



When *grundskoleklass* becomes *mainstream classroom*

An investigation of the translation of Swedish compound nouns into English
using Google Translate

När *grundskoleklass* blir *mainstream classroom*

En undersökning av översättningen av svenska sammansättningar till engelska
med Google Translate

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Abstract

The aim of this study was to examine how Swedish compound nouns are translated by the machine translation program Google Translate. In order to conclude what main types of mistranslation occur, different texts were first translated by the program; all compound nouns were then listed and analysed, and the mistranslated compound nouns were categorised in accordance with the manner of mistranslation. The study was also working from a hypothesis that the frequency of a compound would affect the chances of getting a correct translation. To test this hypothesis, queries were run in a Swedish corpus to get an estimation of how frequently used the compounds are.

The results show that mistranslations could be categorised into four different types, and that the most common types of mistranslation were omitting part of the compound, and translating reoccurring compounds inconsistently. The hypothesis that compounds with high frequency in the corpus would be correctly translated, while compounds with low frequency would be incorrectly translated, could not be conclusively confirmed or refuted. Although there was some indication of a link between frequency and translation accuracy, the connection was not clear enough to claim that there is a correlation.

Keywords: translation, machine translation, compound nouns, Google Translate

Sammanfattning på svenska

Syftet med denna undersökning var att undersöka hur sammansättningar på svenska behandlas av maskinöversättningsprogrammet Google Translate. För att bedöma vilka som var de vanligaste typerna av felöversättningar översattes först olika texter med programmet. Sammansättningarna listades sedan och analyserades, och felöversatta sammansättningar kategoriserades efter typ av felöversättning. Undersökningen utgick vidare från hypotesen att frekvensen av ett sammansatt ord skulle påverka sannolikheten för en korrekt översättning. För att testa denna hypotes gjordes sökningar på orden i en svensk korpus för att få en uppfattning om hur vanligt förekommande sammansättningarna är.

Resultaten visar att felöversättningarna kunde kategoriseras som fyra olika typer, och att de vanligaste typerna var att ett led i sammansättningen utelämnades samt att återkommande sammansättningar var inkonsekvent översatta. Hypotesen att sammansättningar med hög frekvens i korpusen skulle bli korrekt översatta och sammansättningar med låg frekvens inkorrekt översatta, kunde inte entydigt bekräftas eller vederläggas. Det fanns vissa indikationer på en koppling mellan frekvens och översättning, dock var dessa inte tydliga nog för att hävda att ett klart samband existerar.

Nyckelord: översättning, maskinöversättning, sammansatta substantiv, Google Translate

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List of abbreviations

FE	First element
MT	Machine translation
pmw	Per million words
SE	Subsequent element
SL	Source language
SMT	Statistical machine translation
ST	Source text
TL	Target language
TT	Target text

1. Introduction and aims

Translation is a term that can carry several different meanings. It can refer generally to the subject field of translation; it can refer to a text that has been translated from one language to another, and it can also refer to the process by which this translation is made, otherwise known as translating. The process of translation between languages involves a translator, who changes an original text (called the source text, *ST*) in its original language (called the source language, *SL*) into a written text (target text, *TT*) in another language (target language, *TL*) (Munday, 2001:5).

When translating a text, the translator carries it from one language to another, making it available to readers not familiar with the language in which the text was originally written. This might seem like a straight-forward procedure, a direct transfer of words into equivalent words in another language. This is, however, not quite true, since languages might be very different in structure and what connotations words carry. There may be words in one language for which there are no equivalent terms in another language. Different languages make use of very different systems.

Can a machine manage this sometimes very advanced process and perform translation for us? There certainly has been no lack of interest in producing a machine or computer program for that purpose. Perhaps the most advanced translating program available today is Google Translate; a free online tool which instantaneously translates text between different languages. It uses a technique where translation patterns are found by processing a vast amount of documents; with a continuously growing body of text for reference, its translations are constantly improving. It seems like a perfect tool in a time when more and more information needs to be transmitted across language borders. However, it is probably obvious to anyone who has used Google Translate that the translations are often far from perfect, and that the message of the source text sometimes gets distorted.

The area of interest for this paper is the possibilities and restrictions in using Google's machine translation to transfer a text from Swedish into English, focusing on structures which are dissimilar between the two languages. Making translations of texts from Swedish into English using Google Translate, the study has examined how compound nouns are handled by the machine translation.

The texts used as primary material were randomly selected from Swedish municipal websites and contain information to the public concerning municipal services. The reason for using this type of text for the study was that the texts were thought to represent samples of the

language style used to convey information to the public. Citizens not very familiar with the Swedish language might need to receive this information, and thus might use Google Translate in order to get a version of these pages in a more familiar language. The texts would be expected to be written in a manner that will be easy for everyone to understand, not employing an unnecessarily bureaucratic and specialised language. In short, this could be considered a text type one would expect Google Translate to be able to handle.

The working hypothesis was that the frequency with which a compound noun is used will affect Google Translate's chance of making a correct translation. Compound nouns frequently used in Swedish texts will be correctly translated, while compound nouns used less frequently will be erroneously or inconsistently translated. To test this hypothesis, the frequency of the compound nouns in Swedish corpora was assessed, using the online resource of *Språkbanken* (the Swedish Language Bank).¹

A research question to guide the study is:

- What main types of mistranslations occur when translating Swedish compound nouns into English using Google Translate?

2. Background

Machine translation has been around almost as long as the computer itself. For a very long time these types of programs have been available only to professionals and paying customers; today, however, Google Translate and other online machine translation services provide free translations to millions of people. Google Translate instantaneously transfers text between different languages using a technique known as statistical machine translation, where translation patterns are found by processing a large amount of documents. In this section the emergence and advancement of the machine translation field is briefly accounted for, with a special focus on statistical machine translation. Also included is a survey of some of the research conducted on Google Translate, and a description of compound nouns, which is the linguistic category of interest to the study.

2.1 Machine translation

Machine translation (henceforth abbreviated *MT*), is a term denoting tools that are intended to translate texts without the aid of a human being. Hutchins (2006:376-380) outlines the history

¹ The corpus can be found at <http://spraakbanken.gu.se>.

of machine translation. MT came about at the end of the Second World War, when discussion began as to the potential for the newly invented computer to be used for automatic translation. In 1954, using a restricted vocabulary and simplified grammar, a simple MT system could be devised that translated a Russian text into English. This was enough to stimulate interest in both the United States and the Soviet Union. Development in computing and formal linguistics seemed to promise great improvements in the quality of machine translation. The initial enthusiasm led some to consider high-quality machine translation to be just around the corner, and translators soon to be obsolete. As work on this technology progressed throughout the 1950s and 1960s, however, the complexity of linguistic problems became apparent. Although the first working MT systems showed that low-quality translation could be useful, there was a growing disappointment that computer translation could not live up to the high expectations. After a decade of very little progress in the field of MT research, the late 1970s and early 1980s saw the emergence of new MT systems and a revival of research. One of the most ambitious projects of the 80s was the Eurotra project of the European Communities (now the European Union), intended as an advanced translation system for transfer between all the languages of these organisations. The 1990s saw the rise, or rather the revival, of the so-called statistical machine translation (further discussed in section 2.3). This was the decade when the internet entered the homes of the general public, and especially from the mid-90s, the Internet has had a major impact on the development of machine translation.

The Internet opened the possibility for people to communicate freely across the globe, but language differences still had to be bridged. Developments in intelligent technology seemed to hold the potential for more powerful translating tools to bridge this gap and benefit from the ever growing stream of information on the web. In the mid-90s, MT software products appeared with the purpose of translating webpages and e-mail messages, and since then many MT vendors have provided online translation services. Until 1997 MT services were only available to paying customers, but the launching of Yahoo's Babel Fish ushered in a new era of free online translating tools (Hutchins, 2006:382; Hampshire & Porta Salvia, 2010:200).

According to Hatim and Munday (2004:118), statistical machine translation has been the dominating approach to MT from the 90s onwards. The statistically based MTs analyse data from a large body of bilingual parallel text collections (these bodies of texts are known as *corpora*), to determine the probability of matching given SL and TL terms and expressions. The program then determines the most statistically probable match for the translation. The internet is in a way a massive ever-growing digital corpus, containing all kinds of texts in

different genres. The development of the internet thus means that there is a rough corpus available to every researcher and translator with a computer.

According to Hartley (2009:121-122), there are two major modes in which MT is used today; on its own in order that the reader gets the main points of incoming information written in a language unfamiliar to the user, and with controlled language input and post-edited output as a time-saving and inexpensive alternative to full human translation, in cases when high quality is not a top priority. MT is an advantage in the case of time-sensitive documents, for example financial market bulletins, where waiting for a human translation is not really an option. Examples of when MT has been advantageous include the Global Public Health Intelligence Network, which used MT to extract information from Chinese reports in late 2002, allowing them to detect the outbreak of SARS two months before any English-language media reports; and the European Patent Office, which uses MT to enable affordable and less time-consuming browsing of patent content.

2.2 Why translation might be difficult for a computer

Arnold (2003:119-120) describes some important points which explain why languages are hard to reconcile with a computer system. The object of any translator, human or machine, is to take a text in one language and produce a text in another language which is in some sense equivalent; there are, however, skills involved in this procedure which go beyond mere competence in the languages concerned. Translators are in a sense asked to produce their own text in the TL – it needs to be clear, unambiguous, interesting; perhaps humorous or even elegant, poetic, gripping etc., depending on text type. When evaluating MT, one might keep in mind that it is one thing to produce a target text that can be considered a rough equivalent, but quite another thing to ask of a computer program to make a text interesting or any other of the criteria mentioned. The translation the MT produces must be expected to be in draft quality; a more or less faithful rendition of the content which will have to be post-edited.

In reality, Arnold continues (2003:120), the translator is often required to function as a cultural mediator, since languages are carriers of culture. What may be obvious to readers of the source text may need to be explained to the readers of the translation. This poses considerable problems to a computer, which is fundamentally just a device that follows set rules. Cultural mediation requires sophisticated reasoning, and sometimes the rules might have to be broken. The source text might contain new terminology, which the translator will have to find equivalents for in the TL. The translator must be able not just to extract the meaning from a text, but also to reason as to what meaning the reader will extract. If this

requires human thought, then what we can expect of a machine is simply to take a text in one language and produce a text in another language with approximately the same content. This will mostly be comprehensible to readers that are already familiar with roughly the same culture and knowledge as the readers of the ST. In the end, the text will require a human to be involved to make sense and/or edit the text all the same.

While significant progress has been made in the MT field, at least concerning some languages, restricted domains and text types, there are still some fundamental theoretical and practical problems. The basis of these problems, Arnold concludes (2003:121), lies in four particular limitations of computers; the inability of computers to (1) perform vaguely specified tasks, (2) learn things (as opposed to being programmed), (3) perform common sense reasoning, and (4) manage problems with large numbers of possible solutions. A human brain is able to do these things, with considerably less effort than programming a computer to do it.

2.3 Statistical machine translation

Hartley (2009:121) explains that there are two basic approaches to constructing MT systems. The first one is the rule-based MT, meaning that knowledge about the morphological, lexical and syntactic structures of the languages and the mappings between them are encoded. The second one is the statistics-based MT, meaning that enough aligned data are provided so that the MT system is “trained to learn” the statistically most likely mappings between the languages.

In the last two decades, Isabelle and Foster claim (2006:415-416), the MT field has been largely dominated by the statistical approach to machine translation. This approach means that the program uses a massive body of bilingual parallel text collections in order to determine the probability of matching the given terms and expressions between two languages; the program then employs the most statistically probable match for the output. The expansion of the Internet in the last few decades has meant a prosperous situation for development within the statistical machine translation (SMT) paradigm, since the World Wide Web is an expanding collection of digital documents in different genres that can be utilised as corpora for SMT programs.

The SMT method is not an entirely new approach, Isabelle and Foster continue (2006:415-416); statistical techniques have been considered since the emergence of the MT field, motivated by early success in cryptography. The modern interest in SMT has its origin in the work of a group at IBM in the late 1980s. The set of statistical models that they

presented in 1993 has become known as the IBM models, and continue to play a central role in the development of STM. This classical approach typically means that the program will translate the text sentence by sentence, working to find the most probable target sentence for a given source sentence. For each sentence to be translated, the program generates a plethora of possible translations, from which it keeps a smaller list of the statistically most likely translations (Isabelle & Foster, 2006:415-416; Yamada & Muslea, 2009:151).

According to Hartley (2009:123), a major challenge to the ability of the SMT is scarcity of data; this is largely due to the fact that it primarily uses parallel corpora of documents that have already been translated by humans. Languages with fewer translations between them therefore have a lesser probability of correct translation. Mistranslations occur when words in the source text have been encountered in the training data rarely or not at all. Because of this, errors made by an SMT system can sometimes be unintelligible. An error made by a rule-based MT program is likely more consistent than one made by an SMT, since they are the product of a rule-based process; these circumstances can make SMT errors harder to post-edit than rule-based MT errors. However, corrections that are made to SMT outputs are added to the program, constantly improving the training data and the program's accuracy.

Arnold (2003:138-140) explains that even though the SMT might solve many problems of machine translation by taking a statistical approach instead of being bound to representations and rules, it might still encounter ambiguity problems. Even in cases where there is an exact match of an SL sentence, it might still correspond to additional target examples, between which a choice has to be made. If the database is sufficiently large and representative, ambiguous cases will get alternative translations; there will often be many examples that partially match an input, each suggesting a different translation. Therefore, the more the source and target examples differ from a word for word alignment, the harder it will also be to work out a matching translation.

2.4 Google Translate

Koletnik Korošec (2011:9-10) writes about Google Translate. It is, arguably, the biggest and most popular machine translator; a statistical MT system that provides automated translation, either directly or via an intermediary language (English), at present between 71 languages. Google Translate was presented by the Google Corporation in 2007, being the result of many years' work of the Google MT group led by German scientist Franz J. Och. Among others, Google Translate utilises translations made for the United Nations, the European Union and European Patent Office as corpora for statistical analysis. Google has also incorporated a vast

library of books since they started scanning text for the Google Books project. The statistical approach, as mentioned earlier, means that the MT system does not have to be programmed in the individual languages and their specific rules; statistical models and algorithms are derived from corpus data that are then used to produce translations. Precision of the translations depends on the size of corpus; languages which have been translated in fewer texts will thus have a lesser chance of adequate translation. Google Translate has proven beneficial, but with great variation in the degree of accuracy between individual languages.

Google Translate further relies on a sort of crowdsourcing, Rensburg, Snyman and Lotz explain (2012:516-517); collecting and incorporating free labour of the general public. Since this means that Google Translate's database is partly made up of contributions from non-professional translators, it has given rise to some questions concerning the quality of the translations. While Google might maintain that the system will become better the more data that is fed into it, Rensburg et al. (2012:517) continue, the question remains to what extent this actually happens and who is responsible for these improvements; and more importantly, who oversees these translations to ensure that the quality is indeed improved.

2.4.1 Previous research on Google Translate

The number of previous studies on Google Translate is not exactly abundant, but a few have been conducted. Some researchers have focused on comparison between Google Translate and other MT systems. Savoy and Dolamic (2009:139-143) evaluated the translation of documents from French into English made by different free online MT tools, including Babel Fish, Google Translate and Prompt. A total of 117,452 documents were fed into the MT systems and evaluated, in order to make a ranking. They found Google Translate to be the most reliable, followed by Babel Fish as second, and Prompt as third. They noted problems for Google Translate with lexical ambiguity, grammatical case, and idioms, which were translated word for word.

Hampshire and Porta Salvia (2010:202-207) studied Google Translate's ability to translate from Spanish into English. Their goal was to evaluate the program qualitatively, working from what they call a Human Likeness Approach; meaning, in short, that human translators evaluated each text individually using applied linguistic criteria. Further, each sentence was specially targeted to test a specific feature of language. These targeted features included phrasal verbs, SVO syntax, idioms and lexical ambiguity. Comparing Google Translate to other free online translators, the study found that Google Translate was the best

among them in managing formal text; it did, however, rank lower on the scale when it came to idiomatic expressions, for which it made word-for-word translations.

Aiken and Balan (2011:np) investigated the translation accuracy of 2,500 language-pair combinations using Google Translate. The study was ambitious, investigating translations between 50 languages. The results were varied; the authors deemed the translations between European languages as being quite good, while those involving Asian languages were often relatively poor. This is closely tied to the (un)availability of large and qualified corpora. It further seemed that translation quality is text-type, genre and subject related. Their study has been criticised, however. Rensburg et al. (2012:517) write that their use of only six example sentences could be criticised as being too limited a text sample, and further, that more complicated text samples would likely have yielded more reliable results.

Ellender (2013:np) made a comparative assessment of Google Translate and two other free online machine translators, Wordlingo and Free Translation. Using a formal text of approximately 200 words from the European Commission's website, each MT was asked to translate from three different SLs into English. The languages used were French, German and Swedish. The intention was to establish whether the MTs more or less efficiently handled languages from different language families. The study found that the French to English translation was very accurate. Items of vocabulary were translated correctly and the general intelligibility was deemed to be very high. The German to English translation was largely correct, but suffered from some small but fundamental inaccuracies. The translation was considered as generally succeeding very well in preserving the message of the original text; but due to incorrect vocabulary and word order in some places, as well as the occasional confusion of the subject of sentences, the meaning of the original text was sometimes lost.

Ellender (2013:np) considered the Swedish to English translation to be "extremely correct"; there were some "small but fundamental" errors here as well, but overall this translation was judged to be correct in both vocabulary and sentence structure. Not only did the author deem it a very faithful reproduction of the source text's content, but the translation was considered a text which reads fluently and is highly accessible to the TL audience. She concludes that all the outputs in the study displayed varying degrees of grammatical, syntactical and lexical inaccuracies, but that Google Translate outperformed the other free online translators included in the test. The study was, however, more concerned with the semantic quality than the grammatical quality of the output. From this point of view, Google Translate's output was judged adequate.

2.5 Compound nouns

Biber et al. (1999:325-326) describe compounds, which are formed by joining together two or more words into a new word. Compounds frequently have meanings which are not predictable from the individual elements. For instance, the compound noun *bluebird* has a different meaning than the noun phrase *a blue bird*. Compounds may be formed by combining nouns, adjectives, adverbs, verbs, prepositions, and numerals. English compounds are formed and written in different ways; they can be solid compounds (i.e. written as one word), open compounds (written as two or more words), or hyphenated compounds. There are no set rules regarding when a compound should be solid, open or hyphenated. Generally, however, compounds which are well-established in the language are solid, while less common or novel terms are hyphenated or represented as separate units.

Whereas English compounds may be solid, open or hyphenated, Holmes and Hinchliffe explain (2003:532-533), Swedish compounds are most often solid. They can be formed from all word classes, and it is usually the second or subsequent element (SE) which determines the word class of the compound. For example, the compound *lättmjölk* ('light/low-fat milk') is a noun formed by an adjective and a noun, and *rökfritt* ('smoke-free') is an adjective formed by a noun and an adjective. In most compounds the elements do not carry equal weight; there is typically a head word, generally the SE, which indicates the basic meaning. The head is accompanied by a descriptive element, which is placed as the first element (FE). In the compound *kaffekopp* ('coffee cup'), for instance, the SE is the noun *kopp*, on its own meaning a generic cup, and this is specified by the FE, the noun *kaffe*, as a cup specifically for drinking coffee.

As exemplified by Källström (2012:174), Swedish morphology allows for several elements to be combined into very long solid compounds. For example, the English equivalent of the Swedish solid compound *människorättsorganisation* would be the open compound *human rights organization*. In theory, there is no limit to how many elements could be compounded and how many characters a word could contain. A word like *realisationsvinstbeskattning* ('capital gains tax'), with an impressive 28 characters, is listed in *Svenska akademins ordlista*, but one could easily combine more elements to form a longer word instantly, like *hushållsmaskinstillverkningsindustriarbetarförbundsmedlemmarna*,² although it has in all likelihood never been used before.

² The translation of which would be something like 'the members of the union for workers in the household appliance manufacturing industry'.

This paper has focused exclusively on compound *nouns*, that is to say, compounds formed with a noun as the SE; making, consequently, the compound itself a noun. According to Holmes and Hinchliffe (2003:532), this is the most common type of compound in the Swedish language. The most common type of compound noun is the one where the FE is also a noun, i.e. noun + noun combinations like *hustak* ('roof'), and *barnbidrag* ('child benefit').

3. Methods and material

The area of interest for this paper is the possibilities and restrictions in using Google Translate to transfer a text from Swedish into English, with a special focus on structures that differ between the two languages. More specifically, this paper examines the English translation of Swedish compound nouns in online documents containing public information. Compound nouns, as described, are dissimilar between the two languages and might therefore pose a challenge to any translator; not least to a machine translator. Further, a pilot study showed that compound nouns were often translated in ways far from ideal – sometimes in ways which would risk distorting the information in the text and confuse the reader.

Nine texts of public information from municipal websites were selected for the study. The documents vary somewhat in length, averaging 269 words per text. These were then translated using Google Translate. When translations had been made, instances of compound nouns were identified in the Swedish source texts, as well as their corresponding items in the translated English text. These compound nouns in the TT were then evaluated for translation accuracy.

From the result of the pilot study and the information in the secondary sources a hypothesis developed: the frequency with which a compound noun is used would affect the success of Google Translate's translation. Compound nouns frequently used in Swedish texts would be correctly translated, while compound nouns used less frequently would be erroneously or inconsistently translated. To test this hypothesis, the frequency of the compound nouns in Swedish corpora was assessed, using the online resource of *Språkbanken* ('the Swedish Language Bank').

3.1 Texts

The texts used in the study were selected from three Swedish municipal websites and contain general information to the public concerning municipal services. The selection was random – the only criterion being that two texts would not be on the same subject. The reason for using

this type of text for the study was that they were considered to be representative samples of the language style used to convey important information to the public. Citizens not very familiar with the Swedish language might need to receive this information, and might use Google Translate in order to get a version of these pages in a more familiar language.³ These were thought to represent a text type one would expect Google Translate to be able to translate. The texts were retrieved from *stockholm.se*, the website of Stockholm City; *goteborg.se*, the website of Göteborg City; and *karlstad.se*, the website of Karlstad municipality. The texts contain information to the public concerning such things as schools, winter road maintenance, social orientation class for new citizens, services provided for the elderly, etc.

The following articles were used in the study: “Grundsärskola” (‘School for children with intellectual disabilities’);⁴ “Kemikalier finns överallt i våra hem” (‘Chemicals are everywhere in our homes’); “Snö- och halkbekämpning” (‘Snow-clearance and anti-skid treatment’); “Hemhjälp eller hemtjänst” (‘Home help services’); “Kommunalt bostadstillägg, KBH” (‘Municipal housing supplementary allowance, KBH’); “Så fungerar färdtjänsten” (‘How the transportation service works’); “Resor till och från skolan” (‘School transport’); “Samhällsorientering” (‘Social orientation’); “Överförmyndarnämnden, en tillsynsmyndighet” (‘The Committee of Chief Guardians, Supervisory Authority’).⁵

3.2 Methods

The nine texts presented in section 3.1 were translated using Google Translate. The texts were scanned for Swedish compound nouns in the source texts as well as their corresponding output in the English translation. When all texts had been reviewed, the identified compound nouns and their corresponding English translations were compiled into a table for further analysis. In order to evaluate translation accuracy, the translated compound nouns in the English target texts were compared to translations in the Swedish-English dictionaries *Norstedts stora engelska ordbok* and *Norstedts svensk-engelsk fackordbok*, and with definitions in the *Collins Cobuild English Dictionary for Advanced Learners*.

³ In fact, none of the municipal websites in the study provided a translated version of the information pages. Instead, readers are referred Google Translate to receive the information in another language.

⁴ This translation is based on official information about the Swedish school system retrieved from the website of *Skolverket*, The Swedish National Agency for Education. Other translations within parenthesis are suggestions by the author, based on *Norstedts stora engelska ordbok*.

⁵ The websites from which the texts were retrieved are included in the list of references. All the texts and GT translations can be found in Appendix 1.

After this procedure, some compounds remained without a satisfactory translation since the English items in the translations were not listed in any of the consulted dictionaries. These were translated by the author, based on two methods: firstly, the compound nouns were analysed in their separate elements; the aforementioned dictionaries consulted for definitions of the individual words which make up the compound (e.g. *prioriteringsordning* was analysed as *prioritering* and *ordning*, respectively); and secondly, web-searches were employed to find the words in context; if the translated compound nouns were used in texts on the internet, these translations were also considered acceptable. The texts consulted were primarily websites which featured a translated version of the site or part of it. For several of the compound nouns, more than one word or phrase were listed as acceptable translations; for example, for *handläggare*, acceptable translations were *administrative officer*, *administrative official*, and *caseworker*.

Subsequently, mistranslations were analysed. The words were entered into tables of either acceptable translations or mistranslations. The pilot study had shown that there were some types of mistranslations that seemed to occur with some regularity in the target texts. For instance, some compound nouns were not translated at all – the compound noun was either missing from the target text altogether, or the Swedish word appeared in the target text untranslated. Sometimes only one element of the compound had been transferred to the target text, and any remaining element(s) was (were) omitted. One aim of the present study was to estimate whether one might find any general pattern to these mistranslations. With the pilot study in mind, the table of mistranslations was analysed in order to make further subdivisions into different categories. The Google Translate mistranslations were at this point coded as one of four types: (1) **non-translation**; meaning that the target text retained the Swedish word as the translation; (2) **erroneous translation**; meaning that the wording of the English translation did not match any established translation of the compound noun, or the English translation had another semantic meaning; (3) **partial translation**, meaning that only one element emerged as the translation of the entire compound (e.g. *skoldag* was translated simply as *school*); and (4) **inconsistent translation**; meaning that a reoccurring word was translated in more than one way in the target text.

The four different categories of mistranslations were then evaluated individually, in order to determine if there was any general pattern to the particular mistranslations. A working hypothesis was that frequently used compound nouns would be correctly translated by Google Translate, and less frequent compound nouns would be erroneously or inconsistently translated. Since Google Translate is an SMT program, it relies on corpora for

examples on which to base its statistical evaluation for translation. The success would therefore relate to how frequently a phrase/word occurs in the Swedish corpora, since a high frequency presumably means a larger set of examples for Google Translate to base its translations on. Less common or novel compound nouns might therefore be expected to receive erroneous or inconsistent translations to a greater extent than frequently used compound nouns.

To test this hypothesis, queries were run in a Swedish corpus to assess the frequency of the compound nouns. *Språkbanken* contains 160 corpora with a total of about 1.7 billion tokens, and is often used in Swedish linguistic research. The greater part of the corpus is made up of modern Swedish news texts and fiction, and texts from other genres and time periods are increasingly being incorporated. Using *Språkbanken*'s online resource, it was possible to get an idea of how frequently used the compound nouns are.

3.3 Delimitations

By running queries in a Swedish corpus, the frequencies of the compound nouns were assessed. There are, however, other factors that might have an influence on Google Translate's correct or incorrect translation of a compound, which should perhaps have been taken into consideration. Firstly, consulting a dictionary on the first recorded occurrence of each compound would have been relevant to the study. Since a longer history of usage would indicate that the compound is well established in the language, it would have been of interest to learn how correct translation relates to age. As mentioned in section 2.5, it is fairly easy to produce new solid compound nouns in Swedish; some compounds featured in the study might therefore be rarely or never before used combinations of elements, assembled for the specific context in which they appear. These would naturally have fewer precedents in Google Translate's corpora, and so their chances of being correctly translated might be smaller. Secondly, since even compounds of three, four or even more elements may be solid in Swedish, which they would not be in English, it would perhaps have been relevant to investigate whether compounds of more than two elements more often than dual-element compounds cause problems for Google Translate. Thirdly, the meaning of a compound cannot always be established by analysing it in its individual elements, and the compound or the elements which constitute it might correspond to several terms in the target language or be imprecise in meaning. Somehow adapting the design of the study to regard how semantically transparent a specific word is would therefore have been preferred, since that surely

influences the probability of the MT providing a satisfactory translation. Due to restraints in time and the scope of the study, however, these factors had to be disregarded in the research.

The study focused on only one particular type of compounds; compound nouns. This means that compounds with an SE from a word class other than nouns, for instance compound adjectives, were not included in the study.

Finally, the study has not taken into consideration the grammatical specifics of genitive and number concerning the translated compound nouns. This means that omissions by Google Translate of inflectional morphemes such as the genitive marker and plural marker were not considered mistranslations. This includes the Swedish definite suffixes *-en* and *-et* and the corresponding definite article in English. There were some discrepancies between the source text and the translation concerning these inflectional morphemes, but they could not be covered within the scope of this study.

4. Analysis and results

A total of nine informational texts were used as primary material. The total number of words for all nine texts amounted to 2,422 (headings included). Out of these, 136 were compound nouns; 28 of them occurred two times or more.⁶ Based on the criteria described in section 3, the compound nouns were categorised as either correctly translated or mistranslated. Out of the 136 total compound nouns in the study, 85 were translated correctly, and 51 were mistranslated. This means that in this study, Google Translate provided 62.5% correct translations of compound nouns, and 37.5% incorrect translations of compound nouns.

Table 1. Types of mistranslation.

Type of mistranslation	Number	Per cent
1. non-translation	6	12%
2. erroneous translation	12	24%
3. partial translation	16	31%
4. inconsistent translation	17	33%
Total	51	100%

As seen in Table 1, the most common types of mistranslations were the ones termed *inconsistent translation*, of which there were 17 examples, and *partial translation*, a category comprising 16 compounds. The category of *erroneous translation* features 12 compounds and the category of *non-translation* features 6 compounds. There were, however, cases of overlap,

⁶ See Appendix 2 for a comprehensive list of compound nouns featured in the study.

meaning that in the category of inconsistent translation, examples were found of the other types of mistranslations. This is discussed further in section 4.4.

4.1 Non-translation

The category of *non-translation* contains compound nouns which Google Translate failed to translate; the Swedish compound noun has simply been kept in the English text. This type of mistranslation was not as widespread as were partial and inconsistent translations (but there are, as mentioned above, some examples of non-translation within the category of inconsistent translation). Since there were only six compounds in the non-translation category, it was difficult to discern any general pattern to their occurrences.

Table 2. Untranslated compound nouns.

Swedish input	English output	Acceptable translation(s)
1. Fastighetskontoret	Fastighetskontoret	Property Management Department
2. grundsärskoleklass	grundsärskoleklass	class in school for the intellectually disabled
3. gång- och cykelbanor	gång (and cycle paths)	footpaths and cycle lanes/bicycle lanes
4. hemkemikalier	hemkemikalier	chemicals for use in the home
5. rullstolsbil	rullstolsbil	wheelchair accessible vehicle/car
6. särskoleelev	särskoleelev	pupil in school for the intellectually disabled

Item 3 is noteworthy; it is made up of two elements linked to the head with a hyphen. The study suggested that this type of item is difficult for Google Translate; there are examples of this in the other categories as well. In this case, the last part has been translated but the first element has been retained in Swedish. It is not actually a complete compound that has received the non-translation, but it was coded as non-translation anyway, since a Swedish word has carried over untranslated. Item 5 might also be worth noting, since a very similar word, *rullstolsbuss*, actually was translated, albeit by a word-for-word translation (see Table 3).

When checking the Swedish corpus for the compound nouns in the non-translation category, it appears they all have a rather low frequency. A majority of these compounds have a frequency lower than 0.1 occurrences per million words (from here on abbreviated *pmw*), something that would suggest that many of these words are not really part of common vocabulary. These results could be taken to suggest that there is a correlation between frequency and translation accuracy. The exception is *Fastighetskontoret* with a frequency of 1.2 occurrences *pmw*, which is actually on par with many words featured in the study which

were correctly translated. In fact, no less than 53 out of the 85 correctly translated compounds have a lower frequency.

4.2 Erroneous translation

The category of *erroneous translation* represents instances where Google Translate provided an output that, for various reasons, could not be said to hold the same meaning as the Swedish compound noun it was supposedly a translation of.

Table 3. Erroneously translated compound nouns.

Swedish input (number within parenthesis indicates number of occurrences in the material)	English output	Acceptable translation(s)
1. etableringsplan	expansion plan	establishment plan/ plan for establishment
2. flexlinjebuss	flex intercity bus	no established translation
3. fritidshem	kindergarten	care centre/after school club
4. färdtjänstillstånd	special transport permit	mobility/transportation service permit
5. föräldrabalken	Children and parents regulation	Code on Parents and Children/Code relating to Parenthood and Guardianship
6. grundskoleklass (2)	mainstream classroom	(approx.) class in nine-year [compulsory] school
7. hyresavi	rent payment	rent notification
8. rullstolsbuss	wheelchair bus	wheelchair accessible vehicle/bus
9. sjukresa	sick trip	journey to receive medical treatment
10. skolkort (3)	school yearbook	(approx.) bus card for pupils
11. träningsskola	orientation training school	training school/school for the severely intellectually disabled
12. ämnesområde	disciplines	subject [area/field]

There did not appear to be any discernable pattern to this category of mistranslations, other than the fact that a majority of these compound nouns might not have a clear-cut translation. Since there is not always an equivalent term in English, and since the translator sometimes needs an idea of the context in which the word appears in order to make the translation intelligible, deciding on an acceptable translation might not be a straight-forward procedure. As described in section 2.2, this type of reasoning is not really something one could expect from a computer.

Items 3, 6, 11 and 12 are terms related to the Swedish educational system, and might cause trouble to a translator since the structure of educational systems varies between countries. When translating terms like these, one might have to take into consideration the

differences between the Swedish school system and that of English-speaking countries; but also the fact that educational systems within the English-speaking world differ. One could, for instance, translate Swedish *gymnasieskola* to *upper secondary school*, as in the British educational system, or *high school*, as in the American educational system. In the end, neither is an exact equivalent. For *träningsskola*, the official term in English would be *school for the severely intellectually disabled*, but *training school* could have been considered an acceptable output, being the literal translation of the word. The *orientation* in the English translation *orientation training school*, however, further obscures the meaning.

Item 5, *föräldrabalken*, might also be a matter of discussion; the output seems to cover the same basic meaning as the acceptable translations. As these were listed in the dictionary as official terms equivalent to Swedish *föräldrabalken*, however, the output ultimately was coded as erroneous translation.

Items 8 and 9, *rullstolsbuss* and *sjukresa*, respectively, are translated word for word, resulting in terms which are not listed in any of the dictionaries. Perhaps these terms are used colloquially, but in the type of semi-formal text where they appear, they risk making the text unintelligible.⁷

Items 10 and 12 are examples of words which are dependent on context for a correct translation. In a different context, *skolkort* might mean a ‘photography taken for a school catalogue or yearbook’, which might be an explanation for this rather strange output. In the context it appears, however, it represents a ‘bus card for pupils’. *Ämnesområde* could be understood as *discipline* in an academic context, but in the context of the compulsory school system it probably would have to be *subject*.

When running queries in the Swedish corpus, most compounds in this category were found to have a very low frequency. More than half have a frequency of less than 0.1 occurrences pmw; *ämnesområde* and *fritidshem* having the highest frequency in this category, each with 1.7 occurrences pmw. This seems to offer support to the hypothesis that the success of Google Translate’s translations would relate to how frequently a compound noun occurs in the Swedish corpus.

⁷ As previously mentioned, *rullstolsbuss* and the very similar *rullstolsbil* were managed differently by Google Translate. It is not apparent why this was so. Since they both have a low frequency, less than 0.1 occurrences pmw, this inconsistency is not explained by differences in frequency.

4.3 Partial translation

The category termed *partial translation* includes instances where the English output is a translation of only one element of the compound. There does not seem to be a clear pattern to the mistranslations in this category either, since Google Translate appears to have randomly translated either the first or the last element of the compounds. As described in section 2, the noun that appears as the last part of the compound usually acts as the head that the former element modifies. Because of this, one might expect a translator to concentrate primarily on this element, in order for the meaning to be contained in the translation. A strictly rule-based MT might be programmed to consider this, but a statistics-based MT might disregard these grammatical specifics.

Table 4. Partially translated compound nouns.

Swedish input	English output	Acceptable translation(s)
1. bostadsbidrag	housing	housing benefit
2. disk- och tvättmedel	detergents	washing-up/dishwashing liquid and detergent
3. förskoleklass	preschool	preschool class
4. Försäkringskassan	social insurance	Social Insurance Agency
5. halkbekämpning (2)	ice	anti-skid treatment
6. Naturskyddsföreningen	society	Society for Nature Conservation
7. personaltäthet	staff	(approx.) teacher to pupil/student ratio
8. prislista	list	price list/sheet
9. samhällsliv	society	social life
10. skoldag	school	school day
11. snö- och halkbekämpning	snow and ice	snow-clearance and anti-skid treatment
12. studiebesök	visits	educational visit/field trip
13. tillståndsärende	licensing	permission/licence errand/matter
14. tillsynsmyndighet	regulator	supervisory authority/control office
15. väderleksförhållanden	weather	weather conditions
16. överförmyndare	chief	chief guardian

Items 1, 3, 4, 7, 9, 10, 13, 15 and 16 suggest that it is in fact the first element of the compound that has been translated, omitting translation of the remaining element; thus the first part of *skoldag*, *skol(a)-*, has rendered the output *school*. Likewise, *förskoleklass* has been translated into *preschool*, *tillståndsärende* into *licensing*, etc. It is not easy to determine what has happened to item 14, but it might be a similar case; this would mean that the first element *tillsyn(s)-* has been translated as *regulator*.

The rest of the partial translations, however, do not seem to follow this pattern. For item 2, *disk- och tvättmedel*, it appears that only the second part, *tvättmedel*, has been translated into *detergents*. For item 5, *halkbekämpning*, it might be the first element, *halk(a)-*, that for some reason has been mixed up with *ice*; this seems unlikely, but something similar appears to have happened to item 11, *snö- och halkbekämpning*, which is translated as *snow and ice*. Items 2 and 11 are made up of two compound nouns presented with a hyphen. Again this proves difficult for Google Translate to manage. It might be interesting to note, then, that in one of the texts *bil- och båtårsprodukter* was correctly translated into *car and boat care products*. Lastly, for items 6, 8 and 12, *Naturskyddsföreningen*, *prislista* and *studiebesök*, it seems to be the last elements that have been translated; *society*, *list* and *visit*.

Table 5. Partial translation: frequency.

Compound noun	pmw
Försäkringskassan	18.6
skoldag	5.3
studiebesök	3.5
tillsynsmyndighet	3.4
Naturskyddsföreningen	3.0
bostadsbidrag	2.9
samhällsliv	1.6
prislista	1.3
förskoleklass	1.1
personaltäthet	0.8
överförmyndare	0.6
halkbekämpning	0.1
tillståndsärende	<0.1
disk- och tvättmedel	<0.1
snö- och halkbekämpning	<0.1
väderleksförhållanden	<0.1

Running queries in the Swedish corpus has not really yielded any unambiguous results concerning the partially translated items. As evident from Table 5, the frequency of these compounds vary from less than 0.1 occurrences pmw for *tillståndsärende*, *väderleksförhållanden*, and the hyphenated combinations, to 18.6 occurrences pmw for *Försäkringskassan*. Further, *skoldag*, *studiebesök*, and *tillsynsmyndighet* all seem to be quite frequent words, but nonetheless receive only partial translations. If higher frequency is to be

taken as greater chance of success for Google Translate, these might have been expected to be correctly translated.

4.4 Inconsistent translation

A majority of compound nouns that were featured two times or more were inconsistently translated. There were 28 Swedish compound nouns in total occurring more than once, and 11 of these were consistently translated, 8 correctly translated and 3 mistranslated. The remaining 17 of the reoccurring compound nouns were inconsistently translated. This category displays a variety of translations, including some that were considered correct (see, for example, item 12, *skolskjuts*, which is correctly translated on two out of four occurrences).

Table 6. Inconsistently translated compound nouns.

Swedish input	English output (dash (–) indicates that the item was omitted in the TL)	Acceptable translation(s)
1. bostadstillägg (7)	housing (6) mortgage style adds (1)	rent allowance/ housing supplementary allowance
2. busslinjenät (2)	busslinjenät bus route network	no established translation [busslinje = bus service [line]]
3. funktionsnedsättning (5)	disability (4) impairment (1)	impairment (disability)
4. färdtjänst (10)	transport service (3) transportation service (6) färdtjänsten (1)	mobility/transportation service
5. färdtjänstresor (3)	special transport journey (2) paratransit trips (1)	journeys/trips with mobility/transportation service
6. grundskola (6)	primary school (1) elementary school (2) schools (2) primary (1)	nine-year [compulsory] school
7. grundsärskola (15)	basic learning disabilities (1) basic Special Schools (2) compulsory school (8) the undergraduate special education (1) special school (2) foundation special school (1)	[nine-year [compulsory]] school for the intellectually disabled
8. gång- och cykelvägar (4)	walking and cycling paths pathways footpaths and cycle paths pedestrian and bicycle paths	footpaths and cycle lanes/bicycle lanes

9. plogbil (4)	plow (1) plow truck (2) snowplough (1)	snow plough/plow
10. hemtjänst (13)	home help (2) home care service (3) home service (3) assisted living (4) care services (1) home help (1)	home help service/ home care service
11. samhällsorientering (5)	samhällsorientering (1) social orientation (2) civic orientation (2)	social/civic orientation
12. skolskjuts (4)	school bus (1) school transport (2) skolskjuts (1)	school transport
13. snöröjning (6)	snow (2) – (1) snow removal (3)	snow-clearance/snow removal
14. stadsdel (8)	district (4) neighborhood (4)	district
15. ställföreträdare (3)	legal representative deputy representatives	deputy/substitute/representative
16. trafikleder (2)	highways thoroughfares	traffic routes/thoroughfares
17. överförmyndarnämnden (4)	guardians (2) chief guardian (1) överförmyndarnämndens (1)	Committee of Chief Guardians

It might be worth noting that translations in this category were not always mistranslations per se. As mentioned above, some of the outputs were considered correct translations; in some instances the output was a term which could be considered a synonym of the acceptable translation. For item 3, *funktionsnedsättning*, both *disability* and *impairment* could likely be considered acceptable translations. However, the word listed in the dictionary was *impairment*; presumably because it is considered more politically correct than *disability*.⁸ Item 14, *stadsdel*, would literary mean ‘part of town’, which both a *district* and a *neighborhood* would be. Since it appears in texts which describe municipal administration and services, however, it did seem more probable that a comparable text in English would use the word *district*.

⁸ With this in mind, it does seem odd that the translation in the dictionary for *utvecklingsstörning* is *mental retardation*. There is likely a more politically correct term than that.

Table 7. Inconsistent translation: frequency.

Compound noun	pmw
stadsdel	27.4
grundskola	14.0
hemtjänst	6.0
funktionsnedsättning	4.0
färdtjänst	2.7
snöröjning	1.6
ställföreträdare	1.4
skolskjuts	1.2
bostadstillägg	1.1
trafikled	0.9
gång- och cykelvägar	0.3
grundsärskola	0.2
plogbil	0.2
samhällsorientering	0.1
överförmyndarnämnden	0.1
färdtjänstresa	<0.1
busslinjenät	<0.1

A hypothesis guiding this study was that frequently used compound nouns would be correctly translated by Google Translate, and less frequent ones would be erroneously or inconsistently translated; the notion being that lower frequency of a word would indicate fewer precedents in Google's corpora for the program to base its translation on. When analysing the most inconsistently translated Swedish compound, *grundsärskola*, there would seem to be some indication of the validity of this assumption. Firstly, it seems that *grundsärskola* has a comparatively low frequency; 0.2 occurrences pmw is not overwhelmingly frequent. Secondly, the translations are notably inconsistent; the English text contains several different erroneous translations which risk severely distorting the text. The output *undergraduate special education*, for instance, would correspond to something very different from *grundsärskola*. Further, the words *plogbil*, *samhällsorientering*, *överförmyndarnämnden* and *gång- och cykelväg* also have what might be considered a low frequency; as do *färdtjänstresa* and *busslinjenät*, which each have a frequency lower than 0.1 occurrences pmw.

Contradictory to these indications, however, stand two other observations; firstly, comparing these figures to those of the correctly translated compounds, the frequencies of these items are actually found to be on par with many among the correctly translated words. Taking *grundsärskola* as an example again, it is noteworthy that 27 compounds with lower frequency than that word were correctly translated. Secondly, the words *stadsdel*, *grundskola*

and *hemtjänst* were all very frequent in the Swedish corpus, but still inconsistently translated. Granted, many of the outputs for these compounds might indeed be considered acceptable translations, but this is also true for compounds with a considerably lower frequency like *plogbil*. If high frequency were an indication of a reliable translation, then *stadsdel*, with 27.4 occurrences pmw, would be expected to be consistently and correctly translated, which it is not.

Within the category of inconsistently translated compounds there are examples of the other three types of mistranslations, as well as some that would be considered correct – and one example of complete omission: in one instance, item 13, *snöröjning*, lacks a corresponding item in the English translation. There are some examples of the same item receiving an erroneous, partial or non-translation in one instance, and correct in another; like item 1, *bostadstillägg*, which appears in six out of seven cases as the partial translation *housing*, but in one instance it has turned into the perplexing term *mortgage style adds*. For item 11, where both *civic orientation* and *social orientation* would have been accepted as correct translations, the output is two of each, plus one instance of non-translation. These observations amplify the impression that translation somehow happens randomly. This is surprising, since one would perhaps assume that Google Translate's statistical approach would make the translations rather consistent. If Google Translate analyses the corpora to find the statistically most likely translation for a given word, then one could certainly question why a majority of compounds featured two times or more were inconsistently translated. The compounds with the highest number of occurrences, *grundsärskola* (15) and *hemtjänst* (13), were also the ones with the highest number of different translations, six each. Thus, one could perhaps begin to speculate if compounds in the other categories would be inconsistently translated as well, had they appeared more than once.

Finding regularity to Google Translate's translations has proven increasingly difficult as the results of this study were revealed. Apart from some minor indications, the translations have appeared throughout the material as being quite random. The hypothesis – that less frequently used compounds would be erroneously or inconsistently translated to a greater extent than frequently used compound – could not be decisively confirmed or refuted. Many of the mistranslated compounds were not very frequent in the Swedish corpus, which would indeed suggest a correlation between frequency and translation accuracy; but there were also many mistranslated compounds which had a medium to high frequency. Since some of the most frequent compounds in the study were mistranslated, there is further reason to be cautious in drawing conclusions.

As discussed by Arnold (2003), an SMT program might translate words incorrectly when an item in the SL corresponds to several different examples in the TL data. There might be many different words that wholly or partially match the input, between which a choice has to be made. This ambiguity problem is likely the cause of at least some of the mistranslations and inconsistencies, but how and why Google Translate chooses the particular translations remains unclear.

It should be mentioned that Google Translate, as far as MTs goes, is still rather impressive. All the researchers referenced in section 2 who have made MT comparisons, judge the ones made by Google Translate to be the most accurate. In the present study, Google Translate did manage to provide adequate translations for 85 out of the total 136 compound nouns; that is 62.5% of the compound nouns featured. The translated texts, while they often read quite awkwardly, are largely comprehensible; although one of the largest issues for reader comprehension is that sometimes a word crucial for understanding the text is erroneously or inconsistently translated. The study has not taken into consideration the readability of the translations, however, and the only thing that can really be remarked on is the translation of compound nouns specifically.

5. Summary and conclusion

The general area of interest for this paper was Google Translate's translation of Swedish text into English. More specifically, the aim of the study was to examine how Swedish compound nouns are handled by Google Translate. A fairly broad research question was formulated to guide the study: what main types of mistranslations occur when translating Swedish compound nouns into English using Google Translate? In order to answer that question, compounds from translated texts were listed and analysed and the mistranslated compounds were categorised in accordance with the manner of mistranslation. Further, a hypothesis was formulated that the frequency of a compound noun would affect Google Translate's chance of making a correct translation. To test this hypothesis, queries were run in a Swedish corpus.

In answer to the research question, the mistranslations made by Google Translate were found to be of four different types: erroneous translations, partial translations, non-translations, and inconsistent translations. In the category of erroneous translation some items were found to be debatable. Since some terms were more or less context-bound, the translation of these would be a matter of judgement on the part of a translator and not something one could really expect a computer program to fully master. The most common

types of mistranslations were partial translations and inconsistent translations. A majority of compounds featured two times or more were inconsistently translated; in the inconsistent translation category examples were found of the other types of mistranslations, some correct translations, and one example of complete omission.

To test the hypothesis, queries were run in a Swedish corpus. The results were ambiguous, however, and the hypothesis could not be conclusively confirmed or denied. A majority of compounds in the erroneous translation category and the non-translation category were found to have a relatively low frequency, which would suggest a correlation between frequency and translation accuracy. The non-translation category contained only six items, however, and in the other categories the compounds displayed a wider range in terms of frequency. Since some of the most frequent compounds in the study were mistranslated, there was further reason to be cautious in drawing conclusions. To summarise; although the results of the study showed some indications of a link between frequency and translation accuracy, the connection was not evident enough to confidently claim that there was a correlation.

What the study ultimately seems to show is that Google Translate is very inconsistent in translating compound nouns. The results make it difficult to draw any conclusions as to how and when mistranslations occur. This is somewhat puzzling since Google Translate, seeing as it is trying to establish the statistically most likely translation, would be expected to be using the same translation more consistently throughout; not, for instance, translating a word in one instance and leaving it out in another. Compound nouns that could be considered difficult to translate for some reason, be it culture bound, context bound, or highly specialised words, would be expected to attract mistranslations from an MT. In these cases, a translator might have to use his or her knowledge of the language and of the context to make decisions on how to preserve the meaning of the original text; there may simply be some translation choices which have to be made by a human. What is surprising is not that they cause difficulties for Google Translate, but that the translations appear to happen so randomly.

For further study on the subject, it would be interesting to investigate if there might be a correlation between Google Translate's correct or incorrect translation and other factors like age, transparency and number of elements of a compound, which could not be fit within the scope of this study. It would also be interesting to examine how Google Translate manages differences in syntax and morphology when translating between Swedish and English, and how well the information of the text is preserved to the reader of the TL.

References

Primary sources

- Karlstad municipal website, <http://karlstad.se> (retrieved 18 November 2013):
<http://karlstad.se/utbildning-och-barnomsorg/grundskola/grundsarskola/>
<http://karlstad.se/miljo-och-energi/kemikalier-i-hemmet/>
<http://karlstad.se/trafik-och-infrastruktur/renhallning-och-snorojning/sno--och-halkbekampning/>
- Göteborg municipal website, <http://goteborg.se> (retrieved 19 November 2013):
<http://goteborg.se/wps/portal/invanare/omsorg-o-hjalp/aldre/hjalp-i-hemmet/hemhjalp-och-hemtjanst/>
<http://goteborg.se/wps/portal/invanare/omsorg-o-hjalp/funktionsnedsattning/boenden-for-personer-med-funktionsnedsattning/kommunalt-bostadstillagg/>
<http://goteborg.se/wps/portal/invanare/trafik-o-gator/fardtjanst/sa-fungerar-fardtjansten/>
- Stockholm municipal website, <http://www.stockholm.se> (retrieved 19 November 2013):
<http://www.stockholm.se/ForskolaSkola/Grundskola/Resor-till-och-fran-skolan1/>
<http://www.stockholm.se/Arbete/Ny-i-Sverige/Samhallsorientering/>
<http://www.stockholm.se/FamiljOmsorg/God-man-och-formyndare/>

Secondary sources

- Aiken, Milan & Balan, Shilpa. 2011. An analysis of Google Translate accuracy. *Translation Journal*, 16 (2): n.p. (<http://www.bokorlang.com/journal/56google.htm>)
- Arnold, Doug. 2003. Why translation is difficult for computers. In Somers, Harold (ed.) *Computers and translation: A translator's guide*, 119-142. Philadelphia: John Benjamins.
- Biber, Douglas, Susan Conrad, Edward Finegan, Stig Johansson, Geoffrey Leech. 1999. *Longman grammar of spoken and written English*. Harlow: Pearson Education.
- Brown, Keith (ed.). 2006. *Encyclopedia of language and linguistics*. Oxford: Elsevier.
- Collins Cobuild English dictionary for advanced learners* (3rd edn.). 2001. Glasgow: HarperCollins Publisher.
- Ellender, Claire. 2012. Free online translators: A comparative assessment of www.worldlingo.com, www.freetranslation.com, and www.translate.google.com. *Translation Journal*, 16 (3): n.p. (<http://www.bokorlang.com/journal/61freexlation.htm>)
- Hampshire, Stephen & Porta Salvia, Carmen. 2010. Translation and the internet: Evaluating the quality of free online machine translators. *Quaderns revista de traducció*, 13 (1): 197-209.
- Hartley, Tony. 2009. Technology and Translation. In Munday, Jeremy (ed.) *The Routledge companion to translation studies*, 106-128. New York: Routledge.
- Hatim, Basil & Munday, Jeremy. 2004. *Translation: An advanced resource book*. New York: Routledge.
- Holmes, Philip & Hinchliffe, Ian. 2003. *Swedish: A comprehensive grammar*. London: Routledge.
- Hutchins, John. 2006. Machine Translation: History. In Brown, Keith (ed.), 375-383.
- Isabelle, Pierre & Foster, George. 2006. Machine Translation: Overview. In Brown, Keith (ed.), 404-422.
- Koletnik Korošec, Melita. 2011. Applicability and challenges of using machine translation in translator training. *Elope*, 8 (2): 7-18.

- Källström, Roger. 2012. *Svenska i kontrast*. Lund: Studentlitteratur.
- Munday, Jeremy. 2001. *Introducing translation studies*. New York: Routledge.
- Norstedts stora engelska ordbok. 2011. Stockholm: Norstedts
- Norstedts svensk-engelsk fackordbok (3rd edn.). 2000. Stockholm: Norstedts.
- Rensburg, Alta von, Snyman, Cobus & Lotz, Susan. 2012. Applying Google Translate in a higher education environment: Translation products assessed. *Southern African Linguistics and Applied Language Studies*, 30 (4): 511-524.
- Savoy, Jacques & Dolamic, Ljiljana. 2009. How effective is Google's translation service in search? *Communications of the ACM*, 10 (52): 139-143.
- Yamada, Kenji & Muslea, Ion. 2009. Reranking for large-scale statistical machine translation. In Goutte, Cyril, Cancedda, Nicola, Dymetman, Marc, & Foster, George (eds.) *Learning machine translation*, 151-168. Cambridge: MIT Press.

Appendix 1 – Texts with translations

Grundsärskola

Grundsärskolan är till för de barn som på grund av utvecklingsstörning inte bedöms kunna nå upp till grundskolans kunskapskrav. Flera av Karlstads grundskolor erbjuder undervisning inom grundsärskolan.

Grundsärskolan erbjuder en utbildning som är anpassad till varje elevs förutsättningar. Så långt det är möjligt motsvarar utbildningen den som ges i grundskolan. Precis som grundskolan har grundsärskolan nio årskurser. För elever som har svårt att tillgodogöra sig undervisning i ämnen finns, inom grundsärskola, inriktningen träningskola där man istället jobbar utifrån ämnesområden.

Eventuell skolskjuts till grundsärskolan samordnas av Klaraborgs specialpedagogiska område.

Mottagande i grundsärskolan

Innan ditt barn erbjuds en plats i grundsärskolan görs en utredning. Utredningen omfattas av en pedagogisk, psykologisk, medicinsk och social bedömning och görs i samråd med dig som vårdnadshavare.

Erbjudande om plats i grundsärskolan prövas av barnets hemkommun. I Karlstads kommun sköts detta av Klaraborgs specialpedagogiska område.

Om du som vårdnadshavare inte vill att ditt barn ska gå i grundsärskola ska barnet gå i vanlig grundskola, om det inte finns synnerliga skäl med hänsyn till barnets bästa.

Olika former av grundsärskola

I Karlstads kommun organiseras undervisningen på olika sätt för att särskoleeleven ska få ut så mycket som möjligt av sin skolgång.

Undervisning kan bland annat ske genom att eleven går i en grundsärskoleklass. Andra varianter är att eleven integreras fullt ut i en grundskoleklass, eller att eleven integreras i en grundskoleklass i vissa ämnen. En grundsärskoleklass är en liten grupp med hög personaltäthet.

Basic learning disabilities

Basic Special schools are for those children who, because of mental retardation is not expected to reach up to primary school proficiency. Several of Karlstad elementary schools offer instruction in compulsory school.

Basic Special schools offer an education that is tailored to each student's abilities. As far as possible, correspond to the training given in schools. Just like elementary school has nine compulsory school grades. For students who have difficulty assimilating the teaching of subjects available, the undergraduate special education, orientation training school where instead work from disciplines.

Any school bus to compulsory school coordinated by Klara's special education field.

Receipt of compulsory school

Before your child is offered a place in the compulsory school made an investigation. The investigation covered by an educational, psychological, medical and social assessment and in consultation with you as guardian.

Offer of place in the compulsory school considered by the child's home municipality. In the municipality of Karlstad was delayed by Klara's special education field.

If you like guardians do not want your children to go to special school because the child must go to ordinary schools, unless there are exceptional circumstances with respect to the child.

Various forms of the special school

In the municipality of Karlstad organized teaching in different ways to särskoleeleven get as much as possible of their schooling.

Teaching can be done through the student attends a grundsärskoleklass. Other variations are that the student be fully integrated into the mainstream classroom, or that the student be integrated into the mainstream classroom in certain subjects. A grundsärskoleklass is a small group with a high staff.

Kemikalier finns överallt i våra hem

Våra hem är fulla av kemikalier och de flesta av oss använder dagligen kemikalier av olika slag. Det kan vara disk- och tvättmedel, bekämpningsmedel, rengöringsmedel, bil- och båtvårdsprodukter, färger och så vidare.

Eftersom vi har så många kemikalier hemma, händer det att barn hittar dem och ibland också smakar på dem. Många hemkemikalier är relativt ofarliga, men en del är farliga eller mycket farliga. På Giftinformationscentralens hemsida finns en lista över olika ämnen och vad du ska göra om någon fått i sig dem.

Använd miljövänliga produkter och rätt mängd

För dig som enskild konsument är det ofta svårt att avgöra vilka produkter som är bra eller dåliga ur miljöhänsyn. Några miljömärkningar som kan hjälpa dig att välja produkter som är mindre farliga för miljön är Svanen eller Naturskyddsföreningens Bra miljöval.

Ett annat tips är att inte använda mer kemikalier än du behöver. Tänk också på att vissa kemikalier är farliga för oss människor och för miljön – håll därför aldrig kemikalierester i avloppet eller släng dem i hushållssoporna. Lämna istället in dem på återvinningscentralerna

Märkning av kemikalier

De som släpper ut kemikalier på marknaden har ansvar för att produkterna är rätt märkta. Märkningen visar produktens farliga egenskaper och du får även veta hur du ska skydda dig själv mot skador eller hur du ska göra för att produkten inte ska skada miljön.

Läs mer om märkning av kemikalier på Kemikalieinspektionens hemsida

Bekämpningsmedel i trädgårdar

En stor del av den totala mängden bekämpningsmedel som vi använder, använder vi i våra trädgårdar. Det är viktigt att vi försöker minska vårt användande av kemiska bekämpningsmedel och är försiktiga så att det inte sprids till grundvattnet eller våra vattendrag.

Båten och miljön

Att glida genom vattnet med din fritidsbåt är säkert något du ser fram mot på sommaren. Genom dina val av bland annat bränsle och båtbottnfärg kan du bidra till ett mer miljövänligt båtliv.

Bilen och miljön

Bilen påverkar miljön på flera olika sätt både med utsläpp till luft och till vatten.

Chemicals are everywhere in our homes

Our homes are full of chemicals and most of us use daily chemicals of various kinds. It may be detergents , pesticides , detergents , car and boat care products , colors and so on.

Since we have so many chemicals at home , it happens that children find them and sometimes even taste them . Many hemkemikalier are relatively harmless , but some are dangerous or very dangerous . The Poisons Information Centre 's website for a list of different topics and what to do if someone has swallowed them.

Use environmentally friendly products and the right amount

For you as an individual consumer , it is often difficult to determine which products are good or bad from an environmental standpoint . Some eco labels that can help you choose products that are less harmful to the environment is the Swan or the Society Good Environmental Choice.

Another tip is to not use more chemicals than you need. Also be aware that some chemicals are dangerous to humans and the environment – so never pour chemical residue in the drain or dispose of them in household

trash. Deliver it them to recycling centers

Labelling of Chemicals

Those who place chemicals on the market responsible for the products are properly labeled. The label shows the dangerous properties and you also know how to protect yourself from injury or what you do to the product not damage the environment.

Read more about the labeling of chemicals on the Chemicals Agency website

Pesticides in Gardens

A large part of the total amount of pesticides we use, we use in our gardens. It is important that we try to reduce our use of chemical pesticides and is careful that it does not spread to the groundwater or to our waterways .

The boat and the environment

To glide through the water with your boat is certainly something you look forward to the summer. Through your choice of including fuel and antifouling paint can contribute to a more environmentally friendly boating.

The car and the environment

The car affects the environment in several ways with both emissions to air and to water.

Snö- och halkbekämpning

Här hittar du information om hur Karlstads kommun arbetar med snöröjning och halkbekämpning på våra gator och vägar.

Karlstads kommun ansvarar för snöröjningen på de flesta vägar i kommunen med undantag för E18, E45, riksväg 61, 62 och 63 som Trafikverket ansvarar för.

Vi har både egen personal och entreprenörer som sköter snöröjningen och fordonen är utrustade med GPS så att vi kan se var de har varit. Under vintertid har vi upp till 100 fordon som kan hjälpa till vid kraftiga snöfall. Vi planerar med hjälp av särskilda väderleksrapporter och vädertjänster, men också genom egna bedömningar på plats.

När kommer plogbilen till din väg?

När snöröjningen börjar beror på hur mycket snö det har kommit och det är alltid gång- och cykelvägar som plogas först. När det har kommit fyra centimeter snö kallas plogbilarna ut och snöröjer i den här ordningen:

- 1.Gång- och cykelbanor, vid 4 cm snö
- 2.Busslinjenät, trafikleder och större huvudgator, vid 4 cm snö
- 3.Övriga gator och enskilda vägar, vid 8 cm snö

Det här betyder att det kan dröja innan plogbilen kommer till just din gata, men vi arbetar så fort vi kan enligt den prioriteringsordning som gäller.

Så här kan du hjälpa till

Även om ansvaret för snöröjning och halkbekämpning ligger på kommunen är det viktigt att vi alla hjälps åt för att få ett så effektivt och bra vinterunderhåll som möjligt. Du kan hjälpa till genom att:

- Inte blockera vägen eller trottoaren. Tänk på att plogbilarna måste kunna ta sig fram.
- När du skottar undan snön från din egen tomt och utfart – se till att snön inte hamnar på gatan, trottoaren, vändplats eller på gång- och cykelväg.
- Klipp alla grenar som hänger ut över gatan från din tomt. Våra plogbilar behöver en fri höjd på 4,5 meter för att komma fram.
- Ha tålamod! Vi kommer till din gata så fort vi kan, men måste ta cykelbanor och större trafikleder först.

Bortforsling av snö

Vi tar bort plogvallar framför infarter först när den prioriterade snöröjningen är slutförd, så det kan ibland dröja. I Tingvallastaden forslar vi bort snö i begränsad omfattning och i övriga stadsdelar och tätorter endast i undantagsfall.

Salt och grus

Det finns olika metoder för att bekämpa halka och i Karlstads kommun använder vi salt och grus. Busslinjenätet saltar vi för att minska halkan medan övriga gator, gång- och cykelvägar täcks med grus. Vid riktigt svåra väderleksförhållanden kan vi använda salt även på gång- och cykelvägar.

Snow and ice

Here you will find information about Karlstad municipality works with snow and ice on our streets and roads.

Karlstad municipality is responsible for snow removal on most roads in the municipality except for E18 , E45 , Highway 61, 62 and 63 that the Swedish Transport Administration is responsible.

We have both our own staff and management contractors and snow removal vehicles are equipped with GPS so we can see where they've been. During the winter , we have up to 100 vehicles can help in heavy snow . We plan with the help of a special weather reports and weather services , but also through their own on-site assessments .

When will plow your way ?

When snow removal begins depends on how much snow has arrived and it's always walking and cycling routes are plowed first. When there are four inches of snow plow trucks are called out and clear snow in this order:

- 1.Gång and cycle paths , at 4 cm of snow
- 2.Busslinjenät , highways and major arterial streets , at 4 cm of snow
- 3.Other streets and private roads , at 8 cm of snow

This means that it may be some time before the snowplough get to your particular street, but we are working as fast as we can, according to the priority order that applies.

How you can help

Although the responsibility for snow and ice is on the municipality , it is important that we all help to make the most effective and good winter maintenance as possible. You can help by :

- Do not block the road or sidewalk. Remember that plow trucks must be able to proceed .
- When shoveling away the snow from your own garden and driveway – make sure that the snow does not end up on the street, sidewalk , turning space or pathways .
- Trim any branches that hang over the street from your plot . Our plow trucks need a clear height of 4.5 meters to arrive .
- Be patient ! We come to your street as soon as we can, but need to take bike lanes and major thoroughfares first.

Removal of snow

We remove plow ridges in front of driveways when the priority snow removal is complete , so it can sometimes linger. In Tingvallastaden transports us away snow in scope and in other neighborhoods and towns only in exceptional cases.

Salt and grit

There are various methods to combat slip and in the municipality of Karlstad , we use salt and gravel. Bus route network salt we to reduce slipperiness , while other streets, footpaths and cycle paths are covered with gravel. In really bad weather , we can use salt even on pedestrian and bicycle paths.

Hemhjälp eller hemtjänst

Du som är äldre och behöver hjälp i din vardag kan ansöka hos kommunen om att få hemtjänst. Du kan få hjälp med din personliga omvårdnad och att värma mat, diska, städa, handla och andra hushållssysslor. Du bestämmer tillsammans med hemtjänstpersonalen hur, när och hur ofta du ska få hjälp.

Du kan bland annat få hjälp med

- att klä på och av dig och sköta din personliga hygien
- att värma mat, diska och ta ut soporna
- städning och tvätt

- olika slags inköp och ärenden, till exempel matinköp och apoteksärenden
- att ta medicin/ögondroppar
- att ta dig till läkaren och olika aktiviteter eller gå på en promenad

I särskilda fall kan du få hjälp att ta hand om ett husdjur. Det är inte en självklar uppgift för hemtjänsten. Ta kontakt med biståndshandläggaren i din stadsdel så får du veta mer.

Behöver du tillfällig vård, finns det också möjlighet för dig att få en plats på ett korttidsboende.

Det här hjälper hemtjänsten inte till med

Hemtjänsten kan inte hjälpa dig med snöskottning. Denna tjänst kan du köpa av något företag och då har du också möjlighet att få en skattereduktion enligt Rut. Du kan också teckna avtal med park- och naturförvaltningen inom Göteborgs Stad om snöröjning. De tar då över skadeståndsansvaret från fastighetsägaren.

Hemtjänst på annat språk

Om det är möjligt försöker hemtjänsten para ihop personal och medborgare så att de talar och förstår samma språk. Eftersom Göteborgs Stad ingår i det finska förvaltningsområdet ska det finnas tillgång till personal som kan finska. Du kan också få information på meänkieli (tornedalsfinska).

Du kan få hemtjänst för teckenspråkiga. Ta kontakt med biståndshandläggaren i din stadsdel så får du mer information. Du kan också läsa mer på webben om hemtjänst för teckenspråkiga.

Om du behöver tolk

Du som inte kan tala svenska eller har en syn- eller hörselnedsättning har rätt till tolk när du har kontakt med olika myndigheter. Det kostar ingenting att anlita en tolk. Om du behöver en tolk ska du kontakta myndigheten och tala om att du behöver tolk och berätta vilket språk det gäller innan du besöker myndigheten. Myndigheten bokar sedan en tolk som kommer till mötet med myndigheten tillsammans med dig.

Hemtjänst på annan ort eller i annan stadsdel

Om du under en kortare period behöver få hemtjänst i en annan kommun eller stadsdel så ansöker du om det hos biståndshandläggaren i din stadsdel. Be att få en ansökningsblankett från din biståndshandläggare. Biståndshandläggaren kommer sen att utreda ditt behov och om din ansökan blir beviljad så får du hemtjänst i kommunen eller stadsdelen där du ska vistas.

Om du flyttar permanent till en annan kommun eller stadsdel så ansöker du om hemtjänst i den kommun eller stadsdel som du ska flytta till.

Domestic or home help

You are older and need help in your everyday life can apply to the local authority about getting home care services . You can get help with your personal care and to heat food, washing dishes, cleaning, shopping and other household chores. You decide together with home-help staff how , when, and how often you should get help .

You can get help with

- to get dressed and to you and take care of your personal hygiene
- To heat food, do the dishes and take out the trash
- cleaning and laundry
- different types of purchase and errands , such as grocery shopping and pharmacy errands
- to take medicine / eye drops
- to take you to the doctor and various activities or go for a walk

In special cases, you can get help to take care of a pet. There is not an obvious task for home care services . Get in touch with assistance officer in your neighborhood to find out more.

Do you need temporary care , there is also the opportunity for you to get a place on a short-term accommodation .

This helps home service not to the

Home service can not help you with shoveling snow. This service can be purchased from any one company , and

then you also have the option to receive a tax credit under Ruth. You can also sign up with Parks and Landscape Management in the City of Gothenburg on snow removal. They will then take over the liability of the property owner.

Assisted living in other languages

If possible, try home service pairing staff and citizens so that they can speak and understand the same language. Since the City of Göteborg is part of the Finnish administrative area, there should be access to staff who can speak Finnish. You can also get information on Meänkieli (Torne Valley Finnish) .

You can receive home care services for sign language . Get in touch with assistance officer in your neighborhood to get more information. You can also read more on the web about home care services for sign language .

If you need an interpreter

You who can not speak Swedish or have a sight or hearing loss have the right to an interpreter when you are in contact with various authorities. It costs nothing to hire an interpreter. If you need an interpreter, please contact the agency and tell them you need an interpreter and tell me what language it comes before visiting authority. Agency book then an interpreter who comes to the meeting with the Authority along with you.

Assisted living elsewhere or in another neighborhood

If you're in a shorter period needs to assisted living in another municipality or neighborhood so you should apply for it in assistance officer in your neighborhood. Ask for an application form from your assistance officer . Assistance officer will then investigate your needs and if your application is granted to get home help in the municipality or district where you 'll be staying .

If you move permanently to another municipality or neighborhood so you should apply for assisted living in the municipality or district that you are moving to .

Kommunalt bostadstillägg, KBH

Du som har en funktionsnedsättning och är folkbokförd i Göteborg kan ansöka om Kommunalt bostadstillägg, KBH.

Vad är ett kommunalt bostadstillägg, KBH?

Kommunalt bostadstillägg, KBH är ett komplement till de bostadsbidrag och bostadstillägg som försäkringskassan och pensionsmyndigheten handlägger.

Vad krävs?

För att du ska kunna få kommunalt bostadstillägg, KBH krävs att du har en varaktig fysisk eller psykisk funktionsnedsättning. Funktionsnedsättningen ska medföra betydande svårigheter i ditt dagliga liv. Du ska också ha behov av ett särskilt anpassat boende på grund av din funktionsnedsättning. Det kan innebära att din bostad behöver ha en viss storlek vilket gör att bostaden blir dyrare än normalt.

Bidraget är inkomstrelaterat och din ansökan måste förnyas varje år.

Så här ansöker du om kommunalt bostadstillägg

Kontakta fastighetskontoret för att få en blankett skickad till dig.

Förutom blanketten behöver du:

- läkarintyg eller liknande som styrker att din funktionsnedsättning berättigar dig till KBH
- intyg från arbetsterapeut
- aktuella inkomstuppgifter
- kopia av din senaste självdeklaration
- kopia på hyresavtal
- kopia av aktuell hyresavi

Municipal Housing , KBH

If you have a disability and are registered in Gothenburg can apply for municipal housing , KBH .

What is a municipal housing , KBH ?

Municipal Housing , KBH is a complement to the housing and mortgage style add as social insurance and pension authority handles .

What is required ?

For you to be able to get municipal housing , KBH required to have a permanent physical or mental impairment . The disability must result in significant difficulties in your daily life. You 'll also need a specially adapted accommodation because of your disability . This may mean that your property needs to have a certain size , which means that the dwelling will be more expensive than normal.

The allowance is income-related, your application must be renewed each year.

How do you apply for municipal housing

Contact Fastighetskontoret to get a form sent to you.

In addition to the form you need:

- certificates or similar documents that support your disability entitles you to KBH
- certification from the Occupational Therapist
- current income data
- copy of your most recent tax return
- a copy of the lease agreement
- copy of current rent payment

Så fungerar färdtjänsten

Färdtjänst finns för dig som har svårt att resa på egen hand. Du får resa med personbil, rullstolsbil, rullstolsbuss eller flexlinjebuss.

För att få resa med färdtjänst krävs ett färdtjänstillstånd.

När du ska resa med färdtjänst måste du boka, antingen via knapptelefon, internet, mobilapp eller genom att ringa till vår beställningscentral.

Res till fasta priser

Med färdtjänsten betalar du alltid samma pris så länge du åker inom Göteborgs kommun. Du betalar i efterhand med faktura.

- Samlad prislista för färdtjänstresor
- Betala färdtjänstresan med faktura

Föraren hjälper till och kontrollerar att du är rätt resenär

När du åker med färdtjänst är du garanterad att få den hjälp du behöver.

- Stöd och hjälp på resan.

Föraren kontrollerar alltid att han eller hon får med sig rätt resenär. Ta därför alltid med dig giltig fotolegitimation.

Resorna samplaneras

Färdtjänstresorna samplaneras alltid. Det innebär att det kan hända att föraren plockar upp en annan resenär på vägen och att resan tar dubbelt så lång tid som de hade tagit att köra raka vägen. Det kan också hända att föraren behöver lämna bilen en kort stund för att möta en annan resenär.

- Restid och samplanering

Resor färdtjänsten inte kör

Det finns resor som inte utförs av färdtjänsten. Exempelvis kan du inte åka färdtjänst till en läkare eller behandling. Då bokar du i stället en sjukresa på telefon 020-91 90 90.

Färdtjänsten kör inte heller liggande transport, resor med fast förare eller resor som är väldigt individuellt anpassade. För dessa resor ska du vända dig till socialkontoret i din stadsdel för att ansöka om bistånd.

How the transport service

Transportation service available for those who find it difficult to travel on their own . You get to travel by car , rullstolsbil , wheelchair bus or flex intercity bus .

To get to travel with transportation service requires a special transport permit.

When you 're traveling with transportation service must book either via touch tone telephone , internet, mobile app , or by calling our order center .

Travel to fixed prices

With transportation service , you always pay the same price as long as you go in Gothenburg. You pay afterwards with invoice .

- Comprehensive list for special transport journeys
- Pay special transport journey with invoice

The driver helps and make sure you are properly traveler

When you go with the transportation service , you are guaranteed to get the help you need.

- Support and help on the trip.

The driver always checks that he or she may, with the right traveler. Therefore, take with you a valid photo ID .

The trips jointly planned

Paratransit trips planned together forever. This means that it can happen that the driver picks up another traveler on the road and the journey takes twice as long as they had to run straight . It may also happen that the driver leaving the car for a short time to meet another traveler .

- Travel time and joint planning

Travel transport service not running

There are trips that are not performed by the transport service . For example , you can not ride transportation service to a physician or treatment. Then book rather a sick trip on telephone 020-91 90 90.

Färdtjänsten run nor underlying transport, travel with the drivers or travel that is very individualized . For these trips , contact the social services office in your district to apply for assistance .

Resor till och från skolan

Elever i grundskola eller grundsärskola kan ha rätt till kostnadsfri skolskjuts. Här kan du läsa vilka kriterierna är för att få terminsbiljett (skolkort) eller resa med skolskjutsfordon.

Skolskjuts är resan från hemmet till skolan och tillbaka, eller från skolan till fritidshemmet alternativt korttidstillsynen efter skoldagens slut. Hem är i det här fallet elevens folkbokföringsadress.

Terminsbiljett (skolkort)

Elever i grundskolan och grundsärskolan kan få gratis terminsbiljett (skolkort). För att få terminsbiljett ska du gå i din skolpliktsbevakande skola och ha en skolväg på:

- minst 2 km för elever i förskoleklass–årskurs 3
- minst 3 km för elever i årskurserna 4–6
- minst 4 km för elever i årskurserna 7–9.

Om du har valt en annan skola än den skolpliktsbevakande skolan får din vårdnadshavare betala resor till och från skolan.

Du får gratis terminsbiljett om du går i grundsärskolan och använder kommunala färdmedel till och från skolan/fritidsverksamheten. Detta gäller oavsett hur nära eller långt det är mellan hemmet och skolan.

Resa med skolskjutsfordon

Skolskjuts med skolskjutsfordon planeras så att flera elever samåker och blir upphämtade på olika ställen. Om du åker skolskjutsfordon och hemresan går senare än skolan är slut för dagen, ansvarar skolan för dig under väntetiden.

Vem som får resa med skolskjutsfordon avgörs utifrån om eleven har funktionsnedsättning, medicinska skäl (läkarintyg krävs) eller annan särskild omständighet.

Travel to and from school

Students in elementary school or foundation special school may be entitled to free school transport . Here you can read what the criteria is to get the semester ticket (school yearbook) or travel by school transport vehicles.

School transport is the journey from home to school and back , or from school to kindergarten alternatively short-term supervision after school . Home is in this case the pupil registered address .

Semester Ticket (school yearbook)

Pupils in primary and compulsory school can get free semester ticket (school yearbook) . To get the semester ticket , go in your schooling guarding school and have a way to school on :

- up to 2 km for students in preschool – grade 3
- up to 3 km for students in grades 4-6
- at least 4 km for students in grades 7-9.

If you have chosen a school other than the school attendance guarding the school receives your guardians pay for travel to and from school .

You get free semester ticket if you go in compulsory school and use public transportation to and from school / leisure activities . This applies no matter how near or far it is between home and school.

Traveling with school transport vehicles

Skolskjuts with school transport vehicle is planned so that several students car pool and are picked up at different places . If you go to school transport vehicles and the return trip goes later than school is out for the day, the school is responsible for you during the wait.

Who may travel on school transport vehicles is determined by whether the student has a disability , medical reasons (medical certificate required) or other special circumstance.

Samhällsorientering

Är du ny i Sverige? Då kan du ha rätt till samhällsorientering, en kurs som på 60 timmar ger dig kunskap hur det svenska samhället fungerar.

Syftet med kursen är att ge dig som nyanländ information om hur du kan göra för att snabbt komma in på arbetsmarknaden och i samhällslivet. Du får också chans att diskutera och ställa frågor. På kursen går vi bland annat genom hur man söker arbete, olika sätt att se på barnuppfostran och hur man hittar rätt i hälso- och sjukvården.

Kursen ges på modersmål eller annat språk som du behärskar väl. Om det inte finns möjlighet till utbildning på ditt modersmål får du samhällsorientering på svenska med tolk. Ofta ingår i kursen även studiebesök hos någon myndighet eller på ett museum.

Vem har rätt till samhällsorientering?

- du som är folkbokförd i Stockholm från och med 1 maj 2013,
- du som kommer från ett land utanför EES-området/Schweiz,
- du som har fått uppehållstillstånd på grund av anknytning,
- du som är mellan 18 och 64 år.

Men det gäller även för dig som har eller kommer att få en etableringsplan på Arbetsförmedlingen. Du vänder dig i så fall till din handläggare på Arbetsförmedlingen.

Centrum för samhällsorientering i Stockholms län är ett gemensamt samordningskansli för flera kommuner i länet som bland annat tar emot anmälningar, sätter ihop grupper och beställer utbildningar.

Samhällsorientering

Are you new in Sweden ? Then you may be entitled to social orientation , a course of 60 hours gives you the knowledge how Swedish society works.

The purpose of this course is to give you as a new arrival information on how you can do that quickly enter the job market and in society. You also get the chance to discuss and ask questions. You will become including how to search for work, different ways of looking at parenting and how to find the right health care .

The course is given in the native language or another language that you know well . If there is no training available in your native language , you get civic orientation in Swedish with an interpreter. Often included in the course even visits to any authority or to a museum .

Who has the right to social orientation ?

- You who are registered in Stockholm as from 1 May 2013,
- You who come from a country outside EES-området/Schweiz ,
- You who have been granted residence permits by association ,
- You are between 18 and 64 years old.

But it is also true for those who have or will have an expansion plan with the Employment Service . You turn if so, to your caseworker at the Employment Service .

Center for civic training in England is a joint coordination office for several municipalities in the county include receiving notifications, putting together groups and ordering programs.

Överförmyndarnämnden, en tillsynsmyndighet

I varje kommun ska det finnas en överförmyndare eller en överförmyndarnämnd. Nämndens huvuduppgift är att utöva tillsyn och kontroll över förmyndare, gode män och förvaltare samt pröva tillståndsärenden i enskilda fall. Syftet med tillsyn är att förhindra att omyndiga barn, eller myndiga personer som inte själva kan ta tillvara sin rätt, missgynnas ekonomiskt eller rättsligt. Därtill har nämnden att utreda ansökningar om ställföreträdare, rekrytera sådana, förordna ställföreträdare i vissa fall samt utreda och fatta beslut om ansökan om byte av ställföreträdare.

Uppdraget är reglerat i föräldrabalkens bestämmelser.

Länsstyrelsen har tillsyn över överförmyndarnämndens verksamhet. Part som inte är nöjd med de beslut som fattats av överförmyndarnämnden kan överklaga besluten hos tingsrätten.

Guardians, a regulator

In every municipality there shall be a chief or a chief guardian. The Board's main task is to supervise and control of guardians, trustees and administrators, as well as men trying licensing in individual cases. The purpose of supervision is to prevent underage children, and adult persons who are unable to take advantage of their rights, are disadvantaged economically or legally. In addition, the Tribunal to investigate requests of legal representative, such recruit, appoint a deputy in some cases and examine and decide on the application for a change of representatives.

The commission is regulated in Children and Parents regulations.

County Board oversees överförmyndarnämndens business. A party who is not satisfied with the decision taken by the Guardians may appeal decisions of the district court.

Appendix 2 – List of compound nouns with translations

Swedish input	English output	Acceptable translation(s)
Correct translations		
utvecklingsstörning	mental retardation	mental retardation
vårdnadshavare (3)	guardian	guardian
hemkommun	home municipality	home municipality
skolgång	schooling	schooling/school attendance
bekämpningsmedel (4)	pesticides	pesticide(s)/biocide(s)
rengöringsmedel	detergents	detergent(s)/cleaning agent(s)
bil- och båtårdsprodukter	car and boat care products	car and boat care/maintenance products
giftinformationscentralen	Poison Information Center	Poisons Information Centre
miljömärkningar	eco labels	eco-labels
kemikalierester	chemical residue	[chemical] residue
hushållssoporna	household trash	household garbage/rubbish/trash/waste
återvinningscentralerna	recycling centers	recycling centers
trädgårdar	gardens	gardens
grundvatten	groundwater	groundwater/subsoil water
vattendrag	waterways	waterways
båtbottenfärg	antifouling paint	anti-fouling paint
vintertid	the winter	the winter [time]
väderleksrapport	weather reports	weather bulletin/forecast/report
vädertjänster	weather services	weather services
prioriteringsordningen	priority order	priority order
vinterunderhåll	winter maintenance	winter maintenance/upkeep
omvårdnad	care	care/nursing
hushållssysslor	household chores	household chores
hemtjänstpersonalen	home-help staff	home help [service] staff
matinköp	grocery shopping	grocery shopping
apoteksårenden	pharmacy errands	pharmacy errands
ögondroppar	eye drops	eye drops
husdjur	pet	domestic animal/[house] pet
biståndshandläggaren (5)	assistance officer	assistance officer
korttidsboende	short-term accommodation	short term accommodation
snöskottning	shovelling snow	clearing/shovelling [away] snow
skattereduktion	tax credit	tax reduction/credit
skadeståndsansvaret	liability	indemnity/liability
fastighetsägaren	property owner	house/property owner
förvaltningsområdet	administrative area	administrative district
arbetsterapeut	occupational therapist	occupational therapist
inkomstuppgifter	income data	income statement/data
självdokumentation	tax return	[income] tax return

hyresavtal	lease agreement	rental/lease agreement
personbil	car	[private] car
knapptelefon	touch tone telephone	push-button/key[pad]/touch tone telephone
mobilapp	mobile app	mobile app(lication)
fotolegitimation	photo ID	photo ID
ansökningsblankett	application form	application form
terminsbiljett (5)	semester ticket	term/semester ticket
skolskjutsfordon (5)	school transport vehicles	school transport vehicles
korttidstillsynen	short term supervision	short-term supervision
folkbokföringsadress	registered address	registered address
skolväg	way to school	way to school/school way
årskurserna (2)	grades	forms/grades
fritidsverksamheten	leisure activities	leisure activity
hemresan	return trip	fare home/return trip
väntetiden	wait	wait/waiting time
läkarintyg	medical certificate	doctor's certificate/medical certificate
arbetsmarknaden	job market	labour/job market
modersmål (2)	native language	native language/mother tongue
uppehållstillstånd	residence permits	residence permit(s)
samordningskansli	coordination office	coordination office
huvuduppgift	main task	main task
länsstyrelsen	county board	county [administrative] board
tingsrätten	district court	district court
mottagande	receipt	reception/receipt
Tornedalsfinska	Torne Valley Finnish	Torne Valley Finnish
Arbetsförmedlingen (2)	Employment service	employment office/agency/[Public] Employment Service
hälso- och sjukvården	health care	health care/service
vändplats	turning space	turning space
cykelbanor	bike lanes	cycle lanes/bicycle lanes
bortforsling	removal	removal
plogvallar	plow ridges	plow ridges
undantagsfall	exceptional cases	exceptional case(s)
Park- och naturförvaltningen	Parks and Landscape Management	Parks and Landscape Management/Recreation and Parks dept.
barnuppfostran	parenting	bringing up of children/raising/child rearing/parenting
beställningscentral	order center	order centre/central dispatch [office]
handläggare	caseworker	[administrative] officer/official/caseworker
Socialkontoret	social services office	social welfare/services office
huvudgator	arterial streets	main/principal streets/thoroughfares/arterial roads/streets
Pensionsmyndigheten	Pension authority	[Swedish] Pensions Agency
kunskapskrav	proficiency	knowledge/proficiency requirements
Kemikalieinspektionen	Chemical Agency	[Swedish] Chemical Agency

fritidsbåt	boat	pleasure boat/pleasure craft
snöfall	snow	snowfall
färdmedel	transportation	means of conveyance/transportation
miljöhänsyn	an environmental standpoint	environmental considerations
syn- eller hörselnedsättning	sight or hearing loss	sight or hearing impairment/loss
hemhjälp	domestic	home help/ domestic
Mistranslations		
grundskola (15)	basic learning disabilities basic Special Schools (2) compulsory school (8) the undergraduate special education special school (2) foundation special school	[nine-year [compulsory]] school for the intellectually disabled
grundskolan (6)	primary school elementary school (2) schools (2) primary	nine-year [compulsory] school
träningsskola	orientation training school	training school/school for the severely intellectually disabled
ämneseområde	disciplines	subject [field/area]
skolskjuts (4)	school bus school transport (2) skolskjuts	school transport
särskoleeleven	särskoleeleven	pupil of/in [nine-year [compulsory]] school for the intellectually disabled
grundskoleklass	grundskoleklass	class of/in school for the intellectually disabled
grundskoleklass (2)	mainstream classroom	class of/in nine-year [compulsory] school
personaltäthet	staff	teacher to pupil/student ratio
disk- och tvättmedel	detergents	washing-up/dishwashing liquid/powder and detergent(s)
hemkemikalier	hemkemikalier	chemicals for use in the home
Naturskyddsföreningen	society	Society for Nature Conservation
snö- och halkbekämpning	snow and ice	snow-clearance and anti-skid treatment
snöröjning (7)	snow (2) - snow removal (4)	snow-clearance/removal
halkbekämpning (2)	ice	anti-skid treatment
plogbil (5)	plow plow truck (3) snowplough	snow plough/plow
gång- och cykelbanor	gång and cycle paths	footpaths and cycle lanes/bicycle lanes
hemtjänst (13)	home help (2) home care service (3) home service (3) assisted living (4) care services home help	home help service
stadsdel (8)	district (4) neighborhood (4)	district
bostadstillägg (7)	housing (6) mortgage style adds	rent allowance/housing supplementary allowance
funktionsnedsättning (5)	disability (4) impairment	impairment

bostadsbidrag	housing	housing benefit
Försäkringskassan	social insurance	Social Insurance Agency
Fastighetskontoret	Fastighetskontoret	Property Management Department
hyresavi	rent payment	rent notification
rullstolsbil	rullstolsbil	wheelchair accesible vehicle/car
rullstolsbuss	wheelchair bus	wheelchair accesible vehicle/bus
färdtjänsten (10)	transport service (3) transportation service (6) färdtjänsten	mobility/transportation service
färdtjänstillstånd	special transport permit	mobility/transportation service permit
prislista	list	price list/sheet
färdtjänstresor (3)	special transport journey (2) paratransit trips	journeys/trips with mobility/transportation service
sjukresa	sick trip	journey to receive medical treatment
Socialkontoret	social services office	social welfare office
fritidshemmet	kindergarten	care center/after school club
skoldagens	school	school day
förskoleklass	preschool	preschool class
samhällsorientering (5)	Samhällsorientering social orientation (2) civic orientation (2)	social/civic orientation
samhällslivet	society	social life
studiebesök	visits	educational visit/field trip
etableringsplan	expansion plan	establishment plan/ plan for establishment
handläggare	caseworker	[administrative] officer/official/caseworker
överförmyndarnämnden (4)	guardians (2) chief guardian överförmyndarnämndens	Comittee of Chief Guardians
tillsynsmyndighet	regulator	supervisory authority/control office/board of control
överförmyndare	chief	chief guardian
tillståndsärenden	licensing	permission/licence errands/matters
ställföreträdare (3)	legal representative deputy representatives	deputy/substitute/representative
föräldrabalken	children and parents regulations	Code on Parents and Children/Code relating to Parenthood and Guardianship
skolkort (3)	school yearbook	bus card for pupils
flexlinjebuss	flex intercity bus	no established translation
trafikleder (2)	highways thoroughfares	traffic routes/thoroughfares
gång- och cykelvägar (4)	walking and cycling paths pathways footpaths and cycle paths pedestrian and bicycle paths	footpaths and cycle lanes/bicycle lanes
busslinjenät (2)	Busslinjenät bus route network	no established translation [busslinje=bus service [line]]
väderleksförhållanden	weather	weather [conditions]