchronisation of text reception and text production as well as the use of translation tools. Gutt (2000: 199) also emphasised that the translator needs to view

himself or herself as a communicator who aims at addressing and informing the target language audience specifically. Reiss and Vermeer also present some questions that should be asked when evaluating a translator's competence through their translation performance: How well did the text producer express their thoughts, i.e., code their intentions; How well could the receiver of the text interpret the text and understand the intentions of the sender; Does the target text receiver understand what the translator wants to relay; What are the requirements of an optimal transfer? (Reiss and Vermeer 1986: 21).

To sum up the requirements above, a translator needs to be linguistically competent and possess cultural information as well as be prepared to solve any problems that emerge and analyse the present task thoroughly to ensure a good translation. In addition, the competence of a translator can be evaluated through analysing how well his or her translation succeeded in relaying the intended message. Linguistic competence and cultural information are gained through education and experience, while analysing the task and problem-solving can vary from one task to another. In order to properly analyse the translation task both before and after, different work phases are needed. These will be discussed in the following.

3.2 Work phases

Translators often need to divide their work into multiple work phases, especially with larger translation tasks. At the very least, at least some preliminary phase is needed in order to ensure the quality of the translation. It was already discussed in the previous chapter that Reiss and Vermeer (1986: 59) considered it important for the translator to include defining the function of the text in his or her decision-making process. In practice, this would mean dividing the work into at least two phases: considering the function of the translation first and then translating the text accordingly. Furthermore, as outlined by the Technical Communicators Association of New Zealand (2016), a part of the work of a technical communicator, such as a technical translator, is deciding how to present the information in regard of layout, structure, content, organisation, and visual aid. This process is also an important step in the act of text translation and in a way a work phase of

its own. Many models have been presented by theorists in an effort to map out the different work phases in translation, be they either planned or intuitive. Sager's (1994) model of translation phases was found to serve as good framework, with some adaptation, for the purpose of the present translation task in regard of its scale.

Sager (1994: 166) presents a model for dividing the translation task into four phases: specification, preparation, translation, and evaluation/revision. The first one, specification, is a phase to be completed before starting to translate the source text, and it includes identifying the source language document and its intention, interpreting specifications, and cursory reading. The second phase, preparation, is also a pre-translation phase that includes choice (or identification) of target language text type and translation strategy, reading-comprehension, and dictionary look-up. The third stage is the translation phase itself: searching for equivalents, matching, compensating, and producing the text. The final phase is the evaluation/revision phase, in which the text is evaluated, revised, and presented (Sager 1994: 166).

The functionalist approach offers tools for realising these work phases in the present translation task. For the first two phases, which include specifying the translation and making preparations, the translation brief as Nord described it encompasses most of what is included in Sager's description of these phases. Furthermore, Sager (1994: 167) draws attention to the fact that especially the third phase, the translation phase, is mostly automatic for most translators, which is why it is hard to observe it step by step. The aim of the present study was to analyse the translation process as a whole, which is why the automatic nature of the translation phase is problematic for observing it. At the same time, however, translators face the need to identify problems and to develop strategies for solving them, which makes the process less automatic from time to time (Sager 1994: 167). Wilss (1988, as quoted in Sager 1994: 167) cites two models of problem-solving that are applicable to the translation situation and concludes that problems that are new to some translators may not be recognised as problems by other translators and what may be a problem for some is an already-solved, routine operation for others. Sager (1994: 167) argues that these two observations make it near impossible to identify particular problem areas, thus confirming the inscrutability of the third phase. However, Nord's model of

translation problems, which was already introduced in section 2.5.2, takes both of these into account: she divided the problems that translators face into general 'translation problems' and translator-specific 'translation difficulties'. In other words, Nord's model provides a good tool for studying the usually opaque translation phase, which brings further justification for its use in this study.

3.3 Modern translation tools

The development of technology has affected the way in which translators work. Moving all the way from working by hand to working with different tools that modern computer technology offers, technological development has improved especially the speed and practicality with which translation is made. The most obvious ways in which technical development has eased translation are the ability to use a keyboard to type the text and the ability to write, edit, and save texts by using word processing software. I will not explain the features of these tools in detail, as they are fairly familiar to all nowadays. However, there is one modern translation tool that was utilised in the translation task present in this study which is best to describe in more detail: translation memory.

One modern translation tool is the use of translation memories. A translation memory is a specific feature that a software made for translation may contain. A translation memory is a database which contains all the translation units that the user enters: if the same translation unit appears again, the software automatically retrieves the equivalent translation that was entered the first time. For example, if you translate the sentence "Kissa hyppäsi yli kuun" to *The cat jumped over the moon*, this is saved in the translation memory and the next time the same sentence appears, the translation *The cat jumped over the moon* is offered automatically by the software. A translation memory can be used to avoid re-writing texts, sentences, and phrases repeatedly. It also helps in keeping the translation consistent, because it ensures using the same translations for the same terms throughout the texts. As stated earlier, translation memory was utilised in the translation job present in this study and its usefulness will be evaluated as part of analysis.

3.4 Types of translation

The style and form of a text differs greatly from one text type or genre to another. In order to produce a good translation, the translator needs to identify the differences between text types and translate the text accordingly. For example, a poem cannot be written according to the same linguistic conventions as a scientific article, so naturally they require different translation strategies as well. Text types often have their specific conventions that need to be carried over from the source text into the target text and often also adapted to the target language culture conventions for that specific type of text (c.f. Nord 2001: 45).

All translation theorists seem to agree that text types greatly affect the way texts are and should be translated. Schleiermacher (as quoted in Wills 1982: 31), in as early as 1914, differentiated between translating artistic texts and texts related to natural sciences (calling this *true translation*), and translating pragmatic texts (calling this *mechanical translation*) and set different qualitative standards for these two types. Sager (1994: 181) argues that even when the source text and the target text have the same function, text type qualities need to be considered in order to produce an adequate translation. Reiss and Vermeer (1986: 118-121) present two main reasons why identifying the text type in addition to text genre is also important. Firstly, understanding the meaning of individual text elements as part of the entire text is only possible if the translator is familiar with the function and status of the source text type in its source culture (Reiss and Vermeer 1986: 119). Then, the translator needs to identify if the target text has the same or different function (Reiss and Vermeer 1986: 121). If the target text has the same function as the source text has in its source culture, as is the case in the present translation task, the translation must have the same qualities as the source text, which can be achieved if the text type is clear to the translator. In more practical terms, identifying the text type means that the translator must convey the characteristics of the text type so that the target text achieves the same effect as the source text. For example, if the translator translates a poem without paying attention to the artistic text qualities, the text loses a lot of its intended function.

While text types could be put into dozens, even hundreds of categories, translation theorists usually try to keep to around three or four types to describe all different types of

texts to translate. In this section, some views of different text types and their translation conventions are discussed. Special attention is paid to where text types similar to the data of this study, namely manuals or instructions, can be placed in these typologies. This section moves us closer to the domain of the present study, technical writing and technical translation.

3.4.1 Sager's three types of translation activities

Sager (1994) divides translation tasks as belonging to three different types of translation activities: literary translation, bible translation, and industrial translation. The third one, industrial translation, is the closest translation activity type to the translation task in the present study. These three types are discussed in detail in the following.

The first translation activity type that Sager (1994: 160-162) presents is literary translation. In terms of audience, a literary translator rarely has a clearly defined audience (Sager 1994: 161). The original writer has written their work based on their knowledge of their own culture and has no vision of the target audience in another culture (Sager 1994: 161). For this reason, Sager (1994: 161) describes literary translation as being heavily text-oriented, meaning that the target text cannot make any references to a world other than that of the original text because there is the risk that it will prejudge the way in which the original writer views the world. This is to say, the translator cannot stray too far from the original text wording in literary translation in fear of losing the intended purpose.

Sager also views bible translation as a translational activity of its own. According to Sager (1994: 162), bible translation has four distinctive features, which is why it needs its own methods and practices of translation: these are the nature of the source language texts, the historical distance between text and reader, the value and integrity of the texts as a whole, and the use of the texts. Translating the Bible has in many cases been one of the first steps in codifying a language, which means that translators are usually putting together an entire written language system while they translate the Bible (Sager 1994: 163; also in Tirkkonen-Condit 2000: 129). According to Sager (1994), conducting bible translation usually involves specific techniques which differ from other types of translation. To name

a few, bible translations are often in the hands of whole translation teams instead of just one individual translator, and a third language is often used as an intermediate between the source and target language (Sager 1994: 163). As can be gathered from this, bible translation indeed has its special qualities: its cultural and linguistic meaning can be greater than that of other translations, especially if the target language is newly codified.

Finally, Sager (1994: 164-165) presents the third type of translational activity, industrial translation, which is the most relevant type to view in light of the present study. Sager starts by bringing up that industrial translation is the least coherent of these three activities and actually embraces all professional translation outside the two others. This broad category is often divided into subdivisions according to topics that include commercial, financial, scientific, legal, and patent topics, to name a few (Sager 1994: 164). Sager points out that these are further divided into professional distinctions according to if the translation affects texts as an entity or if it involves summaries or abstracting at the same time. For example, abstracting is practiced mostly by specialists in the field of information science (Sager 1994: 164). Another distinction within this type of activity is between 'outgoing' and 'incoming' translation (Sager 1994: 165). An 'incoming' translation refers to a translation that is considered "for information only" and is understood as a rough, unpolished translation or a selective translation, and the evaluation and revision process of these translations are usually omitted completely. Sager does not explicitly give a definition for what an 'outgoing' translation is, but it can be assumed that it is a translation that is meant for a larger public than 'incoming' translations, thus being more polished and including evaluation and revision as well. Sager also discusses Simpkin's classification to further distinguish different types of industrial translation: texts are subdivided into (i) 'public relations', which require the technique "translate and write" and (ii) 'factual texts', which require the technique "translate and edit". Unfortunately, Sager does not present any general qualities of industrial translation but rather concentrates on the different subcategories, as described above. To get a more specific description of technical translation, we need to look at more specified categories than Sager's broad category of industrial translation.

All in all, Sager categorises translation into three very broad and unspecific categories, especially from the point of view of this study since industrial translation (and thus technical texts as well) are put into one very broad category. Sager sees that what all these three translation activities have in common is that the origin and use are clearly defined and that they serve a particular communicative purpose that is affected strongly by the task and/or the agent as well. This is well in line with Reiss and Vermeer's text typology, which will be discussed next.

3.4.2 Reiss and Vermeer's functional text typology

Reiss and Vermeer, the pioneers of functional translation theory, also presented their own typology of texts. They argue that before translators (or text producers, as they call them) form the final version of their texts, they choose one of the three basic forms of communication on which text types are based (Reiss and Vermeer 1986: 114). Their classification of text types is based on Bühler's Organon model in which texts are seen as having three basic functions: expression, presentation, and appealing (Reiss and Vermeer 1986: 114).

Reiss and Vermeer's (1986: 114-121) three text types are *informative texts, expressive texts,* and *operative texts*. If the text producer wants to relay content like news, information, and concepts, to name a few, the text type is *informative*. If the text producer wants to relay artistically organised content, edited according to certain aesthetic views, the text type is *expressive*. If the text producer wants to persuade the reader to take some action, the text type is *operative*.

Reiss and Vermeer (1986: 115) specify that these three text types are codified on different levels: informative texts are codified on the level of content relay, expressive on the level of not only content relay but also artistic organisation, and operative on the level of both content relay and persuading or convincing the reader, perhaps also on the level of artistic organisation. Reiss and Vermeer also present examples of these three types to further describe the differences between the types. Their example of an informative text type is manuals/instructions, which of course is relevant to this study. A manual or a piece of

instructions relays the necessary information for the user to use the object or machine correctly. Reiss and Vermeer (1986: 115) categorise this text type as informative despite the fact that there are a lot of use of imperatives in instructions and manuals, a language unit that Bühler usually associates with having a persuasive, operative function. Reiss and Vermeer (1986: 156) also draw attention to the fact that there are mixtures of the three types, for example a satirical novel. However, they view the presented examples, including instructions or manuals, as fairly "pure" examples of their text types.

To maintain the status and function of the text, Reiss and Vermeer (1986: 120) suggest the following guidelines for translating the three text types: The focus of informative texts needs to be in relaying the content; Expressive texts need to relay the content while abiding by the artistic organisation of the text, taking into account the artistic conventions of the target-culture; The main focus of operative texts is in appealing to and affecting the reader, also taking the target-culture conventions into account. Of course, an exception is when the function of the target text is not the same as the function of the source text (Reiss and Vermeer 1986: 121). In these cases, identifying the text types of the source text and target text separately helps the translator in achieving the desired effect on the reader. However, this latter remark is not perhaps relevant to explore further in the present study, as the function and text type of the source texts and the target texts do not differ greatly.

3.4.3 Nord's functional text typology

Nord (1989, as quoted in Nord 2001: 47-52) presents a multi-level categorisation of text types. First, she divides two basic types of *translation processes*: documentary translation and instrumental translation. Then, she divides these two types into several *forms of translation*, under which different text types fall.

Documentary translation refers to texts the function of which is metatextual, in other words, the function is to describe the text or any of its aspects instead of translating the text as is. Nord (2001: 47-50) divides documentary translation into four forms: interlinear translation, literal translation, philological translation, and exoticising translation. Since the present text type does not fall into these categories, I will not go into detail in

explaining these forms. In short, however, documentary translation ranges from the translation of language encyclopaedias to translation of prose in a manner that aims at retaining some of the foreign, exotic nature of the original text (Nord 2001: 47-50).

Instrumental translation, on the other hand, refers to texts that try to achieve the same range of functions as the original text (Nord 2001: 50). This type of translation can be further divided into three forms: equifunctional translation in which the target text has the same function as the source text; heterofunctional translation in which the target text and source text have different functions; and homologous translation in which the literary status of the target text corresponds to the literary status of the source text. Nord (2001: 50) views that equifunctional translation corresponds to what Katharina Reiss refers to as "communicative translation", meaning that the receivers do not notice or care about the fact that they are reading a translation. Naturally, equifunctional translations are found in the area of technical texts, computer manuals, and other such pragmatic texts like instructions for use, recipes, and tourist information texts (Nord 2001: 50). Thus, the data of the present study represents equifunctional instrumental translation.

3.4.4 Summary of text types in regard of the present translation task

The present translation task, namely instructions for use, finds its place in the typologies presented above. In Sager's typology, instructions can be seen as belonging under industrial translation, but Sager unfortunately presents the specific qualities of this category rather vaguely. However, Reiss and Vermeer's typology explicitly categorises instructions as an informative text type, which means that relaying the content of the text is the top priority, with some emphasis on the persuasive text qualities as well. Reiss and Vermeer also clarify why defining the text type is important in addition to defining the text genre: it gives the translator a better idea of what sort of function and effect the translation should have. Furthermore, also Nord's typology emphasises the function of the text type: instructions for use are defined as equifunctional instrumental texts, which means that their purpose is to relay the source text content for the target audience.

To sum up, the emphasis in translating instructions for use is relaying the information of the text. For this purpose, the text needs to be clear, concise, and easy to understand, among other things. Furthermore, special terminology in instructions for use set some additional challenges for both the translator and the reader. Next, the special qualities of the present translation task domain, technical language and technical translation, are presented.

3.5 Technical writing and technical translation

In the previous section, different text typologies were summarised and the text type present in this study, instructions for use, was placed among these types. This section will describe the special features of technical writing and technical language in depth, after which the requirements it sets for translation are viewed.

3.5.1 Definition of technical writing

What exactly is technical writing? The domain of technical language actually involves a myriad of overlapping concepts, most significantly *technical writing* and *technical communication*, the latter of which is a broad concept that can be seen as involving also translation of technical texts. The domain is also intertwined with the *language of science.*

Technical Communicators Association of New Zealand (2016a) defines *technical communication* as a specialised type of business communication that aims at creating easy-to-use information for a specific audience, while the European Association for Technical Communication (2016) describes it as the process of defining, creating, and delivering information for the safe, efficient and effective use of technical products, such as technical systems, software, and services. Both of the aforementioned associations also acknowledge that a *technical communicator* is often synonymous with *technical writer*, but the definition by Technical Communicators Association of New Zealand (2016a) notes that *technical communicator* is a more descriptive term, since the role involves much more than just writing. Similarly to the definitions above, Society for Technical Communication (2016) describes technical communication as including communicating about technical or specialised topics, using technology to communicate, and/or providing instructions on a

task. In practice, information for the use of a product is usually integrated in or delivered with the product, or published somewhere else, for example online (European Association for Technical Communication 2016).

Blake and Bly (1993: 3) define *technical writing* simply as writing that deals with topics of technical nature, and specify *technical* as meaning anything involving specialised areas of science and technology. They list a few fields in which technical writers work, among which there are multiple engineering fields, such as manufacturing, aerospace, and computers, as well as several fields of physical, natural, and social sciences, such as information systems, biology, linguistics, medicine, and statistics (Blake and Bly 1993: 3-4). Trimble (1985: 5-6) uses the term *English for Science and Technology* and defines it as the language that covers the area of peer writing of scientists and technical experts, to different instructional discourses and learning texts, to technician writing.

Yli-Jokipii (2004) quotes several authors on the definition of *technical language*. For example, Anderson et al. (1983, as quoted in Yli-Jokipii 2004: 82) and Andrews (1996, as quoted in Yli-Jokipii 2004: 82) define technical language as including all content that has to do with technical devices or technical topics. Others view all discourse in a technical or industrial environment to be technical language, regardless of rhetorical qualities or text format (Uljin 1996, as quoted in Yli-Jokipii 2004: 82). Thirdly, technical language is often seen as overlapping with trade language as well (Yli-Jokipii 2004: 82). According to Yli-Jokipii, there is, however, a consensus that technical language can be categorised as both *a professional language* as well as a *language for special purposes*. *Professional language*, or *professional discourse*, is, in simple terms, the language that a person uses in their work (Yli-Jokipii 2004: 83). For example, the language used in seafaring, aviation, or firefighting are all examples of professional languages. In most cases, a professional language is only fully understood by another expert in the same field (Yli-Jokipii 2004: 83). The most important aspects of professional language are usually the extralinguistic features as well as the qualities of the language user and the language use situation (Yli-Jokipii 2004: 83). For this reason, when one wants to inspect the language itself, the concept of *language for specific purposes* is used more often (Yli-Jokipii 2004: 83). *Languages for specific purposes* (LSPs) include the aforementioned professional languages, but the concept also includes other

special languages, for example language of law and language of Formula 1 (Yli-Jokipii 2004: 83). In linguistics, the aim of studying LSPs, like technical language, is to find out what special qualities divide LSPs from standard language (Yli-Jokipii 2004: 83).

Moving closer still to the domain of the translation task present in this study, Yli-Jokipii presents instructions for use as having the function of advising and guiding how to set up a certain device (Yli-Jokipii 2004: 88). Textually, instructions for use are directive and abundant with orders to commit actions, and they usually contain certain parts, or moves: first, the names of different parts, usually with pictures, then the required tools, then the necessary work phases, perhaps a few warnings as well, and so forth (Yli-Jokipii 2004: 88).All in all, the domain of technical language is broad. It involves a vast scale of different specialised scientific and technical fields. However, in spite of its diverse use, it has several distinctive features, or more specifically requirements that are set by the general purposes of its use. These features are discussed next.

3.5.2 Features of technical language

Technical language has its specific features in regards of style and content. At its core, at technical language should be at least informative, clear, and concise (e.g., Technical Communicators Association of New Zealand 2016a, 2016b, Blake and Bly 1993, Hallman 1990). Furthermore, a user-centred approach is emphasised in technical communication (Society for Technical Communication 2016). Technical communicators need to understand the needs of the audience and to "translate" complex information into easily understandable form, while avoiding slipping to "dumbing it down" (Technical Communicators Association of New Zealand 2016b). The key is to produce information in a way that is easy to read and understandable while also trying to minimise the possibility of the reader misunderstanding the information (Technical Communicators Association of New Zealand 2016b). Blake and Bly (1993: 4) sum up that the primary goal of technical communication is to transmit technical information accurately, and in this process, style, grace, and technique are secondary to clarity, precision, and organisation. Kingscott (2002: 248) also acknowledges technical accuracy and user-centred approach as essential skills of a technical writer.

Blake and Bly (1993: 4-19) consider the following features as contributing to good quality technical writing:

1. **Technical accuracy:** the content must be factually correct and as technically accurate as possible. Errors in content can lead to financial loss or in worse cases, injuries for the operator of a machine or device.
2. **Usefulness:** every sentence in a technical document should be useful information for the reader. Unnecessary information should be omitted.
3. **Conciseness:** concise technical writing is easy to read and saves time. Conciseness can be achieved by avoiding unnecessary repetition, long phrases, rambling, pompous language, and the use of jargon.
4. **Completeness:** while the text should be concise, it should include all of the necessary information.
5. **Clarity:** technical writing should be clear and obscurity should be avoided. Clarity can be achieved by writing short and simple text by keeping words, sentences, and paragraphs short, avoiding jargon, presenting information in a logical order one step at a time, and using visuals.
6. **Consistency:** the style of writing should be consistent to increase ease of reading.
7. **Correct spelling, punctuation, and grammar**
8. **Being targeted:** technical writing should be done according to the level of understanding in the topic of the intended audience, be that either technically sophisticated readers or a nontechnical audience. For this purpose, the intended audience needs to be defined.
9. **Good organisation:** technical writing should be well organised in order to be clear and easy to follow.
10. **Interestingness**: the reader's attention is grabbed better with interesting text than boring text.

Many of the features listed above revolve around one another: the requirements of technical accuracy, usefulness, completeness, and clarity all boil down to the point that the information provided in technical writing needs to be of use to the reader while not omitting anything necessary. Conciseness, consistency, and good organisation also contribute to the clarity and ease of reading of the text. In addition to these features, technical writing needs to be grammatically correct, written with the target audience in mind, and interesting.

As for a definition of technical language that goes deeper into linguistic details, Yli-Jokipii (2004: 84-85) summarises the findings of researchers who have studied technical language as an LSP. In short, the language in technical texts has been found to contain the following qualities:

1) **Specific syntactic features:** abundance of declarative sentences; the present tense; frequent use of the verb *be*; passive that expresses the result of action (e.g., *automobile fender made of polypropylene*); use of either imperative forms (*use*, *turn*, etc.) or modal auxiliaries (*should*).
2) **Nominality:** texts contain a great amount of content words in relation to function words, which means an abundance of nouns and other nominal forms, such as adverbs and adjectives, often in the form of long noun phrases (such as *a low-cost storage capacity CD-ROM drive*); irregular use of articles, mostly the absence of the definite article (e.g., *dip* ∅ *probe into* ∅ *cement;* ∅ indicates the place of the missing article)
3) **Readability:** the readability of the text is of interest to researchers of technical texts. Readability is usually measured by reading speed. While there is no consensus about which factors contribute to readability, at least the familiarity and strangeness of words seems to affect readability.
4) **Vocabulary:** different vocabulary from standard language: an abundance of terms and words that are missing from standard language or have another meaning in standard language (e.g., *window, mouse*).

Out of these features, specific syntactic features, nominality, and special vocabulary are the most recognisable features, while readability is a more complex phenomenon to analyse. Yli-Jokipii does not even explicitly state whether the readability of technical texts is generally high or low, but it can be assumed that the ideal in any pragmatic text is high readability.

Since Yli-Jokipii was very careful about defining the attributes of readability, it is beneficial to explore the topic with the help of another source. Anderson and Davison's (1988) critical review of readability formulas provide a good overview of readability, because it both summarises and reviews previous empirical studies on the topic. Generally, Anderson and Davison condemn many of the readability formulas they review as misinterpreting correlation with causality, and bring forth studies that reveal the factors that affect readability the most. Regarding word difficulty, words that are not easily recognisable compounds or derivatives were found difficult, as well as dense use of words that are topically unfamiliar to the reader (Anderson and Davison 1988: 31-32). In regard of sentence structure, use of conjunctions is especially important for understanding, which means that long sentences are not necessarily more difficult than short sentences as long as they are logically connected (Anderson and Davison 1988: 32-33). Additionally, complex features of sentence structure may cause difficulties in reading, but not always: readability suffers usually when the complex sentence seems out of context or if the reader loses his or her attention (Anderson and Davison 1988: 34). Furthermore, straining the reader's short term memory, for example with long-spanning modifying clause constituents that precede the main clause constituents, makes it harder for the reader to process the sentence and thus weakens readability (Anderson and Davison 1988: 35-37; 41-43). The reader's prior knowledge about the topic of the text also affects readability: the more the reader knows about the topic, the easier it is to comprehend (Anderson and Davison 1988: 43-45). This prior knowledge depends on various factors, such as age, sex, education, race, religion, occupation, hobbies, and country and region in which the reader originates from or has lived in (Anderson and Davison 1988: 44). Finally, the reader's interest towards the topic and whether the text is presented to the reader in an interesting way also increase comprehension (Anderson and Davison 1988: 45-48). Anderson and Davison (1988: 47-49)

conclude that features of the text and the reader, especially the reader's prior knowledge as well as the interestingness of the text play a more important role in readability than surface features of language like word difficulty or sentence length.

To sum up, technical writing needs to be easy to read, clear, concise, consistent, informative, and audience-targeted. It was stated that the content is the most important aspect of technical writing, but in some way it is contradictory with this statement that there are recognisable conventions that have been found in technical texts. However, this is explained by the fact that repeated conventional forms in a certain kind of text become genre conventions (Nord 2001: 53). Furthermore, it is easy to see that these specific style features are largely in line with the aforementioned aims of technical writing, most significantly the specific syntactic features, like declarative sentences and the imperative form, and high readability (Yli-Jokipii 2004). Furthermore, technical writing also needs to be consistent, so using style conventions that the reader is already used to improves the consistency and readability of texts. Also Nord (2001: 53) acknowledged the use of the imperative form as a general feature in English instructions for use. However, in some regards, authors seemingly disagree on the features of technical language: while Blake and Bly (1993) emphasise that technical writing needs to be void of jargon, Yli-Jokipii's (2004) summary identifies special vocabulary as a particular feature of technical language. However, Yli-Jokipii later adds that in this regard, the target audience needs to be taken into account: if the text is targeted to professionals in a certain field, the use of professional terminology in that field is allowed, while if the text audience is the general public, the used language needs to be standard language (Yli-Jokipii 2004: 87). This goes back to the audience-centred nature of technical language which Blake and Bly (1993) acknowledged. Furthermore, Anderson and Davison (1988) acknowledged reader's prior knowledge as contributing to readability, which further emphasises the necessity of audience-orientation. All in all, Anderson and Davison's account of readability, acknowledged as a feature of technical language by Yli-Jokipii (2004), goes back to clarity, concinesess, and interest; features that Blake and Bly also recognised as characteristic of technical language.

3.5.3 Technical translation

The previous section summed up the aims for technical communication and features of technical language, which of course are in most part carried over to the world of translating technical texts (see e.g. Hallman 1990, Kingscott 2002). However, as a specific subcategory of translation, technical translation involves more than simply transferring technical language features.

There are certain differences between the work of a technical writer and a technical translator. While Kingscott (2002) simplified that a technical translator is essentially a technical writer who operates across two languages, Hallman (1990) listed a number of differences between these roles. Firstly, the preliminary measures before text production differ between writers and translators of technical texts (Hallman 1990: 244). While technical writers determine what documentation is needed, collect the necessary information, organise the information, and also research the topic further, technical translators receive a completed document (Hallman 1990: 244). The technical translator's work includes evaluating style and content of the source text, locating possible problem areas, assembling necessary resources, like dictionaries, writing a draft translation, researching unfamiliar or problematic concepts, and finally transcribing the text (Hallman 1990: 244). Furthermore, technical writing may take more time and involve more consultancy of technical professionals than technical translation (Hallman 1990: 245). Technical writers and translators usually have the same goals for the quality of the text (such as accuracy, completeness, and usefulness), however, the translator faces problems with producing a high quality text if the source text is of low quality (Hallman 1990: 245). In these cases, the translator has to choose whether to maintain or improve the text in the translation (Hallman 1990: 245). The deadlines of technical translators also tend to be shorter than those of technical writers (Hallman 1990: 245-246). Finally, while technical writers and translators both need to consider the target audience and its needs in producing the text, the translator also needs to consider what level of faithfulness to the source text is necessary (Hallman 1990: 246). However, one needs to view generalisation of Hallman's (1990) summary of differences with a critical eye, because there may be variation from task to task, especially in regard of deadlines.

The recommended approach to translating technical text varies. In relation to types of translation activities in section 3.4, it was concluded that the most important aspect of translating instructions for use is relaying the information, which was also identified as a central goal in technical writing in general. However, this does not automatically mean that approach or style do not matter in translating instructions. Yli-Jokipii (2004: 90) draws attention to the text type differences within the field of technical translation: while some text types, like patent claims, require a translation that is as faithful to the original wording as possible, many technical text types require adaptation to the target audience.

The linguistic nature of technical texts sets some special requirements for translation. Nord (2001: 50) states that while the translation of instructions for use is instrumental, in other words, focuses on the function of the target text and not on strict source-text-equivalence, standardised formulas and clichés are often made use of. This means that certain phrases are translated in a standardised way in the target language, for example, the phrase *no entry* is usually translated to 'Zutritt verboten' in German or 'Pääsy kielletty' in Finnish (German example from Nord 2001: 50). Also Kingscott (2002: 248) emphasised that it is vital that a translator uses the correct register for the text in question: the terminology must always reflect the one used currently in the particular subject area, and language used in instructions should be simple and direct. Additionally, technical documents, such as computer software manuals, contain a lot of repetition (Juhola 2000, as quoted in Yli-Jokipii 2004: 89; also in Kingscott 2002: 253). Repetitiveness in technical texts such as computer software manuals fact also justifies the special need for translation memory software with translating these types of text (Yli-Jokipii 2004: 89; also in Kingscott 2002: 253).

Familiarity with the situation of the translation task as well as the field that the text deals with is an essential requirement for technical translators. Freedman and Adam (1996: as quoted in Yli-Jokipii 2004: 88) emphasised that similarly to learning a foreign language, the familiarity with text genre demands a sensitivity and acuteness to analyse the situation surrounding the text in order to find the best linguistic expression for it. The results of a study on the translation methods of one English and one French technical translator showed how familiarity with the text type eases the work of the translator and how

unfamiliar text types can be dealt with. Familiarity with special terminology and the ability to search for terms is one of the most central requirements for a technical translator (Yli-Jokipii 2004: 85). Yli-Jokipii (2004: 89) emphasises how the charm of translating computer software and their instructions for use is in the special terminology, not in the syntactic or rhetoric qualities of the text. Furthermore, Kingscott (2002: 248) draws attention to the fact that in Europe and United States, the law states that the translator is responsible for the consequences of a translation error. In other words, to avoid making detrimental errors, the translator has to possess a good understanding of the topic that the text deals with (Kingscott 2002: 248).

Yli-Jokipii (2004) presents a set of pre-translation questions that technical translators should consider before starting the translation process. Even though Yli-Jokipii does not explicitly relate these to any translation theory, very similar pre-translation techniques have been recommended by advocates of functionalism, as discussed in section 2.5. Yli-Jokipii (2004: 86) proposes the following questions:

1. To whom is the source text intended?
2. To whom is the target text intended?
3. What is the goal of the source text and does the target text have the same goal?
4. What are the central qualities of the text type in question?

Comparing these with the factors that Nord recommended to consider in the translation brief, some similarities can be noticed: both this list and Nord's ideal of translation brief include defining the intended audience and the function (or goal) of both the source text and the target text. In addition, Yli-Jokipii's list includes considering the text type qualities, something that Nord does not state, at least not explicitly.

Yli-Jokipii (2004) also provides details about what factors to consider in answering these questions. The most important factor to consider with identifying the target audience is considering the discourse community of the text reader (Yli-Jokipii 2004: 86-87). Technical fields contain a lot of discourse communities, as well as subcommunities within them (Yli-Jokipii 2004: 86). A group of people belong to the same discourse community if they share

the same goals, have the means to communicate between the members of the community, have the means to give information and feedback, share a genre or genres with which the community tries to achieve its goals, have a lexis of their own, and have a certain skill threshold that the members of the community must cross (Swales 1990, as quoted in Yli-Jokipii 2004: 86). The discourse community with which the translation deals affects the choice of the terminology used in the translation, because belonging to the same professional discourse community allows the use of professional terminology, while if the text reader belongs to the general public, the used language needs to be standard language (Yli-Jokipii 2004: 87). If the text is commissioned, the translator also needs to take into account the expectations of the text commissioner (Yli-Jokipii 2004: 87).

Another important viewpoint in technical translation is considering the situation surrounding the text, as noted in previous sections. The situation surrounding the text, especially the audience and the goal of the text affect the translation choices that the translator makes, including the terminology used (Yli-Jokipii 2004: 87). The functions of technical writing and instructions for use were already discussed in section 3.5. However, in relation to technical translation, the goal of the text, in other words, why the text is produced and what it needs to achieve, affects the choice and use of the communication channel (Yli-Jokipii 2004: 87). The communication channel and the text genre are also often dependent on each other: certain communication channels may call for using certain text types, and vice versa (Yli-Jokipii 2004: 87).

Third, the differences between the source culture and target culture always play an important role, and special attention needs to paid to these differences in technical translation, especially localisation. Localisation refers to the translation of computer software and usually their manuals as well (Yli-Jokipii 2004: 89; also in Kingscott 2002: 252). Hoft (1995: 11-13) defines the term localisation as "the process of creating or adapting an information product for use in a specific target country or specific target market". One of the most prominent translation problems in localisation is that certain technological concepts have no coined translation in the target culture yet (Yli-Jokipii 2004: 89). This problem is often addressed gradually by local professional and linguistic authorities. In Finland, The Finnish Terminology Centre TSK, The Finnish Information Processing

Association TIVIA, The Finnish Information Society Development Centre TIEKE, and The Institute for the Languages of Finland Kotus work together to find and suggest usable translations for foreign, usually English, terminology (Yli-Jokipii 2004: 90). However, a critical look at the Finnish terms that Yli-Jokipii used as examples of coined information technology terms in her 2004 article reveals that these terms are actually not in general use or they are outdated. This serves as an example of quick language change and how language communities dominate over prescriptive authorities.

The pre-translation analysis in this study utilises Nord's translation brief, but Yli-Jokipii's notions that were presented above will also be addressed. In summary, this involves defining the audience, including the text commissioner, the function, and the text type. The features of translation typologies and technical language that were discussed earlier in this chapter are used for assessing the text type qualities in the present translation task.

3.6 Previous case studies concerning the translation process

In the following, some previous studies on translation are introduced and discussed. The reasons why these three studies specifically were chosen is that they are similar to the current study in many ways: they are studies of translation, also master's theses, they are related to scientific language or use similar theoretical approaches, and they are also case studies.

Kalliomäki (2007) translated two Isaac Asimov's fictitious science articles in her master's thesis. Fictitious science articles are articles that are written in the format and style of a scientific article, but are based on purely fictitious, made-up topics. Similarly to Kalliomäki, my thesis also concentrates on translation problems that arise and aims at offering advice to others. One of Kalliomäki's findings is that even though the science in the texts she translated was made up, the translator needs a lot of actual scientific knowledge, for example terms used in physics and chemistry, because they are used amongst the fictional scientific terms. This raised a particularly good question to consider in my study as well: how much will my knowledge of technical vocabulary help me in the translation process?

Nokkonen-Pirttilampi (2007) assessed the quality of Finnish technical translations in her thesis. She looked at three American computer programming guides. As background for her thesis, she looked at different text typologies. One of these is Reiss' typology, which was already examined earlier in this study, meaning that Nokkonen-Pirttilampi's study and this study share some common theoretical background. One of the most relevant findings of Nokkonen-Pirttilampi's study to consider in the light of my study was that the target language text had to derive significantly from the source language text in order to sound fluent. The same phenomenon will also be observed in the present study by comparing free translation with literal translation.

Lehmussaari's (2006) thesis was an analysis on the progress of a translation task as well. Her approach to the topic was very similar to mine: through annotated translation (i.e., translation with commentary) she introspectively studied the decision-making and problem-solving during a translation process. Her data included 1) the source text, an English autobiography revolving around fibromyalgia, 2) her Finnish translation of it, and 3) the notes that she made during the process. Her study answered these four questions: 1) what problems arise in translation when the source text combines prose and poetry? 2) Which translation problems are the most problematic? 3) What is the role of systematic translation strategy in solving problems? 4) How is the translator's loyalty to both the source text writer and the target text receiver ensured? Her results showed that 60% of the problems she faced were text-specific, 25% cultural and pragmatic, and 15% were linguistic problems. Additionally, she found that poems were not as problematic as she originally thought, because they had a lot of room for artistic freedom. Lehmussaari also found it very important to the translation process that the source text was analysed and the skopos was determined before starting the task (vrt. Hakala 2001). Lehmussaari concludes that while making notes slowed the process immensely, they are well suited for the study of translation problems. While Lehmussaari's text genre was different from mine, her aims and approaches to analysing the translation process were very similar. Like mine, one of her research questions was what problems arise in a source text of a specific genre, and she utilised skopos theory and Nord's problem categories as well. As a difference, her translations were produced for the purpose of the study as well as personal

interest, while my translations were commissioned and made for commercial use, which sets different requirements for the texts.

4 THE PRESENT STUDY

The present study focuses on the translation process and problems that emerged in the course of the examined translation task. The data for the study consists of the source texts, the target texts, and a translation diary, with most emphasis on the translation diary. In the following section, the research design of this study is established. First, the aims and the research questions of the study are introduced. Next, the three entities that form the data are described. Finally, the analytical methods that were already introduced in the theoretical framework, are briefly summarised again.

4.1Aims and research questions

The purpose of this study was to document and report the progress of a large translation project. The aim was to examine in depth how an extensive translation assignment progresses and what problems arise. Specifically, since the data present in this study is the translator's first extensive translation job, this study offers an example of how a novice translator observes the translation process. Thus, this study aims at providing a look into what challenges a starting translator might face, what sort of vocabulary is needed when translating texts in a specific field, and other such aspects. Due to the text type of the present translation task, the findings of this study will probably be most useful for translators working, or planning to work, in technical fields, especially Information Technology. Due to the type of software these instructions were for, the findings of the study can also be beneficial for translators working in publishing and finance.

My research questions were the following, of which most emphasis is put on the first question:

1. What kinds of translation problems arose? What were the causes of these problems and how were they solved?

2. How helpful were the used translation tools in this specific task and how helpful would they be in general?
3. How were the qualities of the text type taken into account in the translation process?

The data that was used and how studying it helps answering the research questions is described below.

4.2 Data

This study examines the translations I did while working as a hired translator intern. My employer was a small IT company, specialising in the development of systems for subscription and distribution of newspapers. My job was to translate instructions for the company's subscription system from Finnish to English.

The primary source of data for this study is the diary documenting the translation process. However, the diary itself makes references to two entities: 1) The source texts (STs), the Finnish instructions for the software, and 2) The target texts (TTs), my English translations of the instructions (initial versions and finished versions). In other words, the present study draws mainly from the diary, while the source text and the product of translation are also part of the data.

The software for which instructions were translated is a circulation, subscription, and distribution system for businesses in print and digital media. The company offers their software in SaaS (Software as a service) form, which means that their customers hold a subscription to the software and the software is centrally hosted, including support services, maintenance, and updates. At the time of the translation task, the software and its manual were being localised for the use of Irish customers. The software itself was already translated into English in most part, however, all parts of it had not been translated. It was one part of my job to come up with translations for the missing parts as well as to suggest corrections to possible errors in the existing translations in the software. My main task,

however, was to translate the instructions for the software, located in a web portal ("Online Help" from now on).

4.2.1 Online Help

My main work assignment was to translate the entire content of the Online Help from Finnish to English, and these translations were also the main focus of this study. Online Help is the web portal where the users of the software can find the instructions for using the software. Users of the software get credentials to Online Help, which means that the translated texts are not accessible to the general public. The finished translations were also placed in a similar web portal, meaning that the translations will not be accessible to the general public either. The company holds the right to edit my translations in any way in the future.

The entire scope of my work was around 300 pages of text. Since the work is so extensive, I chose to analyse only the first texts that I translated instead of including the entire work. The software is separated into several different modules meant for different processes (customer information, subscription, circulation, distribution management, etc.). The data analysed in this study is the translations of the instructions for the module for maintaining customer information; this module is not only the first but also the largest module in Online Help. These translations were produced between November 2014 and June 2015, in other words, roughly over a period of 7 months. Analysing the first module on which I worked allowed me to investigate the initial problems that a translator faces when starting and should thus best serve the aims of the study. As the Customer module is the largest module, it also provides an extensive amount of data that serves the aims of this study well.

As was mentioned earlier, in addition to translation, I was also encouraged to fill in any missing translations and make changes to the existing translations in the software when necessary. I was also able to make changes to the source texts, the Finnish instructions. These actions fit the definition of technical writing. In other words, the work included some technical writing as well. I have included the cases of technical writing processes in

my translation diary entries, which is why remarks about them may emerge in the analysis in addition to remarks about technical translation.

4.2.2 *Format of the source and target texts*

Online Help is built so that each individual tool of the software has its own page, and more complex tools sometimes have several documents explaining their functionality. This format, an online portal, means that the source texts are, firstly, in digital format only, and secondly, changeable at any time. The latter factor brought flexibility to the translation, because the original texts could be altered by my colleagues or by me. In other words, I was not tied to translating the original documents as they were, because changes (corrections, clarifications, etc.) could also be made to the original texts. For the purpose of this thesis, copies of the original texts were preserved, so that the original source text could be investigated in my analysis and there was no fear that the texts have changed from the time they were originally translated.

The translations were eventually put in a web portal similar to where the source texts are. However, the portal was not online at the beginning of the training period, although it was so later during my translation period, which is why the documents were translated with word processing software and they were saved as text documents instead of writing straight into the portal. The company has the ability to alter the texts in any way they need to. For the purpose of this thesis, copies of my translations were saved so that they can be analysed and accessed by me after my training period. My work method was to produce an initial version of the translation, which I then read and edited to produce the finished version. These initial versions are part of the data for this study as well. Viewing different text versions of the translations was a method used by, for example, Kalliomäki (2007) in her translation thesis.

4.2.3 *Translation diary*

A field diary, or a research diary, is a method of keeping track of the progress of an introspective study. It was used by, for example, Lehmussaari (2006) in her translation thesis. In this study, the research diary is referred to as *translation diary*. The diary helps

answer the research questions related to translation problems and the introspective aspect of the study. After all, the focus of this study was to investigate translation as a process, which is why something was needed in addition to the source and target texts. The purpose of both the diary and the aforementioned different text versions was to explore what problems the translator faces and what solutions she finds for them during the translation process. The topics of the translation diary entries were tied in with the aims of the present study as well as the aims for the quality of the translation, which will be discussed in detail in the Methods section.

The translation diary was kept only for the duration of translating the texts that are analysed in this study. In other words, the entire diary was used as data for this study. The diary initially contained 632 entries, extending over 80 pages of text. However, in the analysis process, some remarks were omitted because they were found to be either based on erroneous assumptions or were not relevant to the aims of the study. For this reason, the final number of diary entries included in analysis was 605. How the translation diary data was used in this study will be discussed in detail in the following section.

4.3 Methods

In this section, the methods of analysis for the study are examined. The methods of this study rely on the main theoretical framework that was already introduced in the background section. This section discusses how the theories were utilised in analysing the present data in order to answer the research questions. The analysis consists of two parts: firstly, a preliminary analysis of the texts, in other words, the translation brief, was made. The preliminary analysis was not only a necessary step in the translation process, but including it as part of this study also acts as preface for answering the research question about how text type qualities were taken into account in translation. Secondly, the translation diary remarks were categorised and analysed in order to answer the research questions.

4.3.1 *Pre-translation analysis*

Skopos theory emphasised the importance of pre-translation analysis. For this analysis, a translation brief had to be written. The translation brief helps investigate the most major factors related to the text situation: function, audience, genre, time and place of reception, medium, motive, and qualities of the text type. The first three of these were determined by Reiss and Vermeer, the next three were added by Nord (2001: 60) and the last was set by Yli-Jokipii in the form of the question "What are the central qualities of the text type in question?". The function of the text was analysed based on Nord's function categories. In considering the last factor, definitions of technical language and technical translation qualities was used as definition for the text type qualities. The technical language qualities were used in this thesis as both a prescriptive tool for translation as well as a descriptive tool for analysis. Firstly, as these qualities of technical language were found to be descriptive and reasonable, they were used as general guidelines in the translation process. In other words, it was the aim of the translation that these qualities were fulfilled. Secondly, these guidelines were viewed from the perspective of whether the source texts fulfill them and if the source text guides the translation in the direction of fulfilling these qualities.

4.3.2 *Translation analysis*

Translation analysis was mainly based on translation diary remarks. Examples from the diary are presented in this thesis to illustrate the findings of the study. Some quantitative data will also be presented in the analysis to improve the transparency of the study. However, the emphasis of the analysis was on which problem types were the most significant to the aims of the present study, and it was not always the case that the most significant problem types were quantitatively prominent. In other words, the conclusions in this study were not drawn based on quantitative data.

The translation diary data consisted of mainly two types of observations: notes of translation problems and comments about the process. The translation problems were mainly analysed according to Nord's categorisation of translation problems. However, everything in the analysis, including the translation problems, were reviewed based on the

general framework of skopos theory and functionalism, especially referring back to the translation brief. The review of text type qualities was made especially in light of technical language qualities, as defined in section 3.5.

Notes about individual translation problems were categorised based on Nord's view of translation problem types. These categories, discussed already in section 2.5, are pragmatic, cultural, linguistic, and text-specific problems. Additionally, translation difficulties, in other words, the personal difficulties of the translator, were included in analysis and will be discussed in chapter 6. Any problems outside these categories will also be addressed. This categorisation answers the research questions about what problems translators face and what types of problems emerge as most prominent. Some data-driven interpretations of Nord's categories were made in this study, which will be addressed and justified in the analysis.

Comments about the translation process were also written in the translation diary and will be discussed in the following chapters. These general remarks were mostly evaluations of the source and target text qualities as well as general remarks on the process. The evaluation of text qualities was based on the translation brief and qualities of technical language. Additionally, notes were made about any emerging phenomena that were found specifically interesting or out of the ordinary in some way. Because of the general nature of these remarks, there was no specific framework used for analysing them, apart from the general functional viewpoint. The phenomena that were most emphasised in the notes were the perceived ease of translation, technical difficulties, and the usefulness of the used translation tools.

5 PRE-TRANSLATION ANALYSIS

The following is a pre-translation analysis, which provides the foundation for the main translation analysis. The pre-translation analysis was made prior to the translation, but it was rephrased to a more detailed, academic form to present in this study. The research questions will be answered in the main translation analysis section that follows, however, pre-translation analysis was important for forming hypotheses about the results of the

study and for reviewing if the translation succeeded in its intended function. In general, the pre-translation analysis was extremely important in giving orientation to the translation process, as will be discussed in this section.

As was established before, Reiss and Vermeer emphasised the importance of the skopos, or function, of the text as the key element in translation. It was also established that the skopos of the translation can be realised with the help of a translation brief, in other words, a summary of important text aspects, which needs to be produced before starting the actual translation process. Nord (2001) emphasised the need for a translation brief for translators in training, which is why it was important for the present translation task as it was completed by a novice translator. Ideally, the translation brief is provided by the commissioner of the text. I was briefed on the most central text situation qualities, which I then formulated into a translation brief. The translation brief was helpful for orienting myself to the translation task as well as for bringing forth the qualities of the translation task in this study.

The following aspects, proposed by Nord (2001: 60) were covered in the translation brief: 1) the intended text function/functions, 2) the target-text addressee/addressees, in other words, the audience of the texts, 3) the prospective time and place of text reception, 4) the medium over which the text will be transmitted, and 5) the motive for the production or reception of the text. In the following summary, the medium will be discussed before the time of text reception, because the medium affects the time significantly in the present translation task. Nord (2001: 62-63) emphasised that the translator should define these same qualities with both the source text and the target text, which is why these factors were considered for also the source text, where applicable. In Reiss and Vermeer's original definition of skopos, text genre was also included, and Yli-Jokipii (2004) also emphasised the importance of identifying the text type qualities. For this reason, text genre and text type qualities were also included in the translation brief. The aspects that were covered in the translation brief will now be explored one by one, followed by a summary.

5.1.1 The intended text function(s)

The intended text functions can be viewed in light of Nord's view of text functions. According to Nord's categories of translation, instructions for use represent equifunctional instrumental translation (Nord 2001: 50). This means that the function of the target text is the same as the source-text function (Nord 2001: 50). In the present task, the function of both the source text and the target text is to instruct the users of the software, which is in line with Nord's definition. Nord (2001: 51) presented the function of translating instrumental texts as being an "instrument for target-culture communicative interaction modelled according to source-culture communicative interaction". This was also the case in the present translation task. According to Nord (2001: 51), the focus of equifunctional instrumental translation is the functional units of source text. In other words, focusing on the function of the text in the translation is more important than transferring the exact lexis, syntax, or other textual units of the text.

In summary, there was no change in the function between the source text and the target text. Both of the texts are instructions for use, meant to guide the user in the use of the software. According to Nord (2001: 51), the most important focus in translating equifunctional instrumental texts, such as the present translation task, is transferring the functional units of the text, not transferring the text literally. This is also why skopos theory and functionalism offered a great theoretical framework for the present translation task and its analysis.

5.1.2 The audience(s) of the texts

The text addressees of the Finnish source texts are Finnish users of the software who need help in using the commissioner's software. The system was translated primarily for the use of Irish users of the software, but also other English-speaking customers. Both the source text addressees and the target text addressees are people working in the field of newspaper publishing. The texts are not available to anyone else but the customers of the text commissioner, in other words, the texts are not in public use. The audience of the present translation task was the main difference between the text situations surrounding

the source text and target text differ the most. In other aspects, the source text and target text situations are very similar.

Mostly British English (BrE) terminology was used in translation due to the fact that Irish users of the software form the main audience. This is in line with the audience-centred method of translation that was discussed in the theoretical framework of this study. The aim in using British English was to keep the terminology recognisable to the reader and avoiding to create a feeling of foreigness in the text.

5.1.3 The medium

As was stated before, the medium for both the source and the target texts is an online portal, which contains menus, pages, and subpages. The pages also contain images among the text. One text document is placed on one webpage, which scrolls on infinitely. In other words, there is no need to change pages within one text document. This text medium can be contrasted with the traditional user manual, in which the number of pages is more significant: the more pages one feature takes up, the longer the manual is. In the present text type, the number of pages per feature does not visibly make the manual longer. Perhaps for this reason, the source texts were at times very extensive. For example, the longest page in the present translation task (outside the data, however), was 40 pages long. The main effect of this particular medium for the translation process was that there is no need to save space by being concise. However, conciseness was still striven for, because it also contributes to interestingness and clarity of the text. More importantly, however, the medium affects the prospective time and place of text reception.

5.1.4 The prospective time and place of text reception

The source and target texts are available online only to authorised users. This medium affects the time and place of text reception significantly. Firstly, it is only available to authorised users, not the general public. This means that all prospective receivers of the text were known to be exactly the intended audience that was defined earlier. Secondly, due to its availability online, the time and place of text reception can be anywhere anytime. However, for the sake of the translation task, the text's primary place of reception

was presumed to be the workplace of the text receiver. Since the instructions were placed in an online portal that can be modified at any time when necessary, it was possible to produce the instructions according to the current situation, without speculating possible changes to the software functionality. In addition, as the original texts were produced earlier and were not in all parts up to date, it was possible to both modify the source texts as well as produce the target texts according to the current situation in software functionality.

5.1.5 The motive for the production or reception of the text

The motive for the translation was that the commissioner's software had recently been localised for the use of the new Irish customers, which is why English instructions for the software were necessary. A secondary motive was to write instructions for the use of all present and future foreign customers by using English, which is a wide-spread lingua franca.

5.1.6 Genre/text type

Both the source texts and the target texts are instructions for use. For this reason, in writing the target texts, the qualities of this text type were taken into account. Because the source text directs the translation, these source texts were reviewed in analysis to see if they abide by the qualities of the text type as well. The guidelines for analysing the qualities of the text type were based on the summary of technical language qualities that were discussed in section 3.5.

Table 1. Summary of source and target text qualities.

	Function	**Audience / addressee**	**Time and place of text reception**	**Medium**	**Motive**	**Genre**
Source texts	To guide the user	Finnish users of the	Anytime anywhere by an authorised	Online portal	Instructing the Finnish customers on	Instructions for use

		software	user		how to use the software	
Target texts	To guide the user	Irish users of the software	Anytime anywhere by an authorized user	Online portal	Instructing the new Irish customers on how to use the software	Instructions for use

6 TRANSLATION ANALYSIS

This chapter presents the findings of the main translation analysis. First, a brief quantitative overview of the data will be presented. Second, the usefulness of the used translation tools is reviewed. Third, the answer to the research question about what types of translation problems emerged will be answered with the help of Nord's categories of translation problems. Fourth, general notes from the translation diary are used to review how the qualities of the text type manifested themselves in the source texts and how they were taken into account in the translations.

6.1 Quantitative overview of data

The total number of analysed translation diary entries was 605. The breakdown of these entries according to the themes of the research questions is presented in Table 2. The number of total entries in the table is 732, far exceeding 605, because there were some diary entries that were related to multiple themes or multiple subcategories within themes, causing some overlap.

Table 2. Breakdown of quantitative translation diary data according to themes of the research questions.

THEME	**No. of entries**	**Percentage**
Translation problems	417	57%
Text-type qualities	236	32%

Translation tools	54	7%
Other remarks	24	3%
TOTAL	**732**	**100%**

As can be seen from the breakdown of data, most diary entries related to translation problems. Categorising and analysing this data answers research question 1: "What kinds of translation problems arose?". The second most prominent theme in translation diary was related to text type qualities, which serves in answering research question 3: "How were the qualities of the text type taken into account in the translation process?". Third, notes about translation tools provide the answer to research question 2: "How helpful were the used translation tools in this specific task and how helpful would they be in general?" Other themes were related to the process in general.

The total number of translation diary entries related to translation problems was 417. Out of these 417 entries, a total of 118 represented Nord's categories of translation problems, 172 were related to translation difficulties (as identified by Nord), while 118 entries related to problems that were not identified as belonging any of these categories. To sum up, around 71% of all problems and difficulties in the translation process were applicable to Nord's model. A breakdown of translation diary entries related to translation problems is presented in Table 3.

Table 3. Quantitative category breakdown of diary entries related to translation problems.

PROBLEM CATEGORIES	**No. of entries**	**Percentage**
Translation difficulties (as identified by Nord)	172	41 %
Other types of problems	127	30 %
Nord's categories of translation problems	118	28%
TOTAL	**417**	**100%**

Finally, out of the entries that were identifiable as belonging to Nord's categories of translation problems, 62 entries were linguistic problems, 36 were pragmatic problems, 20 were text-specific problems, while no problems could be identified as belonging to the

category of cultural problems. A breakdown of entries belonging to Nord's categories is presented in Table 4.

Table 4. Quantitative breakdown of diary entries related to translation problems that were categorised into Nord's categories of translation problems.

NORD'S PROBLEM CATEGORIES	**No. of entries**	**Percentage**
Linguistic problems	62	53 %
Pragmatic problems	36	31 %
Text-specific problems	20	17 %
Cultural problems	0	0 %
TOTAL	**118**	**100%**

From the presented quantitative data, it would be easy to draw the conclusion that the most significant categories were translation difficulties, problems outside any categories altogether, and linguistic translation problems. However, the level of descriptiveness of the quantitative data should be viewed critically. Instead of putting emphasis on the quantitatively largest categories and drawing the conclusion that they are the most important to note, it should be considered which problem types were the most significant in the translation of the present text and its text type. Indeed, quantitatively the largest category was the category of translation difficulties, however, most diary entries in this category related to word look-up, which is a relatively small effort and rarely causes serious problems for the translation process. Furthermore, while the translation diary may have addressed a certain problem type only a few times, some of these certain problem types took more effort to solve and were found more insightful and relevant to the study than those which manifested themselves more frequently. For these reasons, viewing the translation diary data qualitatively is more descriptive than drawing conclusions based on the quantitative data. The next sections in this chapter describe the data and findings in more detail.

6.2 Review of the used translation tools

Different translation tools were used during the process. These tools and their usefulness in this particular task will be discussed briefly now in light of the translation diary remarks and general thoughts about using these translation tools. After reviewing the usefulness of translation tools, the emerged translation problems will be discussed.

As a novice translator who has no earlier experience of large translation projects, I changed my practical approach to translating during the process as I gradually found the most optimal ways to work. I used the following three distinct methods of translating:

1. Translating into a text document, with the screen split so that the original text is visible from the web browser on the left, and the text document where the target text comes on the right.
2. Translating into a text document, after copying the original text into a text document as well, with the original text on the left, and the text document where the target text comes on the right.
3. Using a software, Wordfast Anywhere (described in more detail below).

In the end, I found the third method best, but during the initial stages of the translation task, the second method was used most of the time.

During the translation process, different translation aids were used to support my translation work. The dictionaries I used the most were Kielikone Oy's MOT Online Dictionaries (mostly *Finnish-English* and *Technology and Commerce*). The addition of other dictionaries could have been beneficial and might have helped to find more of the special terminology present in the source texts, but these dictionaries were found most suitable for the translation task. Their best qualities were that they were available online and were very extensive. Although dictionaries were used in most cases where I needed to look up a word, other online resources helped with vocabulary too. For example, search engine searches were performed frequently to find out how a word is used in natural contexts by first language speakers. Online encyclopedias, most notably Wikipedia, were useful for ensuring that the terms are correct and for finding out more about what formerly

unfamiliar concepts mean in practice. Information was also retrieved from two different corpora, the British National Corpus and the Corpus of Contemporary American English. In addition to dictionaries and online resources, I was able to enquire terminology from customer proof-readers, which helped significantly in selecting recognisable terminology.

One special tool of translation was Wordfast Anywhere, which is a browser-based software for translation. It is free to use and the user's documents are saved on a cloud server, making it accessible anywhere. The user can upload documents to Wordfast, which will then be automatically split into translation units (the units are identified with full stops, so these units are most often one sentence long). After the document is divided into translation units, the translation itself can be started. Translating happens within the software and it progresses one translation unit at a time. One notable benefit of using this software was that after the document is translated, it can be downloaded and the translation will have the same style settings as the original (font type, font size, images…). Most significantly, the use of Wordfast Anywhere's translation memory was found very beneficial, because the text type, instructions, often contain repetition of phrases, sentences and even entire paragraphs between the source text documents. Using Wordfast Anywhere and its translation memory reduced unnecessary work, saving time and effort, and also helped in keeping the translation consistent.

However, it was found that the length of the translation unit that the translation memory used should have been shorter to increase efficiency of the tool in this particular task. The translation memory in Wordfast Anywhere divided the text into translation units by full stops, which generally meant saving a full sentence as a translation unit. In a text that repeats certain phrases, such as click the button, this type of translation memory is perhaps not as useful as a translation memory that would save shorter units than full sentences. However, the use of Wordfast Anywhere and its translation memory certainly eased the translation process significantly.

6.3 Nord's categories of translation problems

The total number of analysed translation diary entries was 605, from which 117 could be identified as belonging to Nord's categories of translation problems and 171 as belonging to Nord's category of translation difficulties. Nord (2001: 64) made the distinction between translation problems and difficulties, which is why translation difficulties will be discussed separately after this section first discusses findings belonging to Nord's categories of translation problems.

Diary entries were first divided into Nord's categories of pragmatic, cultural, linguistic, text-specific as well as subjective translation difficulties. When these entries were analysed in more detail, it was found that certain problem types repeated often. For this reason, the analysis is divided further into subcategories that emerged from the data. With such a vast dataset, it is also more meaningful to view the entry categories and present a few examples of each than it is to view each entry in detail. Some overlapping in categories and subcategories occurred. The categories will be presented in the order of quantitative prominence. The relevance of each problem category in the data will be summed up in section 7 *Discussion and conclusion*.

Furthermore, while the total number of entries in some subcategories may seem small, one needs to bear in mind the statement about the importance of qualitative data over quantitative data that was made in the beginning of this chapter. While the total number of diary entries is as much as 605, it needs to be taken into account that special terminology (discussed in section 6.4. *Translation difficulties*) accumulated as much as 171 diary entries, making up almost a quarter of all data despite being only a subsection of a category that is not even considered a "problem" category by Nord. While this category is quantitatively large, solving these problems was mostly trivial and fast, which is why, despite its quantitative size, this category is far smaller in significance than one might think. In effect, other categories that seem smaller in comparison quantitatively actually bear a large significance and solving the problems related to them was far more complicated than solving problems related to special terminology. In effect, while the number of entries in each category and problem type are sometimes addressed in the

course of this analysis, the qualitative data is more relevant than quantitative and will therefore be used for drawing conclusions.

6.3.1 Linguistic translation problems

Linguistic translation problems was the most prominent Nord's category of problems present in my data, with as much as 62 diary entries belonging to the category, in other words, more than half of all problems that could be identified as belonging to Nord's categories. As Nord described, linguistic problems contain many different types of problems related to the differences between languages, especially in vocabulary, syntax, and suprasegmental features. Problems related to vocabulary were the most prominent source of linguistic problems in the present translation task and problems related to syntax emerged from the data as well. However, no problems related to suprasegmental features were found apart from one occasion, where alliteration, together with complexity, caused the expression *identification information* to sound unflowing and instead, the expression *identification data* was used instead.

Nord pointed out that the nature of linguistic problems is often bound to the language pairs in question. Nord mentioned cognates, false friends, one-to-many and one-to-zero equivalences as examples of such language pair –related problems, all of which are mainly related to vocabulary, but the present data also contained variation in syntactic elements, mainly requirements to change word order due to either grammar rules or to bring out a certain sentence constituent or to achieve a better flow.

Interestingly enough, while I had my own difficulties with the aforementioned linguistic problems, a lot of the errors in the software's original translations were linguistic errors. These will be discussed in more detail in section 6.5.

6.3.1.1 Vocabulary equivalence

One-to-zero equivalences, namely, terms that have no target-language equivalent, were the most frequent cause of vocabulary-equivalence-related problems in this translation task. 18 diary entries dealt with straightforward one-to-zero equivalences, in other words,

source language terms that have no equivalent in the target language. 18 other diary entries were also categorised as problems related to one-to-zero equivalences, although a literal equivalent existed. In these cases, the target-language equivalent exists, but it consists of linguistically different units, for example belongs in a different word class; it has more linguistic units than the original, for example, consists of a noun phrase with two or more words; or the literal equivalent does not flow as well.

These include such terms as '*mm.*' (abbreviation of 'among others'), *rastittaa* (verb 'to tick a tickbox'), and *lööppi* (newspaper headline placard; this term will be discussed in detail below). The most natural way of solving the problem of having no target language equivalent was to translate freely. Sometimes, it was also possible to omit the term altogether without losing information.

Perhaps the most peculiar term with no target-language equivalent that emerged from the data is the term *lööppi*. The search for a translation or a definition of this word returned no results. The term *lööppi* refers to the placard or poster hung on store doors or windows which contain the day's headlines of a tabloid newspaper. In general, *lööppi* is also understood as referring to the newspaper headlines themselves, especially the provocative kind, but in the software it refers to the placard. While these placards exist also in other countries apart from Finland, the equivalent term could not be found. The translation that I used was simply *placard*, but the problem is more complex. Even if I came up with a good equivalent, the word might still not be understandable. The problem here is that the object in question, the placard, seems to have no recognised, official name in the target language community.

In some cases, the target language equivalent of a word consists of more words than original. These create problems, because they make the target language sentences longer, which then poses challenges to high readability, which is an important aspect of technical texts. In some cases, the readability does not suffer overtly, for example with phrases like *pienentää* ('make smaller'). In other cases, the term could be replaced by free translation, for example in the following sentence:

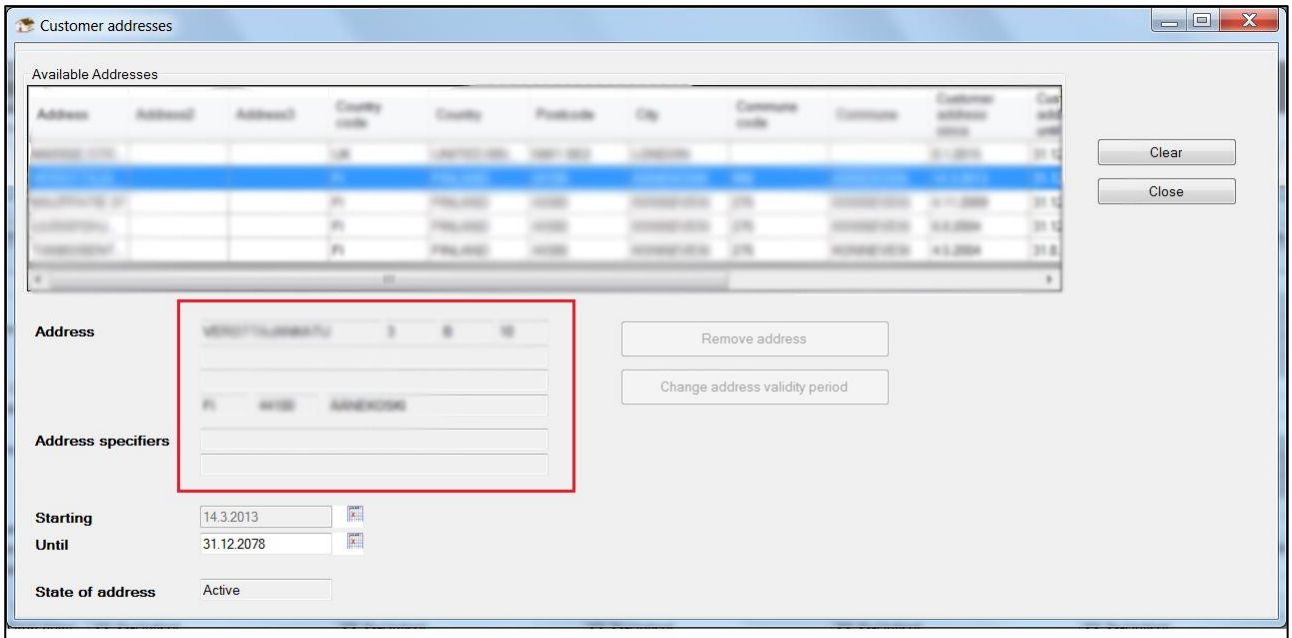
(1) ST: Paina Etsi-nappia, **jolloin** tiedot ilmestyvät alapuolen kenttiin.

Instead of using the literal translation of *jolloin*, 'in which case', the logical connector could be replaced with the simpler and shorter connector 'and': *Click Search **and** the information will appear in the fields below.*

As a sort of a subtype to one-to-zero equivalence, there were also occasions where the literal equivalent of the word would not convey the same meaning or was in some way less flowing. For example, the following sentence:

(2) ST: Saat osoitteen tiedot alla olevaan lomakkeeseen tuplaklikkaamalla listan osoiteriviä.

would have the literal translation 'You **get** the information of the address in the form below by double-clicking the address row on the list'. Here, the literal target language equivalent would be slightly colloquial and would therefore not fit the text type. The translation that was used instead was 'You can **view** the information of an address by double-clicking a row on the list'. In this translation, the verb *saada* is changed to 'view', which changes the meaning of both the verb and the sentence slightly, but is still descriptive for the function that the piece of instruction refers to. The mention of the form is also omitted altogether, because the change in the window is visible to the user (see Image 1). Omission as a technique for clarifying and simplifying sentences will be discussed in more detail in section 6.6. A good example of a non-flowing equivalent would be translating the phrase *kohdistus osoittaa* to 'allocation allocates'. Here, while the source-language verb *osoittaa* differs from the subject noun *kohdistus*, the English equivalent 'allocation allocates' would be a clumsy combination of a verb and noun derived from the same stem. Instead, the phrase was translated to 'Allocation directs'.



The Customer addresses *view shows the available addresses of a customer. You can view the information of an address by double-clicking a row on the list. You can change the validity period of the address, or remove the address by clicking* Remove address.

Image 1. The mention of the form was omitted from the caption of this screenshot, because the reader can very clearly see that the address information specifically appears in the form. Red markings added for emphasis.

Occasions when a source language term has multiple synonymous and non-synonymous target language translations, in other words, one-to-many equivalences, also caused some problems in the translation process. There were mainly two types of problems: occasions when the target-language terms were not synonymous and the context did not reveal in which meaning the word was used, and occasions where it was unclear which was the most fitting term to select from synonymous target-language terms. The choice of the most fitting term was based on different criteria, for example, the aim for clarity or simplicity of text.

The following is an example of when the Finnish term has more than one equivalent in English:

(3) ST: Uuden painotiedon **tekeminen** aloitetaan painamalla vasemman yläkulman Uusi-painikkeella.

The original verb (in bold) is *tehdä*, the literal translation of which would be 'make' or 'do', and in this context the only choice from these two would be 'make'. However, the context refers to other words, which, while not literal translations, are more valid choices for the

translation, like 'create', 'enter', 'make', or 'add'. The term that was seen as the best choice for this context was 'add', resulting in the following translation:

> (4) TT: Start **adding** new weight information by clicking the button Create at the top left corner of the window.

Problems related to the multiple ways of using the word *tehdä* especially were very common. Another example of one-to-many equivalences in which it was important to select the correct term to maintain the correct meaning includes the often used phrase, *paina*, which, depending on the context, translates to both 'press' and 'click'. Commonly, the term 'press' is used when referring to pressing keys of the keyboard, while 'click' refers to clicking one of the mouse buttons to interact with a certain element visible on the screen to which the cursor points. Naturally, these nuances in meaning were utilised in this translation task as well: whenever the reference in the manual was to pressing a key, 'press' was used, and when clicking the mouse button, 'click' was used.

At times, the noteworthy factor in translating a one-to-many equivalence was to select one term from a set of synonymous terms. In these cases, other factors than meaning could be taken into account, mainly the translation aim of simplicity and clarity. For this reason, the choice of word was most often the shortest and simplest equivalent. For example, the word *tunnistetiedot* could have been either 'identification information' or 'identification data', of which the former was already mentioned earlier in this thesis as an example of alliteration that sounds off. For this reason, the latter was selected due to its shortness and it being a better-flowing combination of words with no alliteration.

A peculiar phenomenon is when a word has one-to-many equivalence where the most commonly known translation for a term is not correct in the context, which in this task is the domain of technical language. An example of this from this data is the term *dialogi*, which in its more common meaning would be translated to 'dialogue' (=a conversation between two or more people). However, in this context, the term *dialogi* refers to the computing term 'dialog box' (=a specific kind of window that appears on the computer screen). Similarly, the term SQL-lause contains the word *lause* which in its most common meaning would be translated to sentence or clause. However, an Internet search with the

search word 'SQL' (Structured Query Language) lead to the Wikipedia page 'SQL' which explained the structure of SQL, and revealed that the correct translation for the term is 'SQL statement'.

There was even one occasion where a many-to-one equivalence caused problems. Namely, a document used the terms 'kantopiiri' and 'jakopiiri' interchangeably, which was confusing at first. It had to be made sure whether these two are synonymous in this context before translating them. However, viewing the context in the software revealed that they referred to the same concept and could simply be translated to 'distribution area'.

6.3.1.2 The definite and indefinite article

The Finnish language has no definite or indefinite article, which is why translating from Finnish to English often produces an extra word and thus complicates the text. Furthermore, the irregular use of articles was identified as a special quality of English instructions, especially the fact that the definite article is often left out altogether to simplify the text (Yli-Jokipii 2004: 85). Of course, since Finnish has no articles, there were no diary entries which noted the omission of the definite article. However, the definite article was indeed left out on multiple occasions. For example, a recurring phrase in each document was *Hyväksy muutokset OK-painikkeella* or a slight variation of this phrase, which was translated to 'Save changes by clicking OK'. As can be seen, not only was the word *painike* ('button') omitted, but also no definite article was used (the sentence could have been translated to 'Save the changes by clicking the OK button').

An additional method of handling the problem with articles was translating the singular form of a word to its indefinite form in plural whenever possible to avoid using the indefinite article and cluttering the text. For example, a recurring term in the instructions was *asiakas*, 'a customer'. While the literal translation would be to refer to 'a customer', there would be repetition of the indefinite article, which would clutter the text. Instead, the phrase *asiakas* was most often translated to customers. The sentence *Tilaustiedot-välilehden kautta hallinnoit asiakkaan tilauksia*, for example, was translated to 'In the Subscription info tab you can manage customers' subscriptions'. Another example is the use of *changes* instead of *the change*. The definite article could sometimes also be used to

replace some longer words. For example, in the sentence *[Ohjelma] avaa **valitsemasi** asiakkaan osoitteet listaan, josta voit valita haluamasi osoitteen kohdistusta varten*, the term *valitsemasi* could simply be replaced with the definite article without losing any information: '[Software] opens up a list of **the** customer's addresses from which you can select the address you want for allocation'.

6.3.1.3 Syntax

The differences between languages require making major changes in the word order and sentence constituents. These differences are due to similar factors as those that required the vocabulary-related adjustments described above: not only are the adjustments required due to differences in grammatical rules but also the difference in the general flow of the languages. Word order is perhaps the most prominent syntactic change in translation from Finnish to English, but the requirement to change the voice in the sentence also emerged from the data.

Changing the word order of a text from Finnish to English is a necessity, because the rules of word order differ greatly between these languages. While in Finnish the word order is fairly free, English word order is more constricted. Most of this is an automated process for the translator, because he or she is an expert of the target language. For this reason, not many diary entries were written about the change of word order even though it was a frequent process in translation. One example from the data was the following image caption, where the equivalent sentence constituents are underlined:

(5) ST: Kuva 13. Esimerkin mukaiset valinnat Taulukko-osassa.

Which was translated to:

(6) TT: Image 13. Choices that need to be made in the Table section for this example.

Inspecting this caption and its translation, we notice that it is a single noun phrase with the head noun *valinnat (*'choices'), modified by both the term *Taulukko-osassa* ('in the Table section') and *esimerkin mukaiset* ('according to the example'). This single noun phrase refers to what is presented in the image. In Finnish, the head noun of this noun phrase can easily

be placed in the middle of these two modifiers. In English, however, a word-for-word translation would not work here due to the syntax differences between languages (*'according to the example choices in the Table section'). Even a syntactically correct translation *Choices according to the example in the Table section*, where the sentence constituents have been moved minimally, conveys a slightly different meaning than the original, because here the modifier *in the Table section* can easily be interpreted as modifying the noun *example* instead of *choices*. This example demonstrates the frequent problems that differences between the syntax of two languages can cause in the translation process. The more experienced the translator is in both the languages involved as well as in the job, the easier and more automated this problem-solving process is. It could also be argued that the original Finnish wording in this example could be clearer, for example *Taulukko-osan valinnat esimerkin mukaan*. Remarks about problems with the original source text will be discussed after Nord's categories of translation problems and translation difficulties have been discussed, in section 6.5.

Changing the word order can also be utilised to achieve a better flow or to add emphasis on a certain element in the sentence. In the genre of instructions, this can be especially important in order to bring out the most important part of the instructions. In the following example, the word order has been changed specifically to emphasise the result of action rather than the way the action is completed. While producing a translation that is close to the original word order would have been grammatically correct in this case, the flow of the sentence could have suffered. The underlined parts are the words that have been moved to change emphasis.

> (7) ST: Jos etsittävä osoite on kulmaosoite ja sillä on linkki viralliseen osoitteeseen, niin painamalla Valitse–nappia Kayak hakee virallisen osoitteen.
>
> (8) TT: If the address you are trying to find is a corner address which has a link to an official address, Kayak will retrieve the official address when you click Choose.

The sentence could also have been translated in the following manner that would be more true to the original word order but not necessarily as fluent as the example above:

(9) TT: If the address you are trying to find is a corner address which has a link to an official address, by clicking Choose Kayak will retrieve the official address.

Once again, it could be argued that the original Finnish wording could have had a different emphasis and that this was not only an example of a difference between languages, but also an example of altering the original expression because the translator found it somehow erroneous, uninformative, or as putting emphasis on a semantically less important sentence element.

6.3.2 Pragmatic translation problems

Out of the total 605 entries and of the total 118 belonging in Nord's categories, there were 36 instances of pragmatic translation problems in the translation diary notes. The small number of pragmatic problems is interesting because Nord viewed this category of translation problems as the most important one to deal with at the start of a translator's career, which would suggest that it is usually one of the most prominent problem categories. However, the initial hypothesis was that only few pragmatic translation problems would be found as the translation brief established few differences between the source text and target text situations. In other words, despite the common expectance an abundance of pragmatic problems, the small number of pragmatic problems was to be expected in this translation task.

Nord (2001: 65) identified pragmatic translation problems as caused by differences between the source-text and target text situations, including differences in the sender, receiver, medium, time, place, motive, and text function (Nord 2001: 65). As the translation brief for the present translation task stated, the most significant pragmatic difference between the source-text and target-text situation was the audience of the texts. Indeed, the differences in audience of the texts was the most prominent pragmatic problem category in the present translation task. Specifically, the references to novelty of features in text was related to differences in not only the receivers but also the time of text reception. Furthermore, there were also differences in medium over time. The pragmatic problems that emerged are discussed in detail in the following.

6.3.2.1 References to novelty of features

The most prominent pragmatic problem category that emerged from the translation diary was the problem that the instructions sometimes referred to the novelty of features. There were 19 entries related to this in the diary. An example of this is presented below:

> (10) ST: Osoitetuotannon käynnistykseen lisätty mahdollisuus ajaa päivitysajo ja osoitetuotantoajo, vain päivitysajo ja vain osoitetuotantoajo.

The problem here is that the receiver (Irish customer) has not used any previous version of the software, while this sentence refers to when this feature was not included in the software, which is why the reference to novelty (*lisätty mahdollisuus* = 'the possibility has been added') is not relevant to the target text receiver at all. In other words, in cases like this, the problem is caused by a difference in both the receiver and the time of reception between the source text and target text. The solution to this problem was to remove the reference to the novelty of this feature and keep the other information, resulting in the following translation:

> (11) TT: You can choose if you want to run both the daily update process and distribution process or only either one of the two.

Another diary entry dealing with the difference in time and receiver of the source text and target text that renders the references to any older version of the software irrelevant was related to the following source text passage:

> (12) ST: Yhteensopivuusongelma (vanha ohjelmisto) ja (uusi ohjelmisto) välillä. (Uudessa ohjelmistossa) taksavyöhykkeen rajauksen jakelutapa valitaan radionapeilla, kun taas (vanhassa ohjelmistossa) rastitettavasti, jolloin sama numeroväli voi olla sekä osoitteeton että osoitteellinen. (note: the software titles have been replaced with 'uusi ohjelmisto' and 'vanha ohjelmisto')

Similarly to the first example, the target text receiver never used the old software that is incompatible with the new software, which is why there is no need for this information. In this case, the solution to the problem was to omit the paragraph altogether, because it only conveys information that is not in any way relevant to the receiver of the target text. Another solution would have been to translate only the information that is true in the new software (*taksavyöhykkeen rajauksen jakelutapa valitaan*

radionapeilla), but the function was seen as being clear enough without this detailed specification.

The translation solution that was used for problems of this type was omitting the reference to novelty, as seen in the examples above, with one exception of an image caption, reading "Palautuksen tietoja on selkeytetty" (=*Refund information has been cleared)*: Since the entire caption referred to the novelty of the feature, it was changed into a simple statement of what is seen in the image (*The details of a refund transaction)*. The data also contained a few examples where instructions referred to features that are planned to be fixed in future versions, but have not been fixed yet (example: ST: *tämä ominaisuus ei ole vielä käytössä* -> *TT: this feature is not in use yet*). These were translated literally as they were still factual in the current software version.

6.3.2.2 Targeting the receivers of the text

The receivers of the target text belong in a certain community and culture of English-speakers, which had to be taken into account in translating. This was the cause of some translation problems, which will be discussed in the following.

One significant source of pragmatic translation problems in the present translation task was the use of American English in the software. While the differences between American English and British English are minor and the use of American English should therefore not raise major understandability problems for the target audience, I made it an aim to use British English as a way of creating a domesticating translation that includes terminology familiar to the receiver of the text, Irish customers. This aim created some problems since the software was already translated for the larger part and used mostly American English terms.

While there were only five entries related to British English and American English in the diary, they were actually a repeated source of problems and difficulties during the translation process and in reality raised more problems than was documented in the diary. The entries focused on mainly two things: the problems that were caused when the terminology in the software was American English and on general notes about using

British English consistently in the translations, which is more of a subjective translation difficulty than a universal translation problem. However, since the latter translation difficulty is related to the receiver of the text and therefore fulfils Nord's definition of a pragmatic problem, it was included in this category and will be handled as so.

The use of American English in software contained such minor details as the use of "row house" instead of "terrace house" and the general use of *z* instead of *s* in, for example, the word *organisations*. The solution to the problem differed: in the case of *row house*, I made the suggestion to change it to *terrace house*; in the case of AmE spelling *organizations*, I had to take several screenshots containing the term, which is why I kept it as is, because it was more important to complete the required task of taking screenshots than it was to use the BrE spelling *organisations*.

General notes about using British English contained mid-translation remarks, such as noticing that I had used the AmE spelling "gray" instead of the BrE spelling "grey" and in a similar vein, the AmE spelling "fill out" and BrE spelling "fill in" interchangeably. These mid-translation inconsistencies were then corrected after I noticed them. Correcting these errors was easy due to the search function in the online module where the target texts were placed.

Other receiver-related remarks, of which there were seven, concerned the differences between the cultural and practical conventions of Finland and Ireland. Adapting the target text to the target cultural conventions included changing examples so that they are closer to the target culture. For example, one sentence in the instructions was translated to *Enter the country code in the field Country code (e.g. FI, SE, IE)*, which includes the country code of Ireland, while the original source text sentence did not include it. I also omitted the mention of a discount concerning conscripts: the reason for omission is the uncertainty of whether such a discount exists in Ireland in the same way as it exists in Finland, which is why the example was omitted to be sure. As this is also a sign of lack of cultural competence from the translator, it could also be categorised as a translation difficulty.

6.3.2.3 Differences in medium over time

The third type of pragmatic problem that emerged in the present translation task was related to the medium. While there were only four documented instances of problems like this in the diary, they were really more abundant than was documented and are particularly interesting due to the special nature of the task, and should therefore be discussed.

In the present translation task, medium can be seen as referring to both the medium in which the instructions are presented as well as the software that the instructions describe. In Nord's categorisation, this type of situation was probably not taken into account, which makes it special. Furthermore, it is debatable whether these problems can be categorised as pragmatic problems in the same way that Nord defined them. Nord specifically viewed pragmatic problems as deriving from the differences between source text and target text situations, while in the case of medium, the source text and target text situations are near identical and the problems related to changes in medium are actually related to both the source text and target text situation. In other words, the problems described here are related to changes in medium in both the source text and target text. The examples below clarify this situation better.

There were two instances in the diary, and more were found but not documented, where the source text made a reference to a chapter number, e.g., *Lue lisää perusosoitteen muokkauksesta luvusta 24 (*Translation*: read more about editing basic addresses from chapter 24).* It can be deduced that these passages of text are remnants of an older format of instructions where chapters were used, whereas now the online module does not contain division to chapters. Thus, the medium of instructions has changed, but not only in the target language text but also the source language text. The root of the problems here was that the source text contained a factual error due to change in the text medium that went unchecked when transforming texts from the old medium to the new. Factual errors will be discussed in more detail in section 6.5.2.

There were also two instances in the diary where the source text referred to features or functions in the software that had changed since the last version. In fact, this problem was

very common, but was not documented in the diary often. Examples of problems like this would be instances when the instructions describe a window as having a drop-down menu, but the current version of the software does not contain one, or when a window is described as having two tabs, but it now contains three tabs. These problems are more related to factual errors that emerge when functionality of the software is changed and the writer of the manual neglects to make changes to the instructions accordingly. They are a special problem type of this text type that rarely, if ever, emerges in other text types, for example, literary texts. The solution to these problems was to simply assess the current situation of the medium and change the content so that it describes the features correctly in the present situation. Changes to the source text were also made in the similar way.

6.3.3 Text-specific translation problems

Text-specific translation problems are bound to one text in particular, including the translation of puns, neologisms, and figures of speech. Nord acknowledged that these types are rare in conventional text types such as the text present in this data. This is understandable as puns and figures of speech especially usually only appear in literary texts. However, contrary to the hypothesis that no text-specific problems would not emerge in the data, the present translation task did contain some neologisms that caused problems. Altogether, the translation diary contained 20 entries related to problems with translating neologisms.

Neologism is "a newly coined word, or a phrase or familiar word used in a new sense" (MOT Collins English Dictionary). In the present data, the software and its manual contained a multitude of tool names and feature names that do not exist as terms outside of these source texts. These terms were identified as neologisms by using the information search tools that were described earlier in this study: if the search result was that the term had no official Finnish definition nor an English translation, it was treated as a neologism in this study. In other words, these terms were believed to be neologisms that the company had coined for its own use. Fortunately, solving the problems related to neologisms was easy, because the terms were usually clear, self-explanatory, and most often seemed to have been formed by compounding two or more morphemes. The use of

neologisms in the source texts also included giving new meanings to existing terms. These were identified by defining the meaning of the term by observing the context surrounding the term and finding that no existing definition of the term fit the term in that context.

The data contained three types of problems related to neologisms: in some cases, a new term had been coined and had to be translated somehow; on a few occasions, a new meaning was given to an existing word and it had to evaluated whether to use any existing equivalent or to invent a new term in target language; and in the third, most peculiar problem type, neologisms had already been translated to English in the software, but these were somehow problematic, usually semantically or grammatically incorrect, or otherwise inarticulate.

Altogether 11 diary entries related to cases where the source text contained a term that was identified as a neologism because the search for the word returned no results. In these cases, either a new, explanatory target-language neologism had to be coined or the term had to explained in some other way. Most commonly, I solved problems related to these types of neologisms by assessing the word formation technique of the neologism and then using a similar word formation technique, most often compounding, in the target language to form a neologism that is as self-explanatory as possible. An example of this was the term *levikintarkastussääntö*. There was no official definition nor translation of the word, so an explanatory translation had to be invented. The coined translation was *rule of circulation check-up*. As we inspect the term, it can be seen that it contains all the equivalent words of the compound: *levikki* (='circulation'), *tarkastus* (=*check-up*), and *sääntö (*='rule'). Since the source language term also uses the possessive form of 'circulation' (=*levi**kin***), the *of*-genitive was used, making it as literal a translation as possible. An alternative neologism could have been *circulation check-up rule*, which also contains all three words that form this compound noun in the source language term, only leaving out the explicit use of the genitive.

However, in at least three documented cases, an explanatory new target-language neologism could not be invented, so the phrase had to be explained so that the meaning was understood and no information was lost due to the omission of the phrase. In other

words, the information carried by the neologism was conveyed in some other way than inventing a new target-language term. An example of this would be the term *avoin* (literal translation 'open') in the phrase *siirtää laskun avoimeen* (literal translation '*move to open of the invoice'). The term *avoin* here refers to the sum that still remains unpaid from an invoice and the phrase *siirtää laskun avoimeen* refers to adding a certain sum to the sum that still remains unpaid from an invoice. The root of the problem is that the Finnish adjective *avoin* is used as a noun, thus creating a neologism, which works understandably enough in Finnish, but the direct equivalent 'open' in English does not sound as fluent. Search for a translation of this word returned no results either. Because it was found that the adjective *open* did not form a fluent equivalent, I simply explained the term more explicitly using the words *move to open sum of the invoice*. In similar vein, the term "lopputilaus" was translated to *remaining subscription period* and the term "nukuttaa (tilaus)" was translated to *put (subscription) to sleep state*. More undocumented cases were likely present in the data.

The data also contained neologisms in the sense that a new meaning had been given to an already existing term. Three entries were written related to these, although some of these problems were recurring and thus more general than the number of diary entries would imply. In these cases, it was not always as straightforward as using an official equivalent in the target language and other techniques had to be used. For example, the term *sovellus* in the phrase *Asiakaspalvelu -sovellus* was found to be an existing term with a new meaning. The meaning and the direct translation of *sovellus* would be 'application', however, in this context, it referred to a specific *section* in the software, which does not fulfill the definition of an application. In cases where existing terms were used as neologisms, I usually used non-literal, more explanatory translations, such as in the example of *sovellus*, I used *section* because it carried the meaning of the concept better than the direct equivalent 'application'.

Finally, six diary entries concerned neologisms that had been translated in the software prior to the translation task by someone else, but these translations were in some ways problematic, often by being grammatically or semantically wrong or not descriptive enough. For example, the source material contained a feature called *Tupla-asiakkaat*. The function of the feature is to make sure that a customer is not registered in the system twice.

The direct semantically and grammatically correct translation would be 'Duplicate customers', however, the feature had been translated to 'Double customers'. While the term 'Double customers' is the direct translation of the term and poses no grammatical problem, it is not as fluent or as explanatory as 'Duplicate customers'. The definitions of double in Collins English dictionary include: "1) as much again in size, strength, number, etc., 2) composed of two equal or similar parts; in a pair; twofold --, and 3) designed for two users", while the definitions of 'duplicate' include only: "1) copied exactly from an original, 2) identical, and 3) existing as a pair or in pairs; twofold". As can be seen from these definitions, while the words share at least one equal meaning ('twofold'), 'duplicate' is more self-evident and unambigious than 'double'. Similarly, the term *ovijakelupalvelu* had been translated to 'door distribution service' in the software: the term semantically refers to the service of delivering an item (e.g. a newspaper) to the customer's door. However, the term that was used, *door distribution service*, rather refers to distributing doors as a service and thus the correct semantic meaning is lost in this translation. The solution to solving grammatical errors or fluency errors such as these was using the correct or better term in the text and suggesting to the company officials that the terms would be changed in the software. Of course, as will be discussed in depth in section 6.5, grammatical errors in existing translations were a recurring problem outside of neologisms as well. As the case was with those, these grammatical errors are due to the lack of linguistic competence of the person who originally translated them, which is easy to understand as the person is a non-native speaker of English and professionally trained in IT, not languages.

It must be noted that the terms that were categorised as neologisms in this study may actually not be neologisms in all cases. It is possible that they are already coined terms that the translator was simply not familiar with or the available information search tools were not sufficient to find the terms in question. In these cases, the problems related to these "neologisms" would belong in the category of translation difficulties.

6.3.4 Cultural translation problems

Cultural translation problems were described by Nord as problems relating to translating a specific type of expression in a manner which is recognised by the target audience as an expression of that genre in the target language culture. In Nord's example, translating a slogan so that it can be recognised as a target culture slogan by a representative of that target culture could be the cause of a cultural translation problem. The nature of the present translation task makes is unlikely to run into cultural translation problems: the text type does not contain slogans or other similar types of creative writing. In fact, no occasions of cultural translation problems emerged from the data, or at least no recognised instances were written about in the translation diary.

6.4 Translation difficulties

Translation difficulties, in other words, the difficulties that were faced due to the translator's lack of linguistic or translational competence or lack of appropriate documentation were prominent in the present translation task. Most of the diary entries related to translation difficulties were related to lack of linguistic competence, most often to not being familiar with a certain term and having to look for it in dictionaries and other sources. Other translation difficulties related to lack of linguistic competence include dealing with difficult sentence structures, looking up grammar rules and finding translations to idiomatic expressions. Some translation difficulties were also due to lack of documentation, or more descriptively, occasional unavailability of necessary documentation.

While the number of entries related to translation difficulties is quite considerable, with as many as 171 out of total 605 diary entries related to translation difficulties, it is explained by the small-scale nature of a single diary entry: most of these difficulties were solved by looking up a term in the dictionary, which usually took only under a minute of time. In other words, the mere quantitative mass of this category does not directly correlate with the scale of challenge behind these difficulties.

6.4.1 Special vocabulary

In this study, word searches (dictionary searches, Internet searches etc.) related to both learning and checking a new term were categorised as translation difficulties. The justification is that word searches are always carried out by the translator due to lack of linguistic competence. The need for word searches is personal and depends on not only the general linguistic competence of the translator, but also the competence with special terminology that the text demands. Most diary entries related to translation difficulties were made about word searches of a term related to a special field. In the analysis, word searches are categorised according to what special field they can be seen as belonging to.

While problems related to vocabulary and special terms are also very closely related to the linguistic category of problems, the problems themselves are not universal: Not being familiar with or not remembering the translation of a term is a clear sign of the individual translator's lack of linguistic competence, while also a natural and acceptable part of the learning process. Some translators may struggle with vocabulary related to a specific field, for example technical terminology, while others may not, depending on the proficiency of the translator in both the languages involved and the *language for special purpose* involved (LSPs were discussed in section 3.5).

The languages for special purpose that were present in the translation task were those used in the fields of technology, mathematics, publishing, entrepreneurship, and finance. It was expected in advance that the translation task would include special vocabulary related to technology, mathematics, and publishing, but the emergence of finance and entrepreneurship vocabulary was surprising. These were also fields with which I was unfamiliar before, which then turned out to cause most of the problems related to special vocabulary.

When solving linguistic problems and/or translation difficulties, all the information search tools that were listed earlier were used: dictionary searches, Internet / online encyclopedia searches, corpus searches, as well as proof-readers who were Irish company workers. As the receivers of the target texts are Irish, the proof-readers represented the

clientele. However, the availability of the proof-readers was limited, which is why they were a scarcely used resource. Some of the used information search methods are elaborated on in relation to the examples presented in the following.

6.4.1.1 Technical terminology

Instructions for a software naturally contain a lot of technical terminology: the reader is instructed to click buttons, select items from drop-down menus, and other such actions. My familiarity with information technology and its terminology, acquired through lifelong use of computers as well as studying Information Systems Science made it easy for me to translate most of the technical terminology. For example, translating terms like *drop-down menu* did not require any word searches because I was already familiar with the word.

Despite the familiarity with technical terms, there were still some occurrences when I had to look up a technical term. Altogether 24 diary entries dealt with problems with technical terminology. For example, the terms *tietue (*'record') and *tietoalue* ('data area') were unfamiliar. Inspecting these terms, they relate to concepts that are more familiar to people who work with database management than to the basic user, which may explain their unfamiliarity. In some cases, the word was familiar to me but I was unsure if I remembered the meaning correctly and had to check. For example, I was unsure if the term *liittymä* translated to *interface*, or if the term *vierityspalkki* translated to *scroll bar*, which is why I looked these up to be sure. In some cases, the word was familiar but I was unsure if I remembered the meaning correctly and had to check. For example, I was unsure if the term *liittymä* translated to *interface*, which is why I looked it up to be sure.

Most cases in this field of special vocabulary were solved quickly by using the available dictionaries. Peculiarly, in one case, I used my phone language settings as an information search tool. The instructions for the software contained the term *ennakoiva tekstinsyöttö* ('predictive text'), which could not be found in the dictionary I used. However, I remembered that the settings on my phone include enabling or disabling this feature. Thus, I changed the language in my phone to English and found the term *predictive text* from my phone's settings. This is a rather fun example of innovative information search methods.

6.4.1.2 Mathematical terminology

Mathematical language was a small but noteworthy LSP present in the data. It is logical that mathematical terminology was found in these source texts, because they are instructions for a software and the field of Information Technology is intertwined with mathematics. There were altogether seven occurrences of having to look up a mathematical term. A few other instances of mathematical terminology emerged as well, but the translator was already familiar with the terms and their translations beforehand. Since there were so few instances related to mathematical terminology, I will present all of them here.

Word searches for mathematical terminology included *promille* 'per mille', *looginen operaattori* 'logical operator', and *erotus* 'remainder' was checked twice. An interesting example was the term *raja-arvo,* which can refer to both the IT term 'boundary value' or the mathematical term *limit*. The context did not reveal which word was meant, so the choice was to go with the shorter and simpler-to-understand term *limit*. Spelling was also checked for *ristiintaulukointi* 'cross tabulation'. *Vähentää* 'subtract' was checked, because the context was *to subtract from a price*, for which I was uncertain which one is usually used, the mathematical term *subtract* or the alternative, *reduce*.

6.4.1.3 Publishing terminology

The software that the instructions were written for serves the purposes of publishing houses, which is why naturally the software and its manual contains a multitude of terminology related to the field of publishing. I had some but not much personal expertise in the field of publishing before, which is why this terminology caused some difficulties for me. As a consequence, many word searches were made in relation to publishing terminology, altogether 32 recorded instances.

Most publishing terms were found through a simple word search from the dictionary. Examples include *jakaja* 'deliverer', *lajittelukeskus*, 'sorting office', *jatkotilaus* 'subscription extensions', *kuljetustapa* 'mode of transport', *levikki* 'circulation', *haja-asutusalue* 'sparsely populated area'. In some instances, a moderately close equivalent was settled for. For example, no direct equivalent could be found for *lehtipaino*, so the more general term

'printing press' was used. Other search methods were used as well. For example, the translations for different types of subscriptions were found by searching for information online. These include terms like *kestotilaus* ('continuous subscription') and *määräaikainen tilaus* ('fixed-term subscription'). Additionally, a native speaker proof-reader was enquired, for example, if the preferred translation for the term *jättöpaikka* (a place, usually a container where a delivery can be left) should be 'drop-off point' or 'drop point'. The latter was suggested by the proof-reader. Perhaps the most peculiar example of publishing terminology that emerged from the data is the term *lööppi*, which was already discussed in section 6.3.1. *Linguistic translation problems*. As was mentioned before, this term seems to have no official, recognised equivalent in English, which is why the translation *placard* was used in the hopes that it serves as an understandable enough equivalent.

6.4.1.4 Entrepreneurship terminology

As discussed before, the emergence of entrepreneurship terminology and financial terminology was unexpected. The translator's familiarity with financial terminology was also minimal, which is why it is no wonder that this type of terminology required the most word searches. A total of 52 diary entries concerned financial terminology and seven entries concerned other entrepreneurship-related themes.

Fortunately, most financial terms were found with simple dictionary searches, for example *suoraveloitus* 'direct debit', *laskutuslisä* 'invoicing charge', *erä* 'instalment', *reskontra* 'ledger', and *etumaksu* 'advance payment'. Sometimes the dictionary suggested multiple possible translations and an Internet search or a corpora search had to be utilised to reveal the correct translation, for example with the terms *koontilasku* 'consolidated invoice' and *viitenumero* 'reference number'. Other entrepreneurship terminology apart from those related to finance included *esimies* 'supervisor', *myyntijohtaja* 'sales director', and *yhteistyökumppani* 'partner in cooperation'.

6.4.1.5 Other occasions of word search

Other special terminology emerged related to a myriad of fields, common and specific. Examples of word searches for special terminology in other fields than the ones mentioned above as well as more general, everyday vocabulary included *kuluva* 'present' (in the term

the *present year*), *järjestysnumero* 'serial number', the abbreviation *vrt.* ('cf.'), *puhelinvaihde* ('operator'), *ristiriita* ('conflict'), and *yksilöidä* ('individualise').

Word searches for general vocabulary were seldom documented in the translation diary for this study, even though help was often needed with general vocabulary, especially because translation was made from one's mothertongue into a foreign language. Most often, the documented instances of general word searches were related to other words surrounding them, for example parts in compound words, prepositions, and idiomatic expressions. Most of these instances were discussed in section 6.3.1. in relation to linguistic problems, and prepositions will be discussed in the next section relating to translation difficulties with complex sentence structures.

6.4.2 Complex sentence structures

Problems with long and complex sentences were categorised as translation difficulties. These differ from the syntactic problems already discussed in section 6.3.1.3 in that these relate to the sense of difficulty that the translator experiences, not the generalisable problems that differences between languages pose. Most often the translator's experienced complexity in this translation task stemmed from complex and/or long sentence structures in the source texts. Long sentences or complex sentence structures naturally take a longer time to decode and translate, which caused difficulties and slowed down the progress of translation. Stress and tiredness of the translator also slowed down the translation process of complex sentences. Sometimes, the source texts even contained grammatically incorrect sentences which also caused difficulties, but these are more related to problems in the source text and will be discussed in section 3.5.1.

Eleven recorded instances of difficulties related to complex sentence structures were found in the data, six of which were related to the complexity of the source text sentence and four were perceived difficulties of the translator, mostly due to tiredness. An example of complex source text is the following sentence:

> (13) ST: Tilaaja…-painikkeella **[ohjelma]** avaa listasta valitun laskun tilauksen saajan tiedot **Asiakaspalvelusovellukseen** ja sulkee Koontilaskun tiedot –ikkunan.

(14) TT: Clicking the button Subscriber… opens the information of the receiver of the subscription for the selected invoice and closes the Consolidated invoice details window.

The complexity of the sentence above relates mostly to the long noun phrase, *valitun laskun tilauksen saajan tiedot* ('the information of the receiver of the subscription for the selected invoice'). Arguably, the cause of the problem is also linguistic, because the English equivalent is even longer than the Finnish original, which adds to the length of the sentence, but even the original text with its long noun phrase is uncharacteristically long for a text type that should contain short and simple sentences. Complex sentences, such as the one in the example, noted in the translation diary as taking more time than translation usual.

6.4.3 Grammar

Occasions of grammar-related perceived difficulties related to the translator's lack of linguistic competence also emerged. Difficulties related to grammar mainly consisted of having to look up the prepositions that accompany certain words, especially the verbs and objects of the sentence. Corpora searches were an especially handy tool for solving these problems. A few diary entries also concerned looking up from the dictionary whether a noun phrase should be written as a compound or separately and one entry concerned not remembering if a comma should be used to separate certain clauses. In addition, grammar-related difficulties included looking up comma rules and a few idiomatic expressions.

Documented examples of word searches for prepositions that accompany certain words were *compensate **for**, add **to/in**, copy **to** clipboard, located **in**/located **at**, appear **on/in***, and *details **about/of.*** It is worth noticing that the accompanying prepositions may vary and meanings vary. For example, both *appear on* and *appear in* carry two main meanings that are used interchangeably: *emerge* and *perform*. The two documented instances of looking up the correct spelling of a noun phrase were *postcode* and *check box*, which were both initially thought to be spelled as **post code* and **checkbox*. A few idiomatic expressions were also looked up. Among the documented instances, there were *uusi sukupolvi* ('next generation')

and *toimia samalla periaatteella* ('work on the same principle'). The first of these was actually already familiar, but the latter was learned from utilising corpora search.

6.4.4 Lack of documentation

Nord (2001: 64) specified lack of documentation as one cause of translation difficulties. However, it is unsure what Nord specifically means by "lack of appropriate documentation" as it is not elaborated in any way. However, it most likely refers to an insufficient or entirely absent translation brief and to the general unavailability of meta knowledge, in other words, the lack of having any documents or other sources of information that explain the situation or concepts relevant to the source text. This category of translation difficulties could also be seen as including the lack of context, in other words, occasions when problems emerged due to being unfamiliar with the matters that the texts referred to. In the translation task present in this study, I was able to ask my coworkers for information related to the software. On a few occasions, also the source text writer was available to help explain what different parts of the text referred to. Problems were encountered especially when a Finnish term that has no English equivalent was used.

First, it should be noted that in the present translation task, the availability of resources that could be used to prevent problems related to lack of documentation was remarkably good when compared to most translation tasks. For example, in most translation tasks, the original text writer is not available for consultation, whereas in this translation task, the writer was available and present in person at times. In addition, the text relies on another text, the software, which usually helped in understanding the context. Most difficulties related to lack of documentation were actually related to the *temporary* lack of documentation, due to technical difficulties or unavailability of help from a coworker. They were solved later when information was available once again. In general, the present translation task was documented very well and very few difficulties were faced due to lacking documentation.

Technical difficulties were the most notable cause for the temporary lack of documentation in the present translation task. In general, translation in the modern age relies on technology, which naturally causes problems when technical difficulties occur. In the present translation task, technical difficulties had a considerable effect on the process, because the translation relied on interacting with the software for which the instructions were written. At times, the software was temporarily unavailable due to connection problems or other reasons. A few translation diary entries addressed problems that were faced in the translation process during the downtime of the software. They illustrate the importance of the software in providing context for the translation. For example, when the software was unavailable, the terminology used in the software as well as the general layout of the described functions was unavailable and translation could halt or had to be written with gaps to be fulfilled later. Also, when software was unavailable, screenshots could not be taken, which was an essential part of the translation task.

The lack of having a person to ask about the context was also the topic of some diary entries. For example, the function *Suoritus erälle* could refer to either creating a new payment or associating a payment with a certain invoice. The context was unclear at the moment when this difficulty emerged, because no-one could be consulted about it and the rest of the text context did not reveal this information.

A slightly different cause of difficulties was when the screenshots in the original text were wrong, missing completely, or a similar situation could not be replicated for taking a screenshot for the English instructions. This posed the same problems as with unavailability of the software: the lack of proper text context made the translation process slower or halted it completely for a moment. However, as these problems stem from the problems with the source texts and not the translator's personal difficulties, they will be addressed in the following section that discusses translation problems outside of Nord's categories.

6.5 Translation problems outside of Nord's categories

The findings in this study that could be investigated using Nord's categorisation of translation problems and difficulties were discussed above. A significant number of the translation diary entries that were written during the translation task present in this study fit very well into Nord's categorisation and overall, the categorisation was found relevant to analysing the problems that emerged during the translation process.

In general, Nord's categories apply well to translating source texts that are proof-read and written carefully by a professional writer. However, the situation of the source texts present in this study is perhaps outside of what Nord assumed from the source text in her categorisation. The source texts were probably produced quickly, which meant that writing functional text was prioritised over consistency of style and vocabulary. For this reason, some problems emerged from the content and form of the source text that did not fit the categories in Nord's model. Most of these problems were related to unnatural flow and grammar errors of the Finnish source texts, but there were also factual errors in the source text as well as grammatical errors in the software's English translations. Altogether, 124 diary entries were related to problems in the source texts or the software's English pre-translations.

6.5.1 Linguistic errors in source texts

Some problems were caused by grammatical mistakes as well as general linguistic errors in the Finnish source texts. As many as 44 diary entries addressed these linguistic errors in the source texts. Linguistic errors that were found in the source texts were most likely due to two factors: 1) the original text writer's field of expertise was not writing, and 2) saving time and producing satisfactory instructions was prioritised over fluent, consistent, and grammatically correct text form. However, the errors and the inarticulate nature of the source text at times made it hard to understand the meaning of the source text, which in effect caused problems in the translation process.

The most notable factor in the situation surrounding this translation task was the opportunity to change the source text. While the translations in the software were not

within my reach to change, the source texts of the instructions were. Traditional translation projects rarely come with the opportunity to revise and change the original text, whereas computer-assisted localisation tasks such as the one present in this study, with easy access and tools to change the original text, offer the opportunity to do so. Of course it also depends on the original text owner and author whether this opportunity is given to the translator. In this case the opportunity to change the source texts made it easy to correct the errors. However, it was not always easy to recognise the problem in the first place.

For example, the following sentence in the original text had its modifying clause (italicised) in the wrong place in relation to the word it was modifying (underlined):

> (15) ST: Ei kuljetuspakettia -valinnalla määritetään, jätetäänkö erityinen, tätä kuljetusta koskeva paketti tekemättä, *jossa osoitteettomat lehdet ovat osoitteellisia.*

Admittedly, the sentence contains a lot of information, which made it hard for the source text writer to place the modifying clause, but the end result was grammatically incorrect. This was corrected in the translation:

> (16) TT: Ticking the box No transport packet defines if a transport-specific packet where unaddressed papers are addressed will be made.

There were also multiple occasions of faltering flow on the sentence level and phrase level or non-literary tone in the source text. For example, the following sentence contained continuous repetition of the words that have the stem word *lasku* 'invoice':

> (17) ST: Näet Laskun rivitiedot -listassa laskulla laskutetut laskuperuste- ja lisäveloitusrivit.

The adjusted translation was *The list Invoice rows shows the invoiced extra expenses and invoice arguments.* To avoid using so many words stemming from *invoice* and to generally simplify the sentence, I omitted *laskulla* 'on the invoice' altogether as information evident from context, changed the subject and the verb of the sentence, omitted *-rivit* 'rows', and changed the place of objects at the end of the sentence to avoid the clumsy expression *invoiced invoice arguments*.

6.5.2 *Content errors in source texts*

In addition to linguistic errors, some content errors, such as factual errors, images in wrong places, and wrong image numbering were also found in the source texts. The root of these mistakes in the text usually seemed to be in copy-pasting entire paragraphs from similar documents and forgetting to change the key words. Again, the opportunity to change the source texts made it easy to correct all errors in the source texts. However, it was sometimes problematic to recognise that information was missing and to find that missing information in order to solve the problem. Altogether 40 entries in the translation diary were written about content errors in the source texts.

There were numerous errors in the texts that were most probably a remnant from copy-pasting a similar sentence or passage from a previous document and forgetting to edit the deriving content. As an example, one document ended with the piece of instruction *OK-painike tallentaa asiakkaan tiedot* 'Clicking OK will save the customer's information', however, the function described in this document did not concern changing customer information at all. Hence, the original text was corrected and the translation was made accordingly 'Clicking OK will save the entered information'. Additions were made when there was information missing from the original. For example, on a few occasions, it was assumed that the user had already opened a window without instructing the user to do so and without it being otherwise evident from the context. On these occasions, the instructions to open the window were added to the text.

Additionally, technical prowess helped in noticing and solving problems related to content errors. For example, there was a diary entry about a mistake in a source text passage: an example of an SQL statement did not contain the character ' ; ' at the end, which is required by the syntax of SQL. This mistake would have gone unnoticed by a translator who is unfamiliar with the syntax of SQL. This emphasises the importance of knowledge in the subject area to which the text to translate belongs.

In addition to factual errors in the text, there were also other types of content errors in the source text documents. For example, image numbering in image captions was wrong on

multiple occasions and had to be corrected. Sometimes the information in the caption was erroneous, for example, claimed that the image showed something that was not actually shown. On at least one recorded occasion, the screenshot was wrong: it was taken of a different function than the one it was supposed to present. Luckily, these types of problems were easy to both identify and fix.

6.5.3 Inconsistencies in source texts

One type of content error in the source texts was inconsistent content. Consistency was one of the aims for the quality of the translation in the present translation task because it was recognised as a feature of good technical writing. However, at times the source text contained inconsistencies, which required making adjustments in the target text. Making adjustments in the target text was in line with the translator's aim for consistency of the target text, but the text commissioner did not require consistency, which is why these inconsistencies were at times left in the source text without correcting them, depending on if the misinformation caused by the inconsistency was serious or not.

As an example of inconsistency, the piece of instruction *Liitä asiakas haluamiisi ominaisuuksiin* ('attach the customer to the attributes of your choice') was expressed inconsistently in relation to similar passages in the source texts: everywhere else it was said that attributes are given to a customer, not the other way around. For this reason, I changed the original text passage to *Liitä haluamasi ominaisuudet asiakkaaseen* and translated it accordingly to 'Give attributes of your choice to the customer' to bring more consistency to both the source text and target text.

6.5.4 Grammatical errors in software

As was noted in the description of the data, the software for which these instructions were written had already had been translated to English before my training period. It was also discussed before that while the source text writer is a fluent English speaker, he is not a native speaker of English and not specialised in the English language or writing in general. In effect, the source texts in the software contained perhaps more grammatical

errors than if it were produced by a native speaker, an English student, or a trained writer. There were 38 diary entries related to grammatical mistakes in the source text.

What made these problems especially hard to solve was that some of these grammatical errors could not be corrected because of the limited capabilities of the translator to change the erroneous texts in the software itself. This problem was caused by the special situation surrounding this translation task in particular: the instructions referred to a source material (in this case, software) which contained a lot of text produced by a non-native speaker of English who is not professionally trained in English. If this task type is compared to, for example, translating a traditional manual for a device, the device usually contains little to no text written on it and the small parts of text that it does contain are usually written by a native speaker of English, minimising the chance of grammatical errors. On all occasions, suggestions to change the translations to grammatically correct forms were made, but since making these changes could not be ensured, solving these problems required making a decision: whether to use the incorrect terminology in the text so that the instructions would be in line with the texts in the software, or whether to use the correct terminology despite the risk that it is inconsistent with the texts in the software and thus loses some of the quality of good instructions.

Two of the most notable, recurring grammatical mistakes in the source text were the mistranslation of *(maksu)tapahtuma* to 'event' (correct translation is 'transaction') and *kunta* to 'commune' (correct translation is 'municipality'). The first example, translating *tapahtuma* to 'event' is due to the one-to-many equivalence of the Finnish word *tapahtuma* and a very natural mistake to make: the word *tapahtuma* has two different meanings in Finnish, while the English equivalents are *event* and *transaction*. The second example, translating *kunta* to 'commune' probably relates to its similarity to the Swedish word *kommun*, which means 'municipality'. The similarity of *commune* with *kommun* makes it a so-called 'false friend' for someone who is familiar with Swedish, which is the case with the source text writer. These two expressions occurred in the software on multiple occasions, which made them an especially complicated source of problems. With both of these problems, I decided to translate the terms correctly and made the request to change the texts in the software.

6.6 Review of text type features and translation quality

The translation problems and difficulties that emerged during the process were discussed above. However, the aim of this study was not only to investigate the problems that emerged but also to review the translation quality by comparing its qualities to the qualities of the text type as they were defined in the theoretical framework. Specifically, in addition to the problems and difficulties described earlier in this study, notes in the translation diary also focused on the quality and the content of both the source texts and target texts and their suitability as representatives of the text type, instructions. Altogether, there were 234 entries in the translation diary that concerned text type features and quality of translation. Here, it should be noted that many diary entries were related to both conciseness and clarity, causing some overlap and explaining in part the quantitative mass of the present category.

The aim of the translation was to abide by the qualities of well-structured instructions, which often required completing some translational action that caused the target text to differ from the source text both stylistically and in content. The diary entries related to this topic are closely related to problems with the source text, so the themes, problem-solving methods, and examples related to this topic overlap in part with the ones in the last topic. The most significant difference is that in most cases where problems were found in the source text, the source text required altering, while in the cases discussed in the following, the source text was found sufficient and only the target text was adjusted.

6.6.1 Syntactic features of the texts

As was discussed before, certain syntactic features are characteristic for technical language (Yli-Jokipii 2004: 84-85). Out of these syntactic features, the most notable to emerge from the source texts and then also to be translated in a similar vein in the target texts was an abundance of declarative sentences and the frequent use of imperative forms, especially *paina* ('click') and *valitse* ('choose'/'select'), which was to be expected. Use of the present tense, frequent use of the verb *olla* ('be), and passive forms that express the result of an action (e.g., *automobile fender made of polypropylene*) were also found in the data. However, as these were constantly present in the translation process, they were not often noted

especially in the translation diary and thus not many diary entries relate to these phenomena in particular. It was found that one syntactic element of technical language, modal auxiliaries such as *pitäisi* ('should'), were not used frequently in the source text and in effect, were not frequently used in the target text either.

6.6.2 *Conciseness and usefulness*

Two significant goals in quality technical writing are conciseness and usefulness. These goals should be kept in mind at the same time, because conciseness involves shortening text, which may result in removing necessary information, decreasing usefulness in effect. In the present translation task, these goals were striven for mainly by omitting all expressions that were not important or it was found that the information they carried was otherwise evident from the context. There were also occasions where a phrase was unnecessarily repeated twice in a sentence, which allowed omitting some extra words from the sentences to keep them shorter. Altogether 109 diary entries referred to actions that were completed to achieve conciseness and usefulness. Most of these were related to omission.

Information that was evident from the context was omitted to keep sentences short and clear. Specifically, it was often unnecessary to mention the name of the software in the sentence, or to make the software the subject or agent in the sentence, when it was obvious from context and did not convey new information. For example, the source text phrase *valitse alue [ohjelmisto]:n tarjoamasta listasta* (translation: 'select area from the list provided by [software name]') contained the name of the software as agent. Here, mentioning the software would bring no new or necessary information to the sentence and could easily be omitted, resulting in the translation *select area from the provided list*. Sometimes, even entire clauses could be omitted as unnecessary information or summed up in a few words in the main clause. For example, the sentence -- *kaikille lehtiryhmän lehdille, joita oli kolme kappaletta* could easily be translated to '-- to all **three** publications in the publication group', in which the information of the subordinate clause *joita oli kolme kappaletta* could be condensed into the noun modifier 'three'. Another example of omitting unnecessary sentence elements was *Aloita osoitteenmuutos valitsemalla toiminto Osoitteenmuutos Painike-rivistä* in which the

phrase *painike-rivistä* was not only unnecessary because it was evident from the context, but its use was also inconsistent, because other similar pieces of instructions in other documents did not contain the phrase. Hence, the phrase was omitted from the translation 'Start making an address change by clicking Holiday addresses'.

At times, a piece of information was repeated in one sentence multiple times, which made sentences longer. This is, of course, essentially a problem that emerged from the source text form, however, it was not considered vital to change the original source text. Instead, unnecessary repetition was omitted in the translation when possible. For example, the source text passage *Voit hakea kohdistusvaihtoehtoja Uudet hakuehdot-välilehdellä käyttäen hakua* refers to search on two occasions (the verb *hakea* 'search' and clause *käyttäen hakua* 'by using the search'). It was found unnecessary to include the clause *by using the search* in the target text, because it is evident from both the verb and the context. Hence, the translation for the passage was *You can search for allocation options in the New search criteria tab*, which included the verb *search* but not the clause *by using the search*.

6.6.3 Clarity

As stated in the theoretical framework of the study, clarity is an essential factor in quality technical writing in that it decreases the chance of misinterpretation. Conciseness, as discussed prior, is one factor that contributes to clarity of text, but there are other factors as well, such as writing simple text and avoiding jargon. In addition to diary entries that noted on conciseness, there were 52 diary entries concerning clarity.

Most notably, the source texts in the present translation task contained unnecessarily complex expressions that needed to be simplified to achieve clarity. When the reader does not need to stumble through complex expressions, reading the text is faster and the text fulfils its function to instruct the reader in using the software. For example, the source text contained the passage *tarkista antamasi osoitteen oikeellisuus*, the literal translation of which would be 'check the validity of the address you have provided'. Here, it is unnecessarily complex to use the expression *check the validity*. Hence, this was translated to a simple form 'check that you have the correct address'.

Avoiding jargon was also considered a contributing factor not only to clarity but also to the target-audience orientation of technical writing. For this reason, it was viewed that overtly technical details in the source texts were unnecessary at times and could be omitted in translation. The technical competence of the audience played an important role in this decision. The target audience of the translations are people working in the publishing industry, which means that the main field of expertise for them is publishing, while familiarity with IT is a secondary skill for them. The commissioner of the text also confirmed that the translations do not need to be overtly technical, not even as technical as the source text sometimes is. For these reasons, I often chose simpler phrases instead of complicated technological terms. Naturally, technical terminology cannot be completely avoided in a technical text, but whenever it was possible, technical details were written as simply as possible. The best example of taking the technical competence of the reader into account was omitting the mention of parameters. Some documents explained how to use certain parameters in the software, something that is not usually done by basic users of the software, which is why they could often be omitted from the translation completely.

6.6.4 Consistency

Consistency, another important quality of technical writing, helps the reader to understand the text better. When a concept is referred to using the same phrase throughout the documents, the reader does not need to struggle in combining concepts and understanding meanings of different phrases. In the present task, the aim for consistency was applied not only to terminology, but also style and structure between texts. For example, the phrase *Etsi-painike käynnistää haun* was always translated to 'Finally, click Search' in all documents. Altogether 50 diary entries were related to consistency, however, most of these related to problems, which were already discussed in section 6.5. In the following, I will present more general remarks about consistency.

To ensure the consistent use of vocabulary, a vocabulary list was utilised. In this list, I kept a record of specific terminology and the translation that had been used for them. This was especially helpful with all the special vocabulary that was discussed in section 6.4.1. The vocabulary file eventually contained around 100 entries. The vocabulary file was also

eventually moved into a cloud storage online so that the translator who took over after my training period could use the same vocabulary consistently. Remarks about the vocabulary file's creation and use appeared in the translation diary at times. For example, there was an entry about looking up *koontilasku* 'consolidated invoice' from the vocabulary list.

One major factor that affected consistency negatively in this translation task was already discussed in section 6.5.4: the software contained some buttons and functions that were named using terms that were not correct translations. The major problem in these cases was that although I suggested corrections to the terms, I could not trust that the terms would later be corrected according to my suggestions. For this reason, I had to write the instructions using the incorrect terms to ensure that the customer would know what features in the software are being referred to.

Another factor that had a negative effect on consistency was time constrictions. Overall, the translation task was completed with as much care and professionalism as possible. However, commissioned translations are often to be completed within a certain time frame. This of course has some effects on the translation, because the translator will most likely have to prioritise some factors over others. This was the case with this translation task as well. Some comments in the diary addressed this problem. For example, it was noted that features that had been expressed as a list before were suddenly divided into headings in one document. While the aim of consistency would have called for changing the style to be similar in all documents, it was decided that this style inconsistency can remain in order to save time.

6.6.5 Natural flow of the target text

Flow of the source text was already discussed in section 6.5. The advocates of domesticating translation and Skopos theory found the natural flow of the text important for reader reception: the reception of the text is more favourable if the text does not seem foreign to the reader. In effect, a natural flow of the target text as a text written in English was one of the aims in this translation task. 25 diary entries regarded flow of the translation.

In any diary entry related to flow, the differences between languages played an important role, because literal reproduction of the source text might sound clumsy in the target language, and thus, it could be argued that diary entries about flow should be regarded as belonging in Nord's category of linguistic problems. However, the diary entries about flow are not as much related to problems as they are general remarks, which is why they were not regarded as belonging to the linguistic problem category in this study.

To achieve a more natural flow, free translation techniques were used. The split of translation into two phases, initial translation and proof-reading without comparing to source text, allows the translator to first use a more literal approach to translation and then to change the text to achieve a better flow, making the end product essentially freely translated. Nevertheless, free translation was often used in the initial phase as well.

A considerable number of diary entries concentrated on when and especially on how free translation was used. Free translation techniques that were used most often were omission, changing word order or clause order, and changing sentence constituents in general. These techniques were also used for correcting the errors of the source text (discussed in section 6.5) and for improving clarity (discussed in section 6.6.3), which makes it harder to estimate the exact number of diary entries connected to each of these phenomena. In other words, while the recognised number of diary entries related to flow is 25, the category overlaps with other categories, making the real number far greater.

A good example of a remark about the flow of the text is the aforementioned translation of *Etsi-painike käynnistää haun* to 'Finally, click Search'. Almost all documents in the present translation task contained this expression, which made it a recurring phrase. A more literal translation of the term could be for example 'The Search button starts the search'. However, the translation that was used is more fluent: the word *finally* connects the phrase to context in that this is the final step in the search process, the sentence is short, and the word *button* is omitted altogether because it is evident from the context. In addition to flow, this example also conveniently illustrates other aspects of quality technical writing and ease of reading: it includes shortening sentences and omitting unnecessary

information. It is also an example of the aim to abide by the qualities of the technical language, in this case, by changing the verb to imperative form.

6.7 General remarks

Finally, the translation diary contained 24 entries that are not related to any of the themes of the research questions in particular. These diary entries regarded the translation process in general. As these diary entries do not relate to the aims of the study per se, they will be discussed very briefly.

The remaining diary entries related to noticing mistakes in my translations in the revision process, my feelings about the translation process, and other general remarks about the process. For example, one translation mistake was that I had not noticed one word in the source text sentence, but I later noticed this and added it to the translated passage. Other mistakes included looking at the wrong feature in the software for a while, which naturally caused problems with translation, because the context conflicted with the text and confused me. Two diary entries also noted on my feelings during the process, specifically that I was gaining confidence in my skills as the translation training period progressed and I was getting more familiar with the functionality of the software for which I was translating instructions. Other general remarks included noting that one document was an exact copy of an already translated document, meaning that it does not need to be translated again, and about making backup copies of documents.

7 DISCUSSION AND CONCLUSION

The aim of the study was to find out what problems emerge in the translation process of the present text type as well as to describe the progress of the present translation task in general, particularly concentrating on the influence of text type qualities and tools of translation on the translation process. The findings of the analysis that was presented above will now be summarised in order to explicitly answer the research questions that this study set out to investigate. An evaluation of the process and suggestions for further study conclude the thesis.

7.1 Translation tools

The translation tools that were used in this translation task were found to be sufficient, helpful, and were perceived as easing the process. The dictionaries that were used fulfilled their purpose, although some special terminology had to be looked up from other sources. Out of all the translation tools used, the use of translation memory was found particularly useful. The task contained multiple documents, which often repeated sentences and even entire paragraphs. However, the type of translation memory that was used was perhaps not as useful as a translation memory that would save units shorter than full sentences. This would have also made the process of manually saving used vocabulary obsolete and would have significantly sped up the process. In general, I would recommend the use of a translation tool that saves terminology for the translation of similar text types as the one present in this study.

7.2 Translation problems and difficulties

In order to analyse the challenges and problems that emerged in the translation process, Nord's (2001) model of translation problems was utilised in this study. In addition to the categories that Nord set for problems, she also acknowledged the existence of subjective translation difficulties, which were also addressed in the analysis. Nord's model applied well to the present data, because 71% of the problems and difficulties encountered in the translation task found their place in Nord's classification. The problems that did not fit into the categories in Nord's model were mainly due to the problems in the source texts, which was something that the model did not take into account.

In the present translation task, the most prominent problem type applicable to Nord's model was linguistic problems. Nord defined them as problems resulting from the differences between languages. Most of the linguistic problems that emerged in the present study were related to vocabulary, especially cases of one-to-many and one-to-zero equivalences. Among the cases of one-to-many equivalence, one prominent example was *tehdä*, which, depending on the context, could translate to 'make', 'do', or 'perform'. However, in the present text type, the word usually referred to creating or adding new information, which is why it was particularly important to consider the meaning on each

occasion. Indeed, the best tool in solving equivalence problems was analysing the context and making the word choices accordingly. Additionally, problems related to syntactic elements emerged as well, mostly related to word order and natural flow of the target text language.

Pragmatic problems were the second-most prominent problem type that emerged in this study. Pragmatic problems relate to changes between the source text and target text situation. As could be expected based on the differences found in the translation brief, most pragmatic problems were caused by the change in software over time and different audience between the source text and the target-text. Most notably, the source text contained outdated information about the functionality of the software, which required correcting the information in the target text. The audience of the target text was also taken into account in linguistic choices, most notably by using British English expressions. This was at times problematic, because the software used American English expressions at times.

Text-specific problems also emerged in the translation process, which was unexpected. Text-specific problems, according to Nord, were related to puns, neologisms, and figures of speech, all of which are usually present mostly in literary texts, not instructions. However, these specific instructions contained neologisms, because the company had coined some terms for use in its software. This included mostly the names of features in the software: the actions that these features completed had no recognised name in the language community, so one had to be coined, which then required coining a target language expression in the translation process.

Cultural translation problems were not found at all in the present study. There are at least two possible causes for this. Firstly, the text type present in this study usually does not contain slogans or other similar types of creative writing. In other words, it could be expected that few to no cultural problems would emerge. Secondly, it may be that if there were any cultural problems in the data, they went unnoticed and were not recorded in the translation diary. This is an unfortunate consequence of using the translation diary as the main source of data: some remarks about the translation process may go unnoticed.

As much as 172 translation diary entries, in other words, over a quarter of all diary entries related to subjective translation difficulties. However, this large number of entries is explained by the fact that word look-up was considered a translation difficulty in this study. Indeed, most translation difficulties related to special terminology. The initial hypothesis in regard of special terminology was that the present translation task would concern an abundance of technological terminology and publishing terminology. Additionally, it was expected that most difficulties would be caused by publishing terminology, because while the translator was familiar technical terminology, publishing terminology was not familiar. However, the result of analysis was that most difficulty was caused by financial terminology. The abundance of financial terminology in the source text was surprising and not expected. Nevertheless, it was logical that language of finance turned out to be the most difficult LSP for the translator. In addition to special vocabulary, complex sentence structures in the source text also caused translation difficulties, because they were hard to understand and transfer to the target text, which slowed down the translation process. Some difficulties were also caused by grammar as well as the occasional lack of context, especially related to technical difficulties. Overall, the technical prowess of the translator helped in completing the present translation task and most likely lessened the occurrence of some translation difficulties, especially regarding technical terminology.

It is possible that some translation difficulties that emerged during the process were put into other, perhaps wrong categories in the analysis. This is because in some cases, it was hard to know if something was a problem because of language-dependent reasons or the lack of competence. For example, the neologisms that were found in the text may not be neologisms at all and were categorised as such only because the translator was not familiar with the term or had insufficient methods of information search that did not find the necessary information. Such was also the case in one of the instances of a pragmatic problem described in the analysis where the translator did not know whether a conscript discount is common in the target culture but made the translation decision based on the guess that it is not. This difficulty was caused by the translator's unfamiliarity with the target culture.

Problems that emerged but could not be analysed using Nord's model were mostly caused by problems in the source text. It was found that the model does not explicitly address problems related to the source text, which were frequent in the present task. The reason for this is probably because Nord prepared her model for educational purposes, thus assuming in her categorisation that the source text is a polished, proof-read product. However, this is not the case in all translation tasks in working life, especially with source texts produced by technical experts, not language experts, like in the present translation task. Arguably, some categories in the model were close to addressing source-text problems. For example, the name of the category of text-specific problems would suggest that it may address problems related to source texts, but Nord's definition of the category is limited to the translation of puns, neologisms, in other words, phenomena on the phrase level. Thus, it does not address the qualities of the source text per se and neither the problems emerging from them. The pragmatic category is also close, but it only addresses differences between source and target text types; in this case, there was no difference between the text types of the source text and target text. The cultural category presents the same problem as text-specific: Nord's definition addresses only style differences between source culture and target culture, making the category not applicable to source-text problems. Indeed, if Nord's model required expanding so that it addresses also unpolished text types that may be encountered in the work life of a translator, the category of source-text problems could be added to the model.

Problems in the source text included grammatical errors, errors in the factuality of the text, and inconsistencies. Probably the most problematic fact was that the English version of the software contained grammatical errors, because these could not be corrected. Instead, I had to either go around them in the text, use the correct term in spite of the inconsistency between the software and its manual, or abide by the grammatically incorrect expressions in the software. Factual errors in the texts were also perceived problematic because the correct information had to be dug up. There is also a high risk of content errors going unnoticed, if the translator does not pay attention or is not an expert in the topic of the text. Linguistic errors in the source text were not very problematic, but still worth noting. They are remarkable, because the original text writer is not a professional writer, but

rather a professional in IT, which explains the grammatical errors. Indeed, often the writers of instructions in technical fields are experts in technology, not writing, which makes technical texts an especially interesting text type to study linguistically.

It is interesting that the results of the problem categorisation in this study are in stark contrast with Lehmussaari's findings in her thesis. Lehmussaari also utilised Nord's model, and found that 60% of the problems that she faced were text-specific, 25% were cultural and pragmatic, and 15% were linguistic problems, while the most prominent problem categories in my analysis regarding the model were linguistic and pragmatic, with very few text-specific problems and no cultural problems. However, Lehmussaari's translation task was also very different from mine: her source text was an auto-biography, mixing prose and poetry. The difference between the findings of this study and those of Lehmussaari's study show that the problems in translation may well vary greatly depending on the text type. However, this conclusion should be drawn carefully, because there are a lot of other factors affecting the perceived translation problems, most significantly the translator, how the problems are perceived by the translator, and the method of collecting and presenting data about the translation problems.

7.3 Text-type qualities

One aim of this study was to review how the source texts fulfilled the qualities of the text type, instructions, as well as to describe what measures were taken in order to ensure that the target text fulfills these qualities as well. The summary of technical language and technical translation qualities in section 3.5 was used as reference for this.

Despite the fact that multiple source text problems were addressed in the study, the source texts were generally found to be good representatives of the text type. Indeed, most of the qualities of technical language were present in the source texts. For example, an abundance of nominality and imperative forms were found. However, as the analysis revealed, high readability was not always present. For example, long and complex sentences were used often, whereas simple, easy-to-read sentences should usually be

favoured in instructions to increase clarity of the text. In addition, some content errors and grammatical errors were found in the source texts.

Translation diary notes also paid attention to how the qualities of the text type were fulfilled. Most significantly, notes concentrated on when and how conciseness and clarity were ensured by keeping sentences as short as possible and words as simple and short as possible, while also avoiding losing any information. Unnecessary repetition was also avoided. Consistency of terminology was also considered important for understandability. This was realised by keeping track of used translations for most of the LSP terms. Additionally, one aim was to keep the use of articles to a minimum. However, target texts still contained a lot of definite articles even in places where they are not absolutely necessary, so this aim was not fulfilled perfectly.

7.4 Special features of the present translation task

The text type qualities were fulfilled in the present translation task, as discussed in previous paragraphs. Nevertheless, this case study is based on one translation task, which possesses some notable special features of its own. Most prominent features that affected the translation process in this task was the pre-translation of the software and the time constrictions of the task.

The pre-translation of the software was found at times beneficial and at times detrimental. On the one hand, the pre-translation helped by providing the company's own translations for functions and features of the software and speeding up the translation process, because not all special terminology had to be looked up. On the other hand, the pre-translation was found at times erroneous, due to the fact that it had been translated by a non-native, non-fluent speaker of English, who was educated in the field of IT, not languages. Additionally, these errors could not be corrected instantly and it was unsure if the requested corrections would be made in the future, which made it necessary to use different ways of coping with this in the translation, for example, by avoiding direct reference to the incorrect term or having to use the incorrect term regardless.

Time constrictions set by the commissioner affected the qualitative goals of the translator. Since the translation task was made primarily for use of the company and its customers and only secondarily for this study, it was not possible to take everything that I wished into account. On the other hand, the fact that the data in this study was a commissioned translation task with its limitations also provided a more natural and hands-on approach to the task, and makes this study more descriptive than prescriptive.

7.5 Evaluation of studying the translation process

The present thesis studied the translation process of an extensive translation task by a novice translator. Indeed, the translation task that was viewed in this study was my first extensive translation job. All in all, studying the process was perceived as beneficial for deepening my understanding of translation, both as work as well as a field of study.

Prior to the translation task, I had only translated a few short documents. Furthermore, my English studies had contained very little study of translation, although I was oriented to work as translator, specifically as technical translator. Therefore, studying translation in this thesis significantly deepened my knowledge in both the theoretical aspects of translation as well as translation as a process. It also prepared me for future work as a technical translator.

Most of the concepts that formed the theoretical framework of the study were already familiar to me before I started working on this thesis, however, getting more acquainted with translation literature significantly deepened my knowledge of the area. While I was already familiar with the concepts of literal translation and free translation and the general features of technical writing, I was not familiar with different approaches to translation before. Indeed, completing this thesis required significant absorption to literature and theories of translation. Learning about translation as a field of study helped immensely in not only completing this study, but also in deepening my expertise in translation and preparing me for work as a translator.

Most significantly, utilising a translation diary was found beneficial for not only reporting the process and the problems that emerged but also for understanding the process.

Keeping a translation diary was fortunately accepted by the commissioner of the translation, which might not be the case in all translation tasks. Indeed, the translation diary slowed down the translation process to some extent, but it made up for it by ensuring the quality of translation. Keeping the diary acted as a type of self-monitoring: I believe that the quality of translation was paid more attention to due to the translation diary. A similar result was found by Lehmussaari (2006: 72-73) in her thesis.

Altogether, I would estimate the quality of the translations studied in this thesis to be good, in large part due to the research process supporting the translation work. This was ensured by self-monitoring the process with the help of the translation diary and by comparing the result to the aims of quality technical writing as established in the theoretical framework. The problems that were faced during the process were in some part due to the inexperience of the translator, which further emphasises why case studies such as this one are important in mapping potential problem areas for novice translators.

7.6 Suggestions for further study

The aim of the present study was to describe translation as a process and to find out what problems translators face. The study achieved its goals and answered the research questions that were set. This thesis can hopefully provide valuable insights and practical tips for other translators working with LSPs. There is, however, a myriad of phenomena that could be studied in the field of translation studies and in regard of technical translation, of which the present study has explored only a few.

Because the focus was on the general nature of translation and especially on function as a starting point, a translation diary was utilised in this study. However, a more systematic linguistic analysis scrutinising the translation process could also have been carried out. For example, it would be interesting to conduct an in-depth analysis of what the causes of the linguistic problems were on the level of smaller language units, like morphemes. Some attention was paid to details in this study, for example what sentence elements caused problems, but the main focus was on larger phenomena. A smaller data set would have also provided better opportunities for a deeper analysis.

The problems stemming from the source text were an unexpected finding in this study. This was in part due to the fact that the model used for identifying problems did not address source-text-related problems. If the model was to be developed, it would be beneficial to include these types of problems as well. Furthermore, the abundance of source-text-related problems was so great that it would have been possible to conduct an entirely separate study about identifying the problems that derive from the source texts. This, of course, would no longer relate as much to translation studies, but rather to assessing the quality of language in instructions.

As the present study is a case study, one must be careful with generalising its findings. However, it would be interesting to apply the same problem-type assessment to other similar technical text translations, especially translations of instructions, and compare the results. In this case, it would be more justified to conclude that translating technical texts tends to pose certain types of problems.

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