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# NAVIGATING THE CHALLENGES AND OPPORTUNITIES OF LITERARY TRANSLATION IN THE AGE OF AI: STRIKING A BALANCE BETWEEN HUMAN EXPERTISE AND MACHINE POWER

This paper explores the evolving role of teachers and literary translators in the era of artificial intelligence and machine translation and addresses the challenges encountered in literary translation. It focuses on achieving a balance between human expertise and machine power to ensure faithful translations of literary works while preserving their inherent artistic value. The study analyses four translations of an excerpt from the short story "Lake Como" by Serbian writer Srđan Valjarević. These translations, from Serbian to English, were conducted in groups by third-year Anglistics students at the Faculty of Philology, Sinergija University in Bijeljina, whose native language is Serbian. The quality and accuracy of the translations were assessed, accompanied by detailed justifications of our preference judgments. A comparison was made between our assessments and those generated by Chat GPT-3, aiming to provide insights into the advancements made by AI in the realm of literary translation. This comprehensive evaluation of translations, encompassing both human translators and AI-powered language models (LLMs), offers a deeper understanding of the specific strengths and weaknesses exhibited by LLMs in the context of literary translation. Through this human evaluation process, we strive to shed light on the specific areas where LLM translators excel and identify the challenges they are still facing. The findings contribute to a deeper understanding of AI's impact on literary translation and pave the way for future research and advancements in this area.

**Keywords:** literary translation; machine translation; challenges of literary translation; artificial intelligence; Chat GPT-3

### **1. INTRODUCTION**

Contemplating a world in which a machine can instantaneously translate one's cherished novel into any language may not appear far-fetched. Although resembling a utopian ideal, the truth remains that the craft of literary translation surpasses mere word-for-word substitutions, entailing intricate complexities. As a conduit for bridging cultural divides and fostering cross-cultural comprehension, literary translation assumes a profound role in cultivating cultural interchange and understanding across national borders. It bestows upon individuals the ability to access and relish literary masterpieces that would otherwise remain beyond their grasp.

Within this technologically immersed era, educators, instructors, and literary translators must adeptly navigate the challenges and prospects presented by the age of artificial intelligence. In the article entitled "AI and education: the importance of teacher and student relations", Alex Guilherme (2019) identifies the 'technologisation of education' and 'learnification' as the key stumbling block in establishing teacher-student and student-student relationships. Guilherme (2019: 48) argues that the technologisation of education, which brought about changes in schools and educational systems, has had a direct impact on teachers and teaching due to its "focus on education as Erziehung, or education as the learning of a skill or trade, to the detriment of education as Bildung, or education as character formation". Guilherme draws on Michael Apple's book, initially published in 1987, which explores the political economy of schooling and examines power dynamics in shaping class and gender relations (see Apple 1988). Apple's perspective challenges the notion that techno-philia automatically brings progress in education, raising critical questions such as "Whose idea of progress?" or "Who ultimately benefits from this notion of progress?" (Apple 1988: 151). The diminished understanding of education as Erziehung, as argued by Guilherme (2019: 48), comes as a result of the technologisation trend and the 'learnification' process, which is said to promote the idea that teaching should be concerned with the creation of rich learning environments supported by various technologies. According to Guilherme, the process of 'learnification' has led to a failure in appreciating the importance of the role of the teacher and teaching, thus negatively impacting the relations between teachers and students, as well as among students.

The role of teachers in the age of AI is shifting from being the primary source of information to becoming guides and facilitators who help students navigate the vast amount of information available online and use AI tools to enhance their learning experience. This shift acknowledges the positive impact of AI in education, such as per-

sonalised learning through data analytics and targeted support for individual students' needs. Also, as AI takes over routine tasks, teachers can focus on cultivating students' creativity and critical thinking skills, which stimulate students' intellectual growth and prepare them for the challenges of the future. Another important point to stress is the fact that AI-powered tools facilitate collaboration, enabling cooperative learning environments where students work together to achieve shared objectives. To effectively integrate AI into instructional practices, teachers must engage in lifelong learning, staying abreast of the latest developments in AI technology. This commitment ensures that educators remain competent and adaptable in an evolving educational landscape. If teachers are willing to embrace this change and learn how to harness the power of AI technology, they will be in the best position to help their students succeed in the 21st century. By striking a balance between human expertise, which encompasses our cumulative knowledge, intrinsic characteristics, and latent potential, and machine capabilities, teachers can effectively conduct lectures across various subjects and educational levels.

One significant concern surrounding the integration of AI in educational practices revolves around the potential replacement of teachers by AI technology. As AI continues to improve, there is a possibility of it taking over various tasks traditionally performed by teachers, such as grading, lesson planning, and instruction itself. This raises concern about the diminishing role of teachers and the potential loss of human connection in the classroom. Interpersonal interactions play a vital role in students' social and emotional development, and an overreliance on AI systems may impede the cultivation of these important skills (i.e. it can hinder the development of critical skills like problem-solving and critical thinking among students).

Another crucial challenge is the presence of bias in AI algorithms. If AI systems are trained on biased data, they may perpetuate and reinforce existing biases and inequalities within educational settings. This highlights the need for careful consideration and monitoring to ensure that AI tools used in education promote fairness and equity. In a similar vein, concerns regarding privacy also arise, as AI-powered tools often collect substantial amounts of data about students, raising questions about data privacy and accessibility. Therefore, it is imperative to recognize that these negative consequences are not inevitable but require deliberate and thoughtful implementation of AI in education.

The challenge regarding the integration of AI in the field or translation relates to the ways in which we can ensure the faithful translation of literary works, while preserving the inherent artistic value akin to the original. Machine translation, a prominent outcome of technological advancements, has brought forth a paradigm shift in the translation landscape, offering the promise of the increased efficiency and accessibility of translations across diverse domains, including literary texts. The integration of AI-powered translation tools has undoubtedly streamlined the translation process, facilitating quick and automated translations of vast amounts of text. Machine translation has become an indispensable resource for translating technical documents, facilitating communication in multilingual business environments, and enabling individuals to obtain a general understanding of texts in foreign languages. However, the advancements in machine translation also raise pertinent questions and challenges for the field, particularly concerning the ethical implications of text generated by AI agents (see Illia et al. 2023) and the faithful translation of literary works. The ethical issues regarding the development and use of AI are associated with: the commoditisation of user data, the algorithmic amplification of biases, and the opaque responsibility of AI agents' outputs (see O'Neil 2016; West et al. 2019; Campolo & Crawford 2020; Munoko et al. 2020; Colleoni & Corsaro 2022). Illia et al. (2023: 204-206) identified three new challenges created by the use of AI agents for automated text generation: automated mass manipulation and disinformation (i.e. fake agenda problem), massive low-quality content production (i.e. lowest common denominator problem), and the creation of a growing buffer in the communication between stakeholders (i.e. the mediation problem). They also provide recommendations for addressing these issues effectively (Illia et al. 2023: 206-207). First, they propose controlling AI agents or restricting the use of such agents by independent organisations consisting of experts in the field (1) and regulating the 'educational standards' of AI agents (i.e. the European Union Artificial Intelligence Act (AIA) (2). Along with the restrictions on the use of AI agents by governments and government agencies, the authors also suggest keeping educating actors on how to use AI agents. According to Karpinska and Iyyer (2023: 15), ethical concerns within literary translation predominantly stem from subpar output quality, which can impact the perception of the author's work, hinder the reader's language skills, and impede the effective transfer of ideas to the target language. While the authors acknowledge the potential of machine translation as a valuable tool to assist human translators, they emphasise that it is not feasible to completely replace human translators with machines.

Due to the fact that AI-generated text (i.e. GPT-3 text) is perceived as being as credible as a human-written text (Kreps et al. 2022), that it is trained on Microsoft Azure AI supercomputer (Scott 2020) and that it uses more than 175 billion parameters (Floridi & Chiriatti 2020), it can be said that AI agents, as argued by Illia et al.

(2023: 202), have the potential to blur the traditional boundaries between humans and computers in content production for the web. This phenomenon challenges scholars to reconsider their position and significance within society (Murray et al. 2020) and prompts them to reflect on their role in shaping human communication (Beer 2017).

In their paper "Large language models effectively leverage document-level context for literary translation, but critical errors persist" Karpinska and Iyyer (2023) point out that even though LLM translators are capable of providing good translation at paragraph-level, they cannot fully replace human translators – in terms of both preserving the overall artistic quality and value of literary works and possible ethical issues pertaining to the role of machine learning in literary translation. While AI has made significant strides in machine translation, the nuances and intricacies of literary texts present formidable obstacles for automated systems. Literary works often contain ambiguities, metaphors, cultural references, and other forms of figurative language that require a deep understanding of the source language and its cultural context. Translating literary works demands not only linguistic proficiency but also the sensitivity to capture the author's style, tone, and artistic intentions. Machine translations, despite their efficiency, may struggle to replicate the subtleties and nuances of the original text, potentially diminishing the richness and depth of the literary work.

As researchers, translators, teachers and practitioners in the field of literary translation, it is crucial to navigate the evolving landscape shaped by technological advancements. We must critically examine the implications of technology, acknowledging its benefits in terms of accessibility and efficiency, while also recognizing its limitations in faithfully conveying the artistic essence of literary works. Striking a harmonious balance between human expertise and the computational capabilities of machines is paramount in ensuring the preservation of the inherent artistic value and cultural significance of literary translations.

In this research paper, our objective is to examine the role of technology, specifically advancements in AI and machine translation, within the context of literary translation. The initial section of the paper primarily focuses on the challenges faced in the field of literary translation, particularly those arising from technological advancements such as the utilisation of Chat GPT-3. Through this exploration, we aim to contribute to the ongoing discourse surrounding the intersection of technology and translation. The second part of our paper focuses on a comprehensive analysis and evaluation of four translations of an excerpt from Srđan Valjarević's short story "Lake Como". These translations were completed by third-year Serbian Anglistics students at the Faculty of Philology, Sinergija University. We assessed the quality and accuracy of these translations and provided free-form justifications of our preference judgments. We compared our assessment to the one generated by Chat GPT-3, 'a thirdgeneration, autoregressive language model that uses deep learning to produce human-like text' (Floridi & Chiriatti 2020: 684). This comparison aims to gain insights into the advancements made by AI in the realm of literary translation. By conducting a thorough evaluation of the translations, generated by both human translators and Chat GPT-3, we can gain a deeper understanding of the specific strengths and weaknesses of AI-powered LLMs in the context of literary translation. Through human evaluation, we aim to shed more light on the concrete aspects where LLM translators excel and where they still face challenges.

# 2. OVERCOMING STUMBLING BLOCKS IN LITERARY TRANSLATION

The task of literary translation is a multifaceted and arduous endeavour that transcends mere linguistic proficiency. Rendering literature into another language entails not only transposing the literal meaning, but also capturing the essence of its tone, style, and cultural backdrop. The translator must deftly grasp the author's intentions and safeguard the artistic merit of the work within the target language. Furthermore, a formidable challenge lies in the intricate structures and wordplay often inherent in literary compositions, which pose difficulties in faithfully reproducing them in the translated text. This demands the translator's mastery of both languages, as well as an astute penchant for creativity and imagination. The array of challenges confronting literary translators is extensive, encompassing the navigation of cultural disparities (1), the interpretation of idiomatic expressions (2), the subtle linguistic nuances and connotations that prove elusive to convey in an alternate language (3), the preservation of literary style (4), and the management of subjective elements (5).

In the realm of literary translation, the complexities engendered by cultural differences pose significant challenges. Marcel Proust's renowned novel, *In Search of Lost Time* ( $\dot{A}$  *la recherche du temps perdu*, 1921-22), presents a formidable challenge in translation due to its abundant employment of French idioms and cultural references. The complexities inherent in accurately conveying these elements into English have a significant impact on the translation process and ultimately shape the final outcome. In Volume 4, entitled 'Sodom and Gomorrah' (Sodome et Gomorrhe), the protagonist Swann is portrayed as possessing 'le compas dans l'oeil' (Proust 1921-22: 624), denoting his exceptional ability to discern the beauty of art and music. This idiomatic expression can be rendered as 'having a good eye' or 'exhibiting precision in evaluating proportions and distances.' Notably, it denotes not only a keen sense of judgment but also the capacity to estimate measurements or proportions accurately without relying on instruments. A query posed to Chat GPT-3 yielded the English equivalent 'to have an eagle eye.' It is important to consider that while the English phrase commonly characterises someone with sharp eyesight or the ability to discern minute details or distinctions, the French idiom also encompasses a broader sense of judgment and proportion. Consequently, nuances in meaning and usage may persist between the two languages.

Additionally, literary works frequently incorporate cultural references that lack direct counterparts in the target language, introducing another layer of complexity for translators. For instance, a novel set in a specific region may allude to local customs or traditions unfamiliar to readers in other countries. Translators must be acutely aware of these disparities and devise strategies to convey the essence of the original text in a manner that resonates with the target culture. In Gabriel Garcia Marquez's seminal work, *One Hundred Years of Solitude* (1967), which is set in the fictional town of Macondo in Colombia, the narrative bears a profound imprint of Colombian culture and history. Exploring the concept of 'macondismo', a term emblematic of Colombia, the novel delves into a sense of fatalism or resignation in the face of adversity. This conceptual framework is intricately interwoven with the plot and thematic elements of the work but may be unfamiliar to readers outside the Colombian context.

By acknowledging and addressing the intricacies posed by cultural differences, translators assume a pivotal role in facilitating cross-cultural comprehension and appreciation. Their skillful navigation of linguistic and cultural nuances serves to construct a bridge, enabling readers to access and embrace the rich tapestry of global literature in their native language. Idiomatic expressions often rely on cultural and linguistic contexts that are unique to a particular language. Consequently, achieving an exact equivalence in translation can prove challenging, requiring the translator to exercise creativity and adaptability in order to effectively convey the intended meaning to readers in the target language. An illustrative example is the English idiom 'before you can say Jack Robinson', which conveys a sense of rapidity or suddenness. It is often employed to describe a situation where something occurs or someone emerges unexpectedly and swiftly. Although its origin in the 18th century remains

somewhat obscure, the exact identity of Jack Robinson has been lost to history. In Serbian, a comparable phrase is 'dok si rek'o piksla', which literally translates to "before you can say: 'an ashtray'". When attempting to translate this expression into English, Chat GPT-3 provided the following response: "To my knowledge, there is no established Serbian idiom or expression that uses the phrase "dok si rek'o piksla". 'Piksla' is not a standard word in Serbian and does not possess a clear meaning or usage. It is plausible that the phrase may be specific to a particular locale or region." While an AI translation may provide a literal translation of the words, it often falls short when it comes to conveying the intended meaning of localisms.

Overcoming linguistic challenges posed by word choice, sentence structure, and the utilisation of literary devices such as metaphors, similes, and allusions requires translators to possess not only linguistic proficiency but also a deep understanding of the cultural contexts and associations tied to the original work. They must employ their creative and interpretive skills to capture the essence of these linguistic nuances, ensuring that the translated version resonates with readers in the target language while staying faithful to the artistic value of the original work. Idioms and cultural references abound in literary works, and their understanding may be confined to specific cultural contexts. For example, F. Scott Fitzgerald's *The Great Gatsby* portrays the main character, Gatsby, as possessing "an extraordinary gift for hope" (Fitzgerald 1999: 3). This phrase is rooted in the concept of the American Dream, which may carry distinct cultural connotations and significance that are not easily translatable to other languages.

Translators face the challenge of capturing the author's voice and style in a manner that remains faithful to the original text while making sense in the target language. Ernest Hemingway, renowned for his spare and minimalist writing style, employed simple language and concise sentences to convey complex emotions and ideas. Themes of loss, perseverance, and the human condition permeate his novels, such as *The Old Man and the Sea* (1952). Translating Hemingway's works necessitates the preservation of his distinct voice and style, while also conveying the depth and intricacy of the original text. A skilled translator must effectively convey the sparse and minimalist qualities of Hemingway's writing while retaining the profound thematic elements and well-developed characters. Furthermore, Hemingway's works often contain cultural references and idioms that may lack the same meaning or significance in other languages. In *The Old Man and the Sea*, for instance, the protagonist Santiago frequently alludes to Joe DiMaggio, a baseball player, as a symbol of strength and perseverance. A competent translator must adeptly communicate the cultural significance of DiMaggio in a manner that resonates with readers in the target language.

In the case of translating Hemingway's novel into Serbian, a competent translator can provide contextual information about Joe DiMaggio, highlighting his status as a legendary baseball player in American culture, consider finding an equivalent Serbian cultural figure or sports icon who shares similar qualities or is associated with strength and perseverance as an equivalent cultural reference, or may choose to find a suitable counterpart in Serbian culture and seamlessly integrate it into the translation, i.e. Novak Djokovic's achievements and his unwavering commitment to his craft make him a prominent figure in Serbian culture, embodying qualities akin to those of Joe DiMaggio. However, it is crucial to exercise caution in selecting the Serbian equivalent, as Djokovic is not a contemporary of DiMaggio, and the setting differs. The translator must carefully weigh the available options to seamlessly integrate a suitable counterpart from Serbian culture into the translation.

Capturing the intricate subjectivity inherent in the text is magnified by the fact that literary works often leave room for interpretation, which further complicates the translation process. The task at hand for translators is to deftly navigate the layers of meaning and symbolism embedded within the text, all while remaining faithful to the author's original intention and ensuring accessibility for readers in the target language. In J. D. Salinger's renowned novel, The Catcher in the Rye (1951), a timeless coming-of-age tale that delves into themes of alienation, isolation, and the search for meaning, the protagonist Holden Caulfield embodies a cynicism and disillusionment towards life. Translating this novel requires an adept understanding of the nuanced interpretations and symbolic elements prevalent throughout the narrative. An illustrative example of this challenge arises in the novel's culminating moments, in which Holden watches his little sister ride a carousel in Central Park. This concluding scene has provoked divergent interpretations among readers. While some perceive it as a moment of hope and redemption for Holden, others view it through a lens of ambiguity and uncertainty. Thus, a skilled translator must skillfully navigate these subjective layers of meaning, crafting a translation that captures the author's intent while simultaneously resonating with readers in the target language. To accomplish this, the translator can employ various strategies. First, providing additional contextual information can aid readers in comprehending the overarching themes and the subjective nature of the story. Secondly, preserving the inherent ambiguity found in the original work is crucial, allowing readers in the target language the freedom to engage with the text and form their own interpretations. Also, the translator must skillfully render the emotions, tone, and voice of the characters, faithfully transposing the cynicism, disillusionment, and intricate emotional landscape onto the target language.

## **3. CORPUS ANALYSIS**

Dealing with linguistic, cultural, and stylistic challenges in literary translation is an essential aspect of every literary translator's role. It is crucial to remain attentive to these difficulties, even when faced with apparently uncomplicated passages in literary works. The analysis, based on four different translations presented in this section, will demonstrate the significance of these challenges. Twenty third-yearAnglistics students attending the course Contemporary English Language 6<sup>1</sup> at the Faculty of Philology at Sinergija University were divided into four groups. The students, whose L1 is Serbian, were assigned a task to translate an excerpt from a short story "Lake Como" by Srđan Valjarević from Serbian into English. Prior to assigning the task to Chat GPT-3, the authors of the paper assessed the quality and accuracy of each translation on general subjective observations (Task 1). Next, all the translations were given marks on the basis of the International English Language Testing System (IELTS) band descriptors (Task 2). Then, the authors decided whether any of the translations should be failed, and after that if any of them should be given the highest mark (a ten) (Task 3). The main idea behind the analysis was to compare the answers of human translators to those of the Chat GPT-3 that are also set out in the paper, with a view to gaining an insight into the extent to which AI and machine learning has improved its understanding of the intricacies of literary translation. The original text is given below, while students' translations are given in Appendix 1:

Stjuardesa je donela hranu u plastičnoj kutiji, zatražio sam joj pivo i rekla mi je da nemaju pivo, samo sokove, flaširane vode, čajeve i kafu. Rekao sam joj da bi mi pivo baš prijalo, i da novac nije problem, platiću ga, bio sam užasno mamuran, i pivo sam baš želeo. Pričali smo na engleskom. Ponovila je da nemaju pivo i rekla je da imaju neke tablete, ukoliko se plašim letenja. Bio sam mamuran i plašio sam se svega, i samo mi je pivo trebalo, to sam joj i rekao, ali ona me je slušala i gledala začuđeno (Komo 9).

#### 3.1. Assessing translation by human translators

When it comes to ranking the translations from 1 (the highest quality) to 4 (the lowest quality) (Task 1), the authors identified *Translation 3* as the most accurate and

It is important to note that the study programme in Anglistics at Faculty of Philology at Sinergija University in Bijeljina does not offer a specific 'translation module' per se. However, it does include courses such as Literary Translation, Simultaneous and Consecutive Translation, as well as Contemporary English Language courses 1-8. These courses focus on practical translation sections in both directions.

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Translation 1 as the lowest in terms of quality. In Translation 3, no basic translation errors are detected. It is well-structured, the meaning of all words, phrases and whole sentences in the source language have been correctly conveyed into the target language, and in terms of syntax and sentence structures, they appear natural. It is worth mentioning that the translator's decision to put the noun 'tea' in its plural form in the target language is an indication that they are familiar with the subtleties and nuances of English grammar, knowing that this noun, which is uncountable, can actually have a plural form when referring to more than one type of tea. *Translation 1* ranks the lowest compared to the other three translations in terms of quality, accuracy and coherence. Several basic semantic and grammatical mistakes were made. The noun 'pivo' is translated as 'bear' in English – an error which could have occurred due to the fact that the nouns 'beer' and 'bear' are homophones, i.e. have the same pronunciation but different spelling. The adjective 'mamuran', the English equivalent of which is 'hungover' is translated as 'tipsy', which completely changes the meaning conveyed in the source language, given that the latter word means slightly drunk. Similarly, the part 'ukoliko se plašim letenja' is translated as 'in case that I was afraid of flying an airplane'. Based on this mistranslation, it could be wrongly interpreted that the narrator is the one who is operating the controls of the airplane, which is certainly not the case. In addition to some major semantic errors and wrong vocabulary, grammatical errors were also noted, i.e. inaccurate verb forms and tenses in certain sentences.

*Translation 2* takes second place. Some minor mistakes were noticed in the translated text, regarding the choice of vocabulary and the ideas expressed in some parts of sentences, e.g. 'zatražio sam joj pivo' is translated as 'I asked her to bring me a glass of beer', despite the fact that nowhere in the source language is it indicated that beer is served in glasses, nor that the narrator asks for a glass of beer. Furthermore, instead of 'have a fear of flights', it would be more natural and better to express the same idea using the phrase 'be afraid of flying'.'Money is no object', on the other hand, should be translated using the past tense form of the verb 'to be', according to the rules of tense shift in narration and indirect speech in the English language, etc.

*Translation 4* is in third place in terms of mistakes and the overall quality of this translation. It is not as good as *Translations 3* and 2; however, the text is coherent and the meaning of the original text is conveyed better in comparison to *Translation 1*. The noun 'bag' is not an adequate translation of the noun 'kutija' in the original text, and the phrase 'great hungover' is not a good choice of a collocation – it sounds more natural to say 'bad/awful/terrible hangover'. The translation of the first part of

the penultimate sentence in the original text, "Owing to my hangover I was afraid of everything", is incorrect and indicates that the meaning conveyed in the source language was misunderstood.

When it comes to assessing translations referring to the IELTS band descriptors<sup>2</sup>. which can give an indication of their quality and accuracy (Task 2), the scores are as follows:

*Translation 1:* Grammatical Range and Accuracy (4), Lexical Resource (3), Coherence and Cohesion (4), Task achievement (4);

*Translation 2*: Grammatical Range and Accuracy (7), Lexical Resource (6), Coherence and Cohesion (7), Task achievement (7);

*Translation 3*: Grammatical Range and Accuracy (9), Lexical Resource (8), Coherence and Cohesion (9), Task achievement (9);

*Translation 4*: Grammatical Range and Accuracy (6), Lexical Resource (5), Coherence and Cohesion (5), Task achievement (5).

When determining whether any of these translations should be failed and whether any of them would get a ten (Task 3), the authors argue that *Translation 1* should be failed. It contains quite a few grammatical and semantic errors, incorrect vocabulary, the meaning in some parts is inaccurately conveyed, and some sentence structures appear unnatural. *Translation 3* is the most accurate one. The reader gets the impression that the excerpt had been written in English, not translated into this language. Needless to say, there is always room for small stylistic and linguistic improvements, but overall, we deem this translation to be a very good one and giving it the highest mark would probably not be a mistake.

### 3.2. Chat GPT-3 assessment of the translations

When asked to rank the translations based on grammar, vocabulary and overall coherence with an explanation for the choice made (Task 1), Chat GPT-3 provided the following answers: (1) *Translation 3*, (2), *Translation 2*, (3) *Translation 4*, (4) *Translation 1*. The explanation regarding the ranking by Chat GPT-3 is given below:

*Translation 1* has several grammatical errors, including misspelling 'beer' as 'bear' and inconsistent use of verb tenses. It also lacks clarity in some parts. The translation is of poor quality and contains multiple errors. The meaning of the original text

ELTS results are reported on a 9-band scale. They are designed to be simple and easy to understand and are re
ported as band scores on a scale from 1 (the lowest) to 9 (the highest).https://www.ielts.org/for-test-takers/howielts-is-scored

is conveyed, but the grammar, vocabulary, and style are all inaccurate. *Translation 2* is much better in terms of grammar, vocabulary, and style. The meaning of the original text is accurately conveyed. *Translations 2* and *3* are both well-written and accurately convey the meaning of the original text, but *Translation 3* has slightly better grammar and flow. *Translation 3* is fairly accurate, it has no major mistakes and it is of good quality with only minor adjustments needed for a smoother read. *Translation 4* has some awkward phrasing and unclear sentence structure, but it still conveys the meaning effectively.

When asked to provide an evaluation of the translations based on the IELTS band descriptors and a short explanation for the choices made (Task 2), Chat GPT-3 provided the following response:

*Translation 1*: Grammatical Range and Accuracy (5), Lexical Resource (5), Coherence and Cohesion (4), Task achievement (3);

*Translation (2)*: Grammatical Range and Accuracy (6), Lexical Resource (6), Coherence and Cohesion (5), Task achievement (4);

*Translation 3*: Grammatical Range and Accuracy (6), Lexical Resource (6), Coherence and Cohesion (6), Task achievement (4);

*Translation 4*: Grammatical Range and Accuracy (6), Lexical Resource (6), Coherence and Cohesion (5), Task achievement (4).

The Chat GPT-3 explanation of the assessment:

Based on the band descriptors, Translation 1 appears to have the most significant errors in grammar, vocabulary, and coherence, which could lead to a lower score. Translations 2, 3, and 4 are generally more accurate, and their language use and coherence are mostly coherent, which can lead to higher scores. Based on the sample text and the band descriptors, I would say that Translation 1 has several significant errors that affect the overall accuracy of the translation. The errors include misspellings, incorrect word choices, and confusing sentence structures. Additionally, some parts of the translation are difficult to understand, which could cause confusion for the reader.

In Task 3 Chat GPT-3 was asked to award each translation a mark from 5 to 10 with a short-written explanation mentioning the good and the bad characteristics of each translation. The answers are given below:

Based on the translations provided, I would give the highest mark to Translation 3. It accurately conveys the meaning of the original text, has few errors or awkward phrasings, and uses appropriate vocabulary and grammar. While there are some minor issues, overall it is a well-done translation.

Translation 1: 5/10 This translation has several errors in grammar, spelling, and vocabulary. It also lacks fluency and coherence in some parts. However, it manages to convey the main idea of the text and some sentences are correctly translated. The use of colloquial expressions, such as "terribly tipsy," shows some effort to make the text more natural. Overall, it needs significant improvement in accuracy and structure.

Translation 2: 7/10 This translation is generally accurate and well-structured, with only a few minor errors in grammar and vocabulary. It maintains the coherence and fluency of the original text, and uses appropriate vocabulary and expressions. However, there are some parts where the translation is not faithful to the original text. For example, the use of "different kinds of bottled water" instead of "bottled water" might give a slightly different meaning. Nevertheless, it is a good translation overall.

Translation 3: 9/10 This translation is very accurate and faithful to the original text, with correct grammar, vocabulary, and structure. It is also fluently and coherently written, making it easy to understand. The translator has managed to convey the nuances of the original text, such as the speaker's desperation for a beer, and the stewardess's surprise at his request. The only minor issue is the omission of the word "some" in the phrase "some pills", which might slightly affect the meaning. Overall, this is an excellent translation.

Translation 4: 6/10 This translation has some significant errors in grammar and vocabulary, which make it difficult to understand in some parts. The use of "Owing to" instead of "Due to" and "great hangover" instead of "bad hangover" are examples of inaccurate vocabulary choices. However, it still manages to convey the main idea of the text, and some sentences are correctly translated. The use of contractions, such as "didn't" and "I'd", show some effort to make the text more natural. Overall, it needs improvement in accuracy and structure, but it is still understandable.

### 4. DISCUSSION

Based on the answers provided by human translators and the ones given by Chat GPT-3, the assessment of the translations is the same. *Translation 3* is ranked the highest, followed by *Translation 2, Translation 4* and *Translation 1* at the bottom of the list. The arguments provided for the assessment are quite similar: AI was capable of detecting and identifying different kinds of translation mistakes and oversights in

each translation of the excerpt, ranging from slight and subtle stylistic errors to major semantic and grammatical ones.

When it comes to evaluating the quality of each translation based on band descriptors, i.e. IELTS criteria, it is noticed that evaluations provided by Chat GPT-3 were somewhat lower than ours. The highest mark that the AI chatbot gave for each of the four criteria was six out of a maximum nine. Interestingly, even though it commented on *Translation 3* being excellent in terms of accuracy, sentence flow and choice of vocabulary, phrases and expressions, it assigned 6 points to it for grammar, vocabulary and fluency and coherence respectively, and only 4 points for task achievement.

Notwithstanding the evaluation given on the basis of IELTS band descriptors, which is where the answers differ to some extent, the chatbot's overall assessment of the quality of translations is in line with ours, as evident in Task 3 assigned to Chat GPT-3. The analysis goes to show that AI has made a step forward in machine translation and is likely to improve in this area in the coming years. To support this argument, the Chat GPT-3 translation of the original text into English is provided below:

The flight attendant brought food in a plastic box, and I asked her for a beer. She told me they didn't have any beer, only juices, bottled water, teas, and coffee. I told her that I really wanted a beer and that money wasn't a problem – I would pay for it. I was terribly hungover and really wanted a beer. We were speaking in English. She repeated that they didn't have beer and asked if I was afraid of flying. I was hungover and afraid of everything, and all I wanted was a beer. I told her that, but she just looked at me surprised and continued to listen.

It needs to be borne in mind, however, that the analysis was carried out on a relatively small number of students and on a relatively small and straightforward excerpt from a literary work. This work is not very challenging in terms of the use of figurative and idiomatic language, or the connotative meanings of words and phrases in the target language, which are key to understanding and faithfully reproducing the content, style, and spirit of a literary work. Overcoming cultural challenges and differences, another very important factor in literary translation, is another aspect of translation that AI developers will still have to work on and put a lot of effort into in order for AI to make more headway towards a deeper understanding of linguistic and cultural complexities and translating finesse that are indispensable to literary translation.

Further research can focus on exploring additional ways of utilising ChatGPT as an assessment tool, including a more complex comparative analysis with human-generated translations, error analysis to identify patterns and areas for improvement (i.e. analysis of the types of errors made by ChatGPT in its translations), assessing the efficiency of post-editing ChatGPT translations (i.e. human translators edit and improve the initial output generated by ChatGPT), or evaluating its performance in specialised translation tasks, such as technical or legal translation (exploring the suitability of ChatGPT for specific translation domains).

The utilisation of AI in the translation process offers both advantages and limitations, particularly for translating literary works. Striking a delicate balance between the capabilities of AI and the human touch is paramount in ensuring faithful and artistically valuable translations. While AI has its restrictions, it can still serve as a valuable tool in the translation process, augmenting the efforts of human translators. Literature, being an intricate and creative realm, necessitates the discerning eye and creative prowess of human experts to produce translations of exceptional quality.

# 5. CONCLUSION

The integration of AI into translation brings several notable benefits: time-saving through draft generation, which can subsequently be refined and enhanced by human translators; ensuring consistency and accuracy through AI-powered terminology management tools; and facilitating style analysis tools that enable a nuanced understanding that can be reflected in the translation, among others. These tools also aid language learning and sentiment analysis, enhancing translation quality. However, the intricate nuances, metaphors, and figurative language present in literary works pose challenges for AI systems, which struggle to comprehend and convey the richness and depth of such artistic expressions. Hence, the importance of human expertise, creativity and critical thinking in producing translations that resonate with the artistic value of the original work cannot be understated.

The harmonious fusion of AI capabilities and human ingenuity ensures the preservation of the artistic essence of literary works and the cultivation of ethical and moral development. By embracing the collaborative potential of AI and harnessing the distinctive contributions of human translators and teachers, we can navigate the challenges and opportunities of the AI era, enriching the field of translation and empowering students to become adaptable, resilient, and ethically conscious individuals.

In the context of education, the emergence of AI necessitates a reevaluation of the roles of both teachers and students. While AI provides valuable assistance and insights, it cannot replace the pivotal role of teachers in fostering a supportive and en-

riching learning environment. Teachers serve as mentors, guiding students in navigating complex ethical issues and developing their own moral compass. Education is linked to the psychological, social, and political facets of the human being, as argued by Guilherme (2019: 53), which can only be truly fulfilled by *Bildung*, that is, by establishing a real and deep connection between teachers and students who respect and accept each other. In addition, it is important to note that this relationship should not be confused with dialogue (i.e. questioning and answering). Literature and art, with their capacity to cultivate critical thinking, ethical principles, and a deeper understanding of human values, remain indispensable in the education process. AI, while offering valuable support, falls short in nurturing these essential aspects of education, emphasizing the enduring significance of human "intervention".

# REFERENCES

- 1. Apple, Michael W. (1988), *Teachers and texts: a political economy of class and gender relations in education*, Routledge, London
- 2. Beer, David (2017), "The social power of algorithms", *Information, Communication & Society*, 20(1), 1–13.
- 3. Campolo, Alexander, Kate Crawford (2020), "Enchanted determinism: Power without responsibility in artificial intelligence", *Engaging Science, Technology, and Society*, 6, 1–19.
- Colleoni, Elanor, Daniela Corsaro (2022), "Critical issues in artificial intelligence algorithms and their implications for digital marketing", In: R. Belk & R. Llamas (eds.), *The Routledge companion to digital consumption*, Routledge, 166–177.
- 5. Crawford, Kate (2016), "Can an algorithm be agonistic? Ten scenes from life in calculated publics", *Science, Technology & Human Values*, 41(1), 77–92.
- 6. Fitzgerald, Scott (1999), The Great Gatsby, Wordsworth Editions, London
- 7. Floridi, Luciano, Massima Chiriatti (2020), "GPT-3: Its nature, scope, limits, and consequences", *Minds and Machines*, 30, 681–694.
- 8. Guilherme, Alex (2019), "AI and education: the importance of teacher and student relations", *AI & Soc*, 34, 47–54.
- 9. Illia, Laura, Elanor Colleoni, Stelios Zyglidopoulos (2023), "Ethical implications of text generation in the age of artificial intelligence", *Business Ethics, the Environment & Responsibility*, 32(1), 201–210.

- 10. Karpinska, Marzena, Mohit Iyyer (2023), "Large language models effectively leverage document-level context for literary translation, but critical errors persist", arXiv preprint arXiv: 2304.03245.
- 11. Kreps, Sarah, R. Miles McCain, Miles Brundage (2022), "All the news that's fit to fabricate: AI-generated text as a tool of media misinformation", *Journal of Experimental Political Science*, 9(1), 104–117.
- 12. Munoko, Ivy, Helen L. Brown-Liburd, Miklos Vasarhelyi (2020), "The ethical implications of using artificial intelligence in auditing", *Journal of Business Ethics*, 167, 209–234.
- 13. Murray, Alex, Jen Rhymer, David G. Simon (2020), "Humans and technology: Forms of conjoined agency in organizations", *Academy of Management Review*, 46(3), 552–571.
- 14. O'Neil, Cathy (2016), *Weapons of math destruction. How big data increases inequality and threatens democracy*, Crown Books, New York
- 15. Proust, Marcel (1921-22), *À la recherche du temps perdu* (French edition), https://ebooks-bnr.com/
- Scott, Kevin (2020), "Microsoft teams up with OpenAI to exclusively license GPT-3 language model", Official Microsoft Blog. https://blogs.microsoft.com/blog/2020/09/22/microsoft-teams-up-with-openai-to-exclusively-li cense-gpt-3-language-model/
- 17. Valjarević, Srđan (2019), Komo, Laguna, Beograd
- West, Sarah Myery, Merdith Whittaker, Kate Crawford (2019), "Discriminating systems: Gender, race and power in AI", In: *AI Now Institute*. https://ain owinstitute.org/discriminatingsystem

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# IZAZOVI I MOGUĆNOSTI KNJIŽEVNOG PREVOĐENJA U DOBA VEŠTAČKE INTELIGENCIJE: USPOSTAVLJANJE RAVNOTEŽE IZMEĐU LJUDSKE EKSPERTIZE I MOĆI MAŠINA

#### Sažetak:

U ovom radu se sagledava uloga nastavnika i književnih prevodilaca u doba veštačke inteligencije i mašinskog prevođenja te uočavaju se izazovi koji se javljaju prilikom prevođenja književnih tekstova. Posebna pažnja usmerena je na postizanje ravnoteže između ljudske ekspertize i moći mašina kako bi književna dela bila dosledno prevedena, a u isto vreme njihova temeljna umetnička vrednost bila zadržana. Korpus rada čini analiza četiri prevoda odlomka iz kratke priče Komo srpskog pisca Srđana Valjarevića. Odlomak sa srpskog na engleski jezik preveli su studenti treće godine Anglistike Filološkog fakulteta Univerziteta Sinergija u Bijeljini, kojima je srpski maternji jezik. Ocenjeni su kvalitet i tačnost prevoda, uz detalino obrazloženje naših preferencijalnih ocena. Ocena i kvalitet prevoda su, zatim, upoređivani sa onima koje je generisao Chat GPT, kako bi se dobila saznanja o napretku veštačke inteligencije u oblasti književnog prevođenja. Ova sveobuhvatna evaluacija prevoda, koja uključuje kako ljudske prevodioce tako i jezičke modele podržane veštačkom inteligencijom (LLM), pruža dublje razumevanje konkretnih prednosti i nedostataka koje LLM pokazuje u kontekstu književnog prevođenja. Ovim procesom ljudske evaluacije nastojimo da osvetlimo specifična područja u kojima se LLM prevodioci ističu i identifikujemo izazove s kojima se i dalje suočavaju. Rezultati doprinose dubljem razumevanju potencijala i ograničenja veštačke inteligencije u oblasti književnog prevođenja i otvaraju put za buduća istraživanja u ovoj oblasti, ističući kontinuirane napore za postizanje ravnoteže između ljudske kreativnosti i efikasnosti mašine.

Ključne reči: književno prevođenje; mašinsko prevođenje; izazovi književnog prevođenja; veštačka inteligencija; Chat GPT-3

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