

Machine Assisted Human Translation: The Dichotomy of Translatability and Untranslatability of Terminology

Saloua El Yaagoubi
elyaagoubisaloua4@gmail.com

Maha El Biadi
maha.elbiadi@usmba.ac.ma

The CREDIF Laboratory

*Laboratoire: Cultures, Représentations, Education, Didactique et Ingénierie de la Formation
Faculty of Letters and Human Sciences Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fez, Morocco*

Abstract— The accessibility of a bilingual lexicon for a domain of interest is viewed to benefit the translation and translators. Machine Translation via translation software offers time saving equivalences from one language to another. However, the governance of the assistant, in this case the translator, needs to choose the right word, terminology or repository that goes along with the jargon of the source text. The machine human assisted translation ought to balance the human translation attempts while enhancing the translation efficiency. The technologization of translation comes with pitfalls, and criticism for some of the translations produced through its use highlights two main dichotomous notions in the translation field of study, namely translatability and untranslatability. This paper aims therefore to bring to the fore the limitations of machine human assisted translation in providing equivalences of terminologies from different domains.

Keywords— *Machine Human Assisted Translation – Translatability - Untranslatability - Terminology.*

I. Introduction

Adopting or tailoring technological tools for translation can result in failure in holistic understanding and therefore translation efficiency and quality. Professional translation is facing alterations that would have far-reaching implications on translators' practices, and readability. Machine Assisted Human

Translation (henceforth MAHT) is a field of study that focuses on machine resources that aid human translators during the process of translation (Alcina, 2008). This translation mechanism is regulated by two major components. The first one relates to human assessment, and leads to the development of a translation for which a human translator is accountable, while the second is technical and is machine governed. The software is accountable for receiving and sending documents, typing and formatting, searching documents for equivalent or related fragments to minimize the amount of terms and phrases. Machine Assisted Human Translation is responsible for the production of translations and not examination. It does not regard the translation process as a subjective and sophisticated process involving cultural, philosophical, legal, social knowledge. The terminological accuracy and interdependency of concepts or words are depending on the human understanding and interpretation.

While the main role of Machine Assisted Translation is to assist translators in the development of target texts more easily and quickly, it is also an aspect of the translation mechanism whose technologized nature cannot take into account the content and purpose of a translation product. Furthermore, and with regard to the aforementioned, translators are not obligated to follow the recommendations provided by a given program, especially those retained in a Translation Memory. As such, the notion of Untranslatability, which refers to the

inability to translate a word terminology or expression from the source text to the target text (Cui, 2012), comes into play. In the case of Machine Assisted Human Translation, it refers to the inability of the program or software to translate concepts or terminology within a given context necessitating the interference of the translators and interpreters. The readability of the source text in the target language is a result of the human investigation of the product, its quality, and its function.

Text-type, conceptual equivalences and terminology cause restrictions and failure in translation. Some legal, philosophical, social or cultural jargons for example contain rich and varied terminology that can lead to texts not being translated accurately into the target language. This happens when the software or program fails to interpret the meanings intended in the source text due to their cultural relevance to a specific context, or nuanced equivalences of philosophical concepts. It, on other words, causes the software to provide a literal meaning which is dissociated from the context of use of the target text, leaving the translator confronted with the task of finding a suitable equivalence. If it is the human who is responsible for the end product and its quality, what is then the main role of the software or program? A MAHT system's advantage is that it maintains terminological, phraseological, and segmental continuity, which is critical in science and technological translation (Alcina, 2008).

II. What is MAHT?

MAHT is a field of study that deals with machine instruments that aid human translators during the translation process. It is not about mental processes that occur while translating, but rather surface processes that begin when the translation task is approved and end when a finished product is delivered. As a result, the translation phase has two critical parts: an innovative aspect which involves physical evaluation leading to the creation of a translation for which a human translator is solely responsible, and a technical part which

involves human evaluation resulting in the production of a translation for which a human translator is entirely liable (Baker, 1998). MAHT studies the technical instruments used to create translations, while Translation Studies evaluates interpretations. (Baker, 1998). MAHT is concerned with technical aspects of the translation process and therefore does not deal with the translation process as a nuanced and complex process involving, for example, cultural understanding. MAHT is a complex editing and dictionary correlations method that the human translator uses to improve his/ her productivity by automating his access to word meanings and vocabulary correspondences.

III. The difference between Human Translation and Machine Assisted Translation

Human translation ensures that individual translators are responsible for all aspects of the translation procedure. The translator would convert the original text into a translation that captures the essence and sense of the original while maintaining the appropriate language and style for the translated text's intended audience. He/she also edits, refines, and polishes his or her work to suit the subject matter's technical expressions and ensures that correct punctuation, syntax, and other target language components are reached. Expressions and phrases are part of human language, and when translating them into another language, the context and interpretation of the words must be taken into account (Baker, 1998).

Most terms have many connotations and meanings, which must be weighed when deciding on the right form and word choices for an accurate translation. The translator's task is to select the most appropriate words to convey the meaning in the most effective manner possible, which necessitates a combination of rigorous practice and innovation (Griffiths, 2006). It is up to the interpreter to make a determination that ensures the authenticity of the translation, which must always be subjected to technical and professional evaluation and

analysis. The capacity of humans to deduce context does not necessarily address all translation issues. Producing a translation that must communicate concepts, behaviors, and physical realities that are foreign to the target language community requires a great deal of resourcefulness and innovation. If translation calls for complete sensitivity to a source text's cognitive aspects, a program will need to comprehend language and assimilate information in the same manner that humans can in order to resolve linguistic complexity and produce a rendering that pays attention to textual material register (Baker, 1998).

Machine translation is made up of fragments and parts of former translations culled from large multilingual databases. The statistical likelihood of word sequences previously encountered in literature published in the target language guides the selection of words and their order in the target phrase. This method of flat phrase creation without understanding of the source and target languages' linguistic structures works, notably for languages with comparable syntax. Having disparities between languages at the level of the linguistic structure is a significant factor that exposes flaws relating to programs or software not being fully able to correct mistakes such as non-standard spelling, usage errors, and punctuation, as well as words that are accidentally omitted or reused. As the term implies, MAHT is an artificial translation in which the human interpreter is assisted by the algorithm and vice versa. This method of automated translation differs from Machine Translation. It first includes a variety of resources, such as repository and translation memory, and secondly, it gives the human translator a lot of room to participate in the process of translation to make improvements at any time during/ all along the translation process. Machine translation programs do not stray away from the translation counterparts found in the dictionary or dictionaries designated for each mission (Arntz, 1993).

Translators and interpreters consider speech recognition to be a standard way of generating target text, but some choose to use dictionaries and machines for transcription (Arntz, 1993). MAHT focuses on machine resources that aid human translators during the process of translation. It is not a cognitive process that occurs throughout translation, but rather a surface process that begins when a translation task is approved and concludes when a completed product is delivered. MAHT, as previously noted, cannot consider the consistency and operation of a translation product since it is just a part of the conversion mechanism (Trujillo, 1999, p. 44). Consequently, MAHT is unable to comprehend what an author is attempting to express by deviating from existing norms in a highly personal manner. In these circumstances, a translator will make an educated guess as to what the author intended. In this case, the translation is solely oriented and done by the translator. Assumptions, embedded meanings, insinuations and conceptual equivalences need to be provided by the translator (Trujillo, 1999, p. 44). The consistency of concept use or wording may not be regular for some words that can be used interchangeably according to the context. The terms *emigrant* and *immigrant* is a case in point. *Immigrate* stresses moving to a country whereas *emigrate* stresses leaving a country. This constitutes a limitation associated with MAHT since the latter is characterized by its consistent use of one equivalent throughout the process of translation.

IV. The shortcomings of MAHT

The human translator is the only subject capable of comprehending the various cultural, linguistic, and semantic forces that combine to produce a similar impact in the target text as in the source text. (Trujillo, 1999). Software translation is undeniably known as a medium for delivering a large number of translated texts quickly; however, the accuracy of the translation is still arguable.

When interpreting a given text, the program can help prevent leaving out words that the interpreter is unable to translate. However, when translating from Arabic to English for example, omission is often necessary to prevent repetition. The Arabic language uses synonymous words in sentences, the translation to English is programmed to keep only one word for the other synonyms meaning the same thing. The following example demonstrates to what extent Arabic translation offers varied synonyms of the same word:

No, you are here to scope out teenagers for your weekly hotel party.

The Google Translate translation is:

لا ، أنت هنا لتحديد فئة المراهقين لحفلة الفندق الأسبوعية
لا ، أنت هنا لتتفقد فئة المراهقين لحفلة الفندق الأسبوعية
لا ، أنت هنا لتبحث عن فئة المراهقين لحفلة الفندق الأسبوعية

The phrasal verb *to scope out* can be translated differently into تحديد, لتتفقد, لتبحث عن. In Arabic each of the aforementioned words mean different things. It is, therefore, up to the translator to choose the correct translation. If the translation was from Arabic to English the synonymous words are going to translate differently. Each word will have a different equivalent in English.

The google translate translation:

No, you are here to select teenagers for your weekly hotel party.

لا ، أنت هنا لتحديد فئة المراهقين لحفلة الفندق الأسبوعية

The google translate translation:

No, you are here to check out teenagers for your weekly hotel party.

لا ، أنت هنا لتتفقد فئة المراهقين لحفلة الفندق الأسبوعية

The google translate translation:

No, you are here to find teenagers for your weekly hotel party.

لا ، أنت هنا لتبحث عن فئة المراهقين لحفلة الفندق الأسبوعية

The verbs ‘to select’, ‘to check out’ and ‘to find’ have different meanings in Cambridge dictionary. They are not synonyms and cannot be used interchangeably because they will change the whole meaning of the sentence. ‘To select’, according to Cambridge dictionary is “to choose carefully in regards to criterion and requirements” (Cambridge dictionary, 2020, select entry). In such a sentence, if the person is expected to select, he or she would make use of a list of criteria by which he/ she would choose the group of teens that are supposed to attend the hotel party. ‘To check out’, “to inspect something in order to determine its accuracy or quality.” (Cambridge Dictionary, 2020, check out entry). In regards to the definition and in a given sentence the meaning implies that the person is going to find out information relating to the teens such as whether they are random teens or teens that are specifically staying in the same hotel where the party is taking place. *To find*, means “to search for something or someone” (Cambridge Dictionary, 2020, find entry). On this basis, the meaning of the sentence tends to refer to discovering a group of teens that can attend the weekly party. No other specific attributes or conditions, other than being teenagers, are required in this context.

Failure in MAHT is due the fact that it provides the translator with an initial translation and helps make the task faster. The accuracy lies in the analysis of the text and understanding it for what makes the process of translation a complex one is the notion of comprehension. If a text is inserted in the software or program, the purpose is to control the structure of sentence (subject-verb-object) and provide a surface translation of the wording that constitutes the text. The initial translation does not offer readability, accuracy or comprehension. The interaction of the human factor is to give to the text the readability of the source text. In regards to this statement and with respect to the definition of translation as a process and field of study, it is rather problematic to label it MAHT when the interference of the human factor is greater than that of the machine. The translator

makes sense of the source text and assures its readability in the target language; the post-editing of MAHT output is a fundamental step because of the technical, linguistic, cultural, social, philosophic, legal limitations.

V. MAHT of Philosophical Jargon

Philosophy is a multilingual and multicultural process by itself. Many philosophers have had (or purposefully obtained) the linguistic tools to comprehend philosophical texts written in languages other than their own, but translations have been needed in the majority of instances. Some philosophical terminologies are interpreted differently by translators, and are questionable by other translators. The use of the correct equivalents is arbitrary for understanding is entirely dependent on the context, and the readability of the source text. If a translator is unable to understand the source text, even with the help of a machine, the translation will be questionable by others. The nuances of meaning can alter the holistic meaning of the text. The tendency of philosophers to use terminology interchangeably in-between paragraphs is not to avoid repetition but rather to put emphasis on the different historical meanings accorded to the term. Chronological ordering in writings, which requires an integral understanding of the term and its association to history, are difficult to interpret by software even if it is assisted by humans. The following sentences demonstrates a number of philosophical terminologies that take different translations in French:

*Nor is he pleased with Descartes's appeal to **consciousness** to prove the doctrine of liberty* (Bledsoe, 2020, p. 41).

The google translate translation:

*Il n'est pas non plus satisfait de l'appel de Descartes à la **conscience** pour prouver la doctrine de la liberté.*

The translation of *consciousness* as 'conscience' in French is dependent on the development of *consciousness* in the early

modern period. Consequently, it is complicated by the fact that both Latin and French, considered to be central in the field of philosophy as these are among the primary languages in which it was written, have a single term that means either 'moral conscience', or 'consciousness'. Additionally, *consciousness* was linked to moral identity, with both French and Latin lacking even a linguistic distinction between 'consciousness' and 'conscience' (i.e., a moral sensibility). This semantic shift marked a philosophical division between the psychological or phenomenal aspects of thought and a moral sensibility as well. (Trujillo, 1999). A MAHT fails to translate the term as moral sensibility, therefore it acquires for the commonly used equivalent in translation, and that it was programmed to use, conscience.

Descartes's perception of consciousness is not that of Hobbes or Locke. The question posed here and which relates to context and conceptual equivalences is the following: does the MAHT regulate equivalences in respect to philosopher's standpoints and historical periods?

Another example of philosophical untranslatability:

The characteristic of Morality thus described is its essential inwardness and the sovereignty of the conscience over all heteronomy. (Hegel, 2017, p.11)

The google translate translation:

*La caractéristique de la Morale ainsi décrite est son intériorité essentielle, et la souveraineté de la **conscience** sur toute hétéronomie.*

In the aforementioned sentence, the word *conscience* refers to the act of perceiving or apprehending by means of the senses or of the mind, cognition and understanding. Morality is developed through perception. The human mind understands the intersection between good and bad and tries to identify the course of action that needs to take place as the goal is to avoid pitfalls and to act according to what is right. Although

the words *consciousness* and *conscience* are etymologically similar, they have been used to refer to completely separate and distinct concepts in English for decades. These same concepts are conveyed in other languages via different vocabulary items.

VI. MAHT of Religious-Social terminology

The translator is often confronted with many difficulties during comprehension and equivalence because of the nuances of social organization and social control. The framework, in which social activities are created, for example, binds and regulates them. Religion and culture are inextricably linked and cannot be separated. As a result, certain sentences, and phrases used in religious scriptures can refer to and be rooted in cultural expressions. The translation of such terminology most of the time necessitates the use of the same word in the target language. The following table demonstrates the different translations associated with religious social terminology.

Word in Arabic	Word in English	Machine Human Assisted translation to English	Definition of the word
كفالة	Kafala	Custody	An alternative care option for children deprived of a family environment
الإرث	Inheritance	Heritage	the acquisition of real or personal property under the laws of intestacy or sometimes by will
الإيمان	Belief	Faith	A state or habit of mind in which trust or confidence is placed in some person or thing.

Table1: Cases of Untranslatability in Arabic

The sentences below show the way the terms mentioned in the table above would be used in real contexts of use. The aim is to see the translation and corresponded translation from Arabic to English according to Google Translate program.

تشعر اللجنة بالقلق إزاء الشواذات المحتملة في نظامي التبني والكفالة

The google translate translation:

The Committee is concerned about potential anomalies in the adoption and foster care systems.

Although the term الكفالة *kafalah* translates to English as ‘Adoption’ and ‘foster’, these two English terms cannot be considered exact equivalents of it, for *Kafalah* refers to a procedure regulated by religious laws without which it cannot go into effect. Unlike adoption, where the child is considered a family member, It is a form of Islamic custody in which the child is not regarded as a true child of the adoptive parents, but is rather taken care of and offered a suitable living environment.

بجميع الرسل على أتباعه الإيمان فدين مثل الإسلام يفرض والكتب السماوية لا يمكن وصفه بعدم التسامح

The google translate translation:

A religion like Islam that forces its followers to believe in all the messengers and divine books cannot be described as intolerance.

In the sentence, the term إيمان *Imane* was translated in the form of the verb ‘to believe’. The context displays the notion of faithfulness and the state of being faithful. According to Cambridge dictionary, the concept means to unfailingly remain loyal to someone or something and to put that loyalty into consistent practice regardless of extenuating circumstances. Unlike belief, which means, the feeling of being certain that something exists or is true, faithfulness does not assert the notion of existence, for Muslims feel a certain bond with God although they are unable to see Him. If the term belief was used, it would imply that

Muslims believe in God even though they are uncertain about His existence merely for fear of the consequences.

VII. Conclusion

The aim of this paper was to highlight the notion of untranslatability of some concepts and terminologies that translators generally face using MAHT, namely in the philosophical and the legal fields. This generally comes as a result of machine translation programs not being able to deviate from the translation equivalents found in the dictionary or dictionaries designated for each assignment. If this shows anything, it is that human interference is not partial but rather integral to the entire translation process. The translator needs to assist, analyze and post-edit the translation in order to assure the meaning of the source text. The dichotomous notion of translatability and untranslatability are intertwined with the initial translation of the source text and post editing phase of the translator. In other words, translatability is detected from the output of the MAHT, and the untranslatability can be seen in the number of losses that occurred at the level of output. The failure to translate accurately registers and specific terminology makes the interference of the translator a necessity to assure comprehension, readability and understanding in the target language. Any effort to completely substitute human translation with computer translation will undoubtedly fail due to the fact that no translation software is capable of comprehension. Only a human interpreter is capable of translating such cultural elements that may occur in the source text, but cannot be interpreted into the target text's language in regards to similar terms, as machine translation does. Sustaining the same effect in the target language as the source text is one of the most difficult facets of translation. This constitutes the main challenge that automatic translation faces, especially when we bear in mind the shortcomings that it has, and which make human translation indispensable.

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