UNDERSTANDING THE NATURE OF TRANSLATION TOOL

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Abstract

The emergence of Machine Translation, known as MT has given a new hope to abridge the problems in translation. Ideally, it is designed to create a fully automatic high quality translation *(FAHQT). People do hope that a bulk number of work deals with translating a text from source language to target language can be done easily and accurately. Further, it is believed that machine translation will be cheaper compared to 'human translation'.*

The question is does this machine really translate a text well? Unfortunately, many facts show that machine translation produces an unsatisfying translation result. The main factor underlying this fact is that this machine failed to abridge linguistics complexity, which is characterized as context dependent, although it has been designed in such a way to overcome that linguistics complexity. Meanwhile, under the right circumstances, many believed that MT systems are a powerful tool.

This paper focuses on the nature of machine translation and the possibility in empowering it. After recognizing the nature of machine translation, it is hoped that the users of the machine can take any appropriate actions to make the benefit of machine translation.

Key words: machine, translation, meaning, accuracy

Introduction

The development of science and technology has improved the use of electronic tools in assisting human's work deals with languages. One of them is the emergence of machine translation, known as Machine Translation (MT). As the need of translation is getting increased in this global world, MT has a significant role to fulfill this need. Therefore, the presence of a 'good' machine translation is an urgent matter. Machine translation (MT) systems are now considered as extremely important. This is not only driven by the increased need for translation in today's global market place but also an exponential growth in computing power.

Actually, MT is not something new. According to Hutchins (1986) MT has a long history. Even, almost since before electronic computer existed, the idea of using computer to translate was proposed in 1974. It was the starting point that leads machine translation to be the first non-numerical application of computer.

Under the right circumstances, many believed that MT is powerful. Although they can offer 'low-quality translations' but it is better than no translation at all. It can also perform a rough translation of a large document delivered in seconds or minutes. Unfortunately, despite the

widespread accessibility of MT, it is clear that the purpose and limitations of such systems are frequently misunderstood. The accuracy of MT often becomes the central issue raised. This condition at least shows that although the presence of MT is absolutely welcomed, some problems may appear as the result of MT use. In a practical, the question can be: which one is the best, machine, human or the combination of both.

This paper is aimed at giving a comprehensive overview about the nature of the machine in translation. A possible better way to use MT in the translation will also be discussed. Therefore, this paper will not particularly discuss the accuracy of machine translation or the comparison between MT and HT.

The Essence of Translation

Before discussing machine translation, a brief definition and the concept of translation will be introduced first. There are many definitions of translation. Basically, translation is the transferring of the source language into the target language. In this context, it means that translation minimally involves two languages (Catford, 1965: 20). Further, Catford states that translation is the replacement of textual material in one language (source language) by the equivalent textual material in another language (target language).

Another author, Nida and Taber (1969: 34) states that translation is the reproducing message in the target language with natural equivalence in target language, through two main steps, first, based on the meaning and second based on the style.

The more comprehensive understanding about translation is described by Newmark (1988) in his book entitled A Text Book of Translation. He gives a new insight of translation, by considering the dynamic nature of it. He completely describes the dynamic of translation that involves ten elements, they are: source language (SL) writer, SL norms, SL culture, SL setting and tradition, Target Language (TL) readership, TL norms, TL culture, TL setting and tradition, the truth (the fact of the matter) and the translator (Newmark, 1988: 4)

Bell (1993:5) defines translation as "the expression in another language (or target language) of what has been expressed in another (source language) preserving the semantic and stylistic equivalences." In another way, Bell makes his own view saying that translation is "the replacement of presentation of a text in one language by a representation of an equivalent text in a second language." The translation is then about the reproduction of equivalent text in another language. Equivalency here covers the sameness in meaning and style.

Bell (1993:7) further emphasizes some point of equivalence. Strauss (2000) says that the purpose of translation is "to provide an accurate, and

readable rendition of the original that will capture as much of the meaning as possible.

In short, the translation competence is "the ability to carry out the transfer process from the comprehension of the source text to the re-expression of the target text, taking into accounts the purpose of the translation and the characteristics of the target text readers" (Beeby, 2003:92 in Widiastuti and Setiajid, 2009:171).

The Nature of MT

Dealing with above discussion, the term of machine translation can be simply defined as the machine used in translating SL into TL. In general it can be defined that machine translation (MT) is the use of computer software to translate text or speech from one language (source language) for another (target language). Research and development of machine translation has been done since 1950s. Even some believed that the dream of translation by computer is older than the high tech industry itself. As the environment becomes tightly linked and internationally connected, the call for MT increases.

MT offers some real advantages. It is believed as faster than human translation. It is also much cheaper compared to human translator. Meanwhile, MT software has a better memory than human translator since it can store translated documents and re-use phrases that have been translated before.

Machine translation can give its greatest advantage in two main fields, they are:

1. As an aid for human translator

As an aid for human translator working on the material which must be accurately translated, machine translation can produce a first draft quickly.

2. For translating material on a restricted subject matter.

Machine translation will work well for translating predictable technical text. It means that the text is highly restricted and it never goes beyond the expected domain of discourse. Machine translation can produce quite accurate translation when the domain of discourse is highly restricted in some of the following areas:

- syntax is simplified
- vocabulary is predictable and each word is likely to mean only one thing
- technical document
- equipment maintenance manuals
- weather reports

Recognizing the nature of machine translation is an important thing to do before using it in translation. In general, the weaknesses of machine translation can be mentioned as follows:

Context

Since human language is complicated, computers just do not have the ability to deal adequately with the various complexities of language that humans handle naturally: ambiguity, syntactic irregularity, multiple word meanings and the influence of context. Look at the following examples:

a. Time flies like an arrow
b. Fruit flies like an apple

The sentence construction in both sentences is parallel, but the meanings are entirely different. Sentence a, is a figure of speech involving a metaphor meanwhile, the second sentence is a literal description. And the identical words in the sentences - flies and like - are used in different grammatical categories. In the first sentence, 'flies' is a verb, and like is an adjective. Meanwhile, in the second sentence, flies functions as noun, and like is a verb.

This different grammatical category is relatively difficult to be recognized by machine translation in order to produce an accurate translation. Although a computer can be programmed to understand either of these examples, but it cannot distinguish between them.

A deep knowledge about the target language therefore, plays an important role to create an accurate translation. A computer translation is similar to a translation done by a human without a deep knowledge of the target language. Grammatical rules can be memorized, or programmed. But without real knowledge of a language, a human or a computer simply looks up words in a dictionary and has no way to select between alternate meanings.

Translation needs to be sensitive to total context, including the intended audience of the translation. It means that meaning in translation is not some abstract object that is independent of people and culture.

Accuracy

Accuracy of machine translation is an important issue. Actually the term of 'accuracy' is quite difficult to be specified, especially in translation. Even translator cannot always match the content of messages in the source language by an expression with exactly the same content in target language, because what can be expressed and what must be expressed is a property of a specific language in much the same way as how it can be expressed.

Accuracy becomes the key word to evaluate the translation result since the main aims of translation evaluation is to investigate the accuracy, clearness and naturalness (Larson, in Nadar, 2007:104).

Quoting Waddington (2001), Anari and Ghodrati (2008:5) elaborate the model which categorizes the mistakes of translation that influences the accuracy of the translation which may affect the understanding of the source text. Those categories are: *contresens*, *faux sens*, *nonsens*, *addition, omission, unresolved extralinguistic references, loss of meaning, and inappropriate linguistic variation (register, style, dialect, etc.)*." Aiken, Vanjani and Wong (2006:125-126) said that the accuracy is often measured in terms of the number of errors per hundred words or as percentage.

The point is that accurate translation requires an understanding of the text, which includes an understanding of the situation and a bulk variety of facts about our world. In this case, the term of 'accurate' in human translation can not be simply applied to machine translation. Computer can not translate like humans because it is not only lack of the knowledge dealing with word choice, but it is also lack of the knowledge necessary for cultural sensitivity.

The accuracy of MT is much lower than competent human translation, but it can be improved in certain ways, such as by ensuring that spelling and punctuation are all correct in the original text. Accuracy problem faced by machine translation is a common problem. Even many commercial services offering MT online realize that their product is not really a translation. They sometime use a different term in this case. They prefer use 'gisting' in the sense of 'machine-translated text' rather than 'custom translation' which means the translation done by humans. Vitek states that even machine-translated text usually also have a disclaimer on every page in which no guarantee is given that the translation is accurate and no responsibility is assumed for the machine-translated product. He also strongly stressed that if a translation done by machine is accurate it can be accurate only coincidentally because the machine does not understand the concept of accuracy.

Povlsen states that accuracy measurement should be first based on the common error that may be produced in translation work resulted by either human or machine translation. Those errors are: *totally incomprehensible and messy word order at sentence level, incorrect translation of general words, missing words, wrong prepositions and incorrect placement of words*.

Khristianto, in his paper entitled 'Measuring the Accuracy of Translation in Net Service (2009) found the following results: (1) at the world level, machine translation can achieve more than 90% of accuracy; (2) at the second category, the result is not so good, by the findings of the errors categorized in unresolved and the loss of meaning (54-75%); (3) at the sentence level it achieves 17-30 percent of accuracy.

In order to get the best advantage form MT, according to John Hutchins, the users know the way how systems and tools are used. Further, he explained that any various types of MT systems can be used for virtually any of the following basic functions.

1) Dissemination

The production of translation of 'publishable' quality, but it is not necessarily texts that are actually published but texts that are of that quality. Such texts are usually required by organizations and usually involve professional translators.

The raw untreated output from MT system is inadequate, and publishable quality means human assisting to restrict the system to a specific subject domain. Generally, the more the subject domain can be restricted, the more successfully the system is.

2) Assimilation

Assimilation means the translation of texts for monitoring or filtering or skimming information. It is also sometime the translation of text for occasional users (e.g. non-specialist general public), where the raw output from MT does not need to be edited.

3) Interchange

It means the translation required in communication between different languages by individuals, by correspondence, and by other means of communication. In this case the quality of translation is not important as long as people get information they want, understand the message they receive, or manage to convey their intentions.

4) Database access

It refers to the use of translation to assist in getting information from a database in a foreign language, one that the user does not sufficient knowledge to understand. These days, it means mainly the use of translation aids for searching the internet or for accessing the web pages.

Human-aided MT

Dealing with machine translation, According to Hutchins, we need to distinguish two basic types of systems. Firstly, the wholly automatic system that attempts to translate sentences and texts as whole. In this system, there is no human intervention during the process of translation. Since it is without human intervention, generally the outputs of this automatic system are generally poor.

Secondly, as opposed to wholly automatic systems, this system allows the intervention of human during the translation process. Therefore, some translation aids are provided such as: in the form of dictionaries and grammar, and databases of previously translated text to aid translators.

It is believed that the second type, which allows human intervention during the translation process, is the best approach to boost the role of machine translation. It means that this machine is not used separately from human aid. In order to do it well, Hutchins proposed the following figure, in which machine translation system lies at the center.

Based on its nature, machine translation may be restricted (or adopted) to a particular domain, by means of the definitions and contains specified in the databases of domain or sublanguage information.

Dealing with MT, Peter Newmark (1988) states that the computers (either MT, CAT or AT) are useful for translation, in particular for LSPs (languages for special or specific purposes). Therefore, he stressed that the output of such machines needs some kind of editing, since MT, like translation, is not only possible, but it happens.

Editing the 'raw text' produced by MT should be done in such a way to create the equivalency between the SL text and TL one. Therefore, the process of editing should be done in the following considerations:

1. Coping with appropriate word choice/jargon of specific field

It means that we have to keep in mind that the right word choice is determined by the field of the translation. It is commonly known that a word may have different meaning in different context of field. Therefore, understanding about the specific jargon for certain field is a must.

Besides dealing with appropriate word choice in a specific context, understanding the term of 'unfindable' words is needed since it is not an easy matter. According to Newmark (1988: 176) there are eighteen types of 'unfindable' word.

2. Reducing grammatical errors

Grammatical correctness is the prerequisite for the text's understandability. Therefore, the process of editing should ensure there were be no more grammatical error in the translated text.

3. Reducing the ambiguity

The term of 'ambiguity' applied in this discussion means a word of a syntactic structure may have more than one meaning, in or in spite of its context. In the editing process, such ambiguity should be managed well so that the reader can understand the translated text well. Newmark (1988: 218) divides these ambiguities into: grammatical ambiguity, lexical ambiguity, pragmatic ambiguity, cultural ambiguity, idiolect ambiguity, referential ambiguity and metaphorical ambiguity.

4. Applying the principles of translation criticism

Basically, translation criticism is applied in order to evaluate the translated text based on several established aspects to measure the equivalency. Those principles of criticism should also be considered in the editing. The principle of translation criticism covers five topics (Newmark, 1988: 186): a brief of the SL text stressing its intention and its functional aspect; the translator's interpretation of the SL text's purpose, method and the readership; a comparison of SL and TL text; an evaluation of the translation; an assessment of the likely place of the translation in the target language culture or discipline.

Concluding remarks

Machine translation is still considered as a promising tool to assists human's work deals with translation. This is not only driven by the increased need for translation in today's global marketplace but also an exponential growth in computing power.

The main problem faced by machine translation is about the question of accuracy, since translation is not simply as an activity to give the meaning of word from source language into target language, but it is a creative process that requires norms and the culture of both languages as the context. Therefore, machine translation only works quite well for translating predictable technical texts.

Based on above fact, the translator still plays an important role in translation since a machine can not totally replace him. A human-aided machine translation model, therefore, can be the answer to satisfy the greater demand of translation in a more accurate way.

Since this paper is limited on the discussion of the nature of machine, further research that explores the accuracy of machine translation in the translation of various genres of text needs to be conducted.

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