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## **AI TRANSLATION AND CULTURAL NUANCE : HOW HUMAN TRANSLATORS CAN ENHANCE MACHINE-GENERATED TRANSLATION**

The study focuses on the peculiarities of using artificial intelligence in the field of translation and on the role of human translators in ensuring the adequate transmission of cultural nuances, idioms and stylistic features. The aim is to highlight the increasing significance of the human factor in contemporary intercultural communication, despite the rapid advancement of machine translation. Various sources were utilized for the analysis, including literary texts, official documents, and media materials, which enabled the tracing of how modern machine translation systems (e.g., Google Translate, DeepL, ChatGPT) handle culture-specific elements and how effectively human translators can correct or supplement (post-edit) these results.

A review of scholarly papers has demonstrated that the issue of conveying cultural characteristics in translation extends beyond technical or linguistic considerations to encompass cognitive, psychological, and ethical aspects. For a comprehensive analysis, studies from various disciplines were considered, including linguistics, translation studies, artificial intelligence and social sciences. Each of them highlights the problem from its own perspective, allowing for a deeper understanding of both the limitations of modern machine systems [1, 8] and the potential of human intervention to achieve high-quality, culturally relevant translation [2, 4].

Artificial intelligence (AI) has radically changed the field of translation, making it faster, more accessible and more scalable. However, despite significant progress, machine translation (MT) still has significant limitations in conveying cultural nuances, idioms, stylistic features and emotional connotations [1]. This is where human translators remain essential, especially when it comes to texts rich in culturally specific elements, literary works, or complex communicative situations [2].

Even the most advanced MT systems (e.g., Google Translate, DeepL, ChatGPT) demonstrate high accuracy in standard texts, but often fail to cope with idioms, allusions, humour, proverbs, and other culture-specific elements [1, 8]. Studies show that human translation conveys cultural connotations much more accurately and preserves the naturalness and adequacy of the text, while MT often simplifies or misrepresents the content [8]. For example, when translating literary works, machines often lose rhetorical figures, the author's style, and nuanced subtext.

One of the most effective models is cooperation between humans and machines [2]. Human translators perform post-editing of machine translations, correcting errors, adapting the text to cultural norms, adding explanations for complex concepts, and preserving style and emotional tone [2, 3]. It is human experience that allows us to avoid typical MT errors, especially in cases involving ambiguous words, contextual allusions, or specific realities [4].

Human translators act as cultural mediators, capable not only of translating words, but also of conveying the values, traditions, humour and emotions embedded in

the text. They can adapt the text to the target audience, taking into account its cultural context, social norms and expectations [4, 5, 6, 7].

Modern studies highlight the effectiveness of hybrid models, where AI provides speed and terminological consistency, while humans contribute depth, creativity, and cultural sensitivity. Human feedback helps train machine translation systems, enhancing their ability to account for context and cultural nuances [7].

The prospects for further development in this area lie in several key areas. It is necessary to enhance the cultural intelligence of AI through the introduction of specialized modules designed to recognize cultural characteristics and context [1, 7]. At the same time, it is important to focus on the education of translators, which should include the development of skills in working with MT, high-quality post-editing, cultural adaptation, and creative translation [2]. It is important to establish clear ethical standards that will ensure the preservation of the author's style, cultural identity, and responsibility for the final product.

Machine translation is becoming increasingly sophisticated, but the human factor remains key to ensuring cultural adequacy, stylistic integrity and ethical responsibility [3]. The optimal approach is collaboration between AI and human translators, which enables the highest quality translation, particularly in complex, culturally rich texts.

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