

Applied Linguistics and Artificial Intelligence in Translation Studies an Arabic–English Analytical Approach

Assistant Lecturer Maha Abdullah Mohammed

Nineveh University, College of Electronics Engineering,

Department of Biomedical Engineering, Mosul, Iraq

Email: maha.abdullah@uoninevah.edu.iq

اللسانيات التطبيقية والذكاء الاصطناعي في دراسات الترجمة: مقارنة تحليلية عربية إنجليزية

م.ر.مها عبدالله محمد

جامعة نينوى، كلية هندسة الإلكترونيك، قسم هندسة الطب الحيوي، موصل، عراق

Abstract

The paper addresses the question of how far artificial intelligence (AI) translation systems can capture pragmatic meaning in Arabic-English slogan translation and fills a gap in the literature on translation research in which semantic accuracy is frequently considered to be more important than pragmatic adequacy. Corpus of ten internationally known advertising slogans of Coca-Cola, Nike and L Oreal were subjected to descriptive-analytical design. Slogans were tested in their original English versions and their official human Arabic translations as well as the results of two AI systems DeepL Pro (2025 release) and ChatGPT (GPT-4.5-Turbo, February 2025). Five bilingual raters rated the translations on a 1-5 scale independently using a structured codebook that was based on the speech act theory, implicature, and the cultural meaning. The acceptable inter-rater reliability was found (Krippendorff $\alpha \geq 0.70$). The results show that AI systems generated syntactically and lexically correct translations, but they could not always be pragmatically effective. The human translations demonstrated close adequacy (mean = 4.8-5.0), ChatGPT demonstrated middle performance (mean = 3.3-3.7), and DeepL was not always good (mean = 2.0-2.7). Such findings substantiate the fact that when pragmatic meaning is involved, i.e. persuasive force, idiomatic tone, and cultural resonance, semantic accuracy is not enough to ensure cross-cultural communication.

Keywords: applied linguistics, artificial intelligence, machine translation, pragmatics, speech acts.

المخلص:

المقال في مدى قدرة أنظمة الترجمة المعتمدة على الذكاء الاصطناعي على نقل المعنى المقصود في ترجمة الشعارات الإعلانية من الإنجليزية إلى العربية، مع التركيز على المعنى التداولي وليس المعنى اللغوي فقط. وتأتي هذه الدراسة لسد نقص في أبحاث الترجمة التي غالبًا ما تركز على الدقة اللغوية وتُهمل مدى ملاءمة الترجمة للسياق الثقافي والتواصل. اعتمدت الدراسة على تحليل عشرة شعارات إعلانية عالمية معروفة لشركات كوكاكولا ونايكي ولوريال، حيث جرى فحص الشعارات بنصوصها الإنجليزية الأصلية، وترجماتها العربية الرسمية المنجزة بشريًا، إضافة إلى الترجمات التي قدمها نظاما الذكاء الاصطناعي DeepL Pro (إصدار ٢٠٢٥) و ChatGPT (GPT-4.5-Turbo)، فبراير ٢٠٢٥. وقام خمسة مختصين يجيدون اللغتين العربية والإنجليزية بتقييم هذه الترجمات باستخدام مقياس من خمس درجات، اعتمادًا على معايير تتعلق بالمعنى المقصود، والرسالة الإقناعية، والملاءمة الثقافية. وأظهرت النتائج أن أنظمة الذكاء الاصطناعي قدّمت ترجمات صحيحة من حيث اللغة، لكنها لم تتجح دائمًا في إيصال الرسالة الإعلانية كما ينبغي. فقد حققت الترجمات البشرية أعلى مستوى من الجودة، بينما جاء أداء ChatGPT في المستوى المتوسط، في حين كان أداء DeepL أقل من ذلك. وتؤكد هذه النتائج أن الدقة اللغوية وحدها لا تكفي في ترجمة الشعارات الإعلانية، وأن فهم السياق الثقافي والمعنى المقصود يظل عنصرًا أساسيًا لضمان تواصل فعال بين الثقافات.

الكلمات المفتاحية: اللسانيات التطبيقية، الذكاء الاصطناعي، الترجمة الآلية، التداولية، الشعارات الإعلانية

Introduction

The crossroad between translation studies and pragmatics provides fundamental information about the concepts of transferring meaning between languages and cultures. According to Nakhilawi (2016), the ethnos mantic and pragmatic meanings, which are especially in Arabic and English, are cultural norms embedded, not in the literal, lexical equivalence. This points out that it is necessary that translation goes beyond semantic correspondence to include the accountability of speaker intent, cultural anticipation, and situational suitability. These issues are even more acute in the Arabic-English pair because of varying sociolinguistic systems and pragmatic encoding in which preservation of implied meaning remains a critical concern particularly when translation is mediated by artificial intelligence systems. The new scholarship places pragmatic meaning in contemporary digital communication by demonstrating that the meaning is sensitive to contextual changes. Alzamil (2023) demonstrated the effects of the pragmatic transfer during bilingual communication that result in a difference in politeness strategies and directness. In a parallel vein, Tosimpak (2025) showed that the Arabic social media discourse is instilled with implicature, markers of politeness, and indirect means to send the intended meaning. These results indicate that pragmatic meaning is context-sensitive to the extent that it can be distorted during mechanical processing. During the translation of such nuances, human translators, because of cultural and context-related knowledge, are able to negotiate these layers of meanings, whereas currently AI-based translation systems cannot retain such layers of meaning. This hole highlights the necessity of applied linguistic solutions to evaluate whether artificial intelligence is coping with a pragmatic content when working on the assignment of Arabic-English translation. This issue is further worsened by persistent structural and pragmatic problems. Abbas (1991) presented the case of adverbial positioning whereby it creates a difference in the understanding of the sounding in both Arabic and English, not only in the syntax but also the force of the pragmatics. Azi (2019) demonstrated that the pragmatic markers (which are important in controlling the flow of interaction and being polite) are usually lost or distorted in translation. These insights validate that the issues of translation go beyond the issues of lexical/grammatical differences and more often the loss of pragmatic meaning. In this regard, this paper will examine how far AI-driven systems are capable of maintaining these pragmatic layers through the systematic comparison of their output with human translations. In a bid to base the research on a solid theoretical basis, the research builds on the classical grounds that remain relevant across pragmatics and translation. The Cooperative Principle proposed by Grice (1975) and his idea of implicature describe the workings of the implicit meaning in discourse. The Speech Act Theory by Searle (1969) emphasizes the illocutionary force of utterances, whereas the cross-cultural communicative norms and the foregrounded politeness strategies are brought to the fore in the work by Brown and Levinson (1987). In the research of translation, Nida (1964) perceives dynamic equivalence, which suggests that it is necessary to reproduce the desired effect on the target audience. House (1997, 2015), Nord (1997), and Gutt (2000) elaborate this view by highlighting functionalist and relevance-based theories which put emphasis on pragmatic adequacy. By combining these theoretical traditions with the modern trends in artificial intelligence, the given study will be able to answer one important question today: To what degree can the Arabic-English translation maintain pragmatic meaning under the impact of AI? The research consequently intends to determine the pragmatic sufficiency of AI-based translations and contrast them with human translations through the use of applied linguistic instruments. The objectives are:

1. To discuss the pragmatic failure of Arabic-English translations produced by AI systems in terms of finding faults in implicature, metaphor, and contextual meaning.
2. To use the principles of applied linguistics to find pragmatic meaning that AI translations have lost and determine its effect on communicative intent.
3. To draw a comparison between the pragmatic performance of AI translations and human translations to establish accuracy in the rendition of contextual and pragmatic meaning.

In that regard, the research questions of the study are as follows:

RQ1: How do the AI-based translation systems (DeepL and ChatGPT) maintain the pragmatic meaning of Arabic-English translation of advertising slogans?

RQ2: What aspects of pragmatic meaning are the most susceptible to being lost, speech acts, implicature or cultural/connotative meaning?

RQ3: Compared to human translations, AI-based translations can be better or worse in pragmatic adequacy?

The study hypotheses are:

H1: There will be a significantly higher score on a Pragmatic Adequacy Index of human translations.

H2: The highest rate of loss in AI translations will be observed in conversational implicatures and cultural/connotative meaning.

H3: ChatGPT will be superior to DeepL yet worse than human translators.

This work addresses research on translation, applied linguistics, and AI research by making the foregrounding of pragmatic meaning a prime issue instead of prioritizing the semantic or syntactic accuracy. It lists its methodological contributions to the field consisting of a systematic human-AI comparison within the field of high-impact advertising slogans and shows how pragmatic loss can limit the persuasive authority and reception of the audience. The article also provides valuable lessons to practitioners in the field of translation, as well as educators and AI creators, demonstrating how pragmatic theories might be implemented in order to measure and improve the quality of the translation. The research connects theoretical research and practical communicative issues by highlighting the necessity of culturally and contextually informed translation.

Literature Review and Theoretical Framework

Translation is an act of communication, which goes beyond the substitution of lexical equivalents, and it entails negotiating meaning along linguistic, cultural and pragmatic lines. The analytical basis of the understanding of the functioning of meaning in real situations has been formed in applied linguistics, whereas pragmatics is used to gain an insight of the influence of intention, social norms, and interactional cues on communicative effectiveness. It was in this interdisciplinary area that the classical works by Grice (1975) on the conversational implicatures and Searle (1969) on the Speech Act Theory laid the foundations of examining how speakers may act using words. The model of politeness by Brown and Levinson (1987) also showed that social expectations had a role to play in the language that is used and the model of dynamic equivalence by Nida (1964) showed that the communicative effect was of great importance in translation. Other complementary frameworks such as the functional-pragmatic model of House (1997, 2015), Skopos Theory by Nord (1997), domestication/foreignization dichotomy created by Venuti (1995), the equivalence typology created by Baker (1992), the discourse-pragmatic paradigm by Hatim and Mason (1990, 1997), translation norms developed by Chesterman (1997), and the Relevance Theory developed by Gutt (2018) Pragmatic translation research studies have always indicated that meaning usually relies on the contextual and cultural indications as opposed to the literal expressions. Research on the problem, like Ivanytska (2015) and Laviosa (2011) show that idioms, metaphors, politeness markers, and indirect expressions are especially susceptible to loss during translation. This assumption is supported by Kramsch (2015), who defines pragmatics as a theory of practice based on lived communication experience. Arabic-English translation is a more complicated task because of the variations in the social organization of linguistics, pragmatic markers, and expressions having cultural connotations. The previous studies indicate that references to kinship, formulaic expressions, and evaluative markers often experience changes during a translation, which makes it challenging to retain the pragmatic force and communicative intent. Since the introduction of neural machine translation (NMT) the area has broadened to explore the purpose of AI systems to encode pragmatic meaning. Research articles by Laktina (2025), Tosimpak (2025), and Sun et al. (2025) emphasize that the systems such as DeepL and ChatGPT are good in lexical and syntactic translation, but they face ongoing weaknesses of processing implicatures, humor, politeness strategies, and cultural associations. Similarly, Mohammed (2024) and Al-Ali (2018) show that Arabic formulaic expressions and genre-specific pragmatic functions are a challenge to the AI systems and that they translated them literally but inadequately in pragmatic terms. Though these results are a major step in the assessment of machine translations, most of the available literature is descriptive, does not include operational coding process, or uses conference articles instead of research papers. This research is placed at the crossroads of such traditions by looking at the pragmatic adequacy of the Arabic-English advertising slogan translation. Slogans unlike a long text are compressed communications that depend on brevity, cultural appeal, metaphor and persuasion. Their practical load makes them a perfect location to experiment on whether AI-based translations can maintain the illocutionary force, implicit meaning, and cultural connotation. Based on the use of classical pragmatics (Grice, Searle), functionalist theories of translation (Nida, House, Nord) and modern AI research, the current research incorporates a structured codebook with three indicators of analysis: speech acts, conversational implicatures and cultural/connotative meaning. These signs are a way of operationalizing the theoretical premises into quantifiable groups that can measure pragmatic performance in both human and AI translations. Despite the fact that the available literature acknowledges the constraints of AI systems in handling the pragmatic meaning, there are still a number of gaps. No research has been done before that combines classical pragmatics theories with empirical analysis of NMT results, especially in the Arabic-English situation.

Most pay attention to semantic correctness instead of pragmatic correctness, do not have systematic coding schemes, or do not consider high impact genres like advertising slogans. By filling these gaps, the current study will add a theoretically sound and methodologically well-conducted evaluation to the study of translation and to the field of applied linguistics, as well as offer practical implications as to how to make AI-based systems of translating content more effective.

Materials and Methods

Research Design

This study adopts a descriptive–analytical design to evaluate the extent to which AI-based translation systems preserve pragmatic meaning in Arabic–English translation of advertising slogans. The approach is comparative, contrasting human translations with those generated by DeepL and ChatGPT across three pragmatic dimensions: speech acts, conversational implicatures, and cultural/connotative meaning.

Corpus and Sample Selection

The corpus consists of ten advertising slogans drawn from internationally recognized brands in diverse sectors. These were originally produced in English and officially localized into Arabic for Middle Eastern markets. The brands include:

1. Nike (sports apparel): Just Do It
2. Adidas (sports apparel): Impossible Is Nothing
3. Pepsi (beverage): Live for Now
4. Coca-Cola (beverage): Taste the Feeling
5. McDonald's (fast food): I'm Lovin' It
6. KFC (fast food): Finger Lickin' Good
7. L'Oréal (cosmetics): Because You're Worth It
8. Dove (personal care): Real Beauty
9. Apple (technology): Think Different
10. Samsung (technology): Inspire the World, Create the Future

Each slogan was selected based on the following criteria:

1. Belonging to a globally distributed campaign by the brand.
2. Having an official Arabic version, sourced from the company's regional websites or marketing materials
3. Exhibiting pragmatic features such as implicatures, persuasion, or cultural allusions.

Translation Tools

Two AI-based systems were evaluated alongside human translations:

1. DeepL Translator (Pro version, 2025 release).
2. ChatGPT (OpenAI, GPT-4.5-Turbo, February 2025 version).

All translations were produced in March 2025 using standardized prompts to minimize variation.

Analytical Framework

The analysis was guided by principles of applied linguistics and pragmatics. Three main indicators were employed as analytical tools that appeared in table 1:

Table 1. Pragmatic Indicators for Translation Analysis

Indicator	Definition / Focus	Analytical Purpose
Speech Acts	Examines whether the illocutionary force of an utterance (e.g., persuading, inviting, promising) is preserved.	To identify whether AI and human translations maintain the intended communicative function of the original text.
Conversational Implicatures	Determines whether implicit meanings, metaphors, idioms, and indirect expressions are transferred adequately.	To assess whether the translations capture meanings beyond literal wording, preserving subtle context-driven inferences.
Cultural and Connotative Meaning	Evaluates the retention of culturally loaded expressions, associative meanings, and persuasive nuances.	To examine whether AI and human translations convey the socio-cultural depth and persuasive impact of the original slogan.

Evaluation Procedure

The evaluation employed three pragmatic indicators, operationalized through a structured codebook (see Theoretical Framework section):

Table 2: Evaluation Procedure

Component	Details
Pragmatic Indicators	Speech Acts: Preservation of illocutionary force. Conversational Implicatures: Retention of implied and idiomatic meaning. Cultural & Connotative Meaning: Transfer of cultural resonance and persuasive effect.
Human Raters	Sample: Five bilingual raters (Arabic-English), trained in linguistics/translation. Training: Orientation with the codebook and examples. Blinding: Double-blind—raters unaware of translation origin (human, DeepL, ChatGPT).
Rating Scale	Each translation scored on a 1–5 scale per indicator (1 = completely inadequate; 5 = fully adequate). Scores averaged across raters to produce indicator-specific results. Inter-rater reliability calculated using Krippendorff's α (threshold ≥ 0.70).

Data Analysis

1. Descriptive statistics (mean, median, standard deviation, 95% CI) were computed for each indicator across systems.
2. Inferential tests: Pairwise comparisons were conducted using the Wilcoxon signed-rank test and paired t-tests, depending on data distribution.
3. Effect sizes (Cohen's d , r) were reported to capture the magnitude of differences.
4. A composite Pragmatic Adequacy Index (PAI) was constructed by averaging scores across the three indicators.

Additionally, errors were categorized into an error taxonomy (literalism, implicature loss, politeness shift, register change, culture-bound failure, sloganability loss) to provide qualitative insights into translation shortcomings.

Results

The findings of this paper provide the findings of a comparative study regarding human translations and those provided by AI-based systems, namely DeepL and ChatGPT, of a collection of ten globally acclaimed advertising slogans. Based on the methodological framework presented above, the analysis is aimed at determining whether the pragmatic meaning, in particular, the speech acts, conversational implicatures and cultural or connotative meaning, was maintained, distorted, or left out during the process of translation. The slogans, based on the major brands Coca-Cola, Nike, McDonalds, Pepsi, Adidas, Apple, and L oral were chosen due to the high dependency of their persuasive and situational meaning, which provides them with the ideal pragmatic assessment. The results are structured in this section based on the three key pragmatic indicators that are stipulated in the theoretical framework. The results of every translation process are evaluated concerning their human counterpart, and both the spheres of sufficient language are designated as well as the critical weaknesses. A structured overview of comparative results is presented in tables, and a descriptive analysis is drawn up with references to the specifics of pragmatic performance. The combination of qualitative observations and categorization, on the one hand, should help illustrate how AI systems manage to succeed, or fall short of the task of reflecting the pragmatic meaning of the original slogans, which will provide evidence basis of further discussion. The comparative research of the slogans of the ads showed that some apparent deviations were observed between human and artificial intelligence translations. Those human translations that never altered the slogans in order to render them more personally significant and philosophical, preserved in themselves the practical impact of the slogans, and retained in them the convincing, idiomatic, and culturally rooted significance of the slogans. By comparison, DeepL and ChatGPT generated outputs that tended to be more language-directed, i.e. literal-based, yet they were not pragmatically intended to produce the desired effect. This was especially noticeable in slogans whose meanings are constructed around a metaphor or other idiomatic phrase, like the Nike slogan "Just Do It" or the Pepsi slogan "Live for Now," where human translators would render the message in culturally familiar ways, but AI systems would generate message translations that would

sound in a flat or unnatural way. On the same note, pragmatic markers such as implicature and connotation were often diluted or lost during AI translations which undermined the communicative strength of the slogans. As summarized in Table 2, these results show how much AI translation systems have a problem with pragmatic adequacy making the value of applied linguistic analysis apparent in revealing the problem of pragmatic adequacy. The second aim of the work was to use the principles of applied linguistics specifically pragmatics to find out which levels of meaning are the most susceptible to loss in translation using AI. The three aspects examined were speech acts, conversational implicatures, and cultural/connotative meaning that continued to be maintained in terms of human translations such that the communicative meaning and persuasive appeals of the slogans were not lost. In comparison, pragmatic features were often distorted or omitted in AI systems. DeepL tended to translate speech acts like persuasion or invitation in a very mechanical or literal way whereas both DeepL and ChatGPT failed to render implicatures and other idiomatic nuances. The hardest ones were cultural and connotative meanings, which were the key of a slogan, such as Because You're Worth It, and AI translation sounded unnatural or less convincing. These results reveal that AI systems are able to perform satisfactorily at the semantic level, but they show a systematic underperformance in retaining pragmatic nuances, which proves that applied linguistic analysis is still needed in the evaluation of translation. The third objective of the study was to have a direct comparison of the pragmatic performance of AI-driven translations with human translators on the advertising slogans. As human translators had always shown the capability to retain speech acts, implicatures, and cultural subtleties, AI systems showed mixed outcomes. In the case of DeepL, more specifically, there was a predisposition toward strict and mechanical translations, which undermined the persuasive and idiomatic character of the slogans. In a number of instances, ChatGPT generated outputs that were more similar to human translations, but it also was not as natural and culturally captivating as necessary in the advertising dialogue. All in all, the comparative analysis has shown that human translators are at a high level of pragmatic adequacy, and AI systems, even though they are getting more semantically accurate, cannot reproduce the contextual, idiomatic, and cultural diversity of Arabic-English translation. This attests the relative superiority of the human translators in the situations where the meaning relies heavily on the pragmatic interpretation. Table 1. Comparative Pragmatic Adequacy Scores Across Human, DeepL, and ChatGPT Translations

Slogan (EN)	Official Arabic Translation	System	Speech Acts (1-5)	Implicature (1-5)	Cultural Meaning (1-5)	Mean Score	Majority Label	Example Error / Note
Nike: Just Do It	افعلها فقط	Human	5	5	5	5.0	Fully Adequate	Strong persuasive illocution preserved.
		DeepL	3	2	2	2.3	Inadequate	Literalism: weakened force.
		ChatGPT	4	3	3	3.3	Partially Adequate	Partial implicature loss.
Adidas: Impossible Is Nothing	لا شيء مستحيل	Human	5	5	5	5.0	Fully Adequate	Matches rhetorical impact.
		DeepL	3	3	2	2.7	Inadequate	Awkward phrasing, reduced

								resonance.
		ChatGPT	4	4	3	3.7	Partially Adequate	Slight loss of punchiness.
Pepsi: Live for Now	عش اللحظة	Human	5	5	5	5.0	Fully Adequate	Idiomatic and persuasive.
		DeepL	2	2	2	2.0	Inadequate	Literal rendering: "عش الآن".
		ChatGPT	3	3	3	3.0	Partially Adequate	Idiomatic nuance weakened.
Coca-Cola: Taste the Feeling	دُق الإحساس	Human	5	4	5	4.7	Fully Adequate	Natural and resonant.
		DeepL	2	2	2	2.0	Inadequate	Literal, unnatural phrasing.
		ChatGPT	3	3	3	3.0	Partially Adequate	Culturally flat rendering.
McDonald's: I'm Lovin' It	أحبها كثيراً	Human	5	4	5	4.7	Fully Adequate	Matches regional slogan.
		DeepL	2	2	2	2.0	Inadequate	Register shift, awkward.
		ChatGPT	3	3	3	3.0	Partially Adequate	Acceptable but weak.
KFC: Finger Lickin' Good	الطعم الذي يلعق الأصابع	Human	5	5	5	5.0	Fully Adequate	Preserves cultural flavor.
		DeepL	3	2	2	2.3	Inadequate	Literalism, odd phrasing.
		ChatGPT	4	3	3	3.3	Partially Adequate	Some cultural resonance lost.
L'Oréal: Because	لأنك تستحق ذلك	Human	5	5	5	5.0	Fully Adequate	Natural, persuasive effect.

You're Worth It		DeepL	3	3	2	2.7	Inadequate	Flat, weakened tone.
		ChatGPT	4	4	3	3.7	Partially Adequate	Persuasion diluted.
Dove: Real Beauty	الجمال الحقيقي	Human	5	5	5	5.0	Fully Adequate	Matches campaign message.
		DeepL	3	2	2	2.3	Inadequate	Overly literal, vague.
		ChatGPT	4	3	3	3.3	Partially Adequate	Slight nuance loss.
Apple: Think Different	فكر بشكل مختلف	Human	5	5	5	5.0	Fully Adequate	Natural and idiomatic.
		DeepL	3	2	2	2.3	Inadequate	Literal, lacks resonance.
		ChatGPT	4	3	3	3.3	Partially Adequate	Functional but flat.
Samsung: Inspire the World, Create the Future	ألهم العالم، واصنع المستقبل	Human	5	5	5	5.0	Fully Adequate	Retains visionary tone.
		DeepL	3	3	2	2.7	Inadequate	Overly literal, less powerful.
		ChatGPT	4	4	3	3.7	Partially Adequate	Tone slightly weakened.

The findings support a regular hierarchy: Human > ChatGPT > DeepL was found in all ten slogans. Human translations had almost full adequacy (mean = 4.8-5.0), with illocutionary force, idiomatic implicatures and cultural resonance being preserved. ChatGPT scored averagely (means = 3.0-3.7), frequently generating grammatically sound, pragmatically weakened output, and the implicature frequently lost and the tone more persuasive. DeepL had the lowest consistency (means = 2.0-2.7), which is that of literalism, awkward register, and poor management of culturally bound items. One interesting fact is that not all AI outputs were pragmatically incorrect, but they had no punchiness or resonance of what would be expected in an advertising discourse. This explains the necessity of applying the codebook categories (e.g., literalism, implicature loss, register shift) instead of making intuitive judgments when categorizing the errors. It turned out in the analysis that official human translations were frequent and adapted to match regional usage (e.g., I'm Lovin' It → أحبها كثيراً), highlighting the Skopos-driven nature of slogan translation.

Discussion

The results of this paper demonstrate the opportunities offered by artificial intelligence as well as the threats of it in Arabic-English translation and especially assessed in a pragmatic way. Although AI-based systems

including DeepL and ChatGPT have shown remarkable improvements in semantic accuracy and syntactic fluency, they always scored lower when it comes to maintaining pragmatic meaning. The comparative analysis showed that human translators were more skillful at preserving speech acts, conversational implicatures, and cultural or connotative meanings-features that are required to be persuasive and context-dependent advertising discourse features. These findings affirm the point already stressed in the existing literature: translation is not about replacing words only, but expressing meaning, tone, and implications. This part talks about the implication of these findings based on the earlier studies and places the current findings in the context of the established literature on applied linguistics, pragmatics, and artificial intelligence studies concerning translation. Correlating the results of the present research with both the theoretical and empirical input that has been examined above, the discussion will showcase how the study can contribute to the current body of knowledge, which issues have endured, and how avenues can be availed to enhance AI translation systems to be more sensitive to pragmatic meaning. The former aim was to examine the practical flaws of both the Arabic and English translations produced by AI systems. The results proved that DeepL and ChatGPT were able to reproduce the semantic material of advertising slogans with success, however, often they could not preserve their force of action. Examples include idiomatic phrases like Just Do it and Live for Now, which in most cases when translated into languages seemed one-dimensional or mechanical in comparison with human translations. Human translators on the other hand invariably maintained the persuasive nature and cultural attractiveness of the slogans to keep the messages culturally contextually relevant and thus effective. These findings are much more in line with the findings of Charles-Kenechi (2024) who pointed out that although AI application in translation studies became more efficient, the pragmatic and cultural aspects of the systems were not developed. The fact that DeepL produces literal translations, in particular, proves the point made by Charles-Kenechi that AI systems do not handle illocutionary force or contextual appropriateness and are more employable in terms of lexical and structural equivalence. What is more, the identified comparison patterns are indicative of the results shown by Hamood, Al Ghareeb, and Zaid (2024), who directly compared AI and human translation and established that the former suffers considerably in the area of pragmatic and cultural adequacy. Human translators did better than the AI tools in maintaining the contextual meaning, which can also be noticed in the current analysis of advertising slogans. The two works culminate at the fact that cultural and pragmatic intuition, which is a foundation of human intuition, cannot yet be duplicated by the AI-based translator systems. Combined, the results of this paper provide support to the academic conclusion that AI-based translation performs quite well in semantic accuracy but is also low in terms of maintaining pragmatic nuances. This supports the significance of a practical approach to AI translation assessment and affirms the need to maintain human control over this area where meaning is one of the most context-based, e.g. in advertisement and persuasive communication. The second goal aimed at using the principles of applied linguistics and, specifically, pragmatics, to reveal the stratification of meaning that disappeared in translation by AI. The patterns of loss were found to be three, namely, the weakening of speech acts, the dilution of conversational implicatures, and the inability to capture cultural and connotative meaning. Human translations did not weaken the illocutionary force of persuasive slogans (e.g., the Nike motivational slogan of Just Do It reducing it to a literal imperative), but AI systems tended to make them drastically weaker by turning them into the imperatives of language use. Equally, conversational implicatures were translated directly with slogans in idiomatic variables like Live for Now who when translated out as a literal message were flat, sweeping the implied meaning of seizing the moment away. The AI tools failed to translate cultural and connotative meanings, particularly those used in advertisement slogans such as L'Oreal Because You Are Worth It which made the translation in a very awkward manner or even less convincing. These findings resonate with Ivanytska (2015) who posited that pragmatic meaning is frequently neglected during translation procedures instead of lexical and structural equivalence which make translations fail in terms of communication. The literal accuracies that are seen in the current work affirm that Ivanytska is correct in arguing that pragmatic loss is not an accident in the translation process. Similarly, Laviosa (2011) identified the consistent weakness of idioms and figurative speech at the translation stage, which is the emphasis of corpus-based methods, which is similar to the problems that AI systems faced during metaphor translation and idiomatic slogans. The findings are also reflected in the work by Laktina (2025) where many authors noted that the existing AI systems are not able to send the pragmatic markers and culture connotation with an appropriate degree of quality and it is dangerous to trust the system as it may cause the receipt of the semantically correct but pragmatically ineffective translations. Conversely, the authors Al-Azzawi, Mohammed, and Hamood (2024) also found that, although it may not address the pragmatic

flaws of AI, the help of the latter may be applied in the context of cultural diversity enhancement in the translation process alongside human intervention, meaning that the shortcomings of AI as a meaning generator would be less significant with the use of hybrid models of translations. Combined, the results obtained indicate that the pragmatic meaning is the most exposed aspect of AI translation which is why applying the applied linguistic theories in the role of diagnostic dimensions is vital. The systematic use of the concepts of speech acts, implicature, cultural resonance, etc. enables this study that, in addition to revealing the inadequacies of AI, supports the theoretical claim that the analysis of pragmatics is essential in assessing the adequacy of translations. The third objective aimed at comparing the pragmatic behavior of human translators and the AI-based translation systems. The findings clearly provided a hierarchy, with human translators clearly performing better than AI systems, ChatGPT also exhibiting moderate levels of success in comprehending pragmatic intent, but DeepL was lagging with fixed and more literal results. Human translating also maintained stylistic naturalness, tone of persuasion and cultural appeal in all the slogans thereby making sure that speech acts and implicatures are adequately transferred. Comparatively, AI systems, though generating grammatically efficient and lexically sound translations, tended to undertake or dilute the communicative power of the discourse used in advertisement. This relative analysis shows that practical competency is still a determining element that distinguishes human translation and the work of AI. This evidence corresponds to the argument advanced by Fan and Chunlei (2023) that despite the fact that AI has revolutionized the research in the field of translation by increasing efficiency and access to the process, the pragmatic meaning is one of the underdeveloped aspects of the machine translation. The findings of the current research will confirm their argument that semantic and syntactic effectiveness is not enough to ensure the success of communication. On the same note, Mohammed (2019) has proven that the presence of cultural and pragmatic aspects in dramatical literature is particularly susceptible to alteration in the course of translation. The similarities between his results and the bias evident in AI translations of the persuasive slogans support the thesis that the principle of pragmatic sensitivity is the key to successful cross-linguistic communication. Moreover, Soysal (2023) highlighted the opportunities and challenges of AI implementation in translation research and demanded the necessary changes of better quality, which would consider pragmatic and cultural aspects. The results of the main study are similar to the suggestions of Soysal as the results indicate that although AI can become a beneficial source of assistance, it cannot replace human translators to such an extent that persuasive performance and cultural specificities matter. Taken collectively, these papers suggest that the human translation is the standard of pragmatic adequacy and AI-based system still needs a massive emphasis to get near the threshold.

Linking Findings to Classical Theories

It is possible to interpret the findings of this paper, which was always in the format of Human > ChatGPT > DeepL, straightforwardly, using existing pragmatic and translation theories. The implicature loss that is manifested regularly in the AI output is indicative of transgressions of the Cooperative Principle developed by Grice (1975) that relates to the violation of the maxims of relation and manner that are essential in maintaining the implied meaning of slogans. Correspondingly, the breakdown of speech acts in AI translations (e.g., Just Do It translated literally) also shows that it is challenging to transfer illocutionary force as theorized by Searle (1969). Alterations in politeness strategies or persuasive tone especially in culturally ingrained phrases concur with the theory of politeness of Brown and Levinson (1987) that emphasizes the social and fateful aspects of communication. Regarding the translation studies, the results validate the idea of the House (1997, 2015) that pragmatic adequacy are at the core of Translation Quality Assessment, and imply the conflict between functional adequacy and literal transfer proposed by Nord (1997) in his Skopos theory. A significant aspect that could come out of these results is the professional ghost writing of transcreation which extends beyond a literal translation to translate slogans and make them creative to suit target audiences. Formal Arabic translations of phrases like McDonalds loving it demonstrate how Skopos-based adaptation can be able to maintain the communicative effect more successfully than word-to-word translation. Unlike AI system, the human translators are trained to strike a balance between slogans and creativity; thus making them culturally and emotionally resonant. The fact that DeepL performs rather poorly, and that ChatGPT performs only averagely proves that, as it stands, current AI systems are not able to act as reliable transcreation engines, as they do not ensure the pragmatic effect, focusing, instead, on the lexical and syntactic ones. Although the study offers useful information, certain weaknesses should be mentioned. The number of slogans used was ten, thus limiting the universality of the results. Additionally, there are official Arabic translations that differ in the regional market and make addition to the fact that it makes it difficult to develop one gold standard. Two AI systems (DeepL

and ChatGPT) were also evaluated; further research that should be made in the future of the study is to implement other platforms (e.g., Google Translate, Amazon Translate) to have a more comprehensive picture. Lastly, human rates have been consistent with the use of this codebook, but the pragmatic aspects of creativity and resonance are, in some extent, subjective, which explains why mixed-methods methodologies based on both quantitative and qualitative analysis should be implemented. To conclude, the paper reveals that AI systems continue to perform poorly on the practical aspects of translation, notably in culturally biased and persuasive literary forms such as advertisement slogans. Basing analysis on the classical and pragmatic theories of translation and realizing the importance of transcreation, the results highlight the fact that human translators are valued and the present restriction of AI-based systems is significant.

Conclusion

This work proposed to investigate how translation systems based on artificial intelligence can maintain pragmatic meaning in the Arabic-English translation process, specifically with regard to the translation of the advertising slogans, in which the persuasive element, idiomatic expression, and the cultural appeal play a significant role. There were some significant findings that were made in the analysis. To begin with, although AI-based systems like DeepL and ChatGPT achieved significant advancements in generating semantically correct grammatically correct translations, they never managed to outperform due to their inability to focus on pragmatic details. Human translators, on the contrary could conserve the illocutionary force of speech acts, conversational implicatures and cultural or connotative meaning so that the persuasive and communicative purposes of the original texts were not lost. Second, comparative analysis made it clear that there was a definite ranking of the level of performance: human translations were the most pragmatically sufficient, ChatGPT demonstrated moderately successful results, and DeepL were left behind with more automatized versions. This paper can contribute by combining applied linguistics and translation studies with artificial intelligence. The paper used pragmatic theories such as the Speech act theory, implicature, and cultural meaning, thereby showing that AI systems continue to be inadequate in terms of pragmatics, although they are effective in transferring semantic meaning. The studies of this type, thus, contribute to the academic literature by offering empirical data about the areas in which AI translations fail, especially the Arabic-English language pair. In addition to the theoretical contribution, the study has practical implications on both the practitioner-level and developer-level practitioners and developers of AI: on the practitioner side, translators and educators could apply the study findings to predict pragmatic losses in the output of such systems, and AI developers could add pragmatic awareness to the output of future systems to guide better contextual behavior and cultural appropriateness. However, the research has some drawbacks. It was done only on a small corpus of advertising slogans which, however useful in the process of pragmatic assessment, might not accurately reflect the other genres such as legal, academic, or literary writings. Additionally, the AI systems that have been analyzed were only two DeepL and ChatGPT, and the other novice technologies that could prove their potential were omitted. Future research should extend this inquiry by analyzing larger and more diverse corpora, incorporating additional genres, and evaluating a wider range of AI translation tools. To address these points, future research should:

1. Expand the corpus to include 100+ advertising slogans across diverse sectors (food, technology, fashion, healthcare), ensuring a richer variety of pragmatic challenges.
2. Integrate additional AI systems, such as Google Translate, Amazon Translate, and newer large language models, to provide a broader comparative landscape.
3. Develop and release a publicly available corpus of advertising slogans with bilingual pragmatic annotations, enabling replication and comparative studies.
4. Experiment with prompted transcreation strategies, testing whether AI can be guided through carefully engineered prompts to approximate human creativity in slogan translation.
5. Investigate post-editing workflows, where human translators refine AI outputs, to evaluate whether hybrid approaches can combine efficiency with pragmatic adequacy.

By following these directions, future work can contribute not only to theoretical understanding but also to practical solutions for integrating AI into professional translation settings where pragmatic force and cultural resonance are essential.

In conclusion, this paper affirms that while artificial intelligence represents a significant advancement in translation practice, human translators remain indispensable for tasks where pragmatic meaning, cultural nuance, and persuasive force are paramount. The findings underscore the need for continued collaboration

between linguists, translators, and AI developers to move toward systems capable of achieving not only semantic but also pragmatic fidelity in cross-cultural communication.

Ethical Compliance Statement

The author(s) affirm that this manuscript fully complies with the ethical standards outlined in the Arab World English Journal's Ethics and Publication Malpractice Statement. The study was conducted with integrity, transparency, and strict adherence to academic research ethics. All sources have been properly acknowledged, and no part of this manuscript has been published or submitted elsewhere.

Conflict of Interest

The author(s) declare that there are no financial, institutional, or personal conflicts of interest that could have influenced the results, interpretation, or presentation of this manuscript. All authors confirm that the study was conducted independently and without any conflicting interests.

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The author(s) acknowledge that AI tools were used only to improve the language clarity and readability of the manuscript. All research content, analysis, interpretations, results, and conclusions were fully developed by the author(s). The use of AI remained under human oversight and did not influence the scientific content or the originality of the study.

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