

## WHICH “FIGURE OF SPEECH” IS TRANSLATED BETTER BY HUMAN AND WHICH ONE BY MACHINE?

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### ABSTRACT

Since figures of speech have widespread use in nearly all genres of communication and writing, the translation of them becomes really urgent and significant. So, this research was conducted in order to find the figures of speech translated better by human and those translated better by machine. To this end, a questionnaire with 15 English sentences containing 5 types of figures of speech (hyperbole, synecdoche, personification, metonymy and idiom) was sent to 31 translators from 4 translation offices in Shiraz to be translated. The participants were all allowed to use any kind of dictionaries throughout the process. Next, the questionnaire was submitted to Google machine translation and finally, all of the collected translated sentences, whether by humans or Google, were assessed on the basis of Christopher Waddington's model of translation quality assessment, Method C, (2001) and compared with each other using t-tests. Having analyzed the data, the researcher observed that for hyperbole, synecdoche, metonymy and idiom components, the mean score obtained for humans was higher than that obtained for Google. In contrast, an interesting result was that the human personification mean score was lower than the Google. Furthermore, comparing the means showed that in humans, hyperbole ranked first, so it was the best figure of speech translated by humans. On the other hand, the highest score obtained by Google was in personification.

**Keywords:** Figures of speech, humans, Google machine translation, Waddington's model, Method C.

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### INTRODUCTION

Broadly defined, a figure of speech is any way of saying something other than the ordinary way and a figure of speech is more narrowly definable as a way of saying one thing and meaning another" (Arp & Johnson, 2006, p. 715). Puspita 2012 argued that they are forms of expression used to convey meaning or heighten effect, often by comparing or identifying one thing with another that has a meaning or connotation familiar to the reader or listener (Puspita, 2012).

Figures of speech are word or group of words used to give particular emphasis to an idea or sentiment. The special emphasis is typically accomplished by the user's conscious deviation from the strict literal sense of a word, or from the more commonly used form of word order or sentence construction. From ancient times to

the present, such figurative locutions have been extensively employed by orators and writers to strengthen and embellish their styles of speech and composition.

Bullinger (1898) stated that genuine "figures of speech" are legitimate grammatical and lexical forms that add emphasis and feeling to what we say and write.

#### **Statement of the Problem**

Translation in its very nature is a challenging attempt and the translation of "figures of speech", in turn, is one of the most problematic areas of the field that makes translators go through too many ups and downs.

#### **Purpose of the Study**

There were two main objectives in this study. The first aim was to find the figure of speech which is translated better by human. Also, it was intended to find the one which is translated better by machine.

#### **Research Questions and Hypotheses**

Based on the objectives, this study seeks to answer the following questions:

- 1) Which figure of speech is translated better by human?
- 2) Which figure of speech is translated better by machine?

And accordingly, in order to deal with the above-mentioned research questions empirically, the following hypotheses were formulated:

- 1) All figures of speech are translated similarly qualitatively by human.
- 2) All figures of speech are translated similarly qualitatively by machine.

#### **Significance of the Study**

With respect to the widespread use of figures of speech as significant tools of the language and since they are broadly applied in nearly all genres of communication and writing, the translation of them becomes really important and urgent.

It is essential that translators attach their utmost attention to these significant devices since the use of figures of speech involves a risk misinterpretation. Moreover, it would be a challenge for a translator to be able to translate the meanings of them in the source language into their appropriate equivalents in the receptor language so translators and interpreters must be cautious while faced with figurative language. The most negative point for a translator is to translate them literally.

Bullinger (1898) stated that recognizing and properly interpreting the figures of speech has many advantages that can result in better understanding of the true meaning. Murdock (2012) argued that they can help us appraise more clearly the meanings of many phrases cast in this pattern that elude our exact understanding.

Fadaee (2011) argued that they are some of the most challenging translation difficulties and one of the most ambiguous features of the field. They are too obscure that lead to so much confusion; especially those figures of speech which affect translation.

On the other hand, researching about Google is important. There are many machine translation tools available in the market nowadays for handling the translation between different languages. Among them, Google Translate is widely used in the society.

Google is a translation tool which is available for everyone and its accessibility is free. Most of the people especially students of different fields of study use this technology extensively. Google Translate has become the most widely used translation tool today. It is easy to access.

#### **LITERATURE REVIEW**

##### **Works done in the area of Translation of "Figures of Speech" by Human**

Bagheri's work (2006) focused to examine the personification of the animals and then generalized the results of her study about different types of personification. Analyzing the results, she found different strategies of translating personification such as: 1) In the case of similar personifying characteristics in two languages, the translator does not need to change. 2) The characteristics of different animals in the source language must be replaced with other animals that have the same characteristics in the target language. 3) If the author of the source language has specific purpose in attributing unusual characteristics to an animal, this phenomenon should occur in the target language. 4) If an animal does not have any personifying characteristics in target languages or none of the languages, there will be no need to change it in the

translation. If an animal does not have any specific characteristics in the source language and desired characteristics are attributed to it by the author, the translator must be careful that these characteristics will not be unusual in the target language.

Ferdosi (2006) was interested in translation of idioms in English movies. In her study, she concluded that translators use 8 strategies in translating idioms such as: inappropriate translation, equivalence, interpretation, literal translation, omission, idiomatic translation, reduction and addition.

Mustonen (2010) examined translation strategies of idioms. Analyzing the results the author found three different strategies for translating idioms such as translating an idiom with a non-idiom, translating an idiom with an idiom and translating an idiom literally. For both actual idioms and phrasal verbs the most frequently used translation strategy was translating an idiom with a "normal", non idiomatic expression. The second most popular strategy was to translate a source language idiom with a corresponding target language idiom. The least used strategy for both pure and semi-idioms and phrasal verbs was the literal translation strategy.

#### **Works done in the area of translation of "Figures of Speech" by Machine**

Regarding machine translation, Wehrli (1998) discussed the treatment of fixed word expressions developed for ITS-2 French-English translation system. It was recognized that, an idiom can be transferred according to the specifications of the bilingual dictionary. He showed several cases of transfer to corresponding idioms in the target language, or to simple lexemes. He concluded that, once properly identified, idioms can be transferred like any other abstract lexical unit. Finally, given the fully-specified lexical description of idioms, generation of idiomatic expressions can be achieved without ad hoc machinery.

Another article written by Anastasiou (2008) tried to compare 3 commercial machine translation systems, Power Translator Pro, SYSTRAN, and T1 Langenscheidt, with the research hybrid, statistical and rule-based system, METIS-II, with respect to identification of idioms. Based on the results, these systems could not identify discontinuous idioms and were incapable of translating the idioms.

Huet and Langlais's work (2011) was an attempt to analyze the machine translation of idiomatic expressions (Trans Search system). They used an in-house sentence aligner to align 8.3 million French-English sentence pairs extracted from the 1986-2007 period of the Hansards. They argued that with some care on the queries made to the system; this system can identify a fair number of idiomatic expressions and their translations. They found that a rough half of the idiomatic expressions queried to the system finally got a match and a high proportion of the translations returned by the system are correct.

As the present literature revealed and as far as the limited knowledge of the researcher, there hasn't been any evaluation of translating figures of speech by human and machine considering comparison. Assessing and comparing human and machine translation regarding figures of speech is a new aspect which was tackled on in this study.

#### **Researches in the Area of Google**

Koletnik Korošec's study (2011) focused on the modes and frequency of use of the Internet, Google Translate and Google Translation Toolkit among fairly advanced translation students, as well as the use of these resources by students in the translation of short texts. Results revealed that a vast majority of students were using Google Translate during their preparations for translation classes.

### **METHODOLOGY**

#### **Participants**

The participants of this study consisted of 31 translators (5 males and 26 females, mean age, 25.43, max age 33 and min age 23) from 4 translation offices in Shiraz namely Paeizaan, Tik, Pardis and Tandis. Most of them had studied English translation; however, some were from other fields of study such as English Literature, English Teaching, IT and Physics. The translators, mostly had a BA and some an MA degree. The translation offices were chosen on availability sampling and the translators participated voluntarily.

#### **Instrumentation**

For the present study, the researcher used a questionnaire with 15 English sentences containing 5 types of figures of speech (hyperbole, synecdoche, personification, metonymy and idiom) which were selected from

“Metaphoric and Idiomatic Expressions in Translation” by Nilipour (2006) and web pages to be translated into Persian. In this questionnaire, there were three sentences for each single figure.

#### Procedure of the Study

The mentioned questionnaire was sent to 31 translators to be completed. The participants were all allowed to use any kind of dictionary they wanted throughout the process. Next, the questionnaire was submitted to Google machine translation. Finally, all of the collected translated sentences, whether by humans or Google, were assessed on the basis of Christopher Waddington’s model of translation quality assessment (2001) and compared with each other using t-tests. The collected data was input into SPSS. A number of descriptive and inferential analyses were conducted on the data based on the research questions raised in the study.

#### Description of the Method C

The theoretical framework of this study was Waddington’s model (2001) of translation quality assessment. Method C is a holistic method of assessment. This method could be used to judge the quality of translation into the foreign language.

In accordance with these principles, the following scale was drawn up:

Table 1: Scale for Holistic Method C (Waddington, 2001, p. 6)

Level	Accuracy of transfer of ST content	Quality of expression in TL	Degree of task completion	Mark
Level 5	Complete transfer of ST information; only minor revision needed to reach professional standard.	Almost all the translation reads like a piece originally written in English. There maybe minor lexical, grammatical or spelling errors.	Successful	9, 10
Level 4	Almost complete transfer; there may be one or two insignificant inaccuracies; requires certain amount of revision to reach professional standard.	Large sections read like a piece originally written in English. There are a number of lexical, grammatical or spelling errors.	Almost completely successful	7, 8
Level 3	Transfer of the general idea(s) but with a number of lapses in accuracy; needs considerable revision to reach professional standard	Certain parts read like a piece originally written in English, but others read like a translation. There are a considerable number of lexical, grammatical or spelling errors.	Adequate	5, 6
Level 2	Transfer undermined by serious inaccuracies; thorough revision required to reach professional standard.	Almost the entire text reads like a translation; there are continual lexical, grammatical or spelling errors.	Inadequate	3, 4
Level 1	Totally inadequate transfer of ST content; the translation is not worth revising.	The candidate reveals a total lack of ability to express himself adequately in English	Totally inadequate	1, 2

#### Why Method C?

To analyze the 5 mentioned types of figures of speech (hyperbole, synecdoche, personification, metonymy and idiom) in this study, method C was used. These 5 types were selected because as far as the researcher knows, there has been less attention and focus on them compared to other types of figures of speech in previous works.

Since in researches, the participants are usually less interested in filling too long questionnaires, the researcher concluded to use the form of the questionnaire in which every figure is applied in a separate single sentence. As a result of using this form of questionnaire, method C appeared to be the best choice.

Another reason for selecting method C was that methods A and B had limitations and hence using them as the theoretical framework of this study was not appropriate. In the case of method A, Waddington emphasizes that addition is an error but in the questionnaires filled by the participants, addition was seen a lot. It was because the participants tried to transfer the meanings of the figures that they comprehended. Shahraki and Karimnia (2011, p. 5222) have an interesting critique upon this method:

“The last critique upon Waddington’s model is that of addition, in Method A. The notion of explicitation in translation was first raised by Klaudy (1996, as cited in Shahraki and Karimnia, 2011). He believes that sometimes it is necessary (and not optional) to add some information to the concepts, or even grammatical structures, in order to make them more explicit and familiar to the eyes of the target reader. So, not only is not addition an error, but also it is a good means of conveying the desired meaning. Addition adds some extra information to the meaning and as long as this information is not wrong, and it is in cohesive level, one could not deem it as an error. In fact, addition is a good aid for the translator to transfer the meaning, wherever it is not adequate. Persian translators widely use addition. But not only are not some additions errors, but also they are some good strategies of transferring meaning and thus, should not be deemed as errors”.

Also, in this method which is based on error analysis, the distinction that is made between serious errors and minor errors is not clear cut and judgment can be different from evaluator to evaluator.

In the case of Method B, it was designed to take into account the negative effect of errors on the overall quality of the translations and calculating the negative effect on words in ST. In the questionnaire used in this study, the number of words was not too much since every figure was applied in a separate single sentence. As a result, Method B could not be used as the theoretical framework and since Method D was a combination of error analysis Method B and holistic Method C, it could not be the evaluating model of this study either.

In rating the translations, only the figures of speech of the sentences were considered. To illustrate the scoring system better, some translations of the sentence number 14, on the questionnaire and the marks given to these translations have been presented below.

Table 2: An Example of Scoring the Translations (Sentence Number 14 on the Questionnaire)

Frank is a **yes-man** for his boss.

Mark	Translation
10	فرانک یک آدم بله قربان گو برای رئیسش است.
10	فرانک غلام حلقه به گوش رئیسش است.
10	فرانک پاچه خواری رئیسش را می کند.
6	فرانک بی اراده است.
6	فرانک از خودش اراده ندارد (هر کس هر چه می گوید قبول می کند).
5	فرانک چشم و گوش بسته همه چیز را قبول می کند.
5	فرانک آدم نوکرمآبی برای رئیسش است.
5	فرانک آماده به خدمت است.
1	فرانک برای رئیسش یک کارمند ایده آل است.
1	فرانک یک مرد درجه اول برای رئیسش است.
1	فرانک به رئیسش وفادار است.
1	فرانک تعیین کننده کارهای رئیسش است.
1	فرانک مردی راستگو برای مدیرش است.
1	فرانک یک مرد درجه یک برای رئیسش است.
1	فرانک برای رئیسش کارمندی نمونه است.
1	فرانک مرد کارکنی است.
1	فرانک بهترین شخص برای رئیسش است.

**Inter-Rater Reliability**

The filled questionnaires by the participants were first given to the research advisor and then to another person who had an MA degree in English Translation and finally when both of them reached a compromise on a scoring, that score was considered final and the inter-rater reliability was established. It means that for each translated segment they agreed which alternatives were acceptable and which ones were not. Results and details of the data analysis conducted throughout this study have been presented in the next chapter.

**Data Analysis and Results**

**Descriptive Statistics:** The sample consisted of 31 translators and the Google translator machine.

Table 3: Statistics for Research Variables

Variables	Hyperbole	Synecdoche	Personification	Metonymy	Idiom
N	31	31	31	31	31
Mean	6.923	6.306	5.245	6.290	6.613
Median	7.000	7.000	6.300	7.000	6.600
Std. Deviation	2.0579	2.4814	2.3791	1.4770	2.3309
Kurtosis	0.125	-0.810	-0.809	0.209	-1.324
Skewness	-0.899	0.130	-0.268	-0.586	0.269
Minimum	2.3	1.0	1.0	3.3	3.6
Maximum	9.6	10.0	10.0	9.6	10.0
Google Translator	4.0	1.0	7.6	4.0	1.0

Table 3 presents statistics for research variables including hyperbole, synecdoche, personification, metonymy and idiom. Figure 1 shows figures of speech means for human and Google.

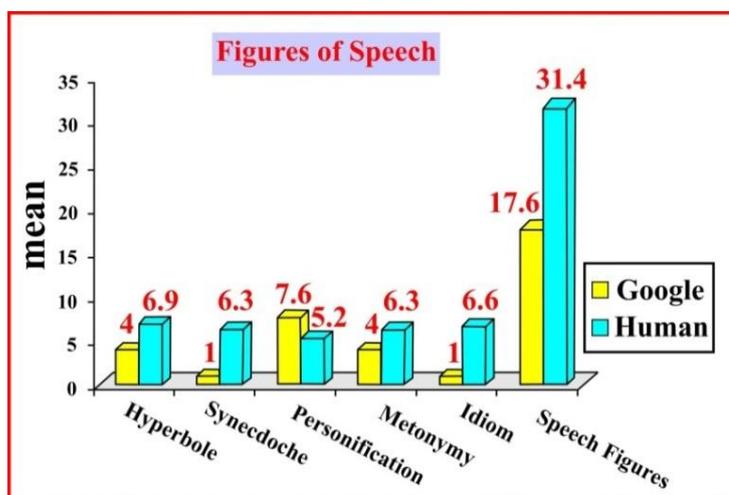


Figure 1: Figures of Speech Means for Human and Google

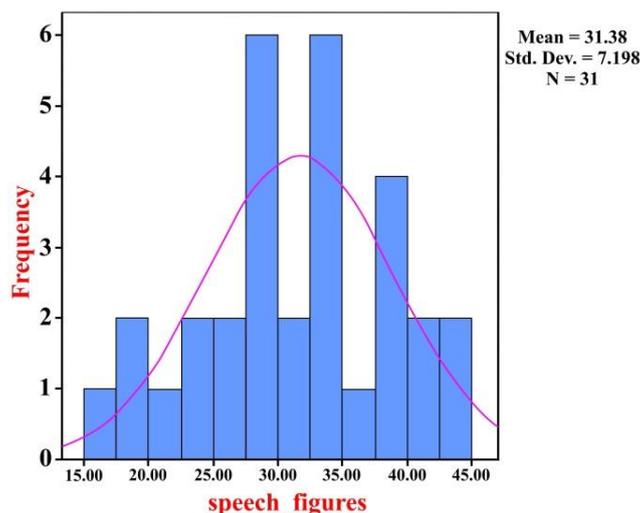


Figure 2: Histogram for Speech Figures

The above figure shows the histogram including the normal curve for speech figures variable. The diagram shows that the distribution of variable was close to the normal distribution.

**Inferential Statistics**

Since parametric tests require that the data distribution be normal, the normality of the variables distribution was investigated by Kolmogorov-Smirnov Test. If the normal distribution condition is not met, non-parametric tests should be used.

Table 4: Kolmogorov-Smirnov Test of Normality for Figures of Speech

Variables \ Statistics	Hyperbole	Synecdoche	Personification	Metonymy	Idiom	Speech Figures
K-S	0.847	1.130	1.083	1.826	1.013	0.473
Sig. (p-value)	0.471	0.156	0.192	0.003	0.256	0.979

The above table shows the results for the Kolmogorov-Smirnov Test. Since p –value was greater than 0.05 ( $p > 0.05$ ) for speech figures variable, the statistics was not significant which means that the distribution of speech figure was normal. For the metonymy component the Kolmogorov-Smirnov test was significant ( $p < 0.05$ ), so the metonymy component distribution was not normal.

**First Hypothesis**

The first hypothesis was that all figures of speech are translated similarly qualitatively by human. The question of this hypothesis was answered by the Friedman test which is a non-parametric test and no normal distribution is needed. This is convenient since the metonymy component distribution was not normal.

Table 5: Friedman Test for Comparing Figures of Speech Components

Mean Ranks					Chi-Square	df	Sig.
Hyperbole	Synecdoche	Personification	Metonymy	Idiom			
3.45	3.16	2.16	3.10	3.13	12.59	4	.013

The results of the Friedman test in the above table indicated that the test was significant at the level of 0.05 ( $p = 0.013 < 0.05$ ). Thus, the figures of speech components were significantly different. Comparing the mean ranks showed that the highest rank was belonged to hyperbole, so it was the best figure of speech translated

by human. The second rank was synecdoche followed by idiom, metonymy and personification, respectively. This hypothesis was hence rejected.

**Second Hypothesis**

The second hypothesis was that all figures of speech are translated similarly qualitatively by machine. To investigate this hypothesis, descriptive statistics was used, since there was only one data (Google) for each of the components.

Table 6: Google’s Scores for Figures of Speech Components

Variables Translator	Hyperbole	Synecdoche	Personification	Metonymy	Idiom	Speech Figures
Google	4.0	1.0	7.6	4.0	1.0	17.6

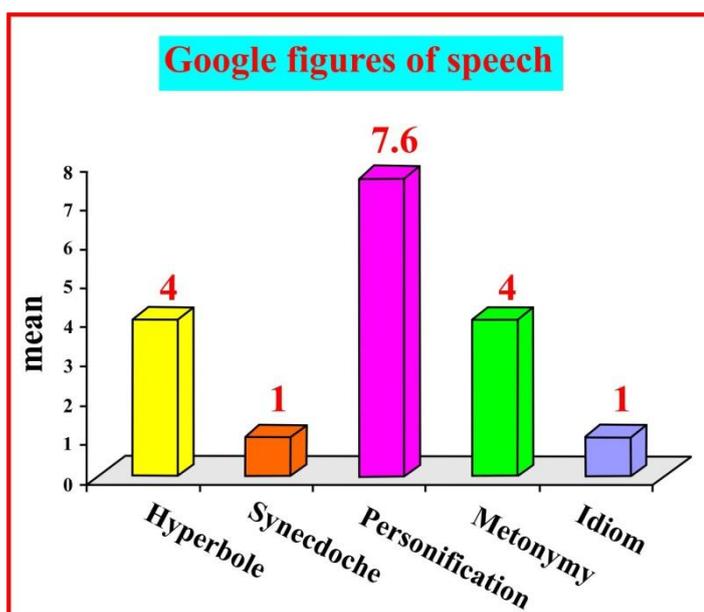


Figure 3: Figures of Speech Means for Google

As seen in the above table and figure, the highest score of the Google’s figures of speech was observed in the personification. The lowest scores were observed in the synecdoche and idiom. This hypothesis was not accepted either.

**DISCUSSION**

**An Interesting Result and Its Reason**

Most of us think that humans translation is certainly better than machine while in the present study, it was revealed that the human personification mean was lower than the Google. In fact, the highest score of the Google’s figures of speech was in the personification. In another study in which machine showed a better result than human, Fiederer and O’Brien (2009) with taking a user guide in English as the source text, German as the target language, and IBM WebSphere as the MT system made a research. It was concluded that the machine translated, post-edited output was judged to be of higher clarity and accuracy, while the translations were judged to be of better style. When it was asked to pick their “favorite” sentence, the majority of the evaluators chose translated (as opposed to machine translated) sentences. Also it was shown that when quality is defined along the parameters of clarity and accuracy, the post-edited quality is on a par, if not greater than, human translation. It was claimed that machine translation plus post-editing does not necessarily produce a product of inferior quality. In fact, collected data of that study suggested that the post-edited quality can be equal to or higher than human translation quality when clarity and accuracy are taken into account.

**Reason**

Personification is giving the attributes of a human being to an animal, an object, or a concept. In the personification sentences of the questionnaires, it was seen that most of the human translators could not accept in their minds this idea that for example a river can clap or a hill can sing since human translators use their ability of thinking while in the world of literature, everything is possible. On the other hand, machine which does not have this kind of ability does not care and translates such sentences like other sentences of general literature word by word. Melby (1995) maintained that computers do not really think about what they are doing and they just mechanically pick a translation for each word of the source text without understanding what they are translating and without considering the context. This resulted in getting into better translations of personification sentences for Google in compare with human being.

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