

A Comparison of Translation Shifts in Jokowi's Instagram and Twitter Accounts Using Machine Translation

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ABSTRACT

Translation shifts occur when content is translated from one language to another, due to either target language structure constraints (servitude) or translators' choices (options). With the growing use of machine translation services like Instagram Translate and Twitter Auto Translate on social media, understanding these shifts is important for effective cross-cultural communication. This study aims to compare translation shifts in the English translations of Jokowi's Instagram and Twitter accounts, focusing in the performance of these machine translation services. The research will analyze a sample of posts from Jokowi's Instagram and Twitter accounts, translated by Instagram Translate and Twitter Auto Translate. The study will use a combination of quantitative and qualitative analysis to identify different types of shifts, such as level shifts and category shifts, and to determine whether they result from servitude or optional choices made by the translation algorithms. Additionally, the research will assess the accuracy and idiomatic quality of the translations produced by these services, considering potential challenges related to context, idiomatic expressions, and cultural references. The findings will help improve understanding of machine translation performance in social media contexts and inform future improvements to translation algorithms. By examining translation shifts in Jokowi's Instagram and Twitter accounts, this study seeks to enhance communication and understanding on social media platforms across language barriers. The research also aims to provide valuable insights for users of machine translation services, particularly within the rapidly changing domain of social media platforms.

Keywords: machine translation, option, servitude, translation shifts

INTRODUCTION

Nowadays, people are familiar with social media platforms. The existence of that matter in society continues to grow every day. Social media platforms' development affects not only specific demographics but to all generations. As an online form of entertainment, people enjoy social media as a necessity. On social media platforms such as *Instagram* and *Twitter*, users are privileged to gain some pieces of information, engage in virtual worlds, and so on. Because of the advantages available by those platforms, communication delivery methods and interaction have significantly improved.

As an integral part of people's daily lives, social media intervened in maintaining communities and social skills. Through *Instagram* and *Twitter*, the spreading of news and connection are easily retrieved by the user, making them reach a wider audience. As of 2023, Instagram users accounted for more than 1 billion on *Google Play Store* and on the *Apps Store*, there were more than 2 million users. On the other hand, the number of *Twitter* marks on the *Google Play Store* sits at over 1 billion users and on the *App Store* with roughly 400 thousand worldwide users. The potential for reach thrives; many influencers, product-based businesses, politicians, and coaches utilize the platforms to get engaged and attention-grabbing.

Social networking offers a powerful toolkit to support people in interacting effectively and creating awareness of various causes. The combination of technology and communication led them to contribute to the establishment of language. Then, the subject matter of translation becomes crucial. Translation is the crafted arrangement that emerges from the attempt to replace statements in the source language with corresponding meanings in the target language (Newmark, 1998, as cited in Nugraha et al., 2013). In overcoming different languages, translation has the ability to offer users to understand the intended meaning of the content. With the advent of translation, languages are delivered to various people worldwide.

The dissemination of news and profitability in the use of *Instagram* and *Twitter* compelled them to have unique features to make them attractive platforms. In that matter, *Instagram* and *Twitter* boast services by facilitating automatic English translation from numerous languages, including Indonesian, to help users communicate across cultures. However, translating may be challenging because of cultural differences, terminology, non-linguistic elements, and more. According to Hutchins and Somers (1992), many academics and researchers' translation notice the issue of machine translation commonly inadequate when it comes to dealing with culturally specific content (p. 9). The existence of machine translation (MT) raises concerns about the accuracy and reliability of the translation.

Following, some previous studies found the unreadability in translating caused by MT. Ningrum (2022) looked into further analysis and

compared two machine translations, namely Google Translate and Instagram Translate. She found out that both of the MT are produced less accurately, less readable, and less acceptable. However, from all aspects, Google Translate has 3 points and a higher percentage of translations than Instagram Translate.

Another is Amanda's (2015) research focuses on the translation strategy used in translating Twitter terms from English to Indonesian. The researcher applied Chesterman's theory and other relevant theories to analyze the kind and most dominant type of translation strategy applied by Machine translation. She found several translation strategies done by the English version of Twitter, such as literal, calque, loan, paraphrase, naturalization, and unit shift. From the translation result, the most dominant strategy is literal translation, and its percentage is 44 percent with 33 data. In this journal, she has no further analysis of patterns done by machines.

Unlike previous studies, this study analyzes two Machine Translations produced by the two most used social media, *Twitter* and *Instagram*. As one of the users of these two social media, the President of Indonesia, Joko Widodo or as known as Jokowi, serves a piece of information about work-life or holiday ceremonies through his account. Being one of the most prominent people, the translation tool on Jokowi's *Instagram* and *Twitter* accounts significantly influences the use of its account. Therefore, the English translation on Instagram and Twitter of Jokowi's caption on the national religious days in 2022 was chosen for this study. To discover Jokowi's way of wishing for a national holiday for Indonesia's religious diversity through his caption.

As both social media are widely used by Indonesians, it is worth analyzing the machine translation of both through the phenomenon of translation compatibility. The researcher focuses on Instagram Translate (IGT) and Twitter Auto Translate (TAT). This research aims to analyze the translation shift experienced by the translation produced from both of the MT. Additionally, it determines the algorithm's choices in deciding a translation, whether it is servitude or option. Then, it leads to the translation's accuracy and acceptability produced by IGT and TAT. This study is expected to provide a practical insider's view for MT developers and translators regarding the accuracy of MT, to be more accurate and reliable.

METHOD

This study is a library research method that studies IGT and TAT to gather the data. All of the data was based on primary and secondary data. The primary data was five English translation version captions of Jokowi's official account on Instagram and Twitter. Those captions are collections of felicitations for religious days in 2022. Meanwhile, the secondary data are

found in Munday (2016) and previous studies to achieve a better understanding of identifying the accuracy and idiomatic quality of the translations produced by these services. The concentration of this study is to identify different types of shifts, such as level shifts and category shifts, in specifying the result produced by IGT and TAT.

Through the examination, the researcher uses a combination of qualitative and quantitative analysis. However, the researcher only uses quantitative research to count the percentage of types of translation shift as well as the most dominant type of shift. By using this study, the data will be presented from the source language and machine translation version from Instagram and Twitter. The target text chosen to compare the performance of IGT and TAT was the English language. Moreover, the researcher made several techniques in collecting data to simplify the analysis process. The first step was the researcher obtained the data by collecting five captions of national religious days on Jokowi's official account during the year 2022. The second step was the researcher divided the caption by taking each stanza. After that, the researcher categorizes the data by assorting to determine the shift experienced by those captions based on the secondary data. Consequently, conclusions can be drawn by comparing the quality produced by both of the MT and the word choices used in the translation.

FINDINGS AND DISCUSSION

A shift is related to the sequence changes in translating part of speech from the source language into the target language. According to Catford (1995), there are two significant shifts which are level shifts and category shifts (p. 73). A level shift occurs when the contents in the target language at one linguistic level have an equivalent in another language corresponding to various languages at different stages of linguistics. On the other hand, when a term or phrase is translated differently from its formal correspondence in the target text, subsequently, it has undergone a category. Additionally, category shifts are subdivided into class shifts, structural shifts, unit shifts, and intra-system shifts.

a. Translation Shift Occurrences

The following section of this study delves into the occurrence of translation shifts. Translation shifts are changes that occur during the process of translating a text from a source language to a target language. These changes may involve alterations in the grammatical structures, stylistic elements, or the semantic content of the original text. They are indicative of the inherent complexities and challenges in the translation process, given the differences in linguistic systems, cultural contexts, and stylistic conventions between languages. By examining the frequency and nature of translation shifts, this discussion seeks to shed light on the translator's decision-making

process, the trade-offs between literal and interpretative translations, and the strategies to ensure the preservation of the original text's meaning and intent.

i. Intra-system shifts

Intra system shifts occur when the translation remains within the same system of the language (like grammar or semantics) but uses it differently. This type of shift may be prevalent in Jokowi's Instagram and Twitter accounts in posts related to Isra Mi'raj, Maulid Nabi Muhammad SAW, and Hari Raya Nyepi, given the unique context and constraints of each social media platform.

Table 1:
 Intra-system Shifts Occurrences
 on Jokowi's Instagram and Twitter Accounts

No. of Data	ST	No. of Data	IG Translate	No. of Data	Twitter Translate
1/ST/IM/1	Kehidupan dunia memang penuh dengan ketidakpastian, disrupsi , juga tantangan	1/IG/IM/1	World life is indeed full of uncertainties, disruptions , and challenges	1/TW/IM/1	The life of the world is indeed full of uncertainties, disruptions , as well as challenges .
1/ST/MN/1	Pandemi belum benar-benar berakhir dan aneka krisis mengancam kehidupan umat manusia.	1/IG/MN/1	The pandemic is not truly over and various crises threaten the lives of mankind.	1/TW/MN/1	The pandemic has not really ended and various crises threaten human life.
2/ST/HN/2	Kita selaraskan niat, pikiran , dan langkah menuju Indonesia yang kita cita-citakan bersama.	2/IG/RN/2	We align our intentions, thoughts, and steps towards the Indonesia we dream together.	2/TW/RN/2	We align our intentions, thoughts, and steps towards the Indonesia we aspire to together.

From the example above, those bold words in the SL, are categorized as singular. However, in the TL, those words are categorized as plural form. In the Indonesian language structure, the words need to be reduplicated to create a plural word from. On the other hand, in the TL, the suffix -s are added in the words to marked that it was a plural form. This shift takes place in circumstances when the language-internal system is involved in

the translation. It happens when a plural term in SL becomes a singular term in TL or vice versa. The first example, the words “ketidakpastian, disruptsi, juga tantangan” translated to be “uncertainties, disruptions, and challenges”. The second example, the phrase “belum benar-benar berakhir” translated into “is not truly over” in the IGT and TAT translated to be “has not really over”. On the third example, the words “niat, pikiran, dan langkah” translated to be “intentions, thoughts, and steps.”

ii. Level Shifts

A level shift can be considered a different equivalent level between SL and TL at one linguistic level (Suherman, 2018, p. 79). This type of shift may be prevalent in Jokowi's Instagram and Twitter accounts in posts related to Isra Mi'raj, Hari Raya Nyepi, Hari Raya Idul Adha 1442 Hijriah, Maulid Nabi Muhammad SAW, given the unique context and constraints of each social media platform.

Table 2:
 Level Shifts Occurrences
 on Jokowi's Instagram and Twitter Accounts

No. of Data	ST	No. of Data	IG Translate	No. of Data	Twitter Translate
2/ST/ IM/2	Akan tetapi ada satu yang pasti: kita tetap berjalan ke arah cahaya yang terang benderang dan kehidupan yang lebih maju	2/IG/ IM/2	But one thing is certain: we keep walking toward a brighter light and a better life.	2/TW/ IM/2	However, there is one thing that is certain: we are still walking towards a bright light and a more advanced life.
3/ST/ HN/3	Indonesia yang maju.	3/IG/ RN/3	Developing Indonesia.	3/TW/ RN/3	A developed Indonesia.
1/ST/ IA/ 20.07. 22	Pengorbanan, keikhlasan, dan rasa syukur ke hadirat Allah Yang Maha Kuasa, akan membuat hidup manusia punya makna dan menjadi jembatan untuk berbahagia.	1/IG/ IA/1	Sacrifice, sincerity, and gratitude to the presence of Allah Almighty, will make human life meaningful and become a bridge to happiness.	1/TW/ IA/1	Sacrifice, sincerity, and gratitude to the presence of Almighty God, will make human life meaningful and become

No. of Data	ST	No. of Data	IG Translate	No. of Data	Twitter Translate
					a bridge to happiness.
2/ST/ MN/2 2	Segala ikhtiar kita tempuh untuk bangkit, seraya mengambil hikmah dari setiap kejadian dan memanjatkan doa kepada Allah SWT agar memberikan pertolongan.	2/IG/ MN/2	All our efforts to rise up, as we take the wisdom from every incident and pray to Allah SWT to give help.	2/TW/ MN/2	We make every effort to get up, while taking lessons from every incident and praying to Allah SWT to provide help.
2/ST/ MN/2 2	Segala ikhtiar kita tempuh untuk bangkit, seraya mengambil hikmah dari setiap kejadian dan memanjatkan doa kepada Allah SWT agar memberikan pertolongan.	2/IG/ MN/2	All our efforts to rise up, as we take the wisdom from every incident and pray to Allah SWT to give help.	2/TW/ MN/2	We make every effort to get up, while taking lessons from every incident and praying to Allah SWT to provide help.
1/ST/ RN/2 5.12.2 2	Saudara-saudaraku umat Kristiani yang sedang bersukacita menyambut Hari Raya Natal di mana pun berada. .	1/IG/ RN/2 2	My Christian brothers and sisters rejoice in Christmas wherever you are.	1/TW/ RN/1	My Christian brothers and sisters who are rejoicing in welcoming Christmas wherever they are.

From the example above, it is found that the grammatical structure from the source language is in the tense form of present continuous, which has a formula as Subject + am/is/are + Verb-ing. The grammatical order has the direct/indirect meaning to picture the situation where action occurs during a specific time in the present. In the example, the sentence in the SL which is “tetap berjalan” has been translated to “we are still walking” in the IGT and “we keep walking” in the TAT. Both machine translations technically have the same structure even though there is a slight difference. It still holds the same meaning. The transition from lexical Indonesian into grammatical English indicates the level shift.

iii. Structural Shifts

Structure shift is changing a word sequence in the form of a sentence. It involves the grammatical form change between the SL and TL structure.

Table 3:
 Structural Shifts Occurrences
 on Jokowi's Instagram and Twitter Accounts

No. of Data	ST	No. of Data	IG Translate	No. of Data	Twitter Translate
1/ST/HN/1	Dalam hening kita melihat dengan mata dan hati yang bening.	1/IG/R N/1	In silence we see with clear eyes and hearts.	1/TW/ RN/1	In silence we see with clear eyes and hearts.
2/ST/RN/2 2	Semoga kedamaian, kebahagiaan, dan cinta kasih senantiasa memayungi langkah kita semua	2/IG/R N/22	May peace, happiness and love always guide all our steps.	2/TW/ RN/2	May peace, happiness and love always cover all of our steps.

From the example above, it can be found that there is a difference in sentence structure level between SL and TL. In translating from SL to TL, the IGT and TAT shows the same structure shift translation. The text structure in SL consists of nouns (mata dan hati) + adding a conjunction, such as a word which (yang), followed by an adjective (bening). It has the structure head + modifier. Following the grammatical sentence in English, the TL changes to noun phrase. A phrase structure consists of modifier + head, which is adjective clear as modifier and the eyes and hearts as the head. However, the shift happened in the translation of IGT and TAT wording structures in that example that have come from noun + conjunction translated into noun phrase.

iv. Unit Shifts

Unit shifts occur when a form of the text of a source language at one rank is equivalent to a different level in the unit of a target text.

Table 4:
 Unit Shifts Occurrences
 on Jokowi's Instagram and Twitter Accounts

No. of Data	ST	No. of Data	IG Translate	No. of Data	Twitter Translate
2/ST/RN/22	Semoga kedamaian, kebahagiaan, dan cinta kasih senantiasa memayungi langkah kita semua	2/IG/RN/22	May peace, happiness and love always guide all our steps.	2/TW/RN/2	May peace, happiness and love always cover all of our steps.

The example above shows that there is a noun phrase “cinta kasih” in the SL. Then, both machine translations have the same meaning in translating the phrase into the target language. In the TL, the IGT and TAT translated the phrase “cinta kasih ” into “love,” which is a noun. The phrase “cinta kasih” here acts as a phrase, then it is translated into “love” which shows a word. This shift here shows the different language structure class in the SL when it is translated into TL. The term was changing from high level to low level. It depends on the number of words and the quantity of meaning components in various concepts. It can be seen that the phrase “cinta kasih” which consists of 2 words, translated into “love” which consists of one word.

v. Mixed Shifts

Table 5:
 Translation Shifts Occurrences
 on Jokowi's Instagram and Twitter Accounts

No. of Data	ST	No. of Data	IG Translate	No. of Data	Twitter Translate
3/ST/IM/3	Selamat memperingati hari Isra Mi'raj untuk semua umat muslim.	3/IG/IM/3	Happy Isra Mi'raj to all Muslims.	3/TW/IM/3	Happy commemoration Isra Mi'raj to all Muslims.

IGT: Unit shift
 TAT: Level shift

From the example above, there is a different translation occurs in translated the text into TL. The IGT applied unit shift, while TAT applied level shift. The IGT translated “selamat memperingati” into “happy,” which is

occurs unit shift. The phrase “selamat memperingati” here acts as a phrase, then it is translated into “happy” which shows a word. This shift here shows the different language structure class in the SL when it is translated into TL. The term was changing from high level to low level. It depends on the number of words and the quantity of meaning components in various concepts. It can be seen that the phrase “selamat memperingati” which consists of 2 words, translated into “happy” which consists of one word. On the other hand, the TAT translated the text from SL into “happy commemorating”. It is found that the grammatical structure from the source language is in the tense form of present continuous. Therefore, in the TL it has a formula as Subject + am/is/are + Verb-ing. The grammatical order has the direct/indirect meaning to picture the situation where action occurs during a specific time in the present.

Based on the table above, the researcher found four kinds of shifts from 22 data collected. Both MT employed the difference or the same shift in translating the captions. From the explanation above, the IGT and TAT show their preferences in translating text from the SL into TL. The shift that occurs in Indonesian translation is different in every sentence. The detailed analysis of translation shifts, both level and category shifts, appear in Jokowi’s caption on Instagram and Twitter Accounts as follows:

Table 6:
 The frequency and percentage of translation shift
 on Jokowi’s Instagram and Twitter Accounts

	Translation Shift			
	Level shift	Category shift		
		Structure	Unit	Intra-system
Instagram Translate	5 1.1%	1 0.22%	2 0.44%	3 0.66%
		1.32%		
Twitter Auto Translate	6 1.32%	1 0.22%	1 0.22%	3 0.66%
		1.1%		

The table above shows that the total type of shifts found in both MT is 22 data. In the IGT, the level shift has 4 data or 0.8%, while the category shift has 5 data or 1.54%. Break down the category shift; structure shift has 1 data or 0.22%, unit shift has 3 data or 0.66%, and intra-system shift has 3 data or 0.66%. On the other hand, the data in the TAT, the level shift shows 1.1 % with 5 data and the category shift as 2,24% with 6 data. The category shift consists of 3 types; the structural shift has 1 data or 0.22%, a unit shift has 2 data or 0.44%, and intra-system shift has 3 data or 0.66%. Both

machine translations mostly used the same shift in translating the text. The shift indicated that the machines more or less applied the same strategy to convey the message that conforms to the structural order of the destination language. Then, it can be seen that the most dominant frequency of translation shifts in Jokowi's caption on Instagram and Twitter accounts is level shift with 9 data. However, based on comparing the two, Twitter has more types of shift level. It can be seen from the percentage Twitter gets, which is 1.32%, with 5 data that occur with level shift.

According to Munday (2016), the difficulty in determining the type of shift caused by SL from those brought about by the translator's linguistic preferences related to the difference between servitude and option (p. 99). Whether the result of machine translation used servitude or option was shown by distinguishing the shift types. According to Vinay & Darbelnet (1995 as cited in Munday, 2016) stated that servitude is a complicated linguistic guideline that the translator must adhere to (p. 93-94). In contrast, the option is a change that emphasizes the kind of translation used to reinforce the generic phrases.

In general, IGT is more likely to rely on the target language equivalent. In comparison, Twitter's Automatic Translation depends on the translator's communication style. As Nigrum (2022) stated in her study, Instagram is lower than Google Translate and tends to be less accurate, less readable, and less acceptable. Therefore, in expressing the message, IGT stylistic choices in the TT and ST are servitude. On the other hand, TAT is more creative in conveying its message delivery. It shows a different result from the previous study written by Amanda (2015). In her study result, the strategy used by TAT in translating is a literal translation. However, compared to IGT, the words used by TAT are more varied in conveying the context and content of the message.

CONCLUSION

This paper intends to explore the shift experienced in machine translation. From the findings, the different objects, namely Instagram Translate and Twitter Auto Translate, show that the change used in machine translation is mostly the same. The shift suggested that the machines used the same method to transmit messages that adhered to the target language's structural order. The most frequent translation shift in Jokowi's caption on his Instagram and Twitter accounts is a level shift with 9 data. However, comparing the two, Twitter has more different shift-level kinds. Twitter has 5 data points with level shifts and a 1.1% proportion. Furthermore, the communication tools on social media regarding language barriers still need to be fixed. In writing format or word choices, TAT has more options than IGT, which is strict with the TL linguistic guideline.

This study case can be continued by other researchers who want to study shifting and stylistic choices in TT and ST by machine translator. The next researcher can use different objects with the same theme regarding the

accuracy of MT. The linguistic analysis of translation shifts made by MT and the style used may give the developers some insight on what to improve for better translation results. Instead of sticking to the linguistic guideline in the target language, developers can have their style in the translation while still conveying the meaning well so that target readers can understand it more easily.

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