Challenges of Translating Conversational Implicatures from English to Kiswahili using Computer Assisted Tools: A Case of *Google Translate*

Lilian Chacha na Iribe Mwangi
Chuo Kikuu cha Nairobi

Abstract

In this study, we investigated challenges faced by computer assisted translation software with special focus on *Google Translate*, in translating conversational implicatures from English to Kiswahili. The data for this study were sourced from William Shakespeare's play, **"***The Tragedy of Othello the Moor of Venice***"** which has been translated to Kiswahili as **"***Othello, Tanzia ya Mtu Mweusi.***"** The data was informed by Grice's (1975) conversational implicature theory, and the relevance-theoretic translation approach as postulated by Gutt (1991). To evaluate the quality of *Google Translate* computer assisted translation system, we made a comparison of the computer translated output with the human translated text to ascertain to what extent the meaning of the conversational implicatures in the source language is preserved in the target text. We further examined challenges encountered by *Google Translate* in the process of translating conversational implicatures and suggested what could be done to improve *Google Translate* method to ensure accuracy in translating conversational implicatures. The results indicate that, there is inferior translation quality of the target text with ambiguous words and sentences. Also, it was observed that it is challenging to translate conversational implicatures using *Google Translate* because it has not been programmed to process aspects of source culture or adapt to the aspects of target culture thus cannot correctly translate conversational implicatures. Besides that, other challenges posed range from lexical, syntactic, and semantic to pragmatic mismatch.

Key Words*: Machine Translation, Computer Assisted Translation, Implicature, Translation Errors*

Background

Translators usually face many challenges when translating literary texts from one language to another. These challenges can be linguistic challenges, cultural challenges, and stylistic challenges among others. The linguistic challenges can be lexical, phonological, syntactic, semantic and pragmatic in nature (Newmark, 1981; 2001). Stylistic challenges arise from the fact that literary texts are characterized by use of aesthetic language such as metaphors, irony, similes, idioms, metonyms, hyperbole, and oxymoron among others. These literary devices carry implicit information. In this sense, implicit information enables the author of the source text to express feelings and impressions without using words. Since literary texts are rich in implicit information, the reader has to put more effort to read and conceptualize them. On the other hand, because of the unique nature of literary texts in the way they convey implicit information; translators of literary texts usually face great challenges in translating the implicit information from the source text to the target text (Larson, 1984; Reiss, 1989).

Snell-Hornby (1988) asserts that translation is a cross-cultural transfer and the meaning associated with these literary devices is culture-bound, and therefore, pose a great challenge to translators when translating them from the source language to the target language. According to Gutt (1991) translation is a special kind of communication which involves the author of the source text, the translator and the target language text reader. In this sense, translation should follow the general rule of communication. He argues that the main goal of translation is its optimal relevance to the source language text as well as the target cultural context on which the contextual assumptions are built. Therefore, a translator should match the intention of the author of the source text with the target language reader's expectation. In this regard, Baker (1992) argues that a translator should not only have a great mastery of the source language and the target language, but also be bicultural. Therefore, a translator has to have a vast knowledge of the cultural norms, beliefs, morals and ideologies of the cultures involved when translating literary texts.

Translating implicatures can be challenging due to their nature as indirect meanings or inferences arise from the context of a conversation rather than from the literal meaning of the words used. Challenges involved in translating implicatures can emanate from cultural differences, linguistic variations, pragmatic differences, contextual dependence, and multiple implicatures among others (Newmark, 1988; Venuti, 1998; Baker, 1992; Pym, 2016). To overcome these challenges, translators need a deep understating of the source and target languages, as well as the cultural and pragmatic aspects associated with them. They must also rely on their skills in interpretation and adaptation to accurately convey the intended implicatures while taking into account the linguistic and cultural differences between the languages involved (Hatim & Mason, 1997; Hatim, 2006; Robinson, 2003).

In this day and age, the use of technological solutions to various problems facing various sectors of the human life has had a great impact. The use of modern technological solutions in solving translation problems is no different. There has been a massive technological advancement in the field of translation with the main focus of making the translation process easy and efficient (Hutchins, 1986; 1988; 1993). In this sense, testing the efficiency and practicability of Computer Assisted Translation (CAT) tools is paramount in order to ascertain what needs to be done to make them more efficient. In this regard, this study evaluates the performance of *Google Translate* in translating conversational implicatures from English to Kiswahili, focusing mainly on its accuracy and efficiency, and also its limitations; and consequently by extension its potential in the future.

Methodology
This study is qualitative. It is a modest contribution to the ongoing research about the quality of *Google Translate* as a Computer Assisted Translation (CAT) tool. We evaluate the performance of *Google Translate* in translating conversational implicatures from English to Kiswahili, focusing mainly on its accuracy and efficiency. Data for this study were sourced from William Shakespeare's play; *The Tragedy of Othello, the Moor of Venice,* which has been translated into Kiswahili as *Othello – Tanzia ya Mtu Mweusi* (Iribe & Mukhwana, 2012).

We purposively singled out utterances from Iago's speech, a character in the play described as the most rhetorician character of Shakespeare's plays. The selected utterances were analyzed according to Grice's (1975) Implicature Theory. These utterances are characterized by use metaphors and euphemisms which according to Grice are conversational implicatures which come about by violating the quality maxim of the Co-operative Principle. The selected conversational implicatures from Iago's speech were then translated from English to Kiswahili using *Google Translate* and the output recorded down. Gutt's (1991) relevance-theoretic approach of translation was used to infer whether the meaning of the conversational implicatures in the source text was correctly rendered in the target text which was translated by *Google Translate.* In order to ascertain the accuracy of *Google Translate* in translating conversational implicatures from English to Kiswahili, we made a vivid comparison of the human translated text and the *Google Translate* output paying particular interest in their context of use, thus clarifying their intended meaning and examining whether they have been translated in accordance with the interpretation of the source text. We further examined challenges encountered by *Google Translate* in the process of translating conversational implicatures and suggested what could be done to improve *Google Translate* method to ensure accuracy in translating conversational implicatures.

Theoretical Orientation
This study was informed by the conversational implicature theory as espoused by Grice (1975), and the relevance-theoretic translation approach as postulated by Gutt (1991). Conversational implicature theory is a framework for understanding how speakers convey meaning beyond the literal interpretation of their words. Grice (1975) argues that, in conversation, speakers often rely on implicatures to convey additional information that goes beyond the explicit content of their utterances.

According to Grice, there are two main types of implicatures: conventional implicatures and conversational implicatures. Conventional implicatures are associated with specific words or phrases that carry additional meaning. These implicatures are part of the conventional meaning of the words themselves. For example, when we say "Mary ate the cake, but she did not finish it," the word "but"

conventionally implicates a contrast between eating the cake and not finishing it. Conversational implicatures, on the other hand, arise from the co-operative nature of conversation.

Grice argues that speakers have a general Co-operative principle to communicate in a way that is informative, truthful, relevant, and clear. This Co-operative principle is governed by four maxims: the maxim of quantity which requires a speaker to be as informative as necessary, the maxim of quality which expects the speakers to be truthful and provide information that is supported by evidence, the maxim of relation which requires the speaker to stick to the topic at hand and provide information that is related to the conversation, and the maxim of manner which requires the speaker to avoid ambiguity. When a speaker violates one of these maxims intentionally or indirectly, listeners may infer additional meaning through conversational implicatures.

In translation, implicatures play a crucial role in capturing the intended meaning of the source text and expressing it effectively in the target language. Translators have to consider not only the explicit words used in the source text but also the implied meaning conveyed through implicatures. Translating implicatures requires a deep understanding of the cultural, social, and linguistic context of both the source and target languages. Grice's (1975) implicature theory is relevant in this study in capturing the intended meaning of the selected conversational implicatures in the source text and how this meaning is rendered in the target text.

Gutt's (1991) relevance-theoretic account of translation builds upon the framework of relevance theory, which was originally proposed by Sperber and Wilson (1986). Relevance theory posits that communication is driven by the search for relevance, with speakers aiming to convey information that is perceived as relevant to the hearer. Gutt applies this framework to the field of translation, offering insights into the cognitive process involved in translating and understanding translated texts. According to Gutt (1991), translation involves two main cognitive activities: comprehension and production.

In the comprehension process, the translator reads and analyzes the source text, aiming to grasp the intended meaning. Gutt (1991) argues that a translator's goal is not a word-for-word correspondence between the source text and the target text, but rather a reconstruction of the speaker's intended meaning. This reconstruction process is guided by the principle of relevance, where the translator seeks to ensure that the translation is relevant and informative to the target audience.

Gutt emphasizes the importance of implicature in the translation process. Implicatures are the inferences that the hearer makes based on what is implied but not explicitly stated by the speaker. Translators need to be aware of these implicatures and reproduce them in the target language to ensure that the translated text conveys the same implied meaning as the source text.

According to Gutt (1991), translation involves a delicate balance between fidelity to the source text and relevance to the target audience. Translators must make decisions about how to convey the intended meaning while taking into account cultural, linguistic, and contextual factors. Gutt's relevance-theoretic account of translation provides a cognitive framework for understating these complex processes and sheds light on the challenges faced by translators in bridging the gap between languages and cultures. This theory is relevant in this study in deducing whether the meaning of the selected conversational implicatures in the source text is rendered correctly in the target text, translated by *Google Translate;* and whether it is relevant to the target audience.

A Critical Overview of *the Tragedy of Othello, the Moor of Venice*

William Shakespeare's play, *The Tragedy of Othello, the Moor of Venice* was written between 1601 - 1604. As noted by Maguire (2004), the title of the play is an oxymoron because Moors do not come from Venice. It can also be viewed as a racial oxymoron as noted by Vitkus (1997). Similarly, the title is paradoxical because it reveals that the Moor is not actually from Venice and cannot belong to the Venetian society. In the play, Othello is a black Moor residing in Venice, who possesses great military skills and is the head of the army, well known in the society. Othello clandestinely marries Desdemona, Brabantio's daughter, putting himself in trouble. He suffers alienation and racism from other characters in the play like Rodrigo and Iago.

Throughout the play, Othello is portrayed as a beast. In most instances, other characters in the play like Brabantio refer to him as ugly, Rodrigo refers to him as lascivious, Iago calls him "a black ram" "a barbary horse" and Emilia also calls him "a black devil." Due to Iago's jealousy of Othello's position in the society, he manipulates other characters in the play to achieve his devious intention of Othello and Desdemona's marriage breaking apart. Through his rhetorical mastery of words and manipulative skills, Iago manipulates Othello into murdering his wife. He lies to him that Desdemona has a secret forbidden love affair with Cassio, an honorable lieutenant. Iago's manipulation equally leads to Othello committing suicide upon finding out the truth from Emilia, Iago's wife that Desdemona actually never had an illicit love affair with lieutenant Cassio.

Findings and Discussions

In this section, we analyze and discuss challenges faced by *Google Translate* when translating conversational implicatures from English into Kiswahili. A framework of analysis is provided, which features Iago's flouting or violating of the quality maxim of the Co-operative Principle thus generating conversational implicatures. Iago violates the quality maxim of the Co-operative principle by using metaphors and euphemisms in his speech. In the play, Iago uses animal metaphors to bring about the effect of semantic derogation; using words to convey negative connotations and stereotypes. He also uses animal metaphors in his speech to dehumanize Othello and in some case the women characters in the play like Desdemona who is Othello's wife, Emilia who is Iago's wife and Bianca who is a courtesan. This category represents a clear case of the difference between what is said and what is implicated.

Metaphors and euphemisms can be interpreted and translated appropriately by elaborating their connotations or their implied meaning or better still, by paraphrasing them through interpreting their immediate meaning. Let us look at the examples from the data, mainly focusing on Iago's use of metaphors and euphemisms in his speech and their implied meaning, and how they have been translated by *Google Translate* and human translators from English into Kiswahili; as we discuss the challenges posed in translating each one of them.

Let us consider the following example below:

1. Act 1, Scene i

Source text: "…you will have your daughter covered with a Barbary horse. You will have your nephews neigh to you."

Human Translation: *"…Utakuja kumpata bintiyo ametwaliwa na farasi wa Kiafrika. Wazawa wako wote watakuwa weusi kama farasi wa Kiafrika."*

Google Translate: "*…utakuwa na binti yako kufunikwa na farasi wa kishenzi, utakuwa na wapwa zako karibu nawe."*

In example (1) above, Iago uses this animal metaphor to provoke Brabantio, Desdemona's father to anger because she has eloped with Othello. Iago refers to Othello as a barbary horse to illustrate his hostility towards Othello's Moorish decent. Moors were racially segregated and therefore not respected. A barbary horse is a horse breed of North African origin. The second part of the metaphor further intensifies the hostility towards Othello as it means that Brabantio will have animals as relatives as Othello is portrayed as an animal by Iago.

Google Translate does not translate this metaphor adequately. There are various translation errors observed. The implied meaning of this metaphor is based on the context in which it has been used. It is clearly observed that *Google Translate* does not put context in consideration when translating this metaphor. It gives a literal translation of the source text thus leading to meaning loss of the source text in the target text, and therefore fails in communicating communication intent. It is also important to note that the translated text using *Google Translate* does not have any meaning in the Kiswahili language because there are syntactic and semantic problems observed. The translated text *"…utakuwa na binti yako kufunikwa na farasi,"* lacks coherence and cohesion. This translation is not relevant and informative to the target audience.

Let us look at yet another example:

2. Act 1, Scene i

Source text: "…your daughter and the moor are now making the beast with two backs."

Human Translation: *"…bintiyo na Mtu Mweusi wanajuana."*

Google Translate: *"…binti yako na moor sasa kufanya mnyama na migongo miwili."*

In the above example, this metaphor can also be perceived as a euphemism to mean sexual intercourse. Iago uses this metaphor because he wants Desdemona's father to be furious by telling him that his daughter is with Othello. He refers the act of Othello and Desdemona making love as making a beast with two backs to mean that their children will be beasts. The translation problems observed in example (2) are words like "Moor" not being translated by *Google Translate* as the word appears in the target text. Another problem observed is syntactic in nature as the translated text does not follow the syntactic rules of the Kiswahili language. Further, the output or the target text has been translated word for word by *Google Translate*, thus bringing about semantic problems because the translated text losses its meaning completely. It fails to communicate the intended meaning of the source text. It therefore can not be processed by the target audience for understanding for lack of sufficient cognitive effects.

Let us look at another example:

3. Act 1, Scene i

Source text: "…an old black ram is tupping your white ewe."

Human Translation: "*…Kondoo dume jeusi na zee lajamiana na lako jeupe la kike."*

Google Translate: *"…kondoo dume mzee mweusi anamvuta kondoo wako mweupe."*

Iago's utterances in the above example can be perceived as a metaphor, as well as a euphemism. Iago uses the animal metaphor to demonstrate the major differences between Desdemona and Othello. Desdemona is portrayed as a white ewe to mean pure, innocent and young. On the other hand, Othello is referred to as an old black ram to mean that he is not worthy of being with Desdemona because of his Moorish origin.

One of the challenges observed by using *Google Translate* to translate this metaphor is the lexical mismatch. There is a lexical mismatch in using the word *"anamvuta"* instead of *"anajamiana"* as translated by human translators. Lexical mismatch causes semantic problems of meaning deviation because the target text's meaning is now different from the source text's meaning. In both human translation and *Google Translated* target texts, we can also say that there is a cultural clash because in the Kiswahili language culture, the terms ram and ewe collectively known as sheep represents foolishness but in the European context and culture, a ram represent hardiness and ewe represents innocence, and purity. Therefore, differences between cultures may cause more severe complications for the translator when translating conversational implicatures, than differences in language structure.

We observe more similar challenges in the example below:

4. Act 1, Scene iii

Source text: "…Ere I would say I would drown myself for the love of a guinea hen. I would change my humanity with a baboon."

Human Translation: "……*ningeweza kujitia kitanzi kwa sababu ya kumpenda kahaba.
Ningehiari kuubadili utu wangu na sokwe- mtu."*

Google Translate: "*…Ere ningesema ningezama mwenyewe kwa penzi la kuku.
Ningebadilisha ubinadamu wangu na nyani."*

When Rodrigo who desires to marry Desdemona laments to Iago about Desdemona eloping with Othello, Iago uses this metaphor to tell Rodrigo that if he were to kill himself because of a woman, he will not be a man anymore but a baboon. In this metaphor, a guinea hen is used to mean a woman, in this case Desdemona.

One of the challenges observed in translating this metaphor using *Google Translate* is the strategy of not paying attention to the meaning of words according to how they have been used in a particular

context thus according to the relevance theoretic approach, fails to communicate the intended meaning. In this case for example, translating the metaphor word for word causes meaning loss. In this example, syntactic, sematic and pragmatic errors of translation are observed. Also, in this context the word "guinea hen" has a different meaning and thus should not be translated word for word otherwise meaning loss or deviation is likely to occur just like it is in the output above.

Let us consider the following example as well:

5. Act 3, Scene iii

Source text: "…oh, beware, my lord, of jealousy. It is the green-eyed monster which doth mock the meat it feeds on."

Human Translation: *"…He! Mkubwa wangu, tahadhari na wivu; ni jinamizi lenye jicho la kijani, linalodhikisha mhasiriwa wake."*

Google Translate: *"…oh, jihadhari, bwana wangu, na wivu. Ni mnyama mwenye macho ya kijani ambaye hudhihaki nyama anayokula."*

Iago uses the metaphor in example (5) to tell Othello about his wife's infidelity. This is a lie fabricated by Iago. Iago warns Othello of being jealous though Iago does not really mean it. In this metaphor, the green-eyed monster is used to portray overwhelming sense of jealousy. It is used to demonstrate that jealousy is destructive.

In example (5) above, *Google translate* has translated the text word for word leading to the loss of the implied meaning of the source text in the target text. Although the first part of the translation is correct, the mistranslation of the last part as "…*ambaye hudhihaki nyama anayokula*" without considering the context leads to meaning loss. This brings a major problem in the intelligibility of the target text.

Generally, we could say that, the challenges encountered by *Google Translate* in translating conversational implicatures range from lexical mismatches, syntactic problems, semantic problems and even cultural problems because *Google Translate* cannot retain aspects of source culture or adapt to the target culture. However, here are a few possible approaches that could be explored to enhance *Google Translate* in this area.

Google Translate could train its models using large amounts of data that include conversational contexts, idiomatic expressions, and cultural references. This could help the system recognize common implicatures and provide more accurate translations. Also, *Google Translate* could invest in developing contextual understanding capabilities, by incorporating contextual information from the surrounding text or using additional data sources such as user demographics or dialogues, the system could better infer implicatures and provide translations accordingly.

Conclusion

Google Translate is a powerful machine translation tool that can provide translations for words, phrases, and sentences. However, conversational implicatures are a nuanced aspect of language that can be challenging to capture accurately through machine translation alone. Conversational implicatures often rely on context, cultural references, and shared knowledge, which may not be fully understood by an automated translation system. While *Google Translate* can give a general idea of the meaning of a text, it might not always capture the implied meaning or the intended conversational implicatures accurately. Conversational implicatures are often conveyed through subtle linguistic cues, such as tone, intonation, and context, which can be difficult for a machine translation system to interpret correctly.

Computer Assisted Translation (CAT) tools such as *Google Translate* can barely compete with experienced human translators especially in conveying meaning accurately and naturally. The target text should be comprehensible but the results show that at some instances, *Google Translated* texts are incomprehensible. In spite of these errors, computer assisted translation tools should not be underestimated. In this sense, post editing of computer assisted translated texts should be done to ensure quality translation.

References

Baker, M. (1992) *In Other Words: A Course book on Translation*. New York: Routledge.

Gutt, E. (1991) *Translation and Relevance: Cognition and Context*. London: Blackwell.

Grice, H.P. (1975) "Logic and Conversation". In P. Cole and J. Morgan (Wah) *Syntax and Semantics III: Speech acts*. New York: Academic Press.

Hatim, B. & Mason, I. (1997) *The Translator as a Communicator*. London: Routledge.

Hatim, B. (2006) "Relevance as Effort and Reward: A Translation and Interpreting Perspective". *FORUM*, Juz. 4 (2): 25-40.

Hutchins, J. (1986) *Machine Translation: Past, Present, Future.* New York: Halstead Press.

Hutchins, J. (1988) "Recent Developments in Machine Translation: A Review of the Last Five Years". In D. Maxwell et al. (Wah) *New Directions in Machine Translation*, Foris: Dordrecht. Kur. 7-62.

Hutchins, J. (1993) "Latest Developments in Machine Translation Technology". In *MT Summit 4*. Kur.11-34.

Larson, M. (1984) *Meaning-based translation: A guide to Cross-language Equivalence*. Boston: University Press of America.

Maguire, L. (2004) *Studying Shakespeare: A Guide to the Plays*. USA: Blackwell.

Mukhwana, A. & Iribe, M. (2012) *Othello – Tanzia ya Mtu Mweusi*. Nairobi: Oxford University Press.

Newmark, P. (1981) *Approaches to Translation*. Oxford: Pergamon Press.

Newmark, P. (1988) *A Textbook of Translation*. Great Britain: Prentice Hall.

Newmark, P. (2001) *Approaches to Translation*. Shanghai: Shanghai Foreign Language Education Press.

Pym, A. (2016) "Translating between Languages." In K. Allan (Mh). *A Handbook of Linguistics*. New York: Routledge.

Reiss, K. (1989) "Text types, Translation types and Translation Assessment". Translated by A. Chesterman, in A. Chesterman.

Robinson, D. (2003) *Performative Linguistics: Speaking and Translating as Doing Things with Words*. Canada: Routledge.

Snell-Hornby, M. (1995) *Translation Studies – An Integrated Approach*. Amsterdam: John Benjamins.

Sperber, D. & Wilson, D. (1986) *Relevance, Communication and Cognition*. Oxford: Blackwell.

Venuti, L. (1998) *The Scandals of Translation. Towards an Ethics of Difference*. London: Routledge.

Vitkus, D. J. (1997) "Turning Turk in Othello: The Conversion and Damnation of the Moor". *Shakespeare Quarterly*, Juz. 48 (2): 145-176.