Is it AI, MT or PE that worry professionals: results from a Human-Centered AI survey

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Abstract

Translation technologies have historically been developed without substantial input from professionals (e.g. O'Brien, 2012). Conversely, the emerging human-centered AI (HCAI) paradigm emphasizes the importance of including end-users in the "process of conceiving, designing, testing, deploying, and iterating" technologies (Vallor, 2024: 17). Therefore, early research engagement on the attitudes, needs and opinions of professionals on AI implementation is essential, as incorporating them at later stages "results in issues and missed opportunities, which may be expensive to recover from due to the cost, time, resources, and energy spent" (Winslow and Garibay, 2004: 123). To this end, this article presents a qualitative analysis of professional translators' attitudes towards AI in the future, centered around the role of MT and post-editing (PE). The discussion draws on data collected from open-ended questions included in a larger survey on control and autonomy from an HCAI perspective, which were thematically coded and qualitatively examined. The thematic analysis indicates that predominant concerns regarding the future of the AI-driven translation industry still revolves around longstanding issues in PE and MT literature, such as PE, translation quality, communicating and educating LSP, clients, users, and the broader public, as well as maintaining human control over the final product or creativity. This is explained to some extent to the relatively slow rate of integration of AI technologies into translation workflows to date (e.g. ELIS, 2025; Rivas Ginel et al., 2024; GALA, 2024, 2025; Jiménez-Crespo,

2024), or the fact the professional report using AI primarily for tasks related to translation, but not necessarily to PE the output of LLMs or NMT (Rivas Ginel and Moorkens, 2025).

1 Introduction

The launch of ChatGPT by the company OpenAI in November of 2022 started a revolution that was intended to transform a large number of fields (Raiaan et al., 2024). Large Language Models (LLMs) and different generative AI apps have been gradually implemented across professional fields, with translation and interpreting identified as an area of high exposure to negative impacts of AI (Eloundou et al., 20 23). In this context, concerns regarding the impact of AI have led to the emergence of the multidisciplinary field of Human-Centered AI (HCAI). This area of inquiry aims to position humans at the centered of technological developments (Ozmen Garibay et al., 2023), thereby ensuring that "their values and agency [are taken] into account" (Capel and Brereton, 2023: np). In countering the prevalent hype in the AI industry, HCAI represents "a paradigm shift, moving beyond the prevalent technology-centered approaches towards AI driven by human values" (Schmager et al., 2023: 7). A key issue addressed in this paper is that, even when AI and LLMs are supposed to revolutionize translation and interpreting practices, they are in fact not human-centered technologies (Vallor, 2024). Scholars have argued this because LLMs were developed without a clear focus on the needs, demands or preferences of existing end users. Instead, they emerged because evolving architectures and processing capabilities allowed companies, such as OpenAI, to successfully implement them (ibid). Nevertheless, they originally came without guardrails or clearly defined professional use-cases unsupervised use beyond the industry hype. This lack of human centeredness for professional tasks means that over the last two years, a large body of research

has been devoted to how, when or to what extent LLMs might be perceived as useful or and can be successfully integrated in professional tasks. In the language industry, Gen-AI and LLMs have been integrated (GALA, 2024, 2025; ELIS, 2025), often through trial and error and careful testing, in a wide range of tasks that include machine translation (MT), MT evaluation or Automatic post editing (APE). Both industry (GALA, 2024, 2025) and scholarly publications (Rivas Ginel and Moorkens, 2024) include a wide range of tasks in addition to translation. For example, recent studies have shown that professionals primarily use LLMs for tasks such as generating inspiration, summarizing content, rephrasing texts, understanding technical expressions, or performing terminology-related tasks (Rivas Ginel and Moorkens, 2024: 269). Nevertheless, translation is not reported as the most frequent use.

In this context, this paper reports on a qualitative section of a wider survey (Jiménez-Crespo, 2024) on attitudes towards the future impact of AI in three key areas of Human-Centered AI approaches, control, autonomy, and automation (Shneiderman, 2020, 2022). The need for this type of research is evident, as a key principle of HCAI approaches emphasizes the active participation of end-users throughout "process of conceiving, designing, testing, deploying, and iterating" technologies (Vallor, 2024: 17). Kishimoto, et al. also stress the importance of "involv[ing] potential users from the early stages of product and service development" because having an "inclusive R&D process is imperative" (2024: 3). They need to be incorporated in the early stages of AI development and deployment because incorporating them at later stages "results in issues and missed opportunities, which may be expensive to recover from due to the cost, time, resources, and energy spent" (Winslow and Garibay, 2024: 123). As AI technologies continue to advance, the understanding of user opinions and attitudes are critical for their successful adoption into the translation workflows. Such understanding helps to mitigate the risk of these technologies being perceived negatively, as imposed or restrictive by end-users (Ruokonen and Koskinen, 2017). These negative perceptions often lead to challenges with technology adoption and reduced job satisfaction (Sakamoto et al., 2024; Christensen et al., 2024).

The qualitative data analyzed for this paper focuses specifically on discourses by professionals surrounding machine translation post-editing (MTPE) on open ended questions related to future challenges posed by AI, as well as how automation might impact the techno sociological work conditions of translators in the USA. Published quantitative results (Jiménez-Crespo, 2024)[1] from the same survey study showed high self-reported levels of "perceived control" and "autonomy" over translation technologies, and subjects reported medium levels of forced technology use. Future perceived control in an AI era declined, but this perceived loss of control in the AI era was attributed to human agents in the process rather than AI apps or algorithms (big tech, developers, Language Service Provicers (LSPs), project managers, clients, etc.).

2 Methodology

This mix methods study involved a self-administered online Qualtrics survey available to professional US-based translators. The study obtained ethical clearance by Rutgers University ethical board and was piloted and revised. The survey was made available until June 15th, 2024 and 50 participants completed the survey. Participants were recruited online via e-mailings through all major professional associations in the US (e.g., ATA Language Technology Division, ATA Spanish Division, North-Eastern chapters of the American Translators Association) and social networks (e.g. LinkedIn). The only requirement to participate was to be a full-time translator in the USA with more than 2 years of experience. To encourage participation, a snowball sampling method was used (Goodman, 1961). Qualitative data in this paper were analyzed through thematic content analysis (Braun and Clark, 2006), utilizing a coding scheme that was developed inductively from emerging patterns in the data, then iterated, and finally used to categorize all responses. The bottom-up inductive analysis resulted on a coding scheme based on patterns in existing responses across the dataset. This initial set was used then by an additional researcher, and the coders then met to discuss any differences and to refine the scheme. Using this approach, the proportion of responses within each group that corresponded to a specific code were calculated, representing a theme identified in the dataset.

The survey had a final section with open-ended questions related to the future of AI-driven translation technology integrations in the HCAI

era. This section included five questions that provided the data analyzed in the present paper:

Question 23a: Human-Centered AI and the future Human-Centered AI involves a high degree of automation with humans firmly in control of the overall process. Imagine that in the near future you will work in a translation platform or translation management system powered by AI integrations. […] do you think you will have control over the integrations of AI in the translation process? Please explain

Question 25: Which part or subcomponents of the translation process do you think you might lose control over as AI becomes increasingly integrated into the workflow?

Question 26: If you had to provide input to design an AI technology tool to augment your capacities to translate better, more efficiently, or faster, how would you describe it?

Question 27: Human-Centered AI involves a high degree of autonomy of the human agent(s). If you would develop AI applications for translation, what would "autonomy" mean for you?

Question 28: In your opinion, what are the main challenges translators might face in the age of automation and AI?

All questions were optional, and participants could skip or not answer specific questions to avoid "survey fatigue" (Davis, 2019). The following responses were recorded for each question: Q23a= 25, Q25= 43, Q26= 35, Q27= 38, Q28= 41. The total responses recorded for open-ended questions dealing with an AI driven future were 182. The focus of the present analysis is on those themes and subthemes related to MTPE and MT, as well as conditions and issues related to these practices.

3   Results

3.1   Themes and subthemes

As previously mentioned, all responses to the open-ended questions were coded by the author and an additional researcher. The analysis of the dataset the author using thematic content analysis (Braun and Clarke, 2006). This resulted in 19 codes for themes and subthemes in those five questions related to the AI-driven future. The themes and subthemes are listed here in order of frequency.

- **PE**: References to post editing, either from NMT systems or LLMs.

- **Quality**: Issues related to translation quality of the final products or its implications.
- **Communication_edu_others**: Any issue related to how translators communicate or discuss the implications of using AI, NMT or other technologies with clients, LSPs, users or society at large. It includes issues related to perception of translators and translation in society, as well as the impact on their loss of professional recognition or status.
- **Replacement**: Any issue related to the potential replacement of translators by any type of technology.
- **Control_final**: Subtheme within the control theme related to the human control over the final product.
- **Tech_on_off**: Any reference to the ability of translators to activate or deactivate any type of technology for projects or at any point throughout the translation process.
- **Rates_competition**: Subtheme within the theme "Job Conditions", referring to the impact on translation rates or competition among translators that leads to reduced rates.
- **Creativity**: Reference to translation creativity.
- **Terminology**: Any reference to issues related to terminology during the translation process.
- **Transfer**: This is a subtheme related to PE, in which translators reference the ability to "transfer" the content or to produce the initial draft themselves, rather than being offered translation suggestions.
- **Adaptive_interactive**: References to adaptive or interactive technologies, both NMT or LLMs.
- **AI_companies**: References to AI or technology companies, typically relating to those in control of processes, development, and integrations.
- **Job_conditions**: References to job conditions of translators.
- **TM_improv_replacement**: References to TM either to improvements or to losing TM technologies due to AI.
- **Unsure**: Direct reference about respondents being unsure or unable to respond to a question that often appears in general survey studies on AI (e.g. Bingley et al., 2023).
- **Override_locked_segments**: This is a subtheme within the "PE" theme where translators discuss that they do not like locked

segments or the inability to override suggestions by NMT, TM, or AI.

- **Speed**: References to gains in translation speed using technology.
- **Human_superiority**: Direct reference to human superiority to machines on translation tasks.
- **Collaboration_with_devs**: References to the desire by translators to collaborate with developers of technologies to directly improve them.

Some other themes and subthemes that frequently appear in both TS and HCAI literature were less present in these responses, such as data biases (N=2), ethics (N=2), usability (N=3) or privacy (N=3).

3.2 Main themes: a summary

Table 1 shows the most frequent themes and subthemes for all questions, and here PE is not the most frequent theme in any of them. The second column, the summary, includes the aggregation of all values from all questions (R= 182). It includes the most frequent themes in all answers related to the future of the profession in the AI era. PE appears as the main theme overall for all, followed by quality, communication and education of other parties (clients, LSPs, users, developers, society), control over the final product and the ability to turn on and off technologies or to decide when to use them.

The rest of the columns show the most frequent theme in each question; For example, the main theme in Q26 (input to developers) is Adaptive_ interactive_tech. This theme does not refer exclusively to adaptive or interactive NMT technologies (Daems and Macken, 2019), as it also includes any type of "adaptation" including the ability of AI implementations to adapt to different contexts, genres, registers, or even dialectal variation. Thus, it includes adaptation both to user preferences and to text-specific issues. Other themes that frequently appear include communication and education with clients, end-users, LSPs or society at large for Q28 related to future AI challenges. Q25 related to what might be lost in the AI era showed that the preservation of human creativity was the most important theme, while for Q27 related to what "autonomy" means in the AI-driven future the main theme was human

control over the final product. Finally, in Q23a that requested additional information on whether translators will retain control in the AI era, the theme AI companies was the main theme. This last issue aligns with findings from previous research (Jiménez-Crespo, 2024) that translators place the blame on human agents for losing control and autonomy regarding technological decisions rather than AI technologies themselves, such as AI companies, AI, and translation tech developers, LSPs, translation managers or workflow designers.

3.3 What is lost with AI? From "transfer" to PE

In question Q25, related to what might be lost with future AI integrations, a subtheme within the PE theme was identified that was labeled as "transfer". The three most frequently identified themes and subthemes in participants' responses to what will be lost with AI were "creativity", "transfer", and "PE". In the iterative analysis to identify the themes and subthemes, it was decided that "transfer" represented a subtheme within the "PE" theme because both "PE" and "transfer" represent two sides of the same coin. Depending on the question, the perceived loss of the ability to "transfer" the initial translation or whether translators will lose the ability to produce the translation from scratch represents the same theme from a different perspective related to how translators cognitively process translations. This shift from traditional translation from scratch to PE is thus frequently described as a "loss." (e.g. Pielmeier and O'Mara, 2020; Girletti, 2024). Notably, translation scholars have always emphasized that translation involves a "transfer" stage. From a theoretical perspective, Gideon Toury (1995) proposed three postulates of translation or what "translation" is: the (1) source and (2) target text postulates, as well as the (3) 'transfer' one, underscoring that translation proper requires a "transfer" stage. Studies have delved into whether automatic transfer, followed or not by PE, can be considered as "translation". Similarly, resistance by professionals to the practice of PE is based on the premise that automatic transfer is not conceptualized a type of "translation". Thus, in this Q25, the subtheme "transfer" was identified in 21.73% answers, while the wider theme "PE" represented 15.94% of the tagged themes identified. Across all survey questions analyzed in this paper, these themes represented 10.68% and

Most frequent themes	Perceptions towards AI-driven future Summary	Q. 28. AI Challenges (R=41)	Q25.What parts of the process will be lost (R=43)	Q26. Input to design augmented tech (R=35)	Q27. Autonomy in an HCAI future (R=38)	Q23a. Future control in HCAI age (R=25)
N1	1. PE	1.Comm_Edu	1.Creativity	1. Adapt_interact_tech	1. Control_Final	1. AI_companies
N2	2. Quality	2. Quality	2.Transfer	2.Configuration	2. Tech_on_off	2. Term
N3	3. Comm_Edu	3. Replacement	3. PE	3. Unsure	3. PE	3. Unsure
N4	4. Control_Final	4. Rates_Competition	4. Quality	4. Usability	4. Privacy	4.Diff_workflow integration_process
N5	5. Tech_on_off	5. PE	5. Term	5. Speed	5. Configure	

Table 1: Summary of most frequent themes in each open-ended question related of the AI driven future. R indicates number of responses for each question, while N indicates the order of frequency for each theme (N1-N5).

6.47%, respectively. Notably, one key finding is that depending on how questions are phrased, responses refer to PE or transfer as the terminology of choice, even when though both terms might describe to the same notion of professionals not translating without prepopulated translation candidates. Participant P34 directly addressed this issue when responding to a question about what professionals might lose in the age of AI:

- The power to negotiate fare rates, the ability to translate from scratch if all the agencies are asking is postediting, quality of the final result (P34) [emphasis own]

This response also addressed other key themes, such as "quality" and "rates". This sense of loss in translation, conceptualized as the inability to craft the initial round of translation, is described by respondents as losing "the actual conversion of one language to another" (P15), the "translation step" (P45) or "the act of translating. I feel humans will become proofreaders" (P14). This is often conceptualized negatively, such as the following response indicating not only that LSPs will require the use of technology, but "even worse", LSPs will present to translators pre-processed files with AI:

- I'm expecting it will be integrated into tools that LSCs will try to require use of. *Even worse would be receiving pre-processed files (segments pre-populated and sometimes locked for editing) where the pre-processing is automatically generated from AI* (rather than TMs) (P20) [emphasis own].

The last words of this response related to phasing out TM technologies is addressed in another subtheme in the analysis. This is perceived as a potential loss in the AI age, as TM technologies are perceived as reflecting human contributions. This subtheme "Losing_TM" within the overall "TM" theme represents 2.8% of overall themes (N=3). Participants described the "transfer" theme in various ways, but it is most often identified with the initial or first phase of translation:

- The initial production of a draft (P16)
- Initial translation and possibly final product (P20)
- The first translation step (P45)
- The initial round of translation, also the ability to override a machine's -approval/acceptance of a translated segment/term/usage/grammar etc. (P41)

In these formulations it can be perceived that respondents often indicate that "translation" will be lost, signaling that PE might not be translation at all. This perception of losing the ability to "transfer" is often related to the second most frequent theme identified in this question, losing "creativity" or the creative potential of the translator:

> -Translating! *AI is not creative, and I work in creative fields of translation.* I don't want to see AI
> suggestions, because they will block my own creativity (studies have shown this to be true). So I am not interested in integrating AI into my workflow. I intend to produce "hand-crafted" translations as long as I can, and I think I work in fields where this approach is valued (P43) [emphasis own].

The fact that PE leads to the loss of creativity has been identified in previous PE studies (e.g. Álvarez-Vidal, Oliver and Badia, 2020), and it is recently one of the most popular research trends within a multidisciplinary area that includes translation studies, literary studies, and computational linguistics (e.g., Guerberof-Arenas and Toral 2020, 2022; Toral and Guerberof-Arenas, 2024; Winters and Kenny, 2023; Kenny and Winters, 2024; Resende and Hadley, 2024).

3.4 Control or autonomy

Control and autonomy are two cornerstones of HCAI approaches (Shneiderman, 2020, 2022). Q27 directly addressed what autonomy might mean in the AI-driven future. The analysis reveals that autonomy is conceptualized in terms of whether translators retain full control of the range of technologies they use (or not), and whether these technologies are imposed by third parties, such as LSPs or AI companies. The role of LSPs and key stakeholders in determining the adoption and implementation PE practices and how it has been previously studied, for example, Nitzke et al. (2024), detail the factors that influence workflow decisions regarding MTPE that are subsequently imposed on participating professionals. In literary translation, Way et al. (2024: 97) stress the importance for practitioners to retain human "control over their preferred translation workflow" and whether to include MT. In this regard, one key

finding in this study is that translators perceive their autonomy in the translation process often in terms of whether they can reject any work that involves the imposition of any tool (select_reject_work):

- I can turn away work that requires me to use tools I don't want to work with (P1)
- I don't work for clients who control my technology (P18)

This is often conceptualized in terms of the ability to make their own decisions rather than having choices imposed upon them:

- Ability to decide which ones are better and when, and not to depend on clients or others to impose (P29)

The reasons why freelancers often conceptualized autonomy as the ability to reject or select work assignments are related to not having access to certain technologies if they are not provided by the LSP, or even that from a usability standpoint they do not feel comfortable using:

- I do not accept assignments that require use of technology I don't have access to or am not comfortable using (P44)

Participants, thus, showcase what has been shown in the study by Nitzke et al. (2024) with stakeholders in making MTPE decisions that "working conditions and prospects for highly qualified and technology-savvy translators in the high-end segment are good despite, claims to the contrary (2024: 143).

Control and autonomy extend to the most frequent theme in Q27, the ability to retain control over all features of the final product (control_final) as observed in previous studies (Rossi and Chevrot, 2019; Girletti, 2024). Regardless of whether PE is used, in combination with AI solutions or independently, respondents indicated that their autonomy would only be considered respected in the future if they retain their agency and decision-making ability in all aspects of the final product.

- Make the final decision for all the steps of the translation (P29)

For example, these respondents indicate that they welcome AI suggestions in the translation process,

but they would like to have the final say in the translation.

- The AI is really just making suggestions; "autonomy" is me creating the translation (P44).
- Be able to create the translation from scratch, with the AI assisting me with research in context (P34)

In some instances, respondents continue to welcome automation and AI assistance, yet they express their resistance to segments that are machine evaluated and automatically approved:

- That nothing is translated without the user clicking a check box to indicate the translation is human approved (P31)

This ties with one of the subthemes identified within the PE theme, the override_locked_segments:

- As the translator, to be able to change anything you didn't think was correct (P28)
- […] the ability to override a machine's approval/acceptance of a translated segment/term/usage/grammar etc. (P41)

In addition, one respondent (P42) indicates that nothing is automatic given that humans set the parameters for automation:

- Nothing is automatic, all autonomy is first decided by a human (P42)

This response is related to the previously mentioned issue that respondents always blame other human agents for their perceived lack of autonomy and control. In this regard, another of the key themes of this area is the ability to control how and when technology is implemented for specific projects, translations or throughout the day (tech_on_off). This ability to integrate different technologies depending on human cognitive or processing demands, based on user preferences or psychophysiological status, emerges as a key theme in this study. For example, respondents indicate:

- The freedom to select which components I incorporate into my workflow, and the extent to which such components are incorporated in any given project (46)
- Autonomy in my view means: 1) Ability to activate/deactivate functionalities […] (P9)

It also implies that during any specific passage, moment or part of a project assistance could be turned on or off:

- Autonomy for me would mean that with a click of a button I could turn AI intervention on or off (P43)

Here, a key issue in AI augmentation approaches is the need for those integrating technologies into current or future workflows to establish "which tasks to automate, which tasks to augment, and which tasks to leave to humans" (Sadiku and Musa, 2021: 191). In practice, decisions related to the levels of automation are often made by LSPs and/or translation managers. However, professionals prefer for the locus of control to reside in themselves, being able to decide when to PE, when to translate from scratch, or when and how to integrate LLM suggestions. This, as Ruffo and Macken indicate, might be more important than any time or efficiency gains for literary translators (Ruffo and Macken, 2024: 241).

3.5 Adaptive or Interactive MT and AI technologies

Adaptive or interactive MT has been one of the key technological developments prior to the emergence of LLMs (e.g. Daems and Macken, 2019; Daems, 2024; Briva Iglesias and O'Brien, 2023). In Question 26, participants were asked to identify input features they would like to provide to AI developers to design technologies that would augment their capacities to translate better or more efficiently. Interestingly, adaptive or interactive MT capabilities emerged as the most frequently mentioned theme among respondents. For instance, one respondent indicated in a brief response "Adaptive AI" (P45) or "Off-line and adaptable translation" (P2). This is also expressed in the following fashion:

- MT that adapted based on the way I post-edited it in a previous segment of current job or of previous translation job (P33)

- I can't envision anything outside better translation memories. I would like AI to remember how I translated individual words or phrases (P31)

Again, interaction closely relates to the previous subtheme related to locked segments or the ability to override AI decisions:

- It should be interactive rather than "over the fence" or post-editing. Offer suggestions rather than assume you will accept it 100% (P20)
- …Offers flexibility: Functions can be activated/deactivated at will… 3) Can interact with external sources:…. Gives the translator freedom to edit the target language as he/she wishes… (P9)

The adaptive capabilities of the MT or AI system should extend not just to the interaction and adaptation to the user, but also to the type of text and genre. Thus, the ability to make context-specific suggestions or choices emerges as a subtheme within this adaptive/interactive theme.:

- I would like to see AI tools that can make choices based on context - time, place, type of document, language register, etc. (P1)
- To grasp more context (P14)

This ability to adapt to context also extends to a key issue in languages with multiple dialectal varieties, specifically the ability to help in dealing and adapting to specific language varieties (Jiménez-Crespo and Rodríguez, 2024).

- One of the things I struggle with, is that Spanish is spoken differently across the world. So AI translates for one word that may not be used in some of these countries. An optional translation tool would be great. (P47).

3.6 Other themes related to PE and MTPE: from lower rates to replacement or collaboration to develop tools

Several additional themes relate to MTPE and appear in published survey-based literature, such as concerns regarding reduced rates through a combination of PE and AI app integration (e.g. Laübli and Orrego-Carmona, 2017; Caldwell,

O'Brien and Teixeira, 2018; Alvarez-Vidal, Oliver and Bandia, 2020; ELIS 2025). As indicated in the 2024 ELIS report (2024), professionals normally conflate both MT and AI to blame for lower rates as "AI and MT are considered to be equivalent in the sense that both reduce the appreciation and therefore also the financial compensation, for human language work" (ELIS 2024: 40). This is perceived in the analyzed data, with some participants explicitly linking the perceived future threat of AI integration to MTPE, particularly due to its potential effect of lowering translation rates:

- Clients might approach translators with machine post-editing assignments rather than translation jobs to save money (P7)

Other participants report this fear of lower rates with the fear of replacement in some tasks:

- Economic challenges: a tighter market for translators with lower rates. […] Now translators will be hired for less money to revise or check AI writing or translation (P43).

In some cases, this fear of lower rates is also connected to fear of replacement and the disappearance of professional translation work:

- I think the main challenge will be to have a job to do. If companies go totally for AI without human control or humans post editing the translations, then there will be no jobs (P47)

While others blame potential lower rates with the hype of the industry on the abilities of AI apps.

- Downward pressure on rates without commensurate gains in efficiency or reductions in actual labor expenditure due to overblown confidence in the capacity of AI. Indeed, a bad tool can often *reduce* efficiency or *increase* labor, if my experiences with MTPE are any indication. (P46)

Nevertheless, a recent study does not show a rate reduction in the AI age with 70.34% of respondents to recent survey indicating similar or increasing rates (Rivas Ginel et al., 2024), while other surveys have shown otherwise (e.g., ELIS 2025). In addition, as shown by other studies, the fear or

lower rates is related to competition by other translators that accept certain conditions that impact across the board:

- Lower and lower rates for translation (translators using AI accept lower rates and that lowers the rates across the board). (P31).

Nevertheless, even when the attitudes towards PE and automation in the data are mostly negative, some positive attitudes are still also found:

- Many translators also feel like automation and AI is here to steal their livelihood. I personally don't feel that way, as I understand automation can be good if we have a voice in how it's implemented. (P25)

In any case, this positive attitude is directly connected to the ability to control automation and how it is implemented. As indicated in a recent study on claims of AI augmentation in collaborative platforms by Jiménez-Crespo (2023), translators can only be augmented from a HCAI perspective if they locus of control resides in human participants, and they fully retain their agency.

A final theme of interest is the call from professionals to collaborate with developers, a key issue for technology to be human centered (Vallor, 2024; Schmager et al., 2023). This is something that has not happened historically (O'Brien, 2012), with developers of MT systems more interested in efficiency gains over creating human centered tools. This seems to be a trend that is starting, as reported in Rivas Ginel and Moorkens (2024) but it is still a desirable position for translators.

- I could be wrong, but I get the impression AI companies are not including translators in conversations related to design and functionality, but they only want translators to do language proofreading to help perfect AI's language output (P15)

Translators thus would like to be part of the development process beyond having their output used for training systems and extending it to user experience and user interfaces (Briva-Iglesias and O'Brien, 2024).

4 Limitations of the study

The study had certain limitations. First and foremost, the size of the sample. As previously mentioned, the call for participation was posted on the main professional forums in the USA and several chapters of the American Translators Association. It is possible that both the extensive nature of the survey and the theoretical approach that focused on certain aspects related to HCAI, control and autonomy might have discouraged potential participants or prevented them from completing the survey. In addition, no direct compensation was offered for participation. Second, it is possible the "survey fatigue" (Davis, 2019) might have influenced response rates, given the large numbers of national and international AI survey studies. Nevertheless, it can be argued that the study is representative of the targeted population to the extent that some results overlap with similar much larger surveys in Europe. For example, the ELIS (2024) and the Rivas Ginel et al. (2024) survey identified a 37-40% use of AI and LLMs by professionals in mid 2024, the same as the present study (Jiménez-Crespo 2024). While the relatively low response rate might be due to a methodological issue in the instrument design, the substantial data compiled provides a clear snapshot of the current attitudes towards AI. In terms of replicability, the complete survey is already accessible in an open science, freely accessible journal for replicability in other regions or settings (Jiménez-Crespo 2024).

5 Conclusions

This qualitative study explored the attitudes towards AI, particularly focusing on HCAI issues, such as control and autonomy, in the context of MTPE and the MT capabilities of recent AI driven LLM models. The survey was responded by 50 US-based professionals and the present study focused on five open ended questions about the future impact of AI on their profession, future job conditions, autonomy or how they envision an "augmented" future.

Overall, the results show that the main future challenges and attitudes towards AI technologies in the AI era primarily center on PE, control over the initial transfer process from the source text, and translation quality. This is followed by themes, such as communicating and educating LSP, clients, users, and society at large, human control over the

final product and the ability to turn on and off technologies or decide when and how to use them. Other less frequent themes emerge as key areas of concern depending on the question posed to respondents, such as creativity, and the attitudes toward adaptive or interactive technologies. When asked about the main challenges posed to translators, issues such as human replacement or rates also appear as key themes. In summary, the thematic analysis of the dataset reveals that those current concerns regarding the AI-driven future still revolve around established issues in PE and MT literature.

Notably, several themes and subthemes that frequently appear in both TS and HCAI literature were less present in these responses towards the future of the profession in an HCAI era, such as data biases, ethics, or usability. Current attitudes toward an AI-augmented future remain predominantly characterized by established concerns, such as resistance to PE, questions about whether relinquishing the initial draft translation (the transfer stage) fundamentally alters the essence of "translation," and related implications for quality, compensation rates, and creative expression. In terms of what professionals' expressed demands, the main themes in the data revolve around developing adaptive or interactive MT and LLM technologies and the full ability to control the final product without impositions such as locked segments, terminology, or the ability to control or override any AI implementations. This study addresses calls for further research into translators' attitudes towards translation technology in MT and AI era (Sakamoto et al., 2024; Christensen, Bundgaard and Flanagan, 2024), and demonstrates the need of a human-centered approach to foster translators' well-being, satisfaction and rates of adoption of technologies.

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