

Limitations of Reverso and Google Translate in Rendering Mosuli Implicatures into English

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Abstract

The research adopts a qualitative analytical method to examine the generated translations of Google Translate and Reverso. It also aims to identify and classify the implicatures in Mosuli linguistic heritage based on Levinson's (2000) model of classifying implicatures. In addition, it uses House's (2015) model to analyze the generated translations and to highlight the limitations of artificial intelligence-generated translations. The results indicate that both applications face difficulties in transferring implicit meanings related to specific cultures. The generated translations tend in most cases to focus on the surface, literal, and explicit meaning or produce new interpretations in the target text that do not fit with the source text, which leads to loss of the communicative function and distortion of the implicit meaning. The research concludes that AI-generated translation, with the significant advances it witnesses, still faces clear challenges in translating Mosuli implicatures, especially when its meaning depends on social context and cultural knowledge. This highlights the need for more advanced and context-aware AI translation applications that are capable of conveying literal and cultural meanings of the source text.

Keywords: AI translations, Implicature, Reverso, Google Translate, Mosuli delict

قيود Reverso و Google Translate في نقل المضمرات الموصلية الى اللغة الإنكليزية

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المستخلص

يتبنى البحث اسلوب تحليلي نوعي لفحص الترجمة المولدة من تطبيقات الذكاء الاصطناعي تحديداً ترجمة جوجل و ريفيرسو. يهدف البحث لتحديد وتصنيف المعاني الضمنية في الموروث اللغوي الموصلي بناءً على مودل Levinson لتصنيف المعاني الضمنية. بالإضافة إلى ذلك يستخدم هذا البحث مودل House لتحليل الترجمة الناتجة من تطبيقات الذكاء الاصطناعي و تسليط الضوء على ابرز المحددات للذكاء الاصطناعي. النتائج تشير الى أن كلا التطبيقين واجها مشكلات في نقل المعاني الضمنية المرتبطة بثقافة محددة. واطهرت إن اغلب التراجم المولدة ركزت فقط على المعاني السطحية والحرفية و قامت بإنتاج معاني جديدة لا توجد في نصوص اللغة الاصل. اهم ما توصل اليه في البحث انه بالرغم من كل التطور الذي

وصلت اليه تطبيقات الذكاء الاصطناعي الا انها لا تزال تواجه تحديات في ترجمة المعاني الضمنية الموصلية خصوصا عندما تعتمد هذه المعاني على السياق الثقافي.

الكلمات المفتاحية: المعاني الضمنية، الترجمة الآلية، جودة الترجمة

1. Introduction

Translation is one of the most used methods for communication between languages and cultures. In addition to transferring the explicit meaning, it extends to convey the implicit meaning and cultural and social messages. With the rapid development of artificial intelligence (AI) technologies and advanced AI translation applications, the translation tools that are powered with AI are now used more in different fields because it offers speed and ease in generating translated texts. The translation of implicature requires more than finding the literal equivalence; it requires a comprehension of the communicative intentions and cultural values that the source text depends on. With the noticeable development that AI applications of translation achieved in the field of machine translation, most studies only focus on the evolution of translation in general.

Only a few studies focus on the limitations and abilities of these applications in transferring the implicit meaning in texts that are rich in culture, especially the Mosuli linguistic heritage. From this point, this research aims to identify the limitations of AI-generated translation through analyzing the output of Reverso and Google Translate.

2.Theoretical Background

a. Implicature: Properties and Theoretical Classification

Many scholars, such as Grice (1975), Horn (1984), Levinson (1987), Bach (1994), and Recanati (2003), provide several properties of implicature:

1-Cancelability: It refers to whether the implicature can be denied without causing a contradiction or not. This property shows that implicatures are not part of the conventional meaning of the utterance. For example, a speaker may say, “Some of the students passed the exam,” and then add, “in fact, all of them did” The fact that this is possible shows that the phrase “not all” is not semantically encoded but rather pragmatically inferred, assuming that the speaker is giving the right amount of information.

2-Truth-conditionality: refers to the fact that implicatures do not affect the truth value of a statement; implicatures are part of what speakers mean, not what they say, which means they are not part of truth-conditional semantics.

3-Context dependency: refers to the fact that implicature’s interpretations can rely on specific communicative situations, shared background knowledge, and

assumptions. This context-sensitivity explains why the utterance may give more than one implicature in different situations.

4-Non-detachability: Refers to whether the implicatures arise from what is said, which is the propositional meaning of an utterance, or from the linguistic meaning of certain words, such as “but,” which holds the meaning of contrast within itself.

5-Universality: As implicatures are based on assumptions of cooperative communication, they can be considered universal across languages despite the variation in cultural and contextual norms.

Grice (1975) classifies implicature into two main types: conversational implicature and conventional implicature. On the one hand, conversational implicature arises when a speaker’s utterance conveys more than its literal meaning; however, the hearer assumes that the speaker is being cooperative, and this triggers a process of pragmatic reasoning, leading the hearer to infer an additional meaning that makes the speaker’s utterance compatible with the cooperative principles (1975, pp. 45–46).

A: “Did you finish the report?”

B: “I started it.”

In the utterance (B), the speaker implies that he/she did not finish the report.

Grice (1989) further subdivides conversational implicature into two types: generalized conversational implicatures (GCIs) and particularized conversational implicatures (PCIs). He proposes this distinction to highlight the fact that not all implicatures rely on the same degree of contextual awareness and specificity. According to his perspective, GCI refers to the implied meaning that arises by default in any context, and anyone can understand what the speaker tries to infer without the need for specific shared knowledge between the speaker and the hearer. He emphasizes that GCIs are defeasible, which means they can be cancellable without resulting in a contradiction, as shown in Grice’s example “some students passed” by adding “in fact all of them did”; it shows that implicature is pragmatic rather than semantic, since it is not part of the encoded meaning of the utterance but rather arises through conversational reasoning (1989, p. 37)

By contrast, PCI refers to implicature tied to a specific context; the success of this type relies on shared knowledge about specific contextual information between participants. PCI arises from the flouting of conversational maxims, precisely the maxim of relation. In such cases, the implicature is not predictable since it is a result of relevant assumptions that are supported by a specific communicative situation and not by the linguistic expression itself (Grice, 1989, pp. 38–40).

Later research supports the importance of separating GCI from PCI; Feng, Yu, and Zhou argue in their analysis that, even though both types involve implied meaning beyond the literal, they differ in the degree of effort required for their interpretation. Generalized and particularized conversational implicatures differ mainly in their reliance on context, showing how the nature of conversational implicature varies in degrees of contextual dependence. (Feng et al., 2021, pp. 1–3)

On the other hand, conventional implicature refers to the meaning triggered by specific lexical items (such as but, even, either, and only) and arises independently of the cooperative principle (Grice, 1975, pp. 50–55). Conventional implicatures, as Potts defines them, are idiosyncratic (2014, p. 29). According to Potts, one cannot produce conventional implicature by separating it from the lexical items, and it cannot be understood from only the context in which it appears (2014, pp. 33–34). For example, uttering “John is poor but honest.” The contrast is expressed by the word “but” and not inferred from the context. After Grice, conventional implicature lost its presence in pragmatic theories. In neo-Gricean approaches, attention is focused on conversational implicature, and no clear connection is proposed between the two types. And conventional implicatures are clearly absent in the relevance theory (Zufferey et al., 2019, pp. 89–94).

Later on, Sperber (1986) and Wilson (1986) introduce relevance theory (RT) as a cognitive approach to explain implicature and reject Grice’s maxims by proposing two principles to classify implicatures: the cognitive principle, which states that human cognition is geared toward maximizing relevance. And the communicative principle, which means when a speaker utters something, a hearer automatically assumes the utterance is worth processing and is the best a speaker could produce in that context. In RT, implicatures are either strong, clearly intended by the speaker and strongly supported by the context, or they are weak, individually variable across hearers, and can have multiple interpretations (Sperber & Wilson, 1986, pp. 47–50).

The Neo-Gricean approach arises in response to the limitations of Grice’s original framework. Horn (2008) classifies implicature into two types: the Q-implicature, which is hearer-oriented and states that the speaker should be as informative as required, for example, “The earthquake killed some of the villagers.” Which implies that “the earthquake did not kill all the villagers.” And the R-implicature, which is speaker-oriented and encourages the minimal expression, suggests that most implicatures arise when speakers want to say as little as possible, and hearers want as much information as possible. Moreover, Levinson (Levinson, 2000) argues that Horn’s two implicatures sometimes mix between semantic informativeness (how strong the meaning is) and expression markedness (how

unusual the wording is). Accordingly, Levinson proposes three types of implicature (Q, I, M): the Q-implicature (quantity) states that if the speaker uses a weaker expression, the hearer infers that the stronger one is not true. For example, “ We teach German, French, and Russian here” implies that “ we do not, for example, teach Spanish.” The I-implicature (informativeness): the speaker usually expresses ideas in general, but the hearer interprets them to the most typical and specific meaning. For example, “If you give me a free Beethoven, I’ll buy five Mozarts,” the utterance implies that “if and only if you give me a free Beethoven, I’ll buy five Mozarts.” The M-implicature (manner/markedness): when the speaker uses a marked expression instead of a simpler or unmarked variation, the hearer may infer a marked or unique interpretation.

Another type of conversational implicature is scalar implicature, derived from the maxim of quantity, it refers to when the speaker uses a weaker scalar term, the hearer assumes that a stronger one is not applicable; otherwise, the speaker would have chosen it to fulfill the maxim of quantity (Geurts, 2010, pp. 1-3). The scale consists of expressions that are ranked by informativeness, such as some and all, where the stronger expression entails the weaker one (Katsos, 2014, pp. 184-186).

One important property that supports the pragmatic nature of scalar implicature is cancelability. Since implicatures can be inferred pragmatically and are not part of the literal meaning of an expression, they can be cancelled. Which means speakers can explicitly deny the implicature, and the utterance will still be logically acceptable. This property reflects the difference between scalar implicatures and entailments, as scalar implicatures belong to pragmatics rather than semantics due to their defeasible nature (Geurts, 2011, pp. 18–21).

Another major point is the debate on whether scalar implicature arises by default whenever a scalar expression is used or only appears when certain contexts support it. Studies based on real language use show that the “not all” meaning of “some” does not occur in most cases, which supports the view that scalar implicatures are context-dependent and are not automatically produced (Larrivee & Duffley, 2014, pp. 531-535; Geurts, 2011, pp. 83-103). In conclusion, scalar implicature shows how speakers tend to convey additional meaning by using weaker expressions on an informativeness scale and relies on the maxim of quantity.

b. Artificial Intelligence (AI) Limitations in Translation

The translation process depends mostly on human translators, but now, with tools like Google Translate and DeepL, anyone can translate texts within a short time. AI applications have become an influential component in international communication between speakers of different languages. However, with AI tools’ capability to provide translation in a short time and accessibility to a large volume of texts, it still faces certain obstacles and limitations. AI translation applications might not

understand culturally embedded meanings like cultural expressions, idiomatic expressions such as “break the ice,” and context-dependent language whose meaning changes according to the context (Shahmerdanova, 2025, p. 69).

According to Shehab and Badah (2026), the translation of implicatures is one of the most difficult challenges that face AI translation applications because implicature understanding and interpretation depend heavily on context and cultural knowledge between speakers. While translators can interpret the intention of the speaker and understand the cultural and contextual dimensions of the text. AI translation applications tend to depend on matching the linguistic patterns of the original text. Therefore, AI applications can reproduce semantically correct outputs but fail on the sociopragmatic level (pp. 13-14).

In addition, the limitations of AI translation can be found in different aspects of language, such as:

1-Linguistic limitations: AI might face issues related to linguistics while translating; the issue arises from the language’s nature itself, which causes different types of ambiguity, particularly lexical and structural ambiguity. Certain words or phrases can hold or share different meanings, and they can only be interpreted appropriately with context. For example, “homonymy,” which is words with the same spelling and/or pronunciation and different meanings, such as the word “bat,” refers to the animal and a tool used in sports. Another example is “polysemy,” which is words with more than one meaning, and all the secondary meanings are related to the primary meaning. Such as the word “bright,” which means something shiny or someone smart. Ambiguity in syntax is another issue since the construction of a sentence may confuse and allow for more than one interpretation. AI systems might mistranslate these words or sentences by choosing only the most common meaning regardless of the context (Chang & Krulee, 1991; Pedersun, 1999; Borsotti et al., 2021). AI translation has also shown limitations in grammar, as it translates with grammatical errors and contextual meaning; sometimes it ignores the context and only translates literally. Additionally, it encounters challenges when translating technical terms. Accordingly, human translators are unreplaceable due to their ability to understand structure, context, and intentions (Pagalilauan, 2025, p. 3126).

2-Cultural limitations: AI systems lack real cultural experiences, which creates a space for errors and shows signs of limitations while translating texts full of cultural symbols. Language is not only a linguistic system, but it also holds human identity and culture. Therefore, understanding a language requires a full understanding of cultural elements such as cultural habits and linguistic heritage. AI systems also fail to capture cultural context; although they might be able to

transfer the literal meaning, they cannot transfer the implicit meaning. As AI systems lack emotional intelligence, this leads to issues in translating text full of emotions, for example, poetry. AI also shows limitations in intercultural pragmatics, as House (2016) refers to; in her recontextualization theory, translation is a process of re-putting the text in a new cultural context that is appropriate for the target readers, and most AI systems lack this ability, leading to inappropriate translation (House, 2016; Valdeon Garcia, 2023; Al Sharoufi, 2025; Syahdewa & Zulhendry, 2024; Boluwatife, 2025).

3. Methodology

This research adopts a quantitative analytical approach to analyze the AI translation applications' ability to translate implicature from Mosuli linguistic heritage to English. The data that is used is selected from Mosuli proverbs that hold implicit meanings of pragmatic and cultural dimensions. The research adopts a hybrid analytical model of Levinson (2000) and House (2015). The Levinson (2000) model is used to identify implicatures in the selected data and to classify it into Generalized Conversational Implicature (GCI) and Particularized Conversational Implicature (PCI). Then House (2015) model is used to analyze the generated translation of the AI applications to assess the degree of preservation of the implicature and identify the most common limitations that these applications have, such as implicature loss, cultural loss, and pragmatic shift.

4-Data Analysis and Discussion

a. Analysis

Case 1: ”أش من يقع من السما تتلقانو الاغص”

•**Literal translation:** “Whatever falls from the sky, the ground receives it.”

•**Type of implicature:** The Mosuli saying is a generalized conversational implicature (GCI). According to Levinson (2000) it is an I-implicature because the intended meaning is not explicitly stated it rather be concluded from shared cultural knowledge and social context. As the relationship between the fall of something from the sky and the land receiving it is not the intended message, it is used as a figurative expression to achieve the implied meaning.

•**Implied meaning and interpretation:** The implied meaning of the Mosuli saying is to express patience and perseverance in facing difficulties. It emphasizes that the speaker is not afraid of facing the difficulties or hardship, and he is ready to accept what fate imposes without hesitation. On the sociopragmatic level, the utterance reflects one of the embedded social values of the Mosuli society, which is the appreciation of patience, endurance, and resilience while facing challenges, difficulties ,and hard circumstances. The interpretation of the utterance depends on shared cultural knowledge, as the society members realize that the expression of something falling from the sky to be received by the land is not a description of a

natural occasion, it is a cultural metaphor that refers to the acceptance of the human to the hardships. The implicit meaning is driven by the lexical words and the shared cultural background between the interlocutors to provide the utterance with the communicative function.

AI Generated Translation:

Google Translate: "What falls from the sky will be caught by the wrath of God.

Reverso: "The most hateful thing that falls from the sky."

•**Analysis:** Google Translate's generated translation adds an additional meaning that does not exist in the source text. It adds a religious concept, which is presented in "the wrath of God." Therefore, semantic distortion occurs, which leads to the creation of new meaning that connects the fall of something with the divine punishment. As a result the generated translation fails to preserve the implicature and functional and cultural equivalence because it replaces the intended message of the source text with another in the target text. Reverso generated translation presents a huge failure in transferring the implicature. It does not maintain the literal meaning and causes a shift in the message by adding the lexical word "hateful" which has no equivalent in the source text. As well as it loses the relationship between the sky and the land which leads to the loss of the pragmatic meaning. It does not achieve any acceptable level of semantic equivalence or pragmatic equivalence and does not allow the target reader to decode the implicit meaning or the intended message of the source text.

•**Case 2: "الجمال اذا وقع تكثف سيكينو"**

•**Literal translation:** "If the camel falls, it knives become many."

•**Type of implicature:** The utterance is a generalized conversational implicature (GCI). According to Levinson (2000) it is an I-implicature because the intended meaning is not explicitly stated it rather be concluded from shared cultural knowledge and social context. The moment the hearer hears the utterance he will be able to decode the implicit meaning that is related to the people's treatment to the person with a high position when he loses his power.

•**Implied meaning and interpretation:** The utterance does not speak literally about the camel or knives, it uses them as a figurative expression to embody a social reality. The camel refers to the person with power and a high position in society, and the camel's fall refers to the person who loses his place or faces a circumstance that weakens his position with the others. The phrase "تكثف سيكينو" refers to the increase in the number of people who criticize him or offend him after he loses his position. The utterance reflects a social phenomenon that is embedded in the source culture. The Sociopragmatic force of the utterance comes from shared cultural knowledge as the society members realize that "camel" is a symbol of power, authority and status. And "knives" is a symbol that refers to who dares to offend, criticize or slander someone who has lost his authority. The utterance also

holds a social evaluative function in which it warns from people changing attitudes. Therefore, the pragmatic value of the utterance is related to the nature of the social relationships and how they can be changed according to someone position in the society.

AI-Generated Translations:

Google Translate: "The camel, if it falls, becomes dense."

Reverso: "If a camel falls, it will become more powerful."

•**Analysis**: Google Translate-generated translation fails to preserve the implicature. It omits the original meaning and replaces it with another ("تكتف" "becomes dense"). The generated translation becomes illogical for the target reader as there is no relation between the camel's fall and being "dense." The pragmatic and functional equivalence are not preserved because the generated translation does not convey the social and cultural message of the source text. The generated translation of Reverso is the most driven away from the source text because it produces the opposite meaning of the intended message. This reflects a clear semantic distortion because of the misinterpretation of the lexical items of the source text, which leads to the loss of the implicature.

Case 3: "بين حانا ومانا ضاعت الحانا"

•**Literal translation**: "Between Hana and Mana, our beards were lost."

•**Type of implicature**: The utterance is a generalized conversational implicature (GCI). According to Levinson (2000) it is an I-implicature because the intended meaning is not explicitly stated it rather be concluded from shared cultural knowledge and social context. The hearer decodes an implicit meaning about loss and confusion between two different situations without the need to know a specific context.

•**Implied meaning and interpretation**: The utterance does not refer to people that hold the names "حانا" and "مانا" but it uses the two names as a figurative expression to convey another meaning. The implicit meaning is that a person is stuck between two different situations and leads him to hesitate to take action. From Sociopragmatic perspective, the utterance is used when someone is completely lost between two opposing views or choices. The Sociopragmatic force depends on the shared cultural knowledge as the members of the society understand that "حانا" and "مانا" are not real people but are symbolic elements used to create a figurative image that expresses the hesitation condition.

AI-Generated Translations:

Google Translate: "Between Hana and Mana, the melodies were lost."

Reverso: "Between Hanna and Mana, Hanna was lost."

•**Analysis:** Overall the generated translations face difficulties in rendering the utterance because it depends on wordplay and the cultural context. Reverso treats "حانا" and "مانا" as names, whereas Google Translate interprets "الحانا" as melodies instead of "beard." In addition, it produces a completely new meaning that is not mentioned in the source text. Therefore, according to House (2015), no AI-generated translation is able to transfer the implicature or to achieve the functional equivalence because it loses the pragmatic meaning presented in expressing confusion.

Case 4: "غالي والطلب رخيص."

•**Literal translation:** "your expensive and the request is cheap."

•**Type of implicature:** According to Levinson (2000), this is a generalized conversational implicature (GCI) since it does not need specific contextual knowledge to understand the implied meaning. This GCI is decoded from the I-heuristic, since the speaker uses simple grammatical structure and assumes that the hearer automatically decodes the implied meaning and comprehends it without exerting much cognitive effort.

•**Implied meaning and interpretation:** the speaker is implying that he appreciates the hearer and he is ready to fulfill his request without hesitation. The utterance is a culture-specific expression that has multiple communicative functions. It expresses the willingness of the speaker to accomplish the hearer's demand. It reflects the generosity of the speaker as he shows that the hearer's request is no burden for him. It also minimizes embarrassment from the hearer, as asking for a favor might cause the hearer to feel hesitant or embarrassed. The utterance reflects an equal power relation and a low social distance; even if the relation between him and his neighbor is not very close his choices of certain lexical items create social closeness.

AI-Generated Translations:

Google Translate: "But this lunch is expensive, and your wish is my command."

Reverso: "But this lunch is expensive and the demand is cheap."

•**Analysis:** Reverso-generated translation relies on literal translation as it transfer the words as they are, which leads to produce unnatural linguistic structures in the target language such as "the demand is cheap." Therefore, the implicature and the Sociopragmatic meaning are loss and the target text loses its naturalness. Google Translate-generated translation stays away from literal translation by adding the phrase "your wish is my command," however this addition does not represent the intended meaning of the source text but it conveys a different meaning that is

related to obey the other person. None of the generated translations preserve the Tenor or the register and cause an implicature loss.

b. Discussion

The analysis shows that translation applications that are powered by AI show different levels of translating implicatures in the Mosuli linguistic heritage. However, they all share one pattern, which is the difficulty of handling implicit meanings that are related to local culture. The three cases show that most translations preserve the literal and direct meaning while failing to convey the communicative function of the source text. According to House (2015), the success of a translation depends on achieving both semantic and pragmatic equivalence in addition to the communicative function of the text in its social and cultural context. The applications mostly tend to use the literal translation or provide inappropriate and inaccurate interpretations of the source text, which leads to implicature loss. From Levinson's (2000) perspective, all the implicatures are generalized conversational implicatures, in particular I-implicatures, because they can be interpreted from shared cultural knowledge without the need to know the exact context in which they uttered.

4. Conclusion

The AI applications in the current study have a limited ability to transfer implicit meaning. The analysis of the study indicates that AI-generated translations used in the current study transfer the semantic meaning in some cases; however, they face clear limitations in transferring the implicature, especially when the implicit meaning is highly connected to social context and shared cultural knowledge. Reverso fails to fully preserve the implicatures in all of the examined cases, as it does not transfer any implicature, which refers to its inability to interpret implicit meanings. Also, it fails in some cases to interpret the linguistic structure of the Mosuli dialect.

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