

AI translation ethics: An exploratory study of bias and objectivity in Saudi Arabia and Oman

أخلاقيات الترجمة باستخدام الذكاء الاصطناعي: دراسة استكشافية للتحيز والموضوعية في المملكة العربية السعودية وسلطنة عمان

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Abstract:

The ethical issues about AI-powered translation systems are becoming more prevalent as they transform communication between different languages and cultures. Even though there is growing globally concern about this topic, there is still a notable lack of research into the ethics of AI translation, particularly in the unique sociolinguistic and diglossic contexts like those of Saudi Arabia and Oman. Hence, this exploratory study seeks to fill that gap by exploring how bias and objectivity play out in AI translations ethics within these often-overlooked regions. Data was collected from 50 individuals experienced in the field of AI translation via a Google Form questionnaire and analyzed using SPSS (Version 26). Findings revealed that the respondents highlighted the concern of bias, losing aspects of the culture, and a lack of objectivity, which have diminished their trust in the output in its purest form. All

of this demonstrates the need for ethical oversight on the part of humans in the process of their translations. They suggested that localized AI, better education of translators, and robust ethical guidelines for the use of AI in their contexts could help in better integrating AI translation ethically. Furthermore, the findings shed important light on the ethical challenges surrounding AI-assisted translation within the socio-cultural and linguistic contexts of Saudi Arabia and Oman. Participants - translation practitioners, teachers, and researchers - demonstrated high familiarity with AI translation tools but simultaneously expressed significant ethical concerns, particularly regarding bias, objectivity, and trust. Accordingly, the implications and recommendations are presented.

Keywords: AI translation, bias, objectivity, ethics, Saudi Arabia, Oman

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المملكة العربية السعودية وسلطنة عمان

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الملخص

مخرجات الترجمة بصيغتها النقية، وتشير هذه النتائج إلى الحاجة إلى إشراف أخلاقي بشري خلال عملية الترجمة باستخدام الذكاء الاصطناعي، كما اقترح المشاركون ضرورة تطوير أنظمة ذكاء اصطناعي محلية، وتثقيف المترجمين بشكل أفضل، ووضع إرشادات أخلاقية صارمة لاستخدام الذكاء الاصطناعي ضمن سياقاتهم الخاصة، بهدف تحقيق تكامل أخلاقي أفضل للترجمة باستخدام الذكاء الاصطناعي، وعلاوة على ذلك، تسلط النتائج الضوء على التحديات الأخلاقية المحيطة بالترجمة بمساعدة الذكاء الاصطناعي في السياقات الاجتماعية والثقافية واللغوية في السعودية وعمان، وقد أظهر المشاركون - من ممارسين ومدرسين وباحثين في مجال الترجمة - إلماً كبيراً بأدوات الترجمة المدعومة بالذكاء الاصطناعي، إلا أنهم في الوقت نفسه عبّروا عن مخاوف أخلاقية كبيرة، خصوصاً فيما يتعلق بالتحيز، والموضوعية، والثقة، وبناءً على ذلك، تم عرض التوصيات والآثار المترتبة على الدراسة.

الكلمات المفتاحية: الترجمة بالذكاء الاصطناعي، التحيز، الموضوعية، الأخلاقيات، المملكة العربية السعودية، سلطنة عمان

تزداد القضايا الأخلاقية المتعلقة بأنظمة الترجمة المدعومة بالذكاء الاصطناعي انتشاراً مع استمرار هذه الأنظمة في تغيير طبيعة التواصل بين اللغات والثقافات المختلفة، وعلى الرغم من تنامي القلق العالمي حيال هذا الموضوع، لا يزال هناك نقص ملحوظ في الأبحاث المتعلقة بأخلاقيات الترجمة باستخدام الذكاء الاصطناعي، وخصوصاً في السياقات السوسiolغوية والازدواجية اللغوية الفريدة، مثل تلك الموجودة في المملكة العربية السعودية وسلطنة عمان، ومن هذا المنطلق، تهدف هذه الدراسة الاستكشافية إلى سد هذه الفجوة من خلال استكشاف كيف تتجلى مفهومات التحيز والموضوعية ضمن أخلاقيات الترجمة باستخدام الذكاء الاصطناعي في هذه المناطق التي غالباً ما يتم تجاهلها.

تم جمع البيانات من 50 شخصاً من ذوي الخبرة في مجال الترجمة باستخدام الذكاء الاصطناعي، وذلك من خلال استبيان عبر Google Form، وتم تحليلها باستخدام برنامج SPSS (الإصدار 26)، أظهرت النتائج أن المشاركين أعربوا عن قلقهم بشأن التحيز، وفقدان الجوانب الثقافية، وغياب الموضوعية، مما قلل من ثقتهم في

1. Introduction

The rapid development of artificial intelligence (AI) in translation facilities has taken substantial profits, yet still there are many concerns regarding the ethical ways of using it in translation fields. These ethics concerns of AI have emerged as a serious field mentioning the common impacts of AI technologies on AI translation ethics (Mutashar, 2024; Kazim & Koshiyama, 2020). In addition, Floridi (2024) stated that these concerns include a wide range of issues such as bias, accountability, transparency, and privacy. Furthermore, Floridi (2024) added that much emphasize was placed for bias of AI systems, human privacy protection, and the effects of these AI systems on wider social effects on industry marketplaces and education.

Ethics, in the realm of academia, involves a thoughtful exploration and real-world application of the principles and values that help guide our behavior and inform our choices about what is right and wrong (Burget et al., 2017). Bird et al. (2020) claimed that "AI ethics is concerned with the important question of how human developers, manufacturers and operators should behave in order to minimise the ethical harms that can arise from AI in society, either arising from poor (unethical) design, inappropriate application or misuse" (p. 2). Josefová (2016) mentioned several ways to view ethics in general, including different categories like environmental ethics, research ethics, and ethical design methods related to human-computer interaction. It also includes design research, professional ethics in various fields such as medicine and business, and the concept of conflict of interest, which emphasizes the importance of differentiating between personal interests and moral principles, among other aspects.

Several studies highlighted the ethical challenges in AI translation and its ethics (Kimera et al., 2024; Li, 2023). For instance, Kimera et al. (2024) mentioned some of these challenges like cultural sensitivity, data privacy, and objectivity and fairness. Li (2023) stated that as AI in translation is still in its beginning phases, there are many questions which are raised regarding its copyright and how the professional identity is maintained especially in literary translation. In addition, the interaction between humans and these AI tools still requires more ethical consideration and investigation (Mohammed et al., 2025; Rehman et al., 2025).

To close, the use of AI within the framework of translation raises some useful advantages and significant ethical issues at the same time. Soysal (2023) acknowledged that the AI effectiveness and availability in translation but raises important concerns regarding its usage, human input, workforce implications, and cultural appreciation AI-enabled translation raises ethical issues of copyright, data, privacy, and consent. Oversight is still important to maintain ethics in Neural Machine Translation (Moorkens, 2022). Soysal (2023) recommended some solutions which are developing an interdisciplinary approach by teaching AI topics in Translation Studies to promote joint studies and research, and resolving the gap in AI's IQ and EQ. Finally, taking all these studies and recommendations into

consideration, the current study explores the bias and objectivity in AI translation ethics in Saudi Arabia and Oman.

2.Literature review

Recent studies underscored the growing importance of ethics in artificial intelligence (AI) in different areas such as health, education, translation, and self-driving learning (Baihakki & Qutayan, 2023; Piteira et al., 2019; Morley et al., 2020). Some of the key ethical matters that have arisen include data privacy, security, bias, safety, and job displacement (Baihakki & Ba Qutayan, 2023). It has been argued that fundamental ethical bases can be found on a global scale, with transparency, privacy, accountability, and fairness being noted as the most common (Khan et al., 2022). However, inadequacy in ethical awareness and unclear principles have hampered their implementation (Khan et al., 2022). To address these problems, it is advocated that we study the ethics of AI as well as constructing AI systems from an ethical perspective (Siau & Wang, 2020). As AI races forward, it becomes critical to set forth appropriate ethical guidelines, standards and laws that guide the use and development of this technology (Siau & Wang, 2020).

Kimera et al. (2024) presented findings on the ethical issues in Neural Machine Translation (NMT) systems. They examined the role of NMT in ethical issues in different NMT development stages-determination of how corruptive the data processing is, usage of training data, and utilization of training data, privacy, data ownership, and consent. They tested and solved moral problems with the help of experience. These involve using Transformer models for Luganda-English translations and improving efficiency by using sentence mini-batching. They discussed the social influence of NMT and the wider ethical everyday tasks of developers, suggesting them as factors accountable for the social consequences of their formations. In addition, they stressed how crucial it is to consider fairness, cultural sensitivity, and human oversight in Neural Machine Translation (NMT) systems. They highlight concerns around data management, privacy, and consent. In a similar vein, Mutashar (2024) critically reviewed the existing literature on the impact of AI on the translation profession. The study explored the ethical challenges ascending from AI implementation in translation process. It intended to offer recommendations for ethical translation practices in an AI-enhanced setting. The study recommended an action-oriented method to pointing out the ethical concerns of AI translation to guarantee the persistence of the translation career in an AI-driven humanity. The study also highlighted three main areas to be enhanced in AI translation such as ethical considerations, human expertise, and future research.

In the same vein, the existing literature have brought to light the ethical challenges and opportunities tied to AI-powered translation. For example, Li (2023) examines the ethical implications surrounding literary translation, focusing on issues like professional identity and copyright as AI technology evolves. Meanwhile, Soysal (2023) delved into the connection between translation studies and AI, making

a case for their partnership to boost translation efficiency and ensure cultural relevance. All these studies pointed out the necessity of tackling ethical questions, such as the significance of human expertise (Kimera et al., 2024; Li, 2023; Soysal, 2023), maintaining accuracy and cultural sensitivity (Kimera et al., 2024; Soysal, 2023), and considering the impact on the workforce (Soysal, 2023). Together, they suggest that incorporating AI into translation practices can not only enhance efficiency and accessibility but also highlight the ongoing importance of human engagement and ethical awareness.

Finally, studies have looked into how AI is affecting translation across various aspects of life. While AI and machine translation (MT) are becoming more common in translation education, there are worries about insufficient critical analysis of their challenges and the necessity for structured approaches in higher education (Khan et al., 2022). The rise of AI-focused translation studies has opened up new research avenues, concentrating on the quality of translation products, the processes involved, and teaching techniques (Fan & Wang, 2023). However, Al-Romany & Kadhim (2024) mentioned that specialized areas like legal texts, human translators continue to outperform AI in terms of accuracy and comprehension of legal terminology. These findings underscore the ongoing evolution of translation research and educational practices as AI becomes integrated, while also highlighting the enduring value of human expertise in certain fields.

Research Objectives

This study is intended to:

1. Investigate the familiarity and use of AI translation tools among translation practitioners in Saudi Arabia and Oman.
2. Find out the attitudes towards bias and objectivity in AI translations within the Arab cultural and linguistic contexts, particularly in Saudi Arabia and Oman.
3. Examine the ethical concerns and responsibilities related to the use of AI translation.

3. Methodology

This section describes the methodology used to investigate how Saudi Arabian and Omani translation professionals view ethical issues in AI translation, specifically objectivity and bias.

3.1 Research Design

This study employs quantitative, exploratory, cross-sectional survey design. The rationale for using this design is that it is possible to gather standardized data from a specific population at one point in time and begin to establish trends, patterns, and general attitudes toward attitudes toward AI translation ethics.

In this case, the exploratory nature of the research seeks to provide some initial insights into the ethical issues concerning AI translation in the Gulf context - namely Saudi Arabia and Oman - where cultural and religious factors greatly influence language use.

3.2 Participants

A purposive sample of 50 individuals with experience in the field of translation (and experience with AI translation technologies) was included in this study. The general criteria for participation included the following:

- Participants had to be actively exploring the field of translation as a practitioner, educator/instructor, or academic researcher.
- Participants had to be based in Saudi Arabia and Oman.
- Participants needed to have experience using AI translation technology, such as Google Translate, DeepL, ChatGPT, or similar resources.

3.3 Instrument

The Researchers developed a 19-item scale grounded in existing literature in AI ethics, machine translation, and translation theory. The items were organized into four broad thematic categories:

1. Demographic Information (4 items): Country, gender, professional role and years of experience in translation.
2. Awareness and Use of AI Translation Tools (3 items): Frequency of use of AI tools, familiarity with the tool, and perceived usefulness.
3. Attitudes Toward Bias in AI Translation (6 items): Focused on cultural, religious, and ideological bias felt in AI-generated translations.
4. Attitudes Toward Objectivity and Cultural Appropriateness (4 items): Inquired into opinions about maintaining impartiality and culturally appropriate language by AI.
5. Ethical Accountability and Trust (2 items): Tested attitudes toward professional responsibility and trust in AI outputs.

The items of the questionnaire were rated using a 5-point Likert scale “Strongly Agree”, “Agree”, “Neutral”, “Disagree”, and “Strongly Disagree”.

3.4 Instrument Validation

To ensure content validity, the questionnaire was reviewed with three subject-matter experts: one professor of translation ethics, one computational linguist, and one Arabic-to-English professional translator. Their feedback led to minor term revisions and readability, especially in phrasing culturally sensitive items. A pilot test was also undertaken with 5 translation specialists (outside of the main sample) to ascertain clarity, sufficiency, and time taken. The average time to finish was 5–7 minutes, and Cronbach's alpha internal consistency was 0.92, which indicates strong reliability.

3.5 Data Collection Procedure

Data collection took place over a four-week period in March 2025. The questionnaire was administered online using a Google Form to accommodate participants in both Saudi Arabia and Oman and to maintain flexibility and anonymity. Participants were informed about the purpose of the study, voluntary participation, and confidentiality of their responses. An informed consent statement was included at the beginning of the form. No identifying personal information was collected.

3.6 Data Analysis

Data was uploaded into Microsoft Excel and analyzed with SPSS (Version 26). Descriptive statistics (means, standard deviations, frequencies, and percentages) summarized survey responses. Inferential statistics were not calculated because of the exploratory and descriptive nature of the study.

3.7 Ethical Considerations

Participants' involvement was anonymous and voluntary. All the data was kept securely and used only for academic and scholarly purposes. Participants could withdraw from their participation at any point before submitting the questionnaire.

4. Results, Interpretation and Implications

This section outlines a thorough analysis of the responses from the 19-item questionnaire provided to 50 translation professionals in Saudi Arabia and Oman and touches upon a number of ethical implications associated with AI translation including cultural and ideological bias, objectivity, trust, and human responsibility. The comments are structured thematically and supported with descriptive statistics and tables.

4.1 Participant Demographics

Knowing the participants' demographic background is important to provide context to the study. This sample included a balanced group of translators; both from Saudi Arabia, and from Oman; and from both academic and professional practice.

Table 1. Participants Demographics (N = 50)

Variable		Frequency	Percentage (%)
Country	Saudi Arabia	30	60%
	Oman	20	40%
Gender	Male	28	56%
	Female	22	44%
Professional Role	Translation Teacher	20	40%
	Translation Practitioner	20	40%
	Translation Researcher	10	20%
Years of Experience in Translation	1-5 Years	12	24%
	6- 10 years	22	44%
	Over 10 years	16	32%

As shown in Table 1, it was noted that 22% of the respondents have six or more than six years of experience in translation, which suggests a depth of knowledge and experience in the field.

Experienced translators (44% with 6 - 10 years; 32% more than 10 years) provide keen insight concerning the ways that AI tools are in line with (or opposed to) professional ethics arising from many years of human-mediated translation experiences. Their hesitance to rely exclusively on AI tools indicates an understanding that ethical translation requires more than literal translation; it requires cultural navigation, an understanding of the context, and ethical decision-making.

4.2 AI Translation Usage and Familiarity

Participants were asked to rate their familiarity and use of AI translation tools, and the results of their responses are shown in Table 2.

Table 2: Awareness and Use of AI Tools

Item	Mean	SD	Agreement Percentage
I frequently use AI translation tools.	4.20	0.83	92%
I am familiar with major AI platforms such as Google Translate, ChatGPT DeepL, etc.	4.26	0.68	88%
AI tools improve translation efficiency	3.98	0.80	78%

As shown in Table 2, most participants often use AI translation systems. Over 90% report regularly using AI translation systems, particularly popular systems, such as Google Translate, ChatGPT, and DeepL. While participants appreciate its time savings, the mean score slightly lower than performance (3.98) indicates potential doubts regarding reliability and quality for nuanced translation tasks. Importantly, this trend is consistent across both countries and roles.

The high report of AI use (over 90% use at least once a week) suggests it is moving quickly into translation workflows. However, the tempered endorsement of AI - exhibited by less confidence in AI contributing to efficiency and/or accuracy - reveals a paradox: translators see AI as a powerful tool, but they do not see it as an independent entity.

This is consistent with what has been observed when people adopt new technologies around the world: while people are happy about increased efficiency, they could never fully rely on black-box AI approaches; when it comes to more complex texts, this particularly applies to documents that carry nuance. Codifying AI capabilities against human language intuition is an impossible gulf to cross, particularly with the complex linguistic nature of Arabic - resulting in a ‘trust but verify’ mentality.

4.3 Perceived Cultural and Ideological Bias

One of the central ethical concerns in AI translation is bias - especially when systems fail to represent cultural, religious, or political nuances. So, the participants recorded their responses, and the results are as in the following table.

Table 3: Perceived Bias in AI Translation

Item	Mean	SD	Agreement Percentage
AI translations reflect cultural bias.	3.82	0.94	74%
AI tools misrepresent religious values.	3.78	1.04	72%
AI content includes Western ideological undertones.	3.72	1.09	68%
AI fails to differentiate between regional dialects (e.g., Gulf Arabic, Najdi).	3.64	0.99	64%
AI-generated bias may cause cultural misunderstandings.	3.94	0.86	78%
Political content is often inaccurately or ideologically biased.	3.54	1.15	60%

Table 3 shows that many respondents indicated their worry that AI translations translate bias - either culturally, religiously, or ideologically. The concern (mean = 3.94) indicates that bias can especially cause significant cultural miscommunication as applied to religious or political texts. These findings also resonate with critiques in the global ethical discourse regarding AI; large language models trained primarily on datasets from Western countries tend to favour a secular, liberal, or Eurocentric view of the world. This can be problematic in contexts like Saudi Arabia and Oman, where there is a cultural or tribal - even religious - meaning imbued in language.

The large standard deviations (for example, SD = 1.15 for political content) imply inconsistency in the personal experiences of respondents possibly related to the type of documents translated. Nevertheless, it appears there is a sense in the region that there is epistemic and ideological asymmetry in AI translation systems.

The stated cultural, religious, and ideological biases suggest that participants are very much aware of the limitations of AI in accurately reflecting the epistemic worldviews embedded in Gulf cultures. AI systems trained on datasets dependent upon Western sources are likely to encode implicit assumptions, values, and worldviews that may not match local realities.

For example, religious terminology is particularly delicate, and mistakes in translating terms to describe jihad, sharia or halal could produce serious misinterpretations and may contribute to the propagation of stereotypes, or worse, fuel Islamophobic discourses around the world.

Finally, the failure to distinguish between dialects, such as Najdi or Gulf Arabic, negates a regional or local identity and masks potential cultural markers that are relevantly important. The participants' assessments are echoed in greater ethical considerations regarding algorithmic bias and fairness in AI: that machine learning

models may unintentionally reproduce colonial or hegemonic language structures that marginalize minority or regional voices.

This necessitates the establishment of regionally specific training corpora and the integrations of feedback loops from subject specific experts on AI system design such that the models can learn from local holders of cultural knowledge.

4.4 Objectivity and Cultural Accuracy

Participants assessed whether AI translation systems can remain neutral and accurate when dealing with complex sociocultural language. Objectivity and cultural accuracy were investigated, and the results were as shown in the following table.

Table 4: Objectivity and Cultural Accuracy

Item	Mean	SD	Agreement Percentage
AI lacks objectivity in political/ideological content.	3.78	0.99	70%
AI fails to recognize cultural metaphors or idioms.	3.78	0.94	74%
Religious references are often misinterpreted.	3.72	0.96	68%
AI cannot manage formal/informal register differences.	3.64	0.99	64%

Going to the depth of the results shown in Table 4, it can be said that weighing AI's ability to generate metaphors, display social register (including honorifics and sub-language), and utilize sacred language (e.g., Qur'anic language) represented issues for Saudi Arabian and Omani translators, repeatedly. This indicates a gap in semantic meaning-making in and through machine-generated texts and human cultural knowledge. In Arabic, honorifics, proverbs, Qur'anic allusions, and dialectal variation are super-charged with cultural and social meaning. AI works to flatten, ignore, and misdescribe that meaning. To wit, AI struggles with formal conversational stances, when recreating the language featured in royal asked, religious advice, or sermons; it tends to use isolating/difficult formulations. Moreover, without a distinction between Modern Standard Arabic (MSA) and dialects (or sub-dialects) east of the Mediterranean (e.g., Hijazi, Najdi, Dhofari), the challenge for the AI to flexibly re-create cultural ways of expressing meaning or acting. This landscape poses ethically - considerations: mis-applied metaphors or religious language could misleadingly propose a treatment of an audience or disrespect possible cultural antics, even in socially safer cultures. These are certainly risks in backward societies - any hint of disrespect demonstrated through "mis-used" sacred language is fraught with implications for livelihood or life. In the end, the ethically-laden issues of accuracy, faithfulness, and accountability not obviously

explored in machine-generated texts, at the very least force us to acknowledge the principled aspects of translation ethics.

Participants' views of AI as not being objective and not understanding idioms show a fundamental limitation of the translation models we have today: the inability by existing systems to grasp the pragmatic, cultural aspects of language at levels deeper than surface semantics.

Idioms and metaphors often convey decades or centuries of cultural history. Though a common Arabic proverb, "الليل كالنهار" ("the night is like the day"), communicates this concept, machine translation exposing skin-deep semantic relatedness fails to communicate connotation affordances.

Machine translation also fails to understand politeness or levels of formality in translation. Even in transitions from English to an Arabic dialect, the perception of social hierarchy can rest on tone and degree of politeness or informality. It matters in how someone is addressed regarding the role of formality and politeness, which when insulted can lead to embarrassment or worse. This point can be debated in the case of transcribing religious sermons, official speeches, or diplomatic correspondence.

The above findings illustrate the ethical obligations translators have when translations or given transfer equivalency in words, but also transfer the values, respect, and cultural identity of the speaker. Clearly, a need exists for more responsive AI systems, and adequate human reviews and oversight on AI translations.

4.5 Trust and Ethical Responsibility

The ethical role of human translators in overseeing AI output was one of the strongest areas of agreement among respondents as it is clearly shown in Table 5.

Table 5: Trust and Ethical Responsibility

Item	Mean	SD	Agreement Percentage
Human translators must ethically review AI-generated content.	4.10	0.76	82%
I fully trust AI translation without human revision.	2.40	1.05	20%

Almost all participants anticipate an ethical layer for AI translation. To that product, trusting AI unedited had one of the lowest mean scores (2.40). This shows that the participants see themselves as responsible agents, not just a user of AI. This fits into a post-editing practice, where human translators are the final authorities on ethical and cultural elements. All responses also express particularity consistent with

teleological theories of translation. A translator who works in government or religious spaces in the Kingdom of Saudi Arabia or Oman could find professional repercussions for AI output leading to cultural diffusion, misquoting Qur'anic verses, or misrepresentation of tribal honourifics. Thus, the importance of human responsibility is grounded in ethics and practicalities.

The human-in-the-loop model ultimately protects all of us from trusting AI indiscriminately, thereby blocking the distribution of translations that are biased or incorrect. With the socio-political implications of mistranslations - such as the potential for arson or mob violence arising from a religiously or politically sensitive translation - human translators serve as ethical guardians in this model.

Interestingly, the low trust rating toward fully autonomous AI indicates a healthy skepticism rather than a fear of AI. Participants were not rejecting AI; rather, they were advocating for a collaboration whereby AI can assist productivity, while the final decision is made by humans who have the responsibility of being ethically accountable for their translation decisions.

This perspective is also aligned with specific ethical values in AI governance intended to address ethical issues arising from AI systems, such as transparency, accountability, and human involvement or oversight in the decision-making processes.

4.6 Regional Trends: Saudi Arabia vs. Oman

While the study was not intended to provide an inferential statistical comparison of the two countries, observations and distributional trends indicate that both contexts share some converging concerns, albeit with some nuance.

- Saudi Arabia: Respondents pointed out that there is a danger of religious distortion due to the AI's inability to deal with formal scriptural references (e.g., Faydas, royal announcements, Hadith).
- Oman: Respondents pointed out its inability to deal with diversity in linguistics (i.e., Arabic-Swahili code-switching in coastal regions) and diplomatic nuance in multilingual contexts. In both contexts, AI translation is regarded as a tool that needs to be domesticated - adapted, controlled, and checked against local linguistic and ethical filters.

It can be summarized as there is a high familiarity and use across roles and countries and AI outputs reflect cultural, religious, and ideological bias. Furthermore, AI lacks context.

5. Discussion

The findings from this exploratory study provide significant insights into the ethical considerations around AI-assisted translation within the socio-cultural and linguistic environments in Saudi Arabia and Oman. Participants, all of whom were professional translation practitioners, educators, and/or researchers, had a high level of familiarity with AI translation tools while expressing many ethical considerations including bias, objectivity, and trust. This is aligned with the findings of Baihakki & Ba Qutayan (2023) and Khan et al. (2022).

The degree of AI translation tool use in comparison to traditional methods among professionals presents some evidence of the integration of AI into the translation workflow in the Gulf region. This conforms to global trends indicating the increasing use of AI-powered language technologies due to their growing accessibility and affordability. Participants' deliberations about AI efficiency and accuracy suggest caution and demonstrate critical awareness that AI tools will never fully replace human acumen. A "human-in-the-loop" perspective demonstrates a practical and ethical consideration while illustrating that human judgment is wholly necessary to account for the status of AI output if applied to culturally sensitive content. This can be in parallel to the findings of Mutashar (2024), Kimera et al. (2024), and Li (2023).

The key ethical issue raised from the data is the apparent bias in AI translations. The participants reported that AI usually emulates cultural, religious, and ideological bias due to being trained on datasets that include predominantly Western texts. This raises serious ethical concerns from an epistemic justice and representational fairness perspective. In the Gulf context, as language is couched in religious, tribal, and social cultural values, bias has the potential to change meaning and violate cultural propriety. The participants were rightly concerned that the dependency on AI to capture religious terminology and political content presented the risk of misrepresentation. This could lead to significant misunderstandings that can have significant ramifications in intercultural and international relations.

With bias is also the issue of objectivity and cultural fidelity. Participants mentioned that AI systems do not process idioms, metaphors, and dialectal specifications of Gulf Arabic very well. The way in which AI cannot capture these nuances causes flattened, sometimes offendable, translations and lose integrity or authenticity as original texts. The evident separation in meaning between human translations and what machines produce demonstrates a major limitation of AI models, which rely mainly on statistical patterns, not understanding. As a result, ethical translation requires human translators to make judgments, require cultural literacy, and be aware of social registers which AI is not yet able to perform.

The question of trust and responsibility was similarly important. The research showed that translators identify themselves not only as their consultant but an ethical gatekeeper who acts to assess, authenticate, and correct machine-generated

translations. Low trust in AI decision-making seems to stem from this low trust in AI autonomy; translators clearly qualified their skepticism by suggesting that such autonomy might be acceptable - as long as some degree of human oversight was incorporated. The implications of this finding are important because they contradict techno-optimistic views of AI as being able to fully automate the translation process. Rather they champion the interaction between automation - AI's efficiencies—and the ethical reflection of translation through human intervention, which must take place in order to maintain the standards of translators' work in complex sociocultural contexts.

Regional differences between Saudi Arabia and Oman are interesting in their own way. While both regions are concerned with bias and cultural accuracy in translations, Saudi participants were concerned about the possibility of translating texts without and awareness of religious interpretations - alluding to the context of Saudi Arabia as central to Islamic heritage. Omani respondents highlighted the challenge of linguistic differences through variation, dialectic, and cross-lingual modalities which speaks to the need for localized AI tools attuned to local languages ecologies.

In short, it is concluded that there is a pressing need for AI translation systems to include locality-based training data, using the local and cultural realities of language in social contexts to attempt to minimize bias and maximize accurate translation. In addition, professional standards need to be articulated in the Gulf region to set ethical expectations for the industry to adhere to AI technology while re-establishing their cultural values and ethical conduct.

Additionally, the research serves as a broader ethical consideration: AI in translation is not ethically neutral, as it is situated within a wider set of power relations and ways of portraying knowledge. Translators in Saudi Arabia and Oman are therefore not only the in-between term as mediators but also as the guardians of cultural meaning and ethical accountability in their profession in a world becoming more reliant on technology, including AI.

6. Conclusion

This exploratory study demonstrated that there are deep ethical concerns for translation professionals in Saudi Arabia and Oman with the AI translation tools they are using. Although the use and value of AI translation tools are evident, translating professionals are acutely mindful of the pitfalls of algorithmic bias and absence of cultural nuance and objectivity. The study highlights that translations produced by AI cannot be trusted (especially in culturally or religiously sensitive contexts) without adequate human involvement.

The findings indicate there was substantial agreement about the importance of human translators as ethical gatekeepers who are responsible for scrutinizing and contextualizing any AI outputs based on mirrored linguistic and cultural integrity. In

addition, participants emphasized the practice and improvement of AI systems and processes through local linguistic diversity and socio-cultural norms, based on the personalized training data and customization pertaining to the region.

Overall, the ethical integration of AI translation tools will depend on collaborative practices that privilege local context and actively notice variations between technologies and regional cultural integrity or norms. The key next steps will include advising regional institutions on ethical protocols, teaching translators and learners about AI literacy, and engaging in dialogue as a result of an amended project that sees ethical developers speaking with experts from the region - so that AI can be developed which safeguards and expresses the cultural and linguistic wealth of Saudi Arabia and Oman.

7.Recommendations and Suggestions for Further Studies

Recommendations

In order to mitigate the cultural and linguistic biases seen throughout this study, researchers should develop AI translation systems with region-specific datasets; for example, incorporating Gulf dialects, religious writings, political language, and idioms with significant cultural meaning to allow AI to account for the specific nuances of Saudi Arabia and Oman.

Organizational bodies and educational institutions that train translation professionals in the Gulf region need to work together to develop ethical guidelines for the use of AI translation tools. These guidelines should, at a minimum, incorporate principles of human accountability, accepted processes of transparency regarding how AI makes decisions, and awareness in cultural contexts.

Translation programs should include AI technology modules outlining the capabilities of AI, as well as ethical issues surrounding the use of AI tools. Providing translators with AI literacy will allow translators to critically assess machine-generated outputs, and conduct appropriate post-editing, grounded in ethical standards.

For organizations that use AI translation tools, human translators should be incorporated into the workflow that fundamentally examines and legitimizes the AI output, particularly in a text involving identity related to religion, political language or culture. Additionally, including human translators as a part of their regular workflow would preserve a translator's vocation and minimize the chances of cultural insensitivity and misrepresentation.

AI developers must work with local linguists, cultural scholars and translating professionals to codevelop translation systems that are culturally responsive and ethically developed. In this way, technical advancement can align with the needs of local contexts.

Suggestions for Further Studies

Future research should diversify the sample size and geographic coverage with Gulf countries and the more significant Arab geographical region, allowing the study of ethical perceptions about AI translation through comparisons based on different sociopolitical contexts.

Utilizing interviews and focus groups from translators could provide deeper insight into the ethical dilemmas they face while using AI tools and how they navigate trust and responsibility toward their particular workflow.

Experiments that compare the translations made by humans and AI may be able to quantify where AI translations are problematic in culturally sensitive texts, while indicating specific areas of improvement for AI models.

Research could investigate developing ethical guidelines for AI translation in the context of translating Arabic into English and evaluate guidelines in live translation situations.

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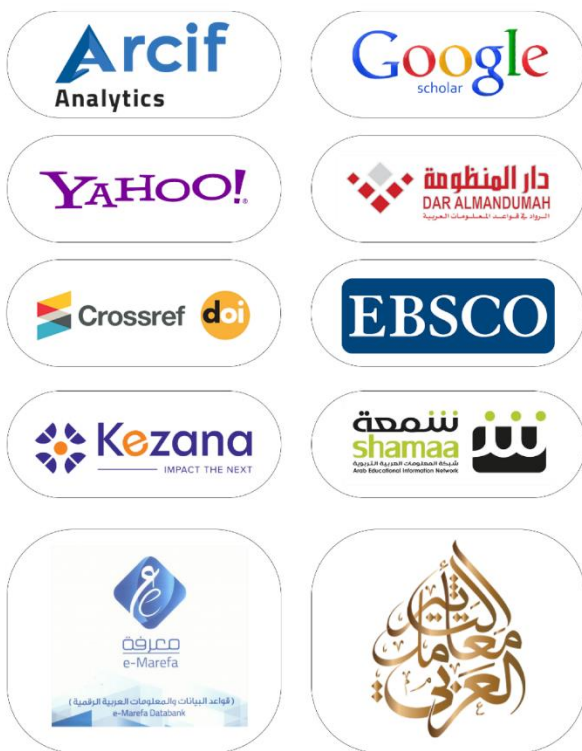
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