Humanus
Jurnal Ilmiah Ilmu-ilmu Humaniora

Can Machine Translations Translate Humorous Texts?

Dapatkan mesin penerjemah menerjemah teks-teks humor?

Havid Ardi[1], Muhd. Al Hafizh[1], Iftahur Rezqy[1], Raihana Tuzzikriah[1]
[1]Universitas Negeri Padang
Jl. Prof. Dr. Hamka, Air Tawar Padang, Zip Code 25131, Indonesia
Email: havid_a@fbs.unp.ac.id

Abstract

Machine translation (MT) has attracted many researchers' attention in various ways. Although the advanced of technology brings development to the result of MT, the quality is still criticized. One of the texts that have great challenges and translation problems is humorous text. Humorous texts that trigger a smile or laugh should have the same effect in another language. Humor uses linguistic, cultural, and universal aspects to create joke or humor. These raise questions how do machines translate humorous texts from English into Indonesian? This article aimed at comparing the translation result and error made by three prominent Machine Translations (Google Translate, Yandex Translate, and Bing Microsoft Translator) in translating humorous texts. This research applied qualitative descriptive method. The data were taken by comparing the translation results produced by 3 online Machine Translations in translating four humorous texts. The findings show that MTs can translate humorous texts but the quality is still in the medium level or not perfect yet. It also shows that Google Translate produced better translation result compared to MBT and YT. However, some errors related to lexical, syntactic, semantic, and pragmatics errors were still found. These findings indicate that machine translation still need human in post editing to produce similar effect to preserve the humor.

Keywords: humorous text, Machine Translation, translation comparison, translation techniques, error analysis

Abstrak

Teks humor yang berfungsi untuk menghibur dan memancing senyum, bahkan tertawa pembaca setelah membaca. Seringkali cerita humor dari bahasa asing juga diterjemahkan ke berbagai bahasa, termasuk bahasa Indonesia. Humor menggunakan aspek linguistic, budaya, dan universal dalam membangun poin humornya. Hal ini memancing pertanyaan bagaimana mesin menerjemahkan teks humor? Artikel ini bertujuan menginvestigasi cara yang dilakukan oleh mesin penerjemah dalam menerjemahkan humor dan dampaknya terhadap inti humor. Penelitian ini merupakan penelitian deskriptif kualitatif. Data diambil dengan cara membandingkan hasil terjemahan yang dihasilkan oleh 3 mesin penerjemah terhadap dua teks humor. Teknik penerjemahan diidentifikasi dan dianalisis dampaknya terhadap hasil terjemahan. Temuan penelitian menunjukkan bahwa mesin penerjemahan walaupun dapat menerjemahkan namun terdapat teknis penerjemahan lazim yang berdampak cerita

lucu yang dihasilkan sehingga menghilangkan poin kelucuannya yang menggunakan aspek linguistik. Implikasi temuan ini menunjukkan mesin penerjemahan masih memerlukan manusia sebagai penyelaras akhir karena manusia memiliki nilai humor.

Kata kunci: *teks humor, mesin penerjemahan, perbandingan terjemahan, teknik penerjemahan, kelucuan*

Introduction

The idea of mechanical translation was started in 17th century and have been developed as automatic translation or machine translation (MT) just after 2nd World War (Omar & Gomaa, 2020; Putri & Ardi, 2015). MT are continuously developed as the advanced of computer technology, MT has developed into online MT. Some popular MTs are Google Translate (GT), Q Translate, Yandex Translation (YT), Microsoft Bing Translation (MBT), SYSTRAN, DeepL. In producing the translation, MT does not apply grammatical rule but based on Statistical Machine Translation (SMT) analysis (Hutchins, 2009; Putri & Ardi, 2015). As the development Artificial Intelligent and Deep Learning, some MTs also use Neural Machine Translation (NMT) analysis (Yamada, 2019; Zein, 2018). NMT has been implemented by GT, DeepL or Systran, and MBT (Rescigno, Vanmassenhove, Monti, & Way, 2020; Yanisky-Ravid & Martens, 2019).

Along with the increase in the use of MT, studies on the result of MT have been carried out by many researchers in various texts, i.e. abstract of scientific texts (Napitupulu, 2017), literary works (Omar & Gomaa, 2020), social media (Läubli & Orrego-Carmona, 2017). However, some of them criticize the result of MT (Läubli & Orrego-Carmona, 2017). Meanwhile, some studies report that machine translation are good in maintaining information related to academic purpose (Groves & Mundt, 2015; Lee, 2021). Thus, it raises a question; how MTs treat humor texts? What error appears in the MTs?

Actually, there also are several studies compared the result of MT in various aspects, such as, gender bias in the result of translation made by Google Translate, Microsoft Bing Translator, and DeepL (Rescigno et al., 2020), the translation made by Google Translate and human translation (Läubli & Orrego-Carmona, 2017), and comparison of SYSTRAN and Google Translate (Oliveira & Anastas, 2011). However, lack of studies that compare the result of those MTs in translating humor.

Humorous text is one of the texts that challenges and problematic. Many humorous text are available in the internet. Recently, the study of humor has attracted the attention various researchers in various aspects, such as, studies on linguistics aspects of humor (Afdhal & Hamzah, 2019; Dahelza, Saun, & Ardi, 2013; Dore, 2019; Low, 2011; Yahiaoui, Alqumboz, Fattah, & Al Adwan, 2019), humor related to physiological aspect (Savage, Lujan, Thipparthi, & DiCarlo, 2017) and psychological of humor (Martin, 2007). In those studies, mostly the materials used to trigger the humor is aimed to evoke laughter or smiles from readers or audience (Martin, 2007; Martínez-Sierra, 2006).

Laughter is universal language reaction on humor (Savage et al., 2017), however it is a challenge and problematic task to produce that reaction in the target text. Humor might be categorized into linguistics joke, cultural joke, and universal joke (Raphaelson-West, 1989; Schmitz, 2002). These types of humor might have different difficulties in translation. However, the translation of humor should keep the effect of the humorous effect in the target language. Some studies reported translation humor, such as, translation of audiovisual humor (Dore, 2019; Martínez-Sierra, 2006; Yuliasri, 2016). In

the previous studies humor is found in the subtitle and comic. It also indicates that although humor is cultural bound (Bendi, 2019), it can be translated (Low, 2011) into another language. However, mostly the previous studies were conducted on audiovisual translation that involved audio or visual aids to help the audience to understand the humor.

Even though, there are some studies that have explored the translation of humor without audiovisual aids, i.e., pun (Low, 2011; Rezqi & Ardi, 2022), wordplay (Díaz-Pérez, 2015), humor in the novel (Yuliasri & Allen, 2019), their studies focus on human translation. Meanwhile, the result humorous texts translated by MTs were not compared yet. Even, lack of studies reported comparison of the result of SMT-based approach and NMT-based approach especially in translating humor. Since humorous texts are functioned to create joke, it should be translated as a joke. If the translation becomes bland, it means there is a humor loss in the translation or bad translation result (Low, 2011; Yuliasri & Allen, 2019).

Thus, this article is focused on the comparison of three translation result of MTs (Google Translate, Microsoft Bing Translate, and Yandex Translate) in translating humorous texts that use linguistic features, such as, homonym, polysemy, pragmatics, to create humor. The objective of the study is to explore how MT which use statistically approach and neural approach in translating humorous texts and error analysis in the target text. Firstly, the translation techniques implemented in the result of MT were identified and classified in treating linguistic aspects and then, exploring error found in the three MTs. Translation techniques were classified based on Molina & Albir (2002) and error analysis based Keshavarz's model (2012).

Method

This research used descriptive qualitative approach as it was aimed at describing how machine translate humorous texts. The researchers chose four humorous texts taken from the internet to be translated by MTs. English humorous texts as the source texts were inserted into the three machine translations to be translated into Indonesian. These texts were translated by using GT, YT, and MBT into Indonesian language. Then, the results of the translation were analyzed using the translation technique (Molina & Albir, 2002) to compare source and target texts as the result of SMT and NMT approaches. The translation quality of humorous texts from the three MTs were rated by using TQA model proposed by Nababan, Nuraeni, & Sumardiono (2012) involving three raters for accuracy, acceptability, and readability. There are some classification of error, such as, Keshavarz's model (2012) .

Data were collected by providing four texts of humor from Source texts that were taken from http://www.teacherjoe.us/. This source were chosen since it publishes humor written by native and authentic humor. Among the four texts, the first and the second texts belong to linguistic humor or word-based humor (see Schmitz, 2002 for details). Linguistic jokes expose the use of words, such as, sound, spelling, puns or wordplay to trigger humor (see text 1 & text 2). Then, the third text and the fourth belong to universal humor or bicultural joke that is understandable by many people from different background (see text 3 & text 4). The full version of source texts in the MT can be seen as follows.
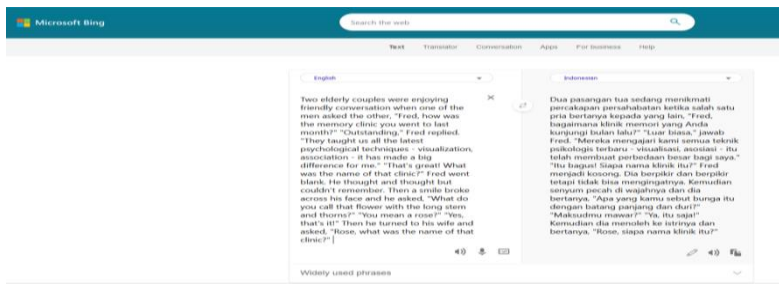
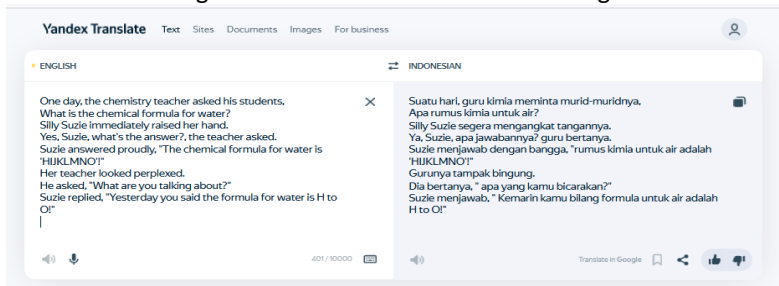Figure 1. Source text 1 in Microsoft Bing Translator
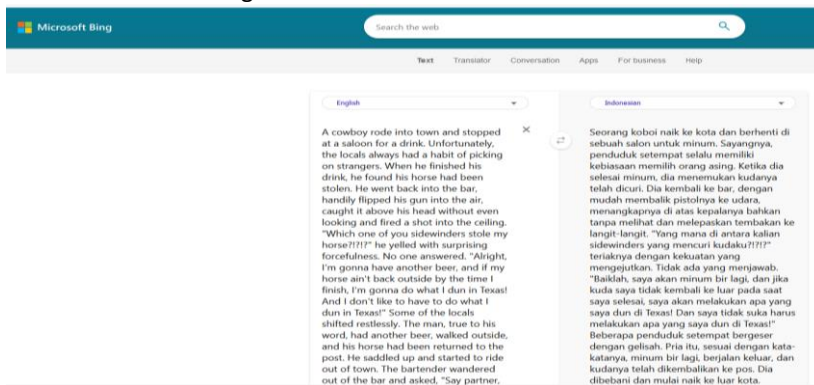

Figure 2. Source text 2 in Yandex Translate

Figure 3. Source text 3 in Microsoft Bing Translator
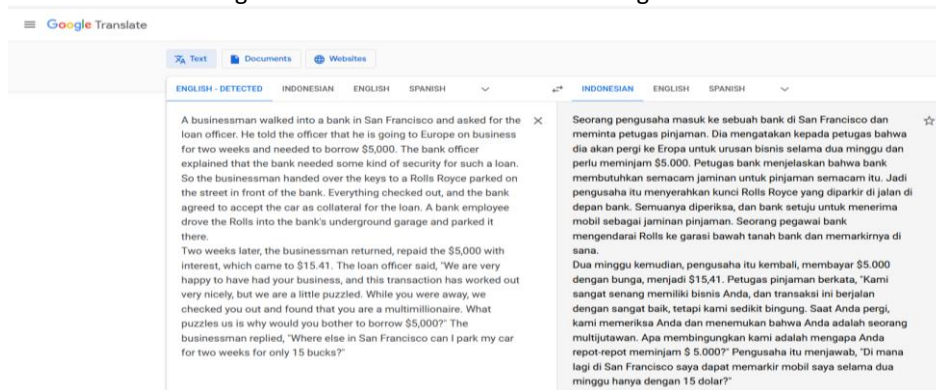
Figure 4. Source text 4 in Google Translate

These texts apply the generic structure of humorous text or spoofs that is orientation, event, and twist. The three texts above were, then, translated into Indonesian language by using three machine translations, they are Google Translate (https://translate.google.co.id/), Yandex Translate (https://translate.yandex.com/), and the last Microsoft Bing Translators (https://www.bing.com/translator).

Similarly, the processes of collecting data through machine translations were conducted by putting source text and getting the target text into Indonesian. Firstly, STs were inserted into GT, and then the results were copied into data card to be rated and analyzed. Similar steps were conducted to MBT and YT. The criteria of translation quality are accuracy and creativity. These rating process involved translation experts and Indonesian experts. Meanwhile the translation error were classified based on Keshavarz (2012) and the result of translation product is categorized based on Molina & Albir (2002).

Result and Discussion

In this section, the results of translation were analyzed the way of MT translated the humorous texts. Then, errors made were classified, and the qualities of translation are compared. The findings were shown based on linguistic point of view to compare how the three machine translations translate the humorous texts by checking the result of the translation. Based on the comparison, it can be seen the translation technique implemented by the MT in translating the generic structure of humorous texts.

Result

In this first finding the quality of MTs were classified based TQA Model (Nababan et al., 2012). Then, the way of MTs translated linguistic and universal humor were compared. In linguistic humor, it plays homophony, homonym, pun/wordplay as part of humor meanwhile universal humor uses story that is understandable by each culture (Schmitz, 2002).

The quality of the MTs translation

Table 1 shows the comparison translation quality made by the 3 MTs in translating humorous text.

Table 1. Translation quality

Domains	GT		MBT		YT	
	Linguistic Humor	Universal Humor	Linguistic Humor	Universal Humor	Linguistic Humor	Universal Humor
Orientations	3.00	2.75	2.58	1.75	2.25	1.83
Events	2.72	2.54	2.20	2.26	2.32	2.33
Twists	2.43	3.00	1.76	2.83	2.30	2.83
Average	2.68	2.59	2.14	2.27	2.31	2.33

Table 1 shows that the translation quality of orientation made by GT for linguistic humor and universal humor are better than the translation made by MBT and YT. Then, the translations of events in humorous texts made by GT are also better than MBT and YT. Similarly, the translations quality of twists linguistic humor made by GT is higher than MBT and YT.

Moreover, Table 1 also shows that the translation quality of twists in linguistic humorous texts made by MTs relatively low compared to other structures. However, the translation quality of twists for universal humor is higher than other structures. It also indicates that the translation quality of twist in universal humor made by GT seems to be higher than MBT and YT. In general, translation quality of linguistic humor made by GT is better than universal humor however the quality is at medium level or

not perfect yet. On the other hand, translation quality of universal humor made by MBT and YT is better than linguistic humor. For details, comparison of translation techniques and error analysis based on generic structure of the texts are described in the following findings.

The translation of orientations & events

As a text, humor has similar generic structure to spoof. It starts by orientation, and then followed by event and end up with a twist. In this part, it shows how the three online MTs translated parts of the humorous texts. The orientation part is part that explains the context of the story and introduces the characters.

In the first text, it can be seen how the language choice from the three MTs. In this text, the story begins by giving the setting a conversation between two elderly couples. They were described as a close friend. One of the men asked the name of memory clinic visited by his friend, Fred. Unfortunately, Fred forgot the name of the clinic and tried to ask his wife about the name of the clinic. These are the translation of orientation produced by GT, MBT, and YT and their back translation (BT), and Suggested Translation (SugT).

Excerpt 1

ST   : Two <u>elderly couples</u> were enjoying friendly conversation when one of the men asked the other, "Fred, how was the memory clinic <u>you went to</u> last month?"

GT   : Dua <u>pasangan lansia</u> sedang menikmati percakapan yang bersahabat ketika salah satu pria bertanya kepada yang lain, "Fred, bagaimana klinik memori yang <u>kamu kunjungi</u> bulan lalu?"

BT   : Two <u>elderly couples</u> were enjoying friendly conversation when one of the men asked the other, "Fred, how was the memory clinic you visited to last month?"

MBT   : Dua <u>pasangan tua</u> menikmati percakapan yang ramah Ketika salah satu dari orang-orang itu bertanya kepada yang lain, Fred, bagaimana klinik memori yang <u>kau datangi</u> bulan lalu?

BT   : Two old couples enjoyed friendly conversation when one of them asked the other, "Fred, how was the memory clinic you came to last month?"

YT   : Dua <u>pasangan tua</u> sedang menikmati percakapan ramah ketika salah satu pria bertanya kepada yang lain, Fred, bagaimana klinik memori <u>Anda pergi ke</u> bulan lalu?

BT   : Two old couples were enjoying friendly conversation when one of the men asked the other, "Fred, how was the memory clinic you went to last month?"

SugT   : Dua pasangan lansia sedang menikmati percakapan yang akrab ketika salah satu pria bertanya kepada yang lain, "Fred, bagaimana klinik memori yang kamu kunjungi bulan lalu?"

In general, this orientation is translated into Indonesian by using established translation. However, there some differences in lexical choices based on translation

technique used by MT, especially the underlined words. GT that is supported by AI choose better lexical choice for "elderly couple" by translating them into 'pasangan lansia'. It applied variation technique which selects better lexical choice compared to MBT and YT that were translated into literally into *'pasangan tua'* which means old couples. It can be categorized as lexical errors.

Then another problem is detected in excerpt 1 in the translation of event. Since it was described as a close friend conversation, the pronoun 'you' is translated by using variation into 'kamu' or 'kau' as as seen in GT and MBT. However, it was translated by using formal variation into 'Anda' in YT. This translation removed the nuance that the speakers were a close friend. It can be said as pragmatic error. Moreover, in this part, YT translated the phrase 'you went to' by using calque technique into 'Anda pergi ke' which causes syntactic error in the target language.

Although the translation of the orientation and event in the second and third texts are mostly accurate, there are some parts that were translated literally. It can found for instance, in the story about chemistry class. In the orientation, this text introduces the character Silly Suzie as seen in excerpt 2. The three MTs treated differently for this part.

Excerpt 2
ST   : **Silly Suzie** immediately raised her hand.
GT   : **Konyol Suzie** segera mengangkat tangannya.
MBT   : **Suzie Konyol** segera mengangkat tangannya.
YT   : **Silly Suzie** segera mengangkat tangannya.

In this event, Silly Suzie is a proper name of a student whose silly character. In GT, it is translated by using calque into Konyol Suzie, meanwhile MBT translated literally into Suzie Konyol, and YT translated by using borrowing technique into Silly Suzie. Actually, the three MTs can detect the use of proper name. However, in this phrase, the first name which has meaning is placed at the beginning of the sentence that makes it ambiguous. This part can be translated into *Suzie yang konyol* or *Silly Suzie*.

Furthermore, the translation of orientation and event of universal humor can be seen in the excerpt 3 below.
Excerpt 3
ST   : A cowboy rode into town and stopped at a saloon for a drink.
GT   : Seorang koboi pergi ke kota dan berhenti di sebuah bar untuk minum.
MBT   : Seorang koboi naik ke kota dan berhenti di sebuah salon untuk minum.
YT   : Seorang koboi naik ke kota dan berhenti di sebuah bar untuk minum.

In the orientation of the text 3 above, GT translated the phrase 'rode into town' by using established equivalent. However, MBT and YT translated literally into 'naik' therefore it causes semantic errors. Even, MBT used natural borrowing technique in translating the word 'saloon'. Again, it causes semantic errors.

The translation of twists

The most problematic part is the translation of the twist as the point of humor. In the first text, it used of homophony as the twist. However, GT, BMT, and YT failed to preserve the wordplay since it involves similar sound for the name of Fred's wife and the flower.

Excerpt 4
ST : "You mean a <u>rose?</u>" "Yes, that's it!" Then he turned to his wife and asked, "<u>Rose,</u> what was the name of that clinic?"
GT : "Maksudmu <u>bunga mawar?</u>" "Ya, itu dia!" Kemudian dia menoleh ke istrinya dan bertanya, "<u>Rose,</u> apa nama klinik itu?"
BT : "You mean the <u>flower of mawar?</u>" "Yes, that's it!" Then he turned to his wife and asked, "<u>Rose,</u> what was the name of the clinic?"

MBT : "Maksudmu <u>mawar?</u>" "Ya, itu saja!" Kemudian dia menoleh ke istrinya dan bertanya, "<u>Rose,</u> apa nama klinik itu?"
BT : "You mean <u>mawar?</u>" "Yes, only that!" Then he turned to his wife and asked, "<u>Rose,</u> what was the name of the clinic?"

YT : "Maksudmu <u>mawar?</u>" "Ya, itu saja!" Kemudian ia berpaling kepada istrinya dan bertanya," <u>Rose,</u> apa nama klinik itu?"
BT : "You mean <u>mawar?</u>" "Yes, only that!" Then he turned away to his wife and asked, "<u>Rose,</u> what was the name of the clinic?"

SugT : "Maksudmu <u>bunga ros?</u>" "Ya, itu dia!" Kemudian dia menoleh ke istrinya dan bertanya, "<u>Ros,</u> apa nama klinik itu?"

The twist of this humor is that Fred just tried to remember his wife's name at first and then call his wife to ask the name of the clinic to his wife.

The GT used explicitation technique for the word "bunga" from the word "rose" to answer his friend question. Then the word rose is translated literally into "mawar". Meanwhile, as Fred call his wife by "Rose", GT used borrowing technique, thus "Rose" is not translated into "mawar" in the target language.

Similarly, MBT and YT also translated rose into "mawar" as the literal translation without any explicitation. Then, YT and MBT also used borrowing technique as the translation of "Rose" as Fred's call his wife. Therefore, the twist of the humor is loss in the translation since the target reader cannot find that Fred tries to remember his wife's name by remembering the name of the flower first.

Again, it indicates that the three MTs are able to detect proper name as it is not translated into Mawar. Machine translation may detect capital letter as the indicator of the proper name in source text. However, machine translation cannot preserve the twist of this humor since in the source text used the same word for different objects and references and the point of humor. Therefore, the word 'rose' should be translated into 'ros' that has the same meaning with 'mawar'.

Then, in the second story the twist is also appeared in the last sentence as Suzie gave the reason for her answer to the teacher's question.

Excerpt 5
ST : Suzie replied, "Yesterday you said the <u>formula</u> <u>for water is H to O</u>!"
GT : Suzie menjawab, "Kemarin <u>kamu</u> bilang <u>formula</u> <u>untuk air adalah H ke O</u>!"
BT : Suzie replied, "Yesterday you said the formula for water is H to O!"

YT : Suzie menjawab," Kemarin <u>Anda</u> mengatakan <u>rumus</u> <u>untuk ish air juga</u>!"
BT : Suzie replied, "Yesterday you told the formula for water ish water too!"

MBT : Suzie menjawab, "Kemarin <u>kamu</u> mengatakan <u>rumus</u> <u>untuk air adalah H sampai O</u>!"
BT : Suzie replied, "Yesterday you said the formula for water is H to O!"

SugT : Suzie menjawab, "Kemarin Bapak mengatakan <u>rumus kimia air adalah H to O</u>!" (bunyi H two O terdengar sama H to O)

In the second story, the point of humor is homophony or similar sound between H_2O and H to O in English as heard by Suzie. Therefore, she answer the chemical formula for water is "HIJKLMNO". This story is mostly translated by using established equivalent however it failed to preserve the twist since the chemistry teacher in Indonesia will never say "H sampai O" since it does not have homophony. The problem appears since H_2O is pronounced as "H dua O" /ha dua ou/ in Indonesian language and it is very different from "H sampai O" /ha sampai o/. Thus, it requires human creativity to translate solve this problems. It can be done by adding information about the location, for instance, "in an international class" as the orientation. Moreover, GT used borrowing technique for the word "formula" instead of translating into "rumus" as the established equivalent as used in YT and MBT.

Furthermore, the translations of twists in the universal humors were better than linguistic humors. It can be seen in the excerpt 5 below.

Excerpt 6

ST : The businessman replied, "Where else in San Francisco can I park my car for two weeks for only 15 bucks?"
GT : Pengusaha itu menjawab, "Di mana lagi di San Francisco saya dapat memarkir mobil saya selama dua minggu hanya dengan 15 dolar?"
BT : The businessman replied, "Where else in San Francisco can I park my car for two weeks for only 15 bucks?"

MBT : Pengusaha itu menjawab, "Di mana lagi di San Francisco saya bisa memarkir mobil saya selama dua minggu hanya dengan 15 dolar?"
BT : The businessman replied, "Where else in San Francisco can I park my car for two weeks for just 15 bucks?"

YT : Pengusaha itu menjawab, Di Mana Lagi di San Francisco saya bisa memarkir mobil saya selama dua minggu hanya dengan 15 Dolar?"
BT : The businessman replied, "Where else in San Francisco can I park my car for two weeks for only 15 bucks?"

The twist translation of text 4 seems to be similar between GT, MBT, and YT. The different is only on the translation of modality can into 'dapat' and 'bisa' as the translation of ''can". GT use established translation meanwhile MBT and YT use variation. It also

Pragmatic problems

The second point in this analysis is focused on the pragmatic aspect of the translation of humor. Firstly, related to the translation of politeness strategies in the TT. In the second story, there is a dialog between Suzie and her teacher. In source text,

it is common to use 'you' for other people both younger and older people. In this text, Suzie used pronoun 'you' to her teacher.

    ST   : Suzie replied, "Yesterday you said …"
    GT   : Suzie menjawab, "Kemarin kamu bilang …"

However, in the TT made by GT the word "you" is translated literally into "kamu". This word is actually not acceptable to be used by a student to her teacher which cause pragmatic error related to politeness marker. Similarly, the word "said" is also translated by using variation technique into "bilang". As a result, Suzie expression seems to be too casual for a student to the teacher. It is categorized as lexical-semantic error.

Similarly, the translation made by MBT, the word "you" is translated literally into "kamu" as seen in the following translation.

    MBT   : Suzie menjawab, "Kemarin kamu mengatakan …"

Then, the word "said" is translated by using established equivalence into "mengatakan". The use of literal translation for pronoun which causes inappropriate translation related to politeness strategies. This inappropriate translation of politeness marker also disturbed the translation acceptability.

On the other hand, YT use variation technique to translate the pronoun "you" used by Suzie into "Anda" as seen in the following data.

    YT   : Suzie menjawab," Kemarin Anda mengatakan …"

Moreover, YT use established equivalent technique to translate the word "said" into the word "mengatakan". Therefore, it is still a formal expression used by student to a teacher. In this point, YT can choose a better politeness marker in translating pronoun related to the relation between speaker and hearer.

Based on analysis, translation errors made by the three machine translations can be categorized as follows.

Table 2. Number of Translation error classification

Machine Translation	Type of error				Total
	Lexical Errors	Syntactic errors	Semantic errors	Pragmatic error	
GT	10	5	4	5	24
MBT	10	9	10	8	37
YT	9	9	9	6	33
Total	29	23	23	19	

Table 2 indicates that lexical errors are the most dominant type of error detected from the MTs. It is related with the choice of word in the translation. Then, it is followed by Syntactic errors which related to the use of tenses, preposition, and sentence structure. These types of error may affect acceptability. Meanwhile, semantic and Pragmatic error related with the changes of messages, meaning, politeness that may affect accuracy of the translation and message in the story and twist of the humor.

Table 2 also shows that MBT made the most errors among other machine translation. Then, table 2 also related with table 1 that more errors cause lower translation quality.

Discussion

Based on the findings above, humor is not an easy material to be translated by using machine translation compared to academic texts (Groves & Mundt, 2015). However, it can deliver the message in general thus the readers may understand the story and try to get the point of humor trying to understand the contexts since this humor relies on linguistic aspect (homonymy and homophony). Although, these type of humor are translatable, it is problematic and have attracted many researchers (Díaz-Pérez, 2015; Low, 2011; Nugroho, 2011). It is because English word have many type of pun or wordplay that may not exist in another language (Delabastita, Gottlieb, & Davis, 2014).

Mostly, the three machine translations have used equivalence translation in translating the point of humor of the two stories. However, the machine translation cannot preserve the humorous points that used homonymy and homophony since they are not homonymy and homonymy in the target language (Yuliasri & Allen, 2019). Related to this problem, translation pun as a joke, Low (Low, 2011) proposes six possible solutions, they are: (1) replicate the SL if it is possible in TL; (2) create a new similar pun target language; (3) use different humorous device in the story; (4) use compensation to introduce pun in another place; (5) give explanation; and (6) ignore the pun or omit of them.

Several studies reported that the translation of humorous texts had several problems, among others, culture specific jokes (Low, 2011), humor loss (Yuliasri & Allen, 2019), and non pragmatics equivalence (Yuliasri, 2016) in translating humor texts. There is also a research that explore problems in translating humor based on students' perception (Tuzzikriah & Ardi, 2021) however the study mostly related to experience, time limitation, and tools in translation. The previous studies have explored translations in subtitle, novel, in form of pun and wordplay. However, those studies were limited to the problems found in the translation of humor made by professional or student translators.

The comparison of translation quality indicates that GT has better translation. Although GT and MBT both supported by Artificial Intelligent and deep learning (Rescigno et al., 2020; Yanisky-Ravid & Martens, 2019) in their process of translation GT produces better result. GT is currently used Neural Machine Translation meanwhile YT is still supported by Statistical Machine Translation.

Actually, based on the basic function, all the machine translation have delivered the message and be relied on (Groves & Mundt, 2015) especially for academic purposes. However, machine translations need human to revise and align the result to preserve the point of humor since it requires creativity. This findings indicate that the result of machine translation require post editing session to make the point of humor can be preserve. It is also supported by the research conducted by Masaru (2019) about the impact of post editing on Google neural machine produce better result.

Moreover, current findings enrich linguistic error category into pragmatic error. Previously, errors in translation are classified into syntactic errors, semantic errors, and miscellaneous (Wongranu, 2017) and linguistic-based errors (orthographic, phonological, lexico-semantic, and morpho-semantic error) and process-based

classification (Ghasemi & Hashemian, 2016; Keshavarz, 2012). Based on this finding, MTs should anticipate pragmatic error, such as, politeness marker, speech act. In Indonesia and Malay which use pronoun as one of politeness markers should be translated appropriately (Ardi, Nababan, Djatmika, & Santosa, 2018; Sulaiman & Mohamad Yusoff, 2020). Thus, as part of social texts function to entertain the readers the choice of translation technique may affect the quality (Ardi, 2017).

Conclusion

In this study in discovers that in general, GT, MBT, and YT have implemented established equivalent technique based on the program. GT that has implemented AI and deep learning can produce better translation compared to MBT and YT. Low quality of Machine Translation is caused by linguistic errors, such as, lexical errors, syntactic errors, semantic errors, and pragmatic errors. Since linguistic humors use some linguistic tools, such as, wordplay, pun, homonymy and homophony, it can trap the Machine Translation to translate the twist by using literal translation technique. Moreover, the findings also indicate that in the Machine Translation should be enriched with pragmatic consideration in its program. For instance, in Indonesian, there are several appropriate pronouns which have different contexts of using. The use of pronoun may relate with politeness marker to achieve acceptable translation in the target language. Finally, it implies also that MT can transfer the meaning of humorous text in general however post editing to adjust and maintain the twist of humor. It cannot be neglected that human creativity is needed in translating humorous text.

References

Afdhal, M., & Hamzah, H. (2019). An analysis of verbal humor found in Sitcom Tetangga Masa Gitu. *E-Journal English Language and Literature*, *8*(3), 264–274.

Ardi, H. (2017). The Impact of Translation Techniques Toward the Quality of Translation: a Case Study on a Social Text. *Humanus: Jurnal Ilmiah Ilmu-Ilmu Humaniora*, *15*(2), 142. https://doi.org/10.24036/jh.v15i2.6564

Ardi, H., Nababan, M. R., Djatmika, & Santosa, R. (2018). Characters' politeness strategies in giving command: Should translators keep them? *3L: Language, Linguistics, Literature*, *24*(2), 181–193. https://doi.org/10.17576/3L-2018-2402-14

Bendi, M. (2019). Hybrid humour as cultural translation: The example of Beur humour. *European Journal of Humour Research*, *7*(2), 87–99. https://doi.org/10.7592/EJHR2019.7.2.Bendi

Dahelza, D. L., Saun, S., & Ardi, H. (2013). Types and Meanings of Humors Used in T-Shirt Slogans in the Bad Idea T-Shirt Online. *Journal of English Language and Literature*, *1*(1a), 34–45. Retrieved from http://ejournal.unp.ac.id/index.php/ell/article/view/1812

Delabastita, D., Gottlieb, H., & Davis. (2014). *Essays on Punning and Translation*. Retrieved from http://weekly.cnbnews.com/news/article.html?no=124000

Díaz-Pérez, F. J. (2015). The translation of wordplay from the perspective of relevance theory: Translating sexual puns in two Shakespearian tragedies into Galician and Spanish. *Meta: Journal Des Traducteurs/Meta: Translators' Journal*, *58*(2), 279–302. https://doi.org/10.7202/1024175ar

Dore, M. (2019). Multilingual humour in audiovisual translation. Modern Family dubbed in Italian. *The European Journal of Humour Research*, *7*(1), 52–70. https://doi.org/10.7592/EJHR2019.7.1.DORE2

Ghasemi, H., & Hashemian, M. (2016). A Comparative Study of Google Translate Translations: An Error Analysis of English-to-Persian and Persian-to-English Translations. *English Language Teaching*, *9*(3), 13. https://doi.org/10.5539/elt.v9n3p13

Groves, M., & Mundt, K. (2015). Friend or foe? Google Translate in language for academic purposes. *English for Specific Purposes*, *37*, 112–121. https://doi.org/10.1016/J.ESP.2014.09.001

Hutchins, J. (2009). *The history of machine translation in a nutshell*. Retrieved from http://hutchinsweb.me.uk/Nutshell-2005.pdf

Keshavarz, M. H. (2012). *Contrastive Analysis & Error Analysis* (New Editio). Tehran: Rahnama Press.

Läubli, S., & Orrego-Carmona, D. (2017). When Google Translate is better than some human colleagues, those people are no longer colleagues. *Proceedings of the 39th Conference Translation and the Computer*, (November), 59–69. https://doi.org/10.5167/uzh-147260

Lee, S. M. (2021). An investigation of machine translation output quality and the influencing factors of source texts. *ReCALL*. https://doi.org/10.1017/S0958344021000124

Low, P. A. (2011). Translating jokes and puns. *Perspectives: Studies in Translation Theory and Practice*, *19*(1), 59–70. https://doi.org/10.1080/0907676X.2010.493219

Martin, R. A. (2007). *The psychology of humor: An integrative approach*. Amsterdam: Elsevier Academic Press.

Martínez-Sierra, J. J. (2006). Translating audiovisual humor: A case study. *Perspectives: Studies in Translation Theory and Practice*, *13*(4), 289–296. https://doi.org/10.1080/09076760608668999

Molina, L., & Albir, A. H. (2002). Translation techniques revisited: A dynamic and functionalist approach. *Meta: Journal Des Traducteurs/Meta: Translators' Journal*, *47*(4), 498–512. https://doi.org/10.7202/008033ar

Nababan, M. R., Nuraeni, A., & Sumardiono. (2012). Pengembangan model penilaian kualitas terjemahan. *Kajian Linguistik Dan Sastra*, *24*(1), 39–57.

Napitupulu, S. (2017). Analyzing Indonesian-English abstracts translation in view of translation errrors by Google Translate. *International Journal of English Language and Linguistics Research*, *5*(2), 15–23.

Nugroho, A. B. (2011). *Teknik penerjemahan wordplay dan kualitas terjemahannya dalam novel Charlie and the Great Glass Elevator karya Roald Dahl*. Universitas Sebelas Maret.

Oliveira, R. G. de, & Anastas, D. (2011). Comparison of SYSTRAN and Google Translate for English→Portuguese. *Tradumàtica: Traducció i Tecnologies de La Informació i La Comunicació*, *9*, 118–136.

Omar, A., & Gomaa, Y. A. (2020). The machine translation of literature: Implications for translation pedagogy. *International Journal of Emerging Technologies in Learning*, *15*(11), 228–235. https://doi.org/10.3991/IJET.V15I11.13275

Putri, G. D., & Ardi, H. (2015). Types of errors found in Google Translation: A model of MT evaluation. *Proceedings of International Seminar on English Language Teaching (ISELT-3) 2015*, 183–188. Padang: Sukabina Press.

Raphaelson-West, D. S. (1989). On the feasibility and strategies of translating humour. *Meta: Journal Des Traducteurs*, *34*(1), 128–141. https://doi.org/10.7202/003913ar

Rescigno, A. A., Vanmassenhove, E., Monti, J., & Way, A. (2020). A Case Study of Natural Gender Phenomena in Translation A Comparison of Google Translate, Bing Microsoft Translator and DeepL for English to Italian , French and Spanish. *CLiC-It*.

Rezqi, I., & Ardi, H. (2022). An Analysis of Translation Acceptability in Translating Humour About Pun. *Journal of English Language Teaching*, *11*(1), 77–86. https://doi.org/10.24036/jelt.v11i1.116310

Savage, B. M., Lujan, H. L., Thipparthi, R. R., & DiCarlo, S. E. (2017). Humor, laughter, learning, and health! A brief review. *Advances in Physiology Education*, *41*(3), 341–347. https://doi.org/10.1152/ADVAN.00030.2017

Schmitz, J. R. (2002). Humor as a pedagogical tool in foreign language and translation courses. *Humor: International of Humor Research*, *15*(1), 89–113. https://doi.org/10.1515/HUMR.2002.007/MACHINEREADABLECITATION/RIS

Sulaiman, M. Z., & Mohamad Yusoff, M. J. H. (2020). Bila dan Mengapa 'You' Menjadi 'Kita': Satu Analisis Perbandingan Inggeris-Melayu (When and Why 'You' Becomes 'Kita': A Contrastive English-Malay Analysis). *GEMA Online® Journal of Language Studies*, *20*(4), 151–161. https://doi.org/10.17576/gema-2020-2004-09

Tuzzikriah, R., & Ardi, H. (2021). Students' perception on the problem in translating humor text. *Proceedings of the Eighth International Conference on English Language and Teaching (ICOELT-8 2020)*, *579*, 326–331. https://doi.org/10.2991/assehr.k.210914.061

Wongranu, P. (2017). Errors in translation made by English major students: A study on types and causes. *Kasetsart Journal of Social Sciences*, *38*(2), 117–122. https://doi.org/10.1016/J.KJSS.2016.11.003

Yahiaoui, R., Alqumboz, B., Fattah, A., & Al Adwan, A. (2019). Translating irony into Arabic – who's having the last laugh? Dubbing Monsters Inc.: Egyptian vernacular vs. modern standard Arabic. *The European Journal of Humour Research*, *7*(4), 32–46. https://doi.org/10.7592/EJHR2019.7.4.YAHIAOUI

Yamada, M. (2019). The impact of google neural machine translation on post-editing by student translators. *Journal of Specialised Translation*, (31), 87–106.

Yanisky-Ravid, S., & Martens, C. (2019). From the myth of Babel to Google Translate: Confronting malicious use of artificial intelligence - copyright and algorithmic biases in online translation systems. *Seattle UL Rev.*, *43*, 99–21.

Yuliasri, I. (2016). Translation techniques and pragmatic equivalence in Indonesian translation of humorous utterances in the Walt Disney'S Donald Duck comics. *International Seminar Prasasti III: Current Research in Linguistics*, 409–414. Surakarta: Universitas Sebelas Maret. Retrieved from https://jurnal.uns.ac.id/prosidingprasasti/article/viewFile/1554/1444

Yuliasri, I., & Allen, P. (2019). Humour loss in the Indonesian translation of Harry Potter and the Sorcerer's Stone. *Indonesian Journal of Applied Linguistics*, *9*(1), 119–127. https://doi.org/10.17509/IJAL.V9I1.14185

Zein, A. (2018). Peran Text Processing Dalam Aplikasi Penerjemah Multi Bahasa Menggunakan Ajax API Google. *Sainstech: Jurnal Penelitian Dan Pengkajian Sains Dan Teknologi*, *28*(1), 1410–7104. https://doi.org/10.37277/stch.v28i1.270