Into the Cosmos

A Translation Study of Astronomical Proportions
Focusing on Terminology, Additions and Omissions

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Abstract

The intention of this essay is to illustrate and describe various means to overcome some of the difficulties that any translator dealing with technical translations at some point or another would come upon – presented in a qualitative analysis. The text under analysis is a chapter called Into the Cosmos and is part of the book Planet Quest – The Epic Discovery of Alien Solar Systems by the American astronomer Ken Croswell. The analysis specifically focuses on terminology and two aspects that usually are part of the cultural adaptation of a text; namely additions and omissions. However, in this essay they help adapting the text towards a new target audience not so much because of culture, but rather because of my decision to fully disconnect the text from the context in which it previously functioned. And because of this, the target text was in the end given more of an educational character compared to the source text.

Key words: adaptation, additions, equivalence, technical translation, terminology, translation theory, omissions
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To translate, one must have a style of his own, for otherwise the translation will have no rhythm or nuance, which come from the process of artistically thinking through and molding the sentences; they cannot be reconstituted by piecemeal imitation. The problem of translation is to retreat to a simpler tenor of one’s own style and creatively adjust this to one’s author.

- Paul Goodman, American author and poet

1. **Introduction**

If there is only one thing that can connect the size and complexity of the universe with that of translation it has to be that translators and researchers of the origin of the universe alike have a problem when it comes to trying to compress huge amounts of material into a limited space (cf. Bassnett 2000:73). But at the same time as the universe is expanding as a whole, the distance between cultures and languages here on Earth seems to decrease. With the influence of the Internet, TV, music and more the modern world is nothing like the old and the present day influence of the English language on a country such as Sweden is massive (Ohlander, 1991). Yet, languages are not just bridges between cultures; they are also barriers – barriers that we need translators to struggle with in order to render fully understandable texts. But when we first start learning a second language and in the years that follow, we are often given decontextualized translation exercises that we are told have only one simple solution. However, this notion can in itself become a huge barrier when one later realizes that translation is a task far more advanced than just simply transferring the words from one language into another. Instead, according to the British translation scholar Peter Newmark (1988:5), translation is about “rendering the meaning of a text into another language”, and what is more, that this is carried out “in the way that the author intended the text” (ibid.). And since translation comes down to making all kinds of different choices, often even based on a matter of taste, it is rather the norm than the exception that different translators of the same text would produce different translations. This essay focuses on three of these aspects as described further down.

I have chosen to translate a chapter from the book *Planet Quest – The Epic Discovery of Alien Solar Systems* written by the American astronomer Ken Croswell in 1997. The subject of astronomy was, furthermore, chosen since it has been a fascination of mine for the bigger part of my life and this particular text proved to offer just the right number of obstacles for me as a translator.

Works of non-fiction often contain field specific terminology that occasionally can be very hard to translate (cf. Ingo 2007:227). Sometimes this is because the translation is going
to be used in a popularized form, or because the term in question might simply not yet have a proper equivalent in the target language (TL) as it does in the source language (ST). It then becomes very interesting to see what strategies the translator has used to overcome these obstacles; and thus, as my first aspect, with phrases like *extrasolar planet* and *faster-than-light-travel*, I have chosen to study terminology.

The second and third aspects of this essay both have to do with cultural adaptations – namely omissions and additions. Any form of translation of a text that is redirecting itself to a new target audience usually undergoes a so called cultural adaptation – especially if the translation is to be published in a different country (cf. Ingo 1991:202). For instance, the translation and spelling of proper names often differ in the TT when compared to those in the ST. Also, since e.g. presupposition, previous knowledge of a topic covered, varies for every new target audience omissions or additions made of or to the text may be justified, however, it is important to realize that “any attempt to produce a single all-inclusive translation - one that will suit every reader - is doomed to failure” (Chesterman & Wagner 2002:56).

1.1 Aim and scope

The primary aim of this essay is to analyse the Swedish translation of a chapter in *Planet Quest – The Epic Discovery of Alien Solar Systems* by Ken Croswell with the following aspects in focus:

- Terminology
- Additions
- Omissions

A secondary aim is to illustrate some general problems that any translator might run into during a translation, and how I specifically went about solving these.

1.2 Method

In order to have something to base this essay on, the first step to undertake was to translate the ST. While translating, a number of notes were taken and these were later compiled into this paper. Although only one chapter was translated it was translated as if it stood on its own. What is meant by this is that despite the fact that a specific term may have been described in an earlier part of the book I have in the translation sometimes either added a small explanatory phrase adjacent to the term or left the term out and kept the explanatory phrase
only. As a consequence my target audience now consists of a wider group of people than that of the ST. Also, because of the pragmatic additions made to the text the style of the TT has an even bigger educational feel to it than the ST, and would therefore perhaps exclude those readers with a higher knowledge of the science field.

In the analysis section, primarily under the terminology aspect, different translation strategies are illustrated with the purpose of showing how a translator deals with difficult situations. With the purpose of primarily gaining knowledge of correct target language terminology and thus further increasing the accuracy and reliability of the translation, in full accordance with e.g. Ingo (1991) and Gotti & Šarčević (2006), I have consulted external subject experts in the form of Björn Davidsson, Ph.D in theoretical astrophysics at Uppsala University, as well as a Växjö University Ph.D and lecturer in theoretical physics by the name of Conny Sjögren. A linguistic marketplace has spawned because of the internet and the first stage of finding proper target language terminology therefore usually began with a basic search using Wikipedia and then switching over to the Swedish version of the same article. A search for the Swedish term was then performed on a search engine such as Google to see if it existed in use on e.g. recognized scientific websites. Yet, some cases did involve guessing or simply searching for the source language term used as a borrowing in the target language.

1.3 Material

This study was performed on my own translation of a chapter out of the book *Planet Quest – The Epic Discovery of Alien Solar Systems* by Ken Croswell published in 1997. Ken Croswell is an American astronomer in Berkeley, California who received his Ph.D. from Harvard University (Croswell 1997). The chapter covered is called *Into the Cosmos* and deals with the prospects and problems of man’s age-old desire of interstellar travel. The source text consists of roughly 10 book pages and the target text of about 23,000 characters.

The book was intended for a general public interested in astronomy, and is consequently not riddled with complex formulas or overly intricate language. As a result, despite all the scientific facts, it is written in a fairly accessible way. However, lengthy sentences (e.g. one containing 84 words), astronomical concepts and basic physics formulas (such as $E=mc^2$) occur.

The text is translated in a way so that the target audience can benefit from it in 2008 in the same way the source audience could in 1997. In practical terms, what this means for the translator is that alterations occasionally have been made so that the text is up to date.
2. Theoretical background, translation strategies and definitions

A translation strategy I have tried to utilize is that of *deverbalisation* – the act of transferring the message the author was trying to convey rather than to force the source text verbatim into the target text. This is very close to Nida and Taber’s overall definition of translation which reads: “translating consists in reproducing in the receptor language the closest natural equivalent of the source language message, first in terms of meaning and secondly in terms of style” (Nida & Taber 1969 in Ingo 2007:14). That is, write what was meant and not what was written. However, according to Pritchard the whole issue is not written in stone and “should be regarded as a matter of degree rather than choice” because “literal translation could produce false pairs or inadequate or even wrong translations” (Pritchard in Gotti & Šarčević, 2006:286).

2.1 Terminology

According to Merriam-Webster Online Dictionary *terminology* is defined as “the technical or special terms used in a business, art, science, or special subject”. Terminology in a field such as astronomy evolving with every new finding and for a translator it is thus very important to be up to date (Ingo, 2007:229). In this text the terminology is of course specific mainly to the fields of astronomy and physics. However, in most cases searches of field specific terms in generic dictionaries yield nothing and although technology, e.g. through the Internet and terminology databases, has changed the methods of modern terminology research I have for the most parts used reference material or so-called parallel text in Swedish because of a lack of proper findings of the former. The use of proper equivalents is furthermore of special importance when it comes to texts of educational or scientific style since they guarantee that no misunderstandings occur (Ingo, 1991).

According to Pedersen in “traditionally, the terminology of translation theory has been deplorably vague” (1988:11) and so to be clear in regards of finding natural translation equivalents the following detailed strategies presented by Vinay and Darbelnet (in Munday 2001:56ff) have been used when performing the translation:

**Borrowing (1):**

(1) Particles that exceed the speed of light are called *tachyons*, but no one has ever seen any […] (Croswell:244)

Partiklar som överstiger ljusets hastighet kallas *takyoner*, men finns hitintills bara teoretiskt […]

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“The SL word is transferred directly to the TL” (Munday 2001:56). The term has been kept in the translation although it has been fitted with a standard Swedish plural affix and a slightly different spelling. Further comments on this particular term can be found in example (7). Borrowing can be used when or if there is a lexical gap in the target language. However, the problem is how to determine that there is no lexical translation equivalent already in existence.

Literal translation, or ‘word-for-word’ translation, as shown in (2) below, is according to Vinay and Darbelnet most common in use between two languages that share the same family and culture – as English and Swedish in fact do. It should furthermore only be “sacrificed because of structural and the metalinguistic requirements [, the relation between language and other cultural factors in a society,] and only after checking that the meaning is fully preserved” (Vinay and Darbelnet 1995:288 in Munday 2001:57). Furthermore, Newmark (1988) regard it as an elegant and efficient way of translating as long as an unnatural target text is not being rendered.

(2) A craft that zooms away at 99.999 percent of the speed of light will reach Alpha Centauri only a year before one travelling at 80 percent of that speed […] (Croswell:241)

Below in (3), the two terms wormhole and light-year already exists as established terms in Swedish in the forms of maskhål and ljusår respectively.

(3) For example, shortcuts called wormholes may exist in space that would let ships travel from the Sun to Alpha Centauri without passing through the entire 4.3 light-years of space between the two. (Croswell:236)

The translation strategy used is called Calque and is “a special kind of borrowing” (Munday 1991:56) in which the expression or structure of the SL has been brought over into the TL in a literal translation. For example, worm and hole literary corresponds to mask and hål in Swedish.

Modulation – The point of view and semantics is changed in order to avoid awkward or unidiomatic TL. The passage exemplified in (4) was modulated into “fysiker har svårt” because a more literal rendering of “Stars can do it much more easily” seems to give subtle connotations that stars are aware of what they are doing and that they are doing it well, especially since the author has placed the stars and physicists on an equal level. In the
translation the stars have in a sense been de-personalized in the same way as the wormhole in figure 41 has (see p. 10 of translation). Wormholes would be neither friendly nor unfriendly; they are what they are and can as such be nothing but neutral.

(4) In addition, nuclear fusion demands high temperatures, which is why *stars can do it much more easily* than physicists can. (Croswell:244)

Kärnfusion kräver därtill oerhört höga temperaturer och det är en av orsakerna till att *fysiker har svårt att återskapa något som annars bara sker inuti stjärnor.*

According to Vinay and Darbelnet the modulation procedure is justifiable when a literal translation would result in a fully “grammatically correct utterance” but still considered to being “unsuitable, unidiomatic or awkward in the TL” (Munday 1991:57f).

2.2 Equivalence

Words have different stylistic values (consider *father, dad, pop*) and can even have different meanings in different contexts and because of this an essential factor when translating is choosing equivalent words for any given situation. And in addition to this, the matter of the translator’s interpretation has to be taken into account (Bassnett 1991:22ff). Example (5) below is deemed fairly informal in style in the ST purely because of its figurative meaning, and has become more formal and to the point in the TT, but the ST and the TT are still equivalent with each other. This because *equivalence* as described by Vinay and Darbelnet is when you e.g. transfer a fixed expression but through “different stylistic or structural means” (Vinay and Darbelnet 1995:90 in Munday 2001:58).

(5) The good thing about antimatter, though, is that it *packs a lot of punch per pound.* (Croswell:243)

Tacksamt är dock att det är *väljligt kraftfullt i förhållande till sin massa.*

(5) above is also a good example of when a literal translation is not a good strategy to use since it, when transferred directly into something like *packar många slag per pund,* first of all would produce very unnatural Swedish, but most important of all would mean very little, if anything, to the reader of the TT. According to Chesterman (2002) the highest mark one can get on a translation is that “it reads just like an original” and with unsatisfactory expressions like that a text would have the exact opposite effect.

And although translation is about finding “the closest natural equivalent to the source-language message” (Nida 1964:166 in Ingo 1991:81) equivalence in translation “should not
be approached as a search for sameness, since sameness cannot even exist between two TL versions of the same text, let alone between the SL and the TL version” (Bassnett 1991:29).

2.3 Additions and omissions

These two aspects come in a few different varieties and are part of the so called cultural adaptations that a translator sometimes needs to undertake in order to render a fully acceptable translation for the new target audience. According to Ingo (2007:123) *semantic additions* in the forms of e.g. an adjective or adverb are occasionally justifiable to create a more balanced and frictionless TT than what would have been produced had the additions not been made. Semantic additions were used in this translation in order for the text to come off as slightly less artificial and stiff. However, they have not been, and are not to be, used on a frequent basis.

*Pragmatic additions*, on the other hand, are used when there is an apparent need to further explain an aspect where e.g. an uninitiated reader would otherwise have problems understanding (Ingo 2007:123) – either because of presupposition or cultural grounds. Pragmatic additions are common when popularizing texts of a non-literary style. A big problem, however, is to determine what the general reader might understand on their own and what they might need help with (Ingo 2007:124). As a translator one would not constantly want to underestimate the intelligence of some readers – but, since the goal of this translation is to be appealing to a wide audience and at the same time stand on its own outside the rest of the book, pragmatic additions are a key aspect in this translation. Also, according to Ingo (cf. 1991:203), the *type* of text often influences the length of the additions that need to be made to a translated text. For instance, it appears that longer additions are more common in texts which have an informative purpose.

The opposite of additions are *omissions*, and a translator can resort to this translation strategy if for some reason a particular portion of a text is deemed superfluous and unnecessary. The reasons for this vary, but are often due to cultural motives whose outcome seldom changes the original meaning of the text but rather only affect aspects that perhaps were of interest to the original audience, but would be of little or no interest to the new target audience. Although, according to Ingo (2007:124) too often text is omitted due to indolence and carelessness.

Furthermore, the traditional view of an omission is that an aspect is left out of the text completely; however, a slightly broader definition is used in this essay. Here omissions also include those sections that are omitted in one place of the text only to appear as an addition, in
one form or the other, in another. Also, what Ingo (1991:86) describes as *implicit equivalence*, i.e. making information implicit without changing the meaning of a sentence, has in this essay fallen under the category of omissions.

### 3. Analysis

This part of the essay deals with the actual analysis of the translation with the three aspects described in section 1.1 in mind: terminology, additions and omissions.

#### 3.1 Terminology

On terminology Peter Newmark argues that "[t]he chase after words and facts is unremitting and requires imagination" (1988:8). And though the terminology used in the ST for the most parts already has established equivalents in the TT, it did in fact present some rather unorthodox words that in turn required imagination and craftsmanship on the translator’s part. And so, to begin with did (6):

(6) Also in the domain of speculation is *faster-than-light-travel*. (Croswell:244)  

When this expression came up during my first rough translation, I marked it as being a pleasant though difficult one, and soon went on with a simple unit shift translation, i.e. “a word translated as a phrase” (Chesterman & Wagner 2002:60), in the likes of *resor snabbare än ljuset*. However, since the equivalent term for *supersonic* (faster-than-sound-travel) is *överljushastighet* in Swedish, why could there not be a word such as *överljushastighet*? A web search for this term was performed using Google and, surprisingly, it in fact yielded a total number of 413 hits. At the same time a search for the term *överljusfart* was performed. This generated 390 hits, and the difference in these terms lies of course in the suffixes which could roughly be translated into *velocity* and *speed* correspondingly. One could therefore argue that the choice is a matter of taste and formality only. However, the ultimate guidance in the decision making came in three steps. First, a highly encouraging two thumbs up regarding the use of *överljushastighet* from the external subject expert Conny Sjögren. Second, subject expert Björn Davidsson’s find of the same term in a lecture title at Indiana State University held by Swedish-born physicist Torsten Alväger accompanied by Davidsson’s own comment “if it’s good enough for him, it’s good enough for me”. And third, the use of *överljushastighet* in a Swedish popular science magazine called *Illustrerad*...
It was now an easy choice to make, and also resulted in the use of the opposite term underljushastighet ‘below speed of light’ at a later point in the translation.

In this next example, the term tachyon has been kept, although with a slightly adapted Swedish spelling. Also, a Swedish plural ending of -er has replaced the English plural -s.

Particles that exceed the speed of light are called tachyons, [...] (Croswell:244)

According to Nationalencyklopedin (NE.se) both takyon and tachyon are acceptable spellings in Swedish, and when a frequency search of the expression in the plural was performed using Google the former generated a mere 7 hits and the latter a full 136. In the popular science article previously referred to in example (1), there was also a mentioning of the term tachyoner in Swedish. However, despite this the adapted spelling was chosen since, first of all, it gives the reader a better idea of its pronunciation, and what is more, many other terms brought into the Swedish language has undergone the same transformation. For instance, compare heart palpitation (tachycardia) to ‘takykardi’ or tachymeter to ‘takometer’ (Norstedts 2000). Something else that can be used as a guide when translating is to examine how the term has been previously translated in the neighboring languages. In the case with tachyon I found takyon in Norwegian (bokmål) and this only further supported the choice of spelling. A parallel text using the term with my choice of spelling is Sören Holst’s Rumtid – En introduktion till Einsteins relativitetsteori (2006). An entirely different translation equivalent that would be more descriptive in it self, yet far more technical, would perhaps be the borrowing of the English term superluminal, but because this text is aimed at a general reader, this was decided against. Although the translation strategy used for the term chosen is not exactly that of a modulation as described by Vinay and Darbelnet (Munday 2001:57) it is the strategy that comes closest.

Example (8) below is very interesting because the English phrase extrasolar planets has been transferred into an, at least initially, completely different English and scientific term in the TT (exoplaneter).

Someday astronomers will also be able to discover extrasolar Earth-mass planets around Sun-like stars [...] (Croswell:246)

En vacker dag kommer astronomer även att upptäcka så kallade exoplaneter – planeter utanför solsysteom i storlek med jorden i banor runt stjärnor liknande vår egen sol [...]
Both *extrasolar planets* and *exoplanets* seem to be in use in the English language, although a search on Google using the affix *site:edu* yielded roughly 32,000 hits for the former and about 9,000 for the latter. The term *exoplaneter* in Swedish is therefore a borrowing in itself but can in the case of this particular transfer not be classified as such. According to NE.se the term is a fully acceptable one in Swedish and is furthermore accompanied by many other such scientific terms beginning with the prefix exo-, meaning ‘outside’ or ‘outwards’, such as *exorcism* and *exoskelett* (NE.se). On several occasions the term was found in use in *Illustrerad Vetenskap* (e.g. in no 12/2007 p.26) as well as in the Swedish daily newspaper *Dagens Nyheter* [electronic] which seemed to confirm what external subject expert Björn Davidsson had stated in an email about it being the single most used translation equivalent within the astronomical field as well as in everyday use.

Below, in (9), the term *collimate* gives a good example of the principle that a translator constantly must be aware of and consider whom the translation is targeting:

(9) Because photon pressure is weak, the lasers must be large and powerful, covering hundreds of miles, and their beam must remain *collimated* over trillion of miles of space. (Croswell:244)

According to Tyda.se the Swedish translation equivalent for *collimate* is ‘kollimera’ and means roughly *align* or *make parallel*. But after a conversation with 5 of my peers, I came to the conclusion that I could not leave the term as it was but had to come up with some kind of pragmatic addition. The explanatory phrase that I came up with, *löpa precis parallellt*, could have substituted the term in full, but since I wanted the readers of the text to get the chance of perhaps learning something new I chose to keep the Swedish translation equivalent as well. Using the term on its own would be a too technical a translation and thus make parts of my target readers feel left out. And since this is a popular science type text, I want the translation to be inclusive; not exclusive. Although it has been altered somewhat to better fit the Swedish language the term would most likely be considered a borrowing (Munday 2001:56).

The next example consists of two specialized terms made up by *main-sequence star* on the one hand, and *G/K-type* on the other.

(10) Alpha Centauri A is a yellow *G-type main-sequence star*, and Alpha Centauri B is an orange *K-type main-sequence star*. (Croswell:235)

[…] Alfa Centauri A en gul *huvudseriestjärna av så kallad spektotyp G*, och Alfa Centauri B en orange *huvudseriestjärna av spektotyp K*. 
According to Stockholm Observatory’s terminology wordlist [electronic], a star that lies within the so called Herzsprung-Russel diagram is referred to as a main-sequence star ‘huvudseriestjärna’, and this would therefore, in accordance with Vinay and Darbelnet most likely be considered as a calque (Munday 2001:56). The TT term was found on Nationalencyklopedin (NE.se) and is used on websites with authority such as ESA (The European Space Agency). I have found no alternative terms that would make the term decision hard and so, from my point of view, it looks like the equivalence here is 1:1 between the two languages.

Spektraltyp would be considered as a borrowing (Munday 2001:56) since G/K-type is an abbreviated form of spectral type. A guess/estimation of the term was searched for at Nationalencyklopedin and it revealed that there indeed was such a word. It also said that it is interchangeable with spektralklass, but instances in print of the latter one were only found in Astronomi (1978) and since a frequency search between the two terms on Google (using the affix site:se) favored spektraltyp (357 vs. 174 instances) a choice to use that one was made. Why there are two terms for the same term in Swedish has to do with the simple fact that there, for some reason – at the risk of it being confusing (although the terms are quite similar), are two terms for it in use in English as well – spectral class and spectral type. Although not conclusive in any way, the findings in the parallel text and the frequency search might indicate that spektraltyp has come to be the preferred term in Swedish modern day astronomical texts.

Neither main-sequence star nor G/K-type have been explained earlier on in the chapter, so pragmatic additions were added. The additions will be discussed in connection with example (12).

3.2 Additions

Many of the additions made to this translation have come about in order for the text to function on its own outside the book it was originally written for, but also in order for the text to function in 2008 specifically.

First of all, the addition as exemplified in (11) is necessary for the reader to even grasp what an astronomical unit is – without a reference the distance in said unit is not only worthless but what is worse; meaningless.
The Pioneer-spacecraft cover about 2.3 astronomical units every year, and the faster Voyagers about 3.4 astronomical units per year. (Croswell:237)

Since the translation is supposed to stand on its own a clarification for this unit was deemed justifiable. The additional information was inserted after conferring NE.se, and the TT use of the international standardized unit \( au \) (as per general recommendation of the International Astronomical Union) instead of a Swedish \( AE \) or \( a.e. \) that, according to NE.se are in use, has to do with the spacecraft TAU later mentioned in the ST. Although the name of the craft is clarified in the ST as something that would “travel a thousand astronomical units from the Sun” (Croswell 1997:245) the use of the unit \( au \) in the TT helps the reader to see that there is a connection between the name of the craft and its mission – especially since the T in the spacecraft’s name for thousand also corresponds nicely to ‘tusen’ in Swedish.

Since neither of the two star classifying systems mentioned in (12) were explained in the ST chapter in any way, a rather hefty pragmatic addition consisting of 43 words was made to make this clear.

Instead of adding information next to the existing text a footnote was considered, perhaps even with a translators note, but since this could have distracted the reader a completely anonymous addition was decided on. As previously stated in section 2.3, Ingo (1991:203) argues that texts that are meant to be informative often get the largest additions (and that is even more the case with this text since it is meant to stand on its own). The first part of this addition was inspired by a section in the parallel text Stjärnor och äpplen som faller – En bok om upptäckter och märkvärdigheter i universum (2003:168) written by Ulf Danielsson, a Swedish professor in theoretical physics. The second part was written after reading up on the Herzsprung-Russel diagram in the Stockholm Observatory wordlist.
In (13) two additions have been made to adapt the text with a 2008 publication in mind. The first one concerns the fact that the ST places Pluto on the same level as the other planets, and although this was correct at the time of the original publication over a decade ago, it is no longer so. Since 1930 the planet Pluto has been regarded as our solar system’s ninth planet, but this was to change in August of 2006 when IAU (The International Astronomical Union), after the discovery of numerous Pluto-like objects in our solar system for the first time decided to come up with a definitive definition of what a planet really is. Following the decision Pluto failed to meet the criteria and after a vote the planet was reclassified as a dwarf planet or in TT, as a ‘dvärgplanet’. A keen-sighted and up-to-date reader might very well have spotted this as an error had the alteration not been made. I knew the TT term beforehand, but its existence still needed confirmation and that was accomplished using NE.se.

At the end of the sentence an addition of twelve words was also added to satisfy the need of any reader that, like myself upon first reading it, wondered about when the first ever space probe were to arrive to Pluto. Both pieces of information added to (13) were gathered from the official NASA website and the additions can be seen below:

(13) To date, terrestrial spacecraft have explored all the Sun’s planets from Mercury to Neptune; only Pluto has been left out in the cold. (Croswell:237)


At first glance, the two versions in example (14) seem practically identical – the translation is close to literal (Munday 2001:56); however, at a closer examination you find aspects that distinguish one from the other.

(14) Life could not exist if the universe did not have the specific properties that it does. If the gravitational force were weaker, matter would never have conglomerated into galaxies, stars and planets; if the primordial universe had possessed equal quantities of matter and antimatter, they would have completely annihilated each other; if the carbon atom did not have the specific resonance that Fred Hoyle had predicted [...](Croswell:246)

Liv hade inte kunnat existera om universum inte haft de egenskaper det faktiskt har. Om gravitationskraften exempelvis vore svagare skulle materia aldrig ha ackumulerats och slagits samman till planeter, stjärnor och galaxer. Om det ursprungliga universum därtöver innehållit en lika fördelning av materia och antimateria skulle de fullständigt ha tillintetgjort varandra och om kolatomen inte hade haft den specifika resonans som Fred Hoyle förutsände [...]

One is the length of the ST sentences compared to those in the TT, but what was really referred to was the subtle addition of the words exempelvis, därtöver and och which all help weaving the TT sentences together in a way that the sentences of the ST completely lack. When read, the TT seems less strict, and the additions have thus resulted in a change in style.
Although the ST style gives the passage a dramatic touch that fits the facts presented, I am fairly certain that the same mechanical approach would disturb and alienate a Swedish reader. English and Swedish text norms differ from each other, and the additions made would therefore be justifiable because of the sake of rhythm (cf. Ingo 2007:124).

3.3 Omissions

A translator can choose to omit a portion of a text if something, for instance, appears overly clear and repetitive in an irritating way. The first example illustrates exactly this and concerns three different sentences taken from the same book page that in one way or another all point to the same piece of information: that antimatter and ordinary matter when in contact with each other are a dangerous mix. It starts with:

(15) When matter meets antimatter, they completely annihilate each other, converting all mass into energy. (Croswell 1997:243)

Just a few lines down this is repeated, although in slightly different ways, starting with:

(16) Unfortunately, antimatter does not exist naturally on Earth; if it did, it would have exploded when it touched ordinary matter. (Croswell 1997:243)

And finally further down still:

(17) Furthermore, antimatter is dangerous to handle, because it must not touch any ordinary matter. (Croswell 1997:243)

Now, in the TT, only one sentence was kept untouched and that was the initial (15). This was because it conveyed what that the two other sentences did as well as the part about the energy outcome. If it were omitted the sentence would, furthermore, make the surrounding text lose the least amount of momentum out of the three. (16) was kept in part since the omitted part it conveyed something that already had or would come up in any of the two other sentences – the sentence lost the phrase after the semicolon and was then sown together with the sentence that immediately followed and thus created a somewhat nicer textual flow. (17) was completely omitted since it provided no new information – that it would be dangerous to handle had, I believe, already been made clear in (15), although not in those exact words.
Example (18) concerns text that has been omitted due to obvious information in the ST that is seemingly not useful for anything more than perhaps to convey a slightly more easy-going tone.

(18) Before spacecraft flew past the planets of the Sun, astronomers trapped on Earth knew little about them: some thought Venus had oceans, Mars canals […] (Croswell:235)

Innan farkoster hade passerat solens planeter visste astronomer väldigt lite om dem – man trodde exempelvis att Venus hade ocealer och att Mars hade kanaler.

Since humans have not made it that far into space yet there is no actual need for this part of the sentence to make it over into the TT. Trapped on Earth? As supposed to being trapped where? The omission does, furthermore, not change the meaning of the sentence and nor does it make the sentence any harder for a reader to understand. The information has been made implicit and would normally not be considered as an omission (Ingo 1991:86), but for the sake of this essay – it has.

Illustrated below is example (19):

(19) Still others, of a more spiritual persuasion, see the universe's remarkable offspring as a sign that an intelligent creator wrote a tremendous symphony whose melodies the stars, galaxies, and planets now play with beauty and precision, and we living beings are one of the fortunate resulting chords, perhaps the climatic chord in that symphony’s greatest movement. (Croswell:235)

Det finns även de med en mer andlig övertygelse som uppfattar universums anmärkningsvärda liv som ett tecken på att en intelligent skapare tonsatt en mäktig symfoni vars melodier: planeterna, stjärnorna och galaxerna nu anspelar på skönhet och precision, och att vi – de levande varelserna, kanske är det mest framgångsrikt komponerade ackordet.

The omitted part of the translation comprises of “perhaps the climatic chord in that symphony’s greatest movement” (which would translate into something like “kanske till och med det mest storslagna ackordet i symfonins maffigaste strof”) and did not make it over because of the unnatural flow it would evoke had the entire sentence been transferred (cf. Ingo 2007:124). However, in order to outweigh the omission of these nine words, equivalents of both perhaps ‘kanske’ and greatest ‘mest’ were added to the sentence preceding the omission so that the TT reader would still get the same sense of what the omitted part produces in the ST audience. The information lost is perhaps that there are other “fortunate resulting chords” out there apart from us humans, and that might perhaps be argued unfortunate, but I saw no other solution to this problem.
4. Conclusion

The primary aim of this essay is to analyse the Swedish translation of a chapter in *Planet Quest – The Epic Discovery of Alien Solar Systems* by Ken Croswell with the three aspects of terminology, additions and omissions in focus. A secondary aim is to illustrate some general problems that any translator might run into during a translation, and how I specifically went about solving these.

One of the responsibilities of a translator is to determine if the translation needs an adaptation (Ingo 2007:127). And since the original target aim was changed from a popularized type text to a more educational one, or at least an even more popularized one, it had to be adapted to fit the new target audience – this as a consequence of the decision to fully disconnect the text from the rest of the book and still wanting it to appear popular in style. However, now I had fully lost the surrounding context in which it previously functioned; and so an adaptation to make up for this was undertaken. The new text was, furthermore, produced in order to function over a decade after it was first published – see example (13).

The essay focused on the three aspects of terminology, additions and omissions. They gave plenty of examples to work with, and all of them were, in varying degrees, used to adapt the text and thus moving it closer to its new readers.

When it comes to terminology it is important that it is correct and up to date, perhaps especially in texts of a technical nature, but certainly also in popularized versions of said texts (cf. Ingo 2007:229). A thorough search for each term was conducted and although the terminology used in the ST for the most parts already has established equivalents in the TT, it did in fact present one or two rather unorthodox terms that required imagination and craftsmanship on my part – e.g. see example (6). It has, furthermore, been great having external subject experts at my disposal when needed. In connection to newly coined terms, Ingo (2007:107) writes that they should resemble previous terms in the same scientific area. And since överljushastighet already exists, and has for a long time, perhaps a new term like överljushastighet could grow strong and one day become a fully accepted term. For a translator, it is also important to always be aware of whom the translation is targeting, as with the term collimated in example (9) which incidentally also got an addition because of its abstract nature. The term in (9) was, moreover, kept because of its educational value. The translation strategy used most frequently within the examples presented seems to be that of borrowing.

Among the two kinds of additions, pragmatic and semantic, the former ones were, to some extent, a key feature in this translation – this because of the many aspects of the text that
needed an explanation after the target audience change. E.g., this can be seen in examples (11) and (12). Because of these additions, TT has got more of an educational character to it than that of the ST, and one could, therefore, argue that the target aim indeed has shifted from the original. Example (13) is, furthermore, evidence of this.

As with (9) mentioned above, example (7) and the term *tachyon* would of course also qualify as an abstract term, but did not need an extra pragmatic addition since the author of the ST had added one himself. Semantic additions were used in the translation in order for the text to come off as slightly less artificial and stiff – as in example (19).

The definition of an omission is slightly broader in this essay than what is usual, and because of this I can see a closer relationship between omissions and additions than what perhaps is the norm. For instance, in example (19) an omission of nine words has led to the addition of two others in an attempt to compensate for and balance the omitted section. Example (18) would in general probably fall under a category called implicit equivalence (Ingo 1991:86) but was counted among the omissions in this particular study. Examples (15) through (17) concerned omissions of repeated information that felt could irritate a reader much in the same way as it did me. It was deemed a bit excessive and was thus omitted.

Something that would have been very interesting to study in connection to this essay would be a reader response study from which one could review and assess how the translation was received by the specific audience that it was targeting.

After taking on this rather big project I have, more so than before, realized how difficult a task translation is, but also gained far better knowledge of the process involved.
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