

Original Research Article

## Comparative Study of Automatic Machine Translation VS Human Translation: A Case Study of Four Surah of Holy Quran

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### ABSTRACT

Comparisons to human performance are often made in quite general and exaggerated terms. Thus, it is important to be able to account for differences accurately. This paper reports a simple, descriptive scheme for comparing translations, which is applied to four Surahs of the Holy Quran and compares the human translation with machine translation. The method applied for the study is qualitative. Within the qualitative domains, one of the four methods of assessment of translation has been adopted from Waddington (2001). The analysis is done on four parameters namely textual, syntactic, semantic, and social. The results obtained from the data confirm that human translation is far better and superior in comparison with the machine translation as human translation almost covers the four above-mentioned aspects. On the other hand, machine translation lacks and misses many important levels of translation and does not convey the true spirit of meaning from one language to another language. However, machine translation is quicker and faster as compared to human translation. It is concluded that machine translation is not as reliable, trustworthy, and dependable as human translation. This study has a future prospect for further studies with some limitations of human translation.

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### Introduction

Translation is the way of knowing and understanding the significance of the original texts and other items from one language to another language. Translation is concerned with the meaning covering the all languages irrespective of boundaries, races and sects or religions. Throughout its history, translation is never valued as the kind of reaction and esteem that various other professions are dealt with. Translators have continually grumbled that translation is sneered as a profession (Gandhi, M., & Maghsoudi.2014). Translation actually brings the different cultures and social norms closer through language and its sociolinguistic aspects. Furthermore, it defeats the linguistic barriers by transmuting the data from one language to another language through machines or humans, the positive or negative effects of which is the focus of this study. Translation aims at changing and transforming the meanings and expressions of thoughts of the given linguistic discourse from one language to another language. It is also noted that translation pointed out and brought home to the importance and significance of the semantic which is the science of meanings. The modern theories and ideas of lexical semantics have been successful to clear the different kinds of lexical uncertainties and ambiguities. Polysemy is picked from other types for transforming the meanings of one language to another language. Thus, the main aim and target here depend on the swing from the central meaning of a given word to the contextual meaning. Such a move is largely related to translation. In a more general word, the practice of translation commenced with the introduction of the main individual when he started to speak with his assistants to give vent to his observations

into words. That can be termed as the fundamental and the primary stage ever. Presently, with the launch of human societies and civil launches, it began to make sure of business as shown by the requirement of the human social orders. Common societies underwent to protect their memories as epigraphs on partitions or individual skins which we are endeavoring to translate today into our languages as are percussion of growth. (Bitchener, J., & Ferris, D. 2012)

It is also observed that the learners of any language and the translators sometimes ignore the very spirit of the meanings of different expressions of both the languages that the meanings appear quite awkward and strange. The acceptable translation does not often come up to the standard of the semantic level. It is the main quality of the translator that the basic concept and spirit of the intended text should not be altogether neglected, as there are no clear restrictions amongst languages and cultures. This is, in fact, one of the present learning that translation theory came to be used in the study of linguistics. This thing clears the fact that pragmatics deeply exercises some sort of influence on the translation legitimacy. The proficient and even expert translators are needed to pay heed to the element of the pragmatic features to learn the ability of the standard translation methodology and concepts. It is also important for the translators to consider the surface as well as the kernel meanings, surface and deep structure, of the expressions and thoughts that are to be translated from one language to other languages so that the original meanings of the translated text should not be missed out. As for as the translation is concerned, it's chief target and aim is meaning. Therefore, it is of significant value to read about the ideas and theories of the meanings. The most commonly approaches to contemporary translation theory are: the hermeneutic approach, the sociolinguistic approach, the linguistic approach, the communicative approach, the semiotic approach, and the literary approach. Semantics deals with the meaning as well as of functions of the words in a sentence. It focuses on the relationships between the signifier and the signified. Words, phrases, signs, and symbols are the signifiers and the objects they stand for are signified. Linguistics semantic is the study of meanings, which is used to study and understand the human expressions through language. The semantic study offers theories, methods or means in comprehending and knowing the meanings that are helpful in translation. The translators in translating a text often face some meaning related issues. Corder (2001) stated, "Untranslatability occurs when it is impossible to build functionally relevant features of the situation into the contextual meaning of the TL text." As for as the present study is concerned, the researcher is going to make a comparison between the three available sources of translation, Google and Bing from machine translation and human being. For this purpose, four different surah's of the Holy Quran are selected to know which of the translation source proves more effective and is better and clearly comprehensible in terms of semantic level as well as contextual level.

### **Literature Review**

Various studies have been done across the world about the translation and the basic concept of translation. In the same context, Choliludin (2007) conducted the study and pointed out that translation has many aspects and is divided into various categories. He stated that translation leads the text from one source to another source according to the need and requirements of the language. During this process of translation, different levels like semantic, syntactic, lexical, and social levels are strictly kept in view. Content analysis is also kept in mind and the translation process is perused.

In addition, Nida and Taber (2007) conducted their study using the thematic methodology as well as the observatory method to compare the different source of the translation and to find out whether translated text fulfills the basic requirements, spirit and deep meaning of the original text. They concluded that the translation done by the machines or other electronic sources are unable to translate the exact meaning from original/source text to the translated text.

In this connection, Bell (1991) carried out his study and found out that different levels of equivalence are found in the various languages. The equivalences are included in context, semantic level, grammatical equivalences, and lexical level. He also concluded that source language sometimes missed the basic meanings in the target language text. This difference might create a sense of fully or partly equivalency in both the languages namely the target as well as the source language. These sources do the function of the same purpose and situation.

### **Theoretical Framework**

The theoretical framework which is applied in this research is Waddington methodology presented by Christopher Waddington in June 2001, used for evaluating student translations. Waddington presented four methods to identify translation competence, used and adapted by a number of researchers and university teachers.

### **Methodology**

As the study is based on the comparison between the different sources of translation and changing from one language to another language. For the selection, description, and elaboration of the data, the qualitative method is used. Waddington (2001) introduced a procedure to analyze the difference between the human translation and machine translation. This process comprises four methods namely method A, method B, method C and method D. The method applied by the researcher in the present research is method A, which is based on error analysis. Method B also describes about error analysis, specifically the negative impact of errors on the overall quality of translation. Method C deals with holistic method of assessment used for judging the quality of translation into the foreign Language. Method D combines the error analysis of second and third methods with a proportion of 70/30, 70 % of total result of method B and remaining 30% of total result of method C.

### **Material**

For the comparison between the different sources, four surahs of the Holy Quran are selected for the model translation from three different sources. The names of the surahs include Surah Humaza, Sura Alkafiroon, Surah Al Maun and Sura Al Nas.

### **Procedure**

First, the four surahs were translated with the help of Bing, after this, all the four surahs were translated with the help of Google and in the end; human translation of these four surahs was done. Firstly, the comparison of both the machine translations was done as per criteria mentioned above, latter the human translation was compared with the machine translation either Google or Bing, whichever found better in the study. On behalf of these comparisons, results would be derived and analyzed using the graphs.

Waddington (2001) introduced a method to judge the quality of source translation and translated text. The methods are named as method A, method B, method C and method D. The most widely used method is Method A. This method is being used in various researches to assess and determine the difference in the translation. Error analysis and possible mistakes are the main elements and factors of the method A. This method works under the following headings. (Khan Muhammad and Osanlo, p.136).

- i. The source text is mainly influenced and affected by eight conditions, which are; faux sense, countersense, omission, addition, nonsense, unresolved extra-linguistic references, loss of meaning, and inappropriate linguistic differences.
- ii. The mistakes in expressions are denoted by spelling, grammar, lexical items, text, and style of the discourse.
- iii. Inadequate conditions that influence the transformation of either the main purpose or minor purposes of the source text.

Different marks are awarded for different categories. Grave errors (-2 points) and slight errors (-1 point). There is fourth, good solutions (+1 point) or remarkably good explanations (+2 points) to translation problems” (Khan Mohammad & Osanlo, p.136).

### **Limitations**

The comparison of human translation with machine translation is inappropriate due to a number of following reasons. Human translations can be said more reliable because they are done by keeping in mind; target audience, human feelings, human purposes; worldly or missionary, the sacredness of the text, possible repercussions of the text, historical references of the text, linguistic adaptation, and so on. Whereas machine translation is devoid of the feelings and expressions mentioned above except for the things that are already kept in the backup of machine. Machine translation can be compared with human translation if the translator is given only one chance to translate without any editing, rephrasing, and restructuring of the text. It is not on spot competitor translation of Machine and Human. Machine translation does not have sense, reference, feelings, and no source to check the sacredness of the translation. Following stylistic devices have been used in the source text; alliteration, analogy, aphorism, apostrophe, diction, imagery, metonymy, mood, parallelism, but both human as well as machine translation are failed to tell the cause of use of these literary devices. A reader cannot understand the true gist of the message without going in the depth of the Holy piece of writing, which is impossible through literal translation. In case if the target culture (TC) of the translation is different from the source culture (SC) of the text, Holy or worldly, to understand the real message, a reader must have sound background knowledge of the source culture. It is generally observed that translation of Holy texts, either

human or machine, is a literal translation. Studies show that Holy text has its own specific symbols, terminologies, referencing, social, cultural and religious context, needs interpretation for an ordinary reader due to his superficial knowledge of the background, symbols, references, and terminologies.

**Research Objectives**

The objectives of this comparative study are to find out:

1. The most appropriate method of the translation.
2. The differences between the machine translation and human translation.
3. The machine translation that is nearer to human translation; Google or Bing.

TABLE 1: TYPOLOGY OF ERRORS IN METHOD B

<i>Negative effect on words in ST:</i>	<i>Penalty for negative effect</i>
On: 1-5 words	2
6-20 words	3
21-40 words	4
41-60 words	5
61-80 words	6
81-100 words	7
100+ words	8
The whole text	12

(Waddington (2001, p.314, p.136).

Method B is describing the error analysis and is made to place it on the negative effects of errors made in the translation. (Waddington (2001, p.314, p.136). In this method, first, errors are marked as either language mistakes or translation mistakes or errors. It means if the meanings of translation are disturbed, it is called translation errors and on the other hand, if meanings are not affected, it is language error. For this kind of error, -2 points should be awarded. “Nevertheless, under such circumstances of translation errors, the researcher can check the significance of the negative effect each error has on the translation (ibid). In order to judge this importance, table 2 is suggested to the rater (ibid)

Table 2. (5 +marks would be considered passing marks and below 5 would be considered inappropriate)  
 Typology of mistakes in Waddington’s Method B is obtained from Khan Mohammad and Osanlo (2009)

1-5 words	2
6-20 words	3
21-40 words	4
41-60 words	5
61-80 words	6
81-100 words	7
100 + words	8

There are a fixed number of marks for each error and its category as for as the method B is concerned. It has 85. The negative errors are deduced from 85 marks and the final marks of errors are divided by 8.5. As for the method C is concerned, Waddington (2001) is of the view that method C needs the researcher to assess the three different aspects of the errors made in the translation. (Khan Mohammad & Osanloo, p. 136)

TABLE 3. TYPOLOGY OF ERRORS IN METHOD B

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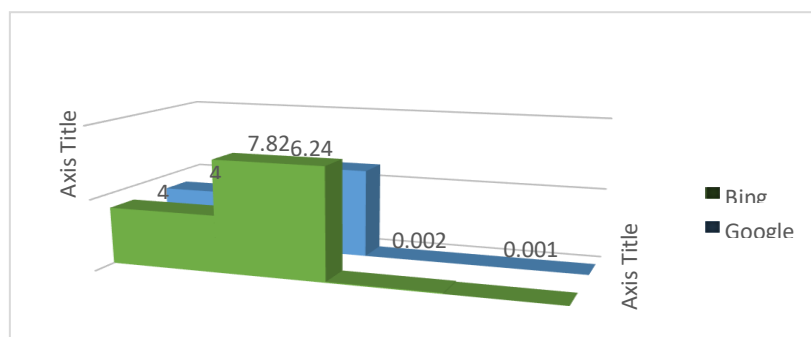
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Table 4. (5 +marks would be considered passing marks and below 5 would be considered inappropriate)  
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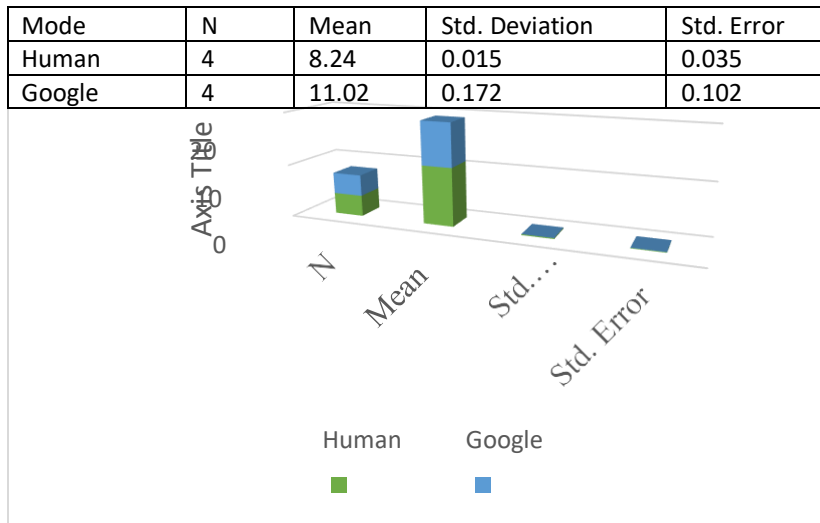
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The table shows the comparison between the translation made by the software Bing and Google. The mean score of

Google is 6.24 while the mean score of Bing is 7.82 which is lower than Google. The comparison shows that translation made with the help of Bing has more errors while the translation of Google has comparatively less margin of mistakes.

**Table 2** Human VS Google Translation



The table shows the comparison between the human translation and machine translation (Google translation). The mean score of human translation is 8.24 and the mean score achieved by the Google translation is 11.02. The comparison shows that human translation has less number of errors as compared to machine translation.

**Results and Discussion**

The results and findings show that the Google translation is more reliable as compared to Bing translation. However, both the sources of translation are search engines and work with the help of software. The first research question was to find out the difference between the translations of two sources namely Google translation and Bing translation. The translation of both the sources was not quite up to the mark. They translated the Arabic verses using the word to word equivalence. Also, the phrases are translated without converting the mean spirit of the verse from Arabic to English. For example, Bing translated the third verse of Surah Humazah in these words, “thinks he’s money.” And Google translates the same verse in the following way, “Calculates that is bad money” but if the Arabic and Urdu translation is observed, the verse says that the one who gathers money and remains counting it. Word “has” in Bing translation and “calculate” in Google translation convey unclear and ambiguous statement and destroys the intended warning and advice in form of a question of the concerned verse. Church and Hovey (2012) in their study found out the same results that machine translation and the two software used for search engine have the different means of doing the research. The Bing translation is weak in respect of quality while Google translation is also weak but it conveys some sense somewhat close to the original text. These results suggest that Google translation is related to the original Arabic and Urdu, closely related to the translation done by human, from the viewpoints of correctness and structure. As correctness was figured out with the thorough psychological and linguistic metrics and unity, it is probable to reach a decision that from machine translation, the translation that is nearer to human translation at the level of semantic and pragmatic structure is Google translation. Nevertheless, at the level of syntax and grammar, a lot of improvement is required. It means Google translation gives and provides a legible and understandable translation in comparison with the Bing translation though grammatical errors take place in grammar. Google translation offers a quick source for individuals who do not have much time and money to hire a translator to get information.

As for as the difference between the human translation and Google translation is concerned, results show that human translation is far better and superior to machine translation. Human translation covers the three aspects of the language. These aspects are syntax, semantic and more than else social level. It is studied that human translation is largely affected by the qualities of source-target language transfer. These factors are cultural, context and individual translation ability (Bassnett and Lefevere2000; Wong and Shen2003). The means of dealing decoding and recoding, equivalence issues, while carrying out the translation (Gentzler 2001), damage and increase, and incapability to

translate (Bassnett 2002) resort to many versions of translation by different translators. It is because of the different explanation of both target and target languages. Machine translation has no ability to create any impact of individual self on the translation. However, the normal for machine interpretation is yet a matter of profound concern. To evaluate the class of machine interpretation, it is fundamental to make a correlation of the machine interpretation with the human interpretation and the establishment of dialect at a more profound and exhaustive word-based dimension, words, linguistic structure, semantics, pragmatics and talk level are incorporated into the human interpretation. Along with the above-mentioned levels, we may have a whole vision on the worth of machine translation when it is compared with human translation. The human translation is full of feelings, passions and literary style, which is missing in the machine translation and machine translation, only provides word equivalence without considering its appropriateness and suitability of the translated word.

## Conclusion

It has been briefly discussed that there is a clear difference between the translation of a general discourse or a common piece of writing than the translation of a divine, holy, and revealed or the sacred book of any of the religion. It is concluded from the study that for the translation of Holy books, the sacredness should be cared, which a machine cannot do. For this purpose, sacred translations of Holy books should be done under the supervision of experts of that specific field who can better do it by taking care of its source, reference to the context and by keeping in mind its religious and social implications. There are different purposes of translation of the Holy books, which may be missionary or worldly, but the ultimate goal of every translator is to make the reader understand about the message of the sacred text. The general way that is adopted by Human, as well as machine or computer-aided translations (CAT) for the translation of Holy texts, is literal translation which is uneasy, unnatural and appears silted, not only fails to fulfill its purposes but also keeps the reader muddled. It is concluded from the discussion and results that translation should not only fulfill the requirements of the language demands but also cover the main aspects of the language like textual, syntactic, and semantic and social level. These requirements are partially met by the human translation whereas the machine translation only gives the surface translation that can be acceptable in some cases like text messages, interviews, and general conversation. On the other hand, for the real taste of literature and comprehensible understanding of language transformation from one language to another language, the figurative language should be used which is better possible for expert human translators.

## 4. FUTURE PROSPECTS OF THE STUDY

It is concluded that human translation of a Holy text requires a lot of training, expertise, skills, background knowledge of the source text, command over syntax, semantics, morphology otherwise that might lead to sensitive issues. Consequently, it is recommended that for the comparative study of human vs. machine translation a general text should be preferred rather than Holy text. For a comparative study of human vs. machine translation, Holy texts, especially of revealed books, should be avoided.

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