

Comparison between Automatic and Human Subtitling:

A Case Study with *Game of Thrones*

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Abstract

In this article, I would like to share my experiences with the software *DeepL* and the comparison analysis I have made with human subtitling offered by the DVD version of the corpus I have chosen as the topic of my study – the eight Seasons of *Game of Thrones*. The idea is to study if the version proposed by an automatic translation program could be used as a first draft for the professional subtitler. It is expected that the latter would work on the form of the subtitles, that is to say mainly on their length, in a second step.

1 Introduction

Internet research has revealed the existence of many free software applications that produce subtitles for videos including *Time Adjuster*; *VisualSubSync*; *Subtitle Workshop*; *Subtitle Creator*; *Aegisub Advanced Subtitle Editor*; *DivXLand Media Subtitler*; *WinSubMux*; *Subtitle Editor* and *AHD Subtitles Maker and SubEdit Player*.

These programs offer many features such as extracting files from a video, editing these files, viewing subtitles of a video, inserting subtitles into a video, synchronizing subtitles with images, and searching for existing subtitle files on the Internet. *YouTube* provides something more by the use of two tools: *Google Voice* and *Google Translate*. It offers automatic translations using automatic transcriptions (voice recognition). Also, it can provide automatic translations using human transcriptions (source scripts).

Furthermore, research on post-editing in translation is becoming more and more extensive. It focuses on the question of the quality/time ratio in the translation activity (O'Brien, 2014).

But what about interlingual subtitling, machine translation and post-editing? Why is research

bringing together these three points which is almost non-existent?

It is true that the specific constraints of subtitling make it a very special form of translation. It is also referred to as "adaptation" because the adapter/subtitle translator must *adapt* to the existence of the image as well as to the space-time parameter. It is therefore not surprising that subtitling research focuses on the form of this type of translation and its polysemiotic context.

Recent decades have seen the increasing use of machine translation by professionals, the nature of whose work has gradually been transformed. In France, the very sophisticated software program *DeepL* has become a popular tool, but how effective is it when applied to the translation of subtitles with their very specific formal constraints?

In what follows, I will compare the automatic translation of subtitles for a television series with the one carried out by human translators. I will focus on the quality of an automatic translation, regardless of formal restrictions. The idea is to evaluate whether the version proposed by the automatic translation program could be used as a first draft by a subtitler. The latter would then concentrate on the formal aspects of the subtitles in a polysemiotic environment.

2 Choice of the Corpus

I have chosen as my corpus the eight Seasons of the American television series *Game of Thrones*, directed by David Benioff and Daniel Brett Weiss and broadcast on HBO from 2011 to 2019. This fantasy drama is an adaptation of the novel *A Game of Thrones*, from the fantasy series *A Song of Ice and Fire* written by the American author George R. R. Martin and published in 1996.

According to the 2016 edition of the Guinness Book of Records (Lexpress.fr, 2015), *Game of Thrones* is the most widely distributed series in the world, with no less than 171 countries. It holds the record for global diffusion and plot twists. Its popularity has led to a large amount of data available on the Internet, including the entire English script of the eight Seasons (more than 800,000 words) and the French subtitles from the DVDs of the eight Seasons.

The nature of the dialogues in *Game of Thrones* are interesting from a *linguistic* point of view for several reasons. First, the vocabulary is relatively extensive, rich and varied. There is frequent use of specialized words specific to the Middle Ages, which makes it possible to analyze the processing of a specialized glossary (rather than a general one) by the machine translation system. Then, the themes of social hierarchy, political and power relations being widely explored, the translation of the personal pronoun *you* into *tu* or *vous* is particularly important. It was an opportunity to analyze this recurrent problem in English to French translation. Finally, the dialogues contain relatively long and complex syntactical elements, which puts the system's ability to handle non-canonic sentences and literary style to the test.

3 Research on Subtitling

The term "adaptation" was chosen to refer to the translation of subtitles because it is subject to specific spatial and temporal constraints. The professional adapter must adapt their translation using specific techniques in order to produce bare, general and sometimes unfair subtitles (Baldo, 2009). The adapter is therefore required to express an idea in a limited number of words – depending on the time and space at his/her disposal - and deliberately discard certain semantic information from the source script.

It is therefore not surprising that academic research in subtitling focuses on its polysemiotic nature and its purpose: the comfort of the viewer (Orero, 2008). Some researchers argue for the use of creative subtitles to overcome traditional constraints, made possible with advances in digital technology (Nornes, 2007; Diaz, 2007; Baldo, 2019).

4 Automatic Translation of Subtitles with Google

There is a gap between university research in France on automatic subtitling translation, which is very rare, and the large number of computer programs that offer automatic subtitling services on the Internet, such as the ubiquitous YouTube. YouTube provides us with the opportunity to do automatic captioning for videos thanks to the coupling of two systems: *Google Voice* and *Google Translate*. The subtitles which are first generated by voice recognition technology (*Google Voice*) are then automatically translated by the machine translation tool (*Google Translate*).

My research so far in the field of automatic subtitling has focused on the use of the automatic subtitling tool provided by Google on YouTube, entitled "*Is automatic subtitling a new technology that professional adapters can use?*" (Baldo, 2015). The latter was the continuation of a study entitled "*Automatic subtitling: a technological innovation that can be used by professional adapters?*" that I presented at the University of Rennes 2 (France) during the Symposium "Optimizing the place of the human in translation: facing the technological challenge" in 2013.

My research was based on a comparative analysis between human translations done by a professional adapter and the automatic translation provided by Google. In other words, I studied the quality of vocal recognition *and* machine translation proposed by the program, thanks to a comparative analysis with the work of a professional adapter. My purpose was to discover whether this technology was potentially helpful for a professional adapter or not.

I limited my research to a qualitative study of speech recognition (automatic transcription), automatic translations using automatic transcriptions (voice recognition) and automatic translations using human transcriptions (source scripts). The use of both of these tools, *Google Voice* and *Google Translate* proved to be chaotic, unmanageable and therefore unusable by a professional adapter:

– The automatic transcription quality using speech recognition provided an unusable track. Speech recognition remains a complex multidisciplinary domain (involving cognitive science, neuroscience, computer science, mathematics, signage, phonetics and linguistics). The results can be highly variable from one video to another and they depend on many parameters, from the

quality of speaker enunciation to the sonic environment, not to mention the recording quality of the medium itself;

- The quality of a machine translation from an automatic transcription: pure madness. Without a doubt, a machine translation system cannot produce meaningful text from text which is senseless;

- The quality of a machine translation from a human transcript: sweet madness since in the context of adaptation, the automatic translation would probably not be acceptable as it cannot provide subtitle-length segments. It would be hard to read on the screen.

The conclusion of my work, valid for the corpus of my study, was that Google's automatic subtitling system in 2015 was an unsuitable technology for professional adapters. Using it was a technological feat: the final quality was unusable (with or without Google Voice), even when the machine translation was acceptable. On the rare occasions when machine translation was acceptable, it did not meet the *sui generis* requirements of adaptation

5 Automatic Translation of Subtitles with DeepL

DeepL, as an online machine translation service of *DeepL GmbH*, was launched in 2017 by the *Linguee* team, authors of the world's largest dictionary since 2010. The dictionary is based on a program that detects bilingual sites, which are collected in the *Linguee* database. Afterwards, an automatic learning algorithm judges the quality of the translations of words, phrases or sentences and sorts them. *DeepL* uses Convolutional Neural Networks which are part of automatic learning (CNN or ConvNet) and that are built on the *Linguee* database.

The service offers seventy-two combinations from nine languages (Dutch, English, French, German, Italian, Polish, Portuguese, Russian and Spanish,) the quality of the combinations likely quite variable, depending on the combination. According to one study (Coldewey, Lardinois, 2017), *DeepL* is more nuanced and more precise, with similar speed, to its competitors *Google Translation*, *Microsoft Translation* and *Facebook*.

My analysis has focused on the *linguistic* quality of the machine translation offered by *DeepL* from English into French, as regards subtitles.

5.1 Analysis

My analysis focused on a sample of 5,000 words per Season, which makes a total corpus of 40,000 words. I developed the assurance quality grid in two main steps. First, by considering other existing professional grids, such as the one from *Lisa* software (Localization Industry Standards Association) and the one created by my colleagues of the University of Rennes 2 (Toudic & al.: 2014), then in parallel with the corpus analysis phase. In the end, the grid I will present is adapted to the analysis of subtitles produced by *DeepL's* system as a first draft for the adapter.

I have identified five categories to illustrate the errors identified in *DeepL* translation followed by my comments. *DeepL's* mistakes are presented in bold print. Lastly, I have added the human subtitled translation for comparison.

Category 1: Grammar; Spelling; Typography

This first category includes grammatical, spelling and typographical errors (including punctuation). In short, these are errors that can be attributed to the program, in the sense that they are correctable, such as a wrong conjugated verb or a capital letter that is not reproduced.

Example 1 Season 1	Go on, Tommy, shear him good.
Human translation	Allez, Tommy, tonds -le.
Machine Translation (<i>DeepL</i>)	Vas-y, Tommy, tonde -le bien.
Machine Translation: Incorrect conjugation	
Example 2 Season 1	I hear he's a drunken little lecher, prone to all manner of perversions.
Human translation	C'est un coureur alcoolique porté sur la perversion
Machine Translation	J'ai entendu dire que c'est un petit alcoolique, sujette à toutes sortes de perversions.
MT: French adjective with wrong gender	

Table 1: Grammatical error.

It should be noted that *no* misspelled words were found in the translation provided by *DeepL* of my study corpus

S6	And without an heir, well let's hope the maesters are right and Lady Walda's carrying a boy.
HT	Sans héritier, eh bien... Espérons que les mestres disent vrai et que lady Walda porte un fils.
MT	Et sans héritier, espérons que les maitres ont raison et que Lady Walda porte un garçon.
MT: Spelling (missing accent.) "Maître" with accent is more common than "maitre" without accent. The latter is rare but not considered as a complete error since the 1990 Spelling Reform in France.	

Table 2: Spelling error.

S2	King Joffrey is a Baratheon , Your Grace.
HT	Le roi Joffrey est un Baratheon .
MT	Le roi Joffrey est un baratheon , Votre Grâce
MT: Absence de majuscule	

Table 3: Typography error.

Category 2: Style

I borrowed the name of the second category – Style – from my colleagues at the University of Rennes 2 (Toudic & al.: 2014).

The Style category is divided into five sub-categories: inappropriate lexicon, terminology, phraseology, language register and finally non-fluidity. It accounts for all the clumsy writing, approximations or even inaccuracies in the translation of a word or a group of words, whether or not they are specialized.

S1	Is it true they lie with their horses?
HT	Est-ce vrai qu'ils dorment avec leurs chevaux ?
MT	C'est vrai qu'ils mentent avec leurs chevaux ?
MT: Nonsense due to the polysemiotic verb "lie".	
S2	I had two cups of wine
HT	J'ai bu deux coupes .
MT	J'ai bu deux tasses de vin .
MT: Wrong collocation	
S2	Or do you want to trade gossip like a couple of fishwives ?
HT	Ou veux-tu échanger des ragots ?
MT	Ou tu veux échanger des ragots comme deux femmes-poissons ?
MT: Lexical calque (instead of "poissonnières" for fishmongers.) Good translation by DeepL when "fishwife" is in the singular.	

Table 4: Inappropriate lexicon.

S3	Small council meetings.
HT	Réunion avec le Conseil restreint.
MT	Réunions des petits conseils
MT: Terminological calque	

Table 5: Inappropriate terminology.

Ex 1 S3	It's not easy for girls like us to dig our way out .
HT	C'est pas évident pour nous autres de bien s'en tirer .
MT	Ce n'est pas facile pour des filles comme nous de creuser pour s'en sortir .
Ex 2 S6	Your Grace, when I was ready to drink myself into a small coffin , Lord Varys told me about a queen.
HT	Majesté. J'étais sur le point de me noyer dans l'alcool quand Varys m'a parlé d'une reine.
MT	Votre Grâce, quand j'étais prêt à boire dans un petit cercueil , Lord Varys m'a parlé d'une reine.
MT: Phraseological calque	

Table 6: Inappropriate phraseology.

The series is known for its different language levels. Brienne of Tarth uses a much more formal register than The Hound, who doesn't hesitate to swear.

S1	And you, you're Ned Stark's bastard , aren't you?
HT	Et toi, tu es le bâtard de Ned Stark.
MT	Et toi, tu es le salaud de Ned Stark, n'est-ce pas ?
Literal vs. figurative meaning Formal vs. informal	

Table 7: Inappropriate language register.

S4	For 40 years I've tried to teach you. If you haven't learned by now, you never will .
HT	40 années passées à t'éduquer. Tu es irrécupérable .
MT	Pendant 40 ans, j'ai essayé de t'apprendre. Si tu n'as pas encore appris, tu ne l'apprendras jamais .
MT: Badly expressed because of the ellipse	

Table 8: Non-fluidity.

Category 3: Morphosyntax

This category includes only one type of error, that of a morphosyntactic nature including syntactic calque.

S1	Whatever Jon Arryn knew or didn't know, it died with him.
HT	Ce que Jon Arryn savait est mort avec lui.
MT	Ce que Jon Arryn savait ou ne savait pas, il est mort avec lui.
MT: Morphological calque	
S2	When Eddard Stark learned the truth, he told only me .
HT	Ned Stark n'avait alerté que moi .
MT	Quand Eddard Stark a appris la vérité, il n'a dit que moi .
MT: Syntactic calque	

Table 9: Morphosyntactic error.

Category 4: Localization

This category is probably the most interesting for a translation scientist as it deals with the most difficult cases in translation. Indeed, (briefly explain what localization is). One wonders how the system could operate to provide a correct translation. The category contains all the translations that seem unsuitable due to the context (i.e. temporal, social one) or to the linguistics itself of the target language.

S1	We've been riding for a month, my love.
HT	Le voyage a été long.
MT	Ça fait un mois qu'on roule , mon amour.
Temporal context. MT: Anachronism.	
S2	And when those affections become common knowledge, well, that is an awkward situation indeed, especially in a prominent family .
HT	Lorsque ces liens sont révélés au public, la situation devient délicate, en effet. Surtout dans les grandes familles .
MT	Et quand ces affections deviennent de notoriété publique, eh bien, c'est une situation délicate, surtout dans une famille nombreuse .
Social context.	
The family in question is the Lannisters'. "Prominent family" is to be taken in the social sense of "grande famille" in French and not "famille nombreuse" (large family).	

Table 10: Non-adaptation to the context

By "non-adaptation to the linguistics of the target language", I refer to all the cases that present difficulties due to differences in linguistic matters. For example, the female or male gender of French

determiners, adjectives or names, the translation of the pronoun *you* by the pronouns *tu* or *vous* or the translations of modal auxiliaries.

S1	All these years, and I still feel like an outsider when I come here.
HT	Depuis toutes ces années, je me sens toujours étrangère en ces lieux.
MT	Toutes ces années, et je me sens toujours comme un étranger quand je viens ici.
MT: French noun translated with wrong gender	
S4	- Do you like women? - When they look like her, my lord. - This one will do nicely.
HT	- Tu aimes les femmes ? - Quand elles lui ressemblent, oui. - Elle devrait faire l'affaire.
MT	- Vous aimez les femmes ? - Quand ils lui ressemblent, mon seigneur. - Celui-ci fera très bien l'affaire.
MT: French pronoun translated with wrong gender	
S6	She was fearless. There was nothing she wouldn't do .
HT	Elle était intrépide. Elle ne reculait devant rien.
MT	Elle n'avait peur de rien. Il n'y avait rien qu'elle ne ferait pas.
MT: wrong tense	
Modal auxiliaries: habit value (past tense) vs. conditional value	

Table 11: Non-adaptation to the linguistics of the target language

Category 5: Omission or Addition of Information

This fifth category is essential in a study on subtitling. Indeed, an omission of information in subtitling is rarely considered an error, unless it affects the viewer's understanding of the film. I have included in this sub-category the untranslated parts as a form of omission.

S3	The Unsullied have stood here for a day and a night with no food or water.
HT	Les Immaculés sont plantés là depuis un jour et une nuit.
MT	Les Unsullied sont restés ici un jour et une nuit sans nourriture ni eau.
MT: Non-translated	

Table 12: Omission.

The addition, on the other hand, is not part of the practice for obvious reasons of spatiotemporal constraints.

S3	One brother inside his army will be worth 1,000 fighting against it.
HT	Un homme infiltré dans son armée vaudra 1 000 hommes le combattant.
MT	Un frère à l'intérieur de son armée vaudra mille dollars en combattant contre elle.
MT: Addition of incorrect information. Erroneous meaning due to an ellipse: “dollars” has been added instead of “men.”	

Table 13: Addition

5.2 Results: Comparison between *DeepL* and Human Translation of Subtitles

DeepL Quantitative Analysis

The analysis I did on *DeepL* was significant for the corpus that was used. It found that the French version provided by the program could be used *a priori* as a draft. Indeed, only an average of 1.18% of errors was found. Also, the number of errors per category varied: 45.9% of style errors; 36% of localization errors; 13% morphosyntactic errors; 5% of grammatical, spelling and typography errors and only 0.1% of omission/addition errors.

Several conclusions can be drawn from this. The most common errors concern stylistic clumsiness involving a poor choice of the lexicon and expressions. The Localization category represents more than a third of all errors, the ones that are due to a failure to consider the context (i.e. feminine sex of the character, of the pronouns and of determiners). Morphosyntactic and grammatical errors are few and spelling errors are non-existent. The least represented category is the omission/addition category, with a very low percentage. However, this deserves more attention as it raises, among other things, the question of non-translation, including the non-translation of proper names. This point proved to be delicate because it is quite subjective (Delavaud: 2014).

The saga is extremely rich in names, nicknames, houses, places, castles, cities, villages, rivers, lakes, regions, islands.... If I had counted the occurrences of non-translated proper names by the program, the percentage of errors in this category would have been higher. But this would have required a full study on a very complex point. The adapters of the series acknowledged that they had mainly relied on the literary translation of Jean Sola and Patrick Marcel of the fantasy novel series *A Song of Ice and Fire* (Pacheco: 2017). This is not without reminding us of the massive translation work done by Jean-François Ménard (Mari-aule: 2019) on *Harry Potter*, which could be used

as a model for the adapters of the French subtitled version of the *Game of Thrones* series.

Here are some examples illustrating the fact that the translation of proper names by *DeepL* has been very variable: from non-translation to translation, including partial translation.

S6	Castle Black is his.
HT	Il règne sur Châteaunoir .
MT	Castle Black est à lui
MT: Not translated	
S4	A vulture grasping a baby in its talons, House Blackmont .
HT	Un vautour agrippant un bébé, maison Noir-mont .
MT	Un vautour tenant un bébé dans ses serres, Maison Blackmont .
Partially translated (House by Maison)	
S4	The Halfhand believed our only chance to stop Mance was to get a man inside his army.
HT	Le Mimain pensait arrêter Mance en infiltrant son armée.
MT	La Demi Main croyait que notre seule chance d'arrêter Mance était d'avoir un homme à l'intérieur de son armée.
MT: Translated literally	

Table 14: Proper names

Besides, I couldn't consider the translation of *you* by the French pronouns *tu* or *vous* in my quantitative analysis of *DeepL* translation. First of all, because there is, like the translation of proper names, a great deal of subjectivity. Secondly, the task is a complex one given the many characters and their multiple and complex relationships. In order to better manage this point, the adapters have created what they call a Bible, which is a very detailed table listing the characters and their use of *vous* or *tu* in addressing this or that character (Pacheco: 2017).

More broadly, I was confronted with several problems:

- the repetition of erroneous occurrences. I opted to count them only once, but they are problematic ;
- it was not always easy to determine the appropriate category for errors that sometimes covered different fields. The error mentioned above in "you're Ned Stark's bastard" translated by *DeepL* into "Tu es le **salaud** de Ned Stark" is from an Inappropriate language register but could also have been identified as a lexical translation error;
- the non-homogeneity of *DeepL*'s translations (sometimes correct, sometimes not, sometimes different depending on the sentences).

S1	What is it? Mountain lion? There are no mountain lions in these woods.
HT	Qu'est-ce que c'est ? Un puma ? Il n'y en a pas dans ces bois.
MT	Qu'est-ce que c'est ? Le lion des montagnes ? Il n'y a pas de pumas dans ces bois.
MT: "Lion des montagnes" is a calque but might be acceptable in a fantasy context.	

Table 15: Non-homogeneity

Lastly, the percentage of errors obtained in my corpus is only indicative but we can assume that given the very low rate of errors that was obtained, *DeepL* could be used as a draft.

DeepL Better than Human Translation?

In choosing to work from DVDs, I assumed I was avoiding the amateurish quality of subtitling associated with, for example, Netflix. The quality of its translation of French subtitles has been subject to controversy and accused of being amateurish (Wachthausen: 2019). So, I chose to rely on the French subtitles of the DVD box set of the series because I assumed that they would be of a more professional quality. However, I have identified a number of errors that are so gross that it cannot be assumed that the subtitles have been reviewed by a professional human being. Here are some examples:

Ex. 1, S1, Episode 1	They were meant to have them .
HT	Ils leurs sont destinés → leur
MT	Ils étaient censés les avoir.
HT: Grammar error MT: Correct grammar	
Ex. 2 S2, E3	This bastard's been meddling where he shouldn't.
HT	Ce bâtard à fourré son nez où il n'aurait pas dû. → a
MT	Ce salaud s' est immiscé là où il ne devrait pas.
HT: Grammatical and typographical error (confusion between the preposition à to and the auxiliary avoir.) MT: Proper translation	
Ex. 3 S1, E3	You never fall .
HT	Tu ne tombe jamais. → tombes
MT	Tu ne tombes jamais.

Ex. 4 S1, E4	What did I buy you for?
HT	Pourquoi t'ais -je achetée ? → t'ai -je
MT	Pourquoi t'ai -je acheté ?
Ex. 5, S2, E3	He ran off before anyone could split.
HT	Il s'est enfuit en une clin d'œil. → s'est enfui
MT	Il s'est enfui avant que quelqu'un puisse partir.
HT: Conjugation error MT: Correct conjugation	

Table 16: Grammar error.

Ex 1 S1, E3	She must take his side even when he's wrong .
HT	Elle doit le défendre même s'il a tord . → tort
MT	Elle doit prendre son parti même quand il a tort .
Ex 2 S2, E3	You didn't win my father's support or his army on charm alone.
HT	Tu n'as pas gagné le soutient et l'armée de mon père uniquement par ton charme. → soutien
MT	Tu n'as pas gagné le soutien de mon père ou de son armée par le seul charme.
Ex 3 S2, E3	Your ennemies aren't happy about us. They want to tear us apart.
HT	Notre union déplaît à tes ennemies . Ils veulent nous séparer. → ennemis
MT	Vos ennemis ne sont pas contents de nous. Ils veulent nous séparer.
HT: Spelling mistake MT: Correct spelling	

Table 17: Spelling mistake

S1,E2	It's time we reviewed the accounts.
HT	Il est tant de revoir les comptes. → temps
MT	Il est temps de revoir les comptes.
HT: nonsense because of a major grammatical/lexical error (homonymic confusion between the adverb tant and the name temps) MT: Correct translation	

Table 18: Inappropriate lexicon

What is interesting to note here is that all translations offered by *DeepL* are correct. This does not mean that *DeepL* is a better translator than the human being. Nevertheless, what can be highlighted here is that the typology of errors that we have found in our corpus is very different in human translation and in machine translation.

The human errors identified are typical of those found in writings by people who have poor command of French spelling, grammar and typography. However, I have found relatively few such errors (5%) with *DeepL*.

Even in case of a pun (Brisset & al.: 2019), which generally poses a difficulty in translation, *DeepL* is surprisingly successful:

S1	- Why do they call you Littlefinger ? - When I was a child, I was very small, and I come from a little spit of land called the Fingers , so you see, it's an exceedingly clever nickname.
HT	- Pourquoi le surnom de Littlefinger ? - Enfant, j'étais très petit (little) , et je viens d'une terre appelée Doigts (Fingers) ..., c'est un surnom très malin.
MT	- Pourquoi on t'appelle Littlefinger ? - Quand j'étais enfant, j'étais très petit , et je viens d'un petit bout de terre appelé les Fingers , alors vous voyez, c'est un surnom extrêmement intelligent.
HT: Explanatory translation MT: Acceptable translation	

Table 19: Pun

The adapter chose to propose an explanatory subtitle, which deconstructs the play on words. This is what I called, the "note-on" (Baldo: 2019, p. 345) by analogy with the word "pop-on". The note refers to a type of subtitle that includes a translator's note. It is becoming more and more common, especially in the case of wordplay or complex translations. As for *DeepL*, the automatic software goes beyond explanations and submits an acceptable and fluent translation, relying on a minimum of English knowledge on the part of the viewer for his/her understanding of the pun.

DeepL's Limits When Applied to Subtitling

Some of the errors found in the *DeepL* version could not have been avoided. For instance, in a case of syntactic ambiguity:

S3	The girl likes you. You like her back , Snow?
HT	La fille t'apprécie. C'est réciproque ?
MT	La fille t'aime bien. Tu aimes son dos , Snow ?
HT: Correct translation MT: Correct translation but wrong context	

Table 20: Syntactic ambiguity

Or in the case of an ellipsis that creates a misinterpretation:

S6	Martell raped and murdered , and you did nothing. Obelyn Martell butchered , and you did nothing.
HT	Elia Martell a été violée et tuée . Vous n'avez rien fait. Obelyn Martell a été massacré . Vous n'avez rien fait.
MT	Elia Martell a violé et assassiné , et vous n'avez rien fait. Obelyn Martell a massacré , et vous n'avez rien fait.
HT: Correct semantical translation MT: Correct syntactic translation vs. incorrect semantical translation.	

Table 21: Ellipse of the auxiliary *be*

Above all, *DeepL's* output is limited in the second phase of the adapter's work: the one that consists in reducing the length of the subtitle. This is not surprising since *DeepL* was not developed for this purpose. Here is an example that shows the adapter's work of synthesizing:

S7	With their help, the Mad King's daughter has ferried an army of savages to our shores, mindless Unsullied soldiers who will destroy your castles and your holdfasts , Dothraki heathens who will burn your villages to the ground, rape and enslave your women , and butcher your children without a second thought .
HT	Avec leur aide, la fille du roi fou a conduit des sauvages à nos portes. Des Immaculés écervelés qui détruiront vos châteaux. Des brutes dothraks qui brûleront vos villages, violeront vos femmes et égorgeront vos enfants.
MT	Avec leur aide, la fille du Roi Fou a transporté une armée de sauvages sur nos rives, des soldats sans scrupules qui détruiront vos châteaux et vos possessions , des païens Dothraki qui brûleront vos villages, violeront et réduiront vos femmes en esclavage , et abattront vos enfants sans hésiter .
HT: Use of omission and short synonyms. 36 words and 221 characters including spaces MT: Full translation. 48 words and 295 characters including spaces	

Table 22: Synthesizing

During this second phase of rewriting, the adapter must conform to a number of standards that I cannot develop here in detail (Baldo, 2009)

6 Conclusion

In France, today, we can no longer ignore the use of *DeepL* in the field of translation. There is no longer any shame associated with the use of an automatic translation program and translation agencies now offer machine translation services with post-editing. Whereas a few years ago this was a taboo subject among agencies, today *DeepL* is part of the reality of professional translation practice, at least with regard to the English-French combination of languages. The real question is no longer whether or not to use *DeepL*, but how to manage this new market reality.

The objective of this research has been to establish whether *DeepL's* automatic translations are a pure utopia or if they can be used by professional adapters. My study has attempted to answer the following question: Can automatic subtitling be of a sufficiently high quality to be used primarily by the human subtitler? I would answer that this is a possible option. The error rate seems low enough to save the translator time. The next step of this research on automatic subtitling practice could be to compare the time adapters spend translating with and without *DeepL*.

However, the integration of an automatic translation program into the adaptation process is a major issue, that of the image of a profession already exposed to criticism. This also explains why few subtitlers admit to using fansubbing translations as a draft for their professional ones.

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