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Analysis of Onomatopeia Translation Result on "Komi Can't Communicate" Comic Using Machine Translation

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Abstract

Machine translations are commonly used for translation, but the result may not be correct, and the user might not know if the mistranslation happened. The research aims to identify the translation result of Japanese onomatopoeia that was translated using google translate to Indonesian, the difference between the google translate result and the Indonesian translated version, and the cause of mistranslation. The qualitative method through library research was applied. The data source was from the comic entitled Komi Can't Communicate by Tomohito Oda. Translation results would be analyzed using the descriptive analysis method. It can be concluded that the research found that google translates onomatopoeia translation had differences from the Indonesian version from the difference in word usage to mistranslation due to language ambiguity and missing data. The author also finds the possibility of the lack of Japanese onomatopoeic data on google translate or the lack of data for translating Japanese onomatopoeic to Indonesian, which causes translation errors. In addition, the authors also found that the translation technique used by Google Translate in translating onomatopoeia mainly uses the word-for-word translation method so that it produces one word from each translation process. However, there is also translation using the free translation method, which uses two words to translate one onomatopoeia so that the translation results can be better understood in the target language.

Keywords
machine translation, onomatopoeia, Komi can't communicate, google translate, machine translation.

1. Introduction

To be able to communicate effectively, language is used to connect in daily life. In this modern time, technological advances rapidly make our life easier. However, with the increasing number of interactions between cultures that occur in a short time, a problem must be resolved, namely the need for a way to translate and understand messages from one language to another. By using the services of a translator, everyone can understand the meaning of information received from other languages. However, it will take time which in modern times will take a long time and is expensive. Therefore, we need a solution that can translate from one language to another in a fast time.

One of the solutions to solve this problem is to use machine translation services. Machine Translation is a part of computational linguistics that studies software to translate spoken or written messages from one language to another. With this machine translation service, everyone can easily translate from one language to another. With machine translation, everyone can easily and quickly translate and understand information obtained from other languages. At

first, machine learning translation could not translate well, but lately, machine translation is more reliable, especially if one of the languages is English. However, even though it is more developed and can translate better than before, translation using machine translation is still not completely perfect, especially translation from or to languages that are not English and have communication habits that are much different from English.

In Japanese communication, several characteristics can be found. One of these characteristics is the use of onomatopoeia. Although onomatopoeia is also found in various languages, the use of onomatopoeia in Japan has its characteristics. Namely, in communication using Japanese, the use of onomatopoeia is much more common than in other languages. In addition, onomatopoeia in Japanese also has a large number and variety. Therefore, in translating from Japanese, it is also necessary to understand the meaning of onomatopoeia.

In finding out about the accuracy of onomatopoeic translation into Indonesian using google translate, the author found several examples below:

1. ニャーニャー → Meong Meong
2. キラキラ → Berkilau
3. ゲラゲラ → Gali

If we look at the results of the onomatopoeic translation from Japanese to Indonesian above, there are different types of answers. In the first example, there is an expected answer because「ニャーニャー」which is an onomatopoeic imitating the sound of a cat is translated to “meong meong.” In the second example, 「キラキラ」which is an onomatopoeia that describes something shiny, is translated into" berkilau," while the word that a human translator might use is the word” kling kling." According to Nida and Taber (in Suryawinata. Z & Hariyanto, S), translation is an attempt to recreate from the source language to the destination language with natural equivalents first in terms of meaning and then style. Based on the statement above, although this translation is not like the first example, which produces an appropriate equivalent to Indonesian, it still conveys the meaning well enough to be acceptable. Then in the third example, the word 「ゲラゲラ」which can imitate a loud laugh was translated into “gali” which is a translation that is far from its true meaning. By looking at the results above, researchers are interested in researching this matter because onomatopoeia is an important thing and is often used in Japanese. Because when many people use machine translation services and do not understand the destination language, they will not realize the error of this translation.

1.1 Objectives

The purpose of this study was to find out the results and compare onomatopoeic translations from Japanese to Indonesian using google translate compared to the translations made by translators. In addition, this study also aims to look at the possible causes of differences or mistakes in translation results.

2. Literature Review

Machine translation is a part of computational linguistics that studies software to translate spoken or written messages from one language. The use of machine translation can increase a person's speed in finding translations from other languages. The goal of machine translation today is not to perfectly translate a text from the source language to the target language but to be able to translate the text with as few errors as possible.

Currently, two types of machine translation are widely used: neural machine translation (NMT) and statistical machine translation (SMT). Of these two types, neural machine translation is the newer type. The following is an explanation of each type of machine translation:

1.Statistical Machine Translation
Statistical machine translation is a machine translation approach that obtains data by collecting large volumes of data to be used as data in the translation process.

2.Neural Machine Translation

Neural machine translation is a machine translation approach that uses an artificial neural network to predict word order. In the process of using it, neural machine translation requires fewer data and is more efficient than statistical machine translation. According to Kunchukuttan, A., & Bhattacharyya, P. (2021:159), neural machine translation can also work well in situations where there is little source data and by getting data from a source language with many data.

Currently, the machine translation that is widely known by the public is google translate which Google manages. This machine translation initially used a statistical machine translation system but was changed to neural machine translation in 2016.

The translation is the process of taking text from the source language and converting it into a text with the exact equivalent to the target language. According to Nida and Taber (in Suryawinata & Hariyanto, 2016, p. 8), there are three stages: the analysis, the transfer, and the restructuring. However, Suryawinata (in Suryawinata & Hariyanto, 2016, p. 9) clarifies these stages by using the concept of inner structure and outer structure of Transformation Generative Grammar so that it becomes four stages, namely the analysis stage, the transfer stage, the restructuring stage, and the evaluation and revision stage. According to Newmark (in Hartono, 2017, p. 15), eight translation methods can be divided into two, namely methods that, when translated, will be more in favor of the source language and those more in favor of the target language. Following are the methods:

1.Methods that favor the source language

a. Word for word translation: Word for word translation is a translation method that translates words directly from the source language to the target language.
b. Literal translation: Literal translation is a translation method that directly but simultaneously looks at the grammatical construction of the source language.
c. Faithful translation: Faithful translation is a method that can produce an appropriate translation of meaning within the limits of the grammatical structure of the target text.
d. Semantic translation: According to Hartono (2019), Semantic translation is a translation method that is more flexible than the faithful translation method and considers the aesthetic elements of the source language text by compromising the meaning within reasonable limits.

2.Methods that favor the target language

a. Adaptation: Adaptation is the freest translation method and favors the source language. The term "adaptation" can be included in this method if it does not change essential things from the source text, such as themes, characters, or stories.
b. Free translation: Free translation is a method that prioritizes the naturalness or fluency of a text in the target language.
c. Idiomatic translation: Idiomatic translation is a translation method that translates idioms or figures of speech from the source language by looking for idioms or figures of speech in the target language.
d. Communicative translation: According to Newmark (in Hartono, 2017, p. 15), Communicative translation is a translation method that seeks to translate the contextual meaning of the source language so that it can be accepted and understood by the target language readers.

Based on Chalker & Weiner (in Aloufi, A, 2021), onomatopoeia comes from the Greek onoma (word or name) and poiein (to make). So onomatopoeia can be interpreted as making words from sounds that come from nature. Onomatopoeia is not something that is only found in Japanese, but the difference is in its use in everyday life. In Japanese onomatopoeia, onomatopoeia is also often called mimetics or ideophone. According to Iwasaki, N, Sells, P & Akita, K (2017:1), mimetics in Japanese is a special class of words whose form, sound, and meaning are related to the similarity between form and meaning or from sound symbolism. Onomatopoeia in Japanese can generally be divided into gitaigo and giseigo. Giongo is an onomatopoeia that imitates sound. Gitaigo is an onomatopoeia that describes what can be felt from an object. Gijogo is an onomatopoeia that describes emotional states and feelings. Flyxe (in Sasamoto, pp. 184-185) argues that onomatopoeia with a high lexical level is challenging to translate, so gitaigo and gijogo are usually translated using paraphrases because it is difficult to find an equivalent translation.

3. Methods

At this stage, the author will explain the steps taken in conducting this research. The author divides this research into three parts: the initial stage of research, the stage of data collection, and the stage of data analysis.

3.1 Preparation stage:

At this stage, the author will determine the themes, objectives, and theories used to conduct the research.

Step 1: the author determines the theme to be studied, namely onomatopoeic translation, using google translate.

Step 2: the author looks for data that will be a source for research

Step 3: the writer determines the research objectives and the data collection method to be used

Step 4: Determine the research approach method to analyze the data, namely the literature analysis method

Step 5: Define the theory used.

The results of this stage are a qualitative approach as a research method, Tomohito Oda's comic "Komi Difficult to Communicate" as the object to be studied, qualitative descriptive method as a method of analysis, and translation theory, onomatopoeia and machine learning as the theory used.

3.2 Data collection stage:

The authors collect the data needed to conduct research at the data collection stage. As the object of research, the researcher will take a sample in the form of several editions which, according to the researcher, are suitable to be the research object.

Step 1: Determine the data that you want to source

Step 2: Record the onomatopoeia from the data that has been determined

Step 3: translate onomatopoeia by using google translate.

Step 4: Record the results of the onomatopoeic translation of google translate

Step 5: Data ready for analysis

The edition studied was selected based on the variety of onomatopoeia, the sample data contained in the edition, and the availability of editions in Japanese and Indonesian before starting the study. Therefore, the sample that will be used is volume 1 because, in this volume, the interaction between characters is still not much done with a conversation but with body movements, and volume 3. After all, there are parts where the interaction is done with movement, so the author must be able to convey the intent by using body movements and gestures. The last one is volume 4, which gives samples of more action due to the sports festival.

After determining the edition that will be used as a research sample, the author will record the onomatopoeia in the Japanese and Indonesian versions to find the onomatopoeia in that edition. The recorded onomatopoeia will be converted to its basic form to facilitate translation. Furthermore, the onomatopoeia will be translated using google translate, and the results will be recorded for analysis. To improve accuracy, data that cannot be found meaning will not be included in the analysis process. From this process, 187 data were found, 105 of which were considered wrong translations and 36 data whose meaning had shifted.

3.3 Data analysis stage:

In this stage, the writer will select and classify the data to be analyzed. After that, the writer will analyze the data in the form of google translate onomatopoeic translation of the comic "Komi can't communicate" and will compare it with the official translation released in the form of a comic book. After analyzing, depending on the results, the researcher will continue the research.

Step 1: Select and group the data to be analyzed

Step 2: Analyze the results of onomatopoeic translation from google translate

Step 3: if there is an error, find the cause of the translation error

Step 4: Perform data analysis check

Step 5: Making conclusions from research results

The results of this stage are the analysis of onomtope and onomatopoeic translation results in the comic "Komi difficult to communicate" volume 1, volume 3, and volume 4, as well as the results of the analysis regarding the types and causes of translation errors.

4. Results and Discussion

4.1 The result of the translation that has the same word type and the same meaning

Data that fall into this category are data whose translation results are the same as or close to the Indonesian version and have the same meaning as the meaning of the source language. The amount of data in this category is ten onomatopoeic data. The following are examples of data that fall into this category:

Onomatopoeia : カチ
The Indonesian version of the comic translation result: klik
Google translate result : klik

From this data, it can be seen that「カチ」which according to Chang, A.C (1990:465), can be interpreted as a sound produced from the sound of a machine or iron. In the official translation, it is translated as " klik " which is an onomatopoeic produced by the sound of a machine or an object being pressed. Whereas in translation using google translate, it is also translated into " klik " which has the same meaning.

This category shows onomatopoeia which shows a google translate translation level that is at the same level as the translation from the human translator. Therefore, it can be considered that translations in this category have carried out the stages of translation well and have been able to overcome machine translation problems, according to Koehn, P (2020:5), namely the ambiguous nature of the language and the balance between fluency and suitability of the translation results.

4.2 Translation Results That Have the Same Meaning but Use Different Words

Data that falls into this category is data whose translation results are different from the translation of the Indonesian version but still have the same meaning as the meaning of the source language. The amount of data in this category is 36 onomatopoeic data. The following are examples of data that fall into this category:

Onomatopoeia : むしゃむしゃ
The Indonesian version of the comic translation result: haup
Google **t**ranslate **r**esult : mengunyah

From this data, it can be seen that 「むしゃむしゃ」which according to Chang, A.C (1990:209), can be interpreted as the sound that results from eating something voraciously. In the official translation, it translates to "haup" a word used for eating activities. In translation using google translate, it is also translated into " mengunyah" which is not an onomatopoeia but has the same meaning. Whereas in translation using google translate it is also translated into " mengunyah" which is not an onomatopoeia but has the same meaning

In this category, there is an onomatopoeia translated into other types of words that are different from the Indonesian version. Therefore, it can be concluded that in this category, the translation produced is not perfect. However, because the meaning is still the same as the source language, this translation can still be accepted so that it can still be said to overcome translation problems and carry out the stages of translation well. Some of the translation results are translated into phrases consisting of two words so that the translation method used is not a word-for-word translation but also uses free translation methods by adding words that can produce translations that can be better understood by adding other words. In addition, the use of this phrase also follows the theory by Flyxe (in Sasamoto, pp. 184-185), which says that onomatopoeia with a high lexical level can be translated into paraphrases because it is difficult to find equivalents in the target language.

4.3 The Result of the Translation that has Different Word Types and the Meaning Shifts

Data that fall into this category are data whose translation results do not match the meaning in the source language, but the meaning is not far from the correct meaning. The amount of data in this category is 36 onomatopoeic data. The following are examples of data that fall into this category:

Onomatopoeia : カチャ
The Indonesian version of the comic translation result: klak
Google translate result : menabrak

From this data, it can be seen that「カチャ」which according to Chang, A.C (1990:465), can be interpreted as a sound produced from clicking, in the official translation translates to "klak" which in the manga is a pencil case made of metal. Meanwhile, in translation using google translate, it is also translated into "menabrak" which is not an onomatopoeia and its meaning, although it can be interpreted as describing two colliding metal materials, is still not in accordance with the meaning of the source language.

In this category, there is one problem in translating using machine translation, namely the ambiguous nature of the language. In addition, there is also a problem in the analysis section because the google translate system sometimes translates to English first, causing a slightly shifted meaning and not commensurate with the meaning in the source language. Some of the translation results are translated into phrases consisting of two words so that the translation method used is not a word-for-word translation but also uses free translation methods by adding words that can produce translations that can be better understood by adding other words. In addition, the use of this phrase is also in accordance with the theory by Flyxe (in Sasamoto, pp. 184-185), which says that onomatopoeia with a high lexical level can be translated into paraphrases because it is difficult to find equivalents in the target language.

4.4 The Results of the Translation Used are Different, and the Meaning is not Close at All

Data that fall into this category are data whose translation results do not match the meaning in the source language, and the translation results are far from the correct meaning. This category will be divided based on errors that occur in the translation process. The following are errors that can be encountered during translation:

4.4.1 The translation results are translated directly from the Japanese word

One of the most common mistakes is an error in the translation process, where the translation process is carried out only by changing the Japanese writing into romaji. The amount of data in this category is 66 onomatopoeic data. The following is an example of the data contained in this category:

Onomatopoeia : ぴん
The Indonesian version of the comic translation result: jlebb
Google translate result : pin

From this data, it can be seen that「ぴん」which according to Chang, A.C (1990:266), has the meaning of piercing. In the official translation, it is defined as "jlebb" which is an onomatopoeic word that indicates something is plucking. Meanwhile, in the results of the translation using google translate, the translation results are carried out by translating

the word which, when converted into the alphabet, becomes "pin," resulting in the translation of "pin" which is not one of the words in Indonesian which is the target language.

In this category, there are many errors that can occur due to the lack of onomatopoeic data on google translate so that words from the source language cannot be appropriately analyzed and cause translation errors that think the word has no meaning of its own, so it is translated by changing directly from the Japanese characters. This lack of data causes errors in the analysis stage, according to Nida and Taber's theory (in Suryawinata & Hariyanto, 2016, p. 8) which is the first stage of the translation process.

4.4.2 The translation results are translated into English from the way it is read
Included in this category are onomatopoeias whose translation results are translated by reading Japanese as loanwords from English and directly translating them into Indonesian. The amount of data in this category is 15 onomatopoeic data. The following are examples of this category:

Onomatopoeia : ストン
The Indonesian version of the comic translation result: bluk
Google translate result : batu

From this data, it can be seen that「ストン」which according to Chang, A.C (1990:211), can be interpreted as the sound effect of something falling, in the official translation, is translated as "bluk" which is an onomatopoeic used to describe something falling. While in translation using google translate, it is also translated into "batu" which is interpreted from the way to read English, namely "stone" which is converted into katakana and translated directly into Indonesian.

In this category, the main problem is the translation of the considered onomatopoeia into English. In this category, there is one difficulty in doing machine learning mentioned by Koehn, P (2020:5), namely the ambiguous language problem. In this example, the Japanese onomatopoeia can be mistranslated because of the ambiguity of using the same writing for two different meanings. Moreover, in Japanese, there are borrowed languages from other languages, which are usually written with Japanese characters, thus increasing the possibility of several words with the same meaning. In addition, there is also a tendency in google translate to translate something into English first so that translation errors can occur. This is also one of the errors in the analysis stage according to Nida and Taber's theory (in Suryawinata & Hariyanto, 2016, p. 8) which is the first stage of the translation process.

4.4.3 The result of the translation, which means it comes from translating after using corrections or the way it is read is wrong
In this category, there are onomatopoeias whose translation results are automatically corrected by google translate and translated into Indonesian so that the translation results do not have the same meaning as the source language. The amount of data in this category is 24 onomatopoeic data. The following are examples of translations that fall into this category:

Onomatopoeia : うとうと
The Indonesian version of the comic translation result: ngantuk
Google translate result : Akhirnya

From this data, it can be seen that「うとうと」which according to Chang, A.C (1990:74), has the meaning sound sleepy due to fatigue, is interpreted in the official translation as ″ngantuk″ which is a word used for someone who is tired and wants to sleep. Meanwhile, in the translation using google translate, the resulting translation is ″Akhirnya″ which is not an onomatopoeia, and the meaning is not the same. Translation errors can occur because there is a correction in the translation to translates「とうとう」directly to ″Akhirnya."

In this category, there are translations that are not captured by google translate and corrected automatically, causing translation errors. Insufficient data can be the cause of this problem, so google translate corrects words that should be correct into other words contained in the data, causing unnecessary corrections in the translation process. This is also one of the errors in the analysis stage according to Nida and Taber's theory (in Suryawinata & Hariyanto, 2016, p. 8) which is the first stage of the translation process.

5. Conclusion

After conducting the data analysis process in chapter 4, the author found that the results of the onomatopoeic translations contained in the comic "Komi Difficult to Communicate" by google translate can be divided into four categories, namely:

a. The result of the translation that says the same and has the same meaning
The result of this translation is the result of an onomatopoeic translation that uses words of the same level and meaning as those produced by the Indonesian version of the comic so that the resulting translation can be said to be equivalent to the translation found in the Indonesian version of the comic.

b. The result of a translation that has the same meaning but uses different words
The result of this translation is the result of an onomatopoeic translation that uses words that are different in level from the Indonesian version but still have the same meaning so that the translation process is successful and can be understood by the reader. In this category, many translations produced by Google Translate, compared to Indonesian, are not functionally the same as onomatopoeia, thus showing the lack of Google Translate in understanding words that are sounds or onomatopoeic as well as human translators even though the translation results have the same meaning.

c. The results of the translation used are different, and the meaning shifts.
The result of this translation is the result of an onomatopoeic translation that uses words that are different in level from the Indonesian version, and the meaning has shifted so that the results of the google translate translation in this category are difficult for readers to understand. Translation errors in this category can occur in the language transfer process.

d. The translation results used are different, and the meaning is not close at all
The result of this translation is the result of an onomatopoeic translation that uses words that are different in level from the Indonesian version, and the meaning is not close at all. In this section, some results show onomatopoeia that may not be in the google translate data, so there are ways of translating, such as changing the onomatopoeia directly to Indonesian by using the Japanese reading method, translating it from English to Indonesian, and performing automatic corrections on the onomatopoeia into words that approaching and in the google translate data and then translated into Indonesian.

By comparing the results of the google translate translation and the Indonesian version of the comic, the author finds that many errors in the onomatopoeic translation by google translate occur due to language problems that have ambiguous nature. This causes many errors at the analysis stage of the onomatopoeia before being translated into Indonesian. In addition, the author also finds the possibility of the lack of Japanese onomatopoeic data on google translate or the lack of data for translating Japanese onomatopoeic to Indonesian, which causes translation errors.
In addition, the author also finds that the translation techniques used by Google Translate in translating onomatopoeia mostly use the word-for-word translation method so that it produces one word from each translation process. However, there is also translation using the free translation method, which uses two words to translate one onomatopoeia so that the translation results can be better understood in the target language.

The author realizes that this research is still far from perfect due to a lack of knowledge, time constraints, and data studied by the author, especially in selecting the data to be analyzed and looking for reliable sources to find the meaning of the onomatopoeia in both Japanese and Indonesian, which caused the writer to reduce the data. Therefore, for future research, the author suggests taking more data to add variety, looking for reliable sources, and having many data to clarify the meaning of onomatopoeia. With this research, it is hoped that it can help the general public, those who use machine translation services, and subsequent research to understand translation using machine translation.

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Biography

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Dr. Elisa Carolina Marion graduated from BINUS University's Japanese Department for her bachelor's degree, the University of Indonesia for her master's degree, University of Padjadjaran for her doctoral degree. In 2013, she joined Japanese Language Training at Japan Foundation Training Center Kansai Japan for six weeks, funded by Osaka Gas Foundation. Dr. Elisa has been a Japanese language lecturer for more than ten years. She is often invited as a guest speaker and trainer for Japanese language, made speeches in international conferences in several universities such as Atmajaya, Diponegoro University Semarang, University of Indonesia, Maranatha Cristian University, University Muhammadiyah Prof. Hamka, and conferences held by Asosiasi Studi Jepang Indonesia (ASJI) and Asosiasi Pengajar Bahasa Jepang Seluruh Indonesia (ASPBJI). Elisa has had working experiences in several Japanese companies in Jakarta and West Java. With her experiences in Japanese companies and higher education, she now teaches and focus on research on Japanese Corporate culture topics area.