



AI-Induced Emotions: A Translator Vulnerability Perspective

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Abstract As technological developments, such as artificial intelligence or large language models, are rapidly transforming the profession of translation, the emotional vulnerability of translators has remained largely underexplored. Adopting vulnerability as a conceptual lens, this study examines the psychological and emotional experience of five Iranian translators working across diverse fields (e.g., subtitling and legal translation) and employment statuses (freelance, in-house, seasoned, or newbie) by analyzing data collected from oral and written narratives. Results suggested that technological developments in the translation industry create vulnerabilities in translators, triggering both positive emotions (admiration, excitement, satisfaction, and confidence) and negative emotions (uncertainty, frustration, anxiety, and fear). In other words, some translators experienced or perceived a sense of insecurity in certain scenarios, especially in the translation of academic and scientific content, where artificial intelligence is demonstrating particular capabilities. In contrast, some translators did not feel insecure about the rise of artificial intelligence; rather, they proactively embraced its potential and leveraged its capabilities to enhance their work.

Keywords: *Vulnerability, Emotions, Translators, Artificial intelligence, Technology*

1. Introduction

The rise of artificial intelligence (AI) in recent years and the latest breakthroughs in AI technology (such as *Bard* and *GPT-4*) have gained much praise among professionals and laypeople. These innovations are particularly evident in neural machine translation, which uses a machine learning approach to produce fluent and idiomatic translations (Vieira et al., 2021). However, such praise has not been embraced by many professions, with some, including the translation industry, perceiving AI technology as a potential threat, making translators' jobs obsolete (Sakamoto, 2019). In other words, translators have been more susceptible to such a vulnerability than others. Businesses in many sectors can save time and resources by not needing to hire skilled or seasoned translators; as a result, projects can start faster and meet their goals and timelines more effectively (Habash, 2023). Translation as a profession has always been under pressure from various forces, especially automation, decreasing prices, and global market forces (Vieira, 2020).

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Received: November 2023

Revised: December 2023

Accepted: January 2024

Published: February 2024

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<https://doi.org/10.22034/cee.2024.435751.1016>

For Moorkens (2017), rapid globalization, neoliberal policies, and technological advances in translation have put translators under two forms of pressure. Indeed, job security and translator autonomy have been grossly challenged due to the increasing prevalence of contract work and task-based payments and increased reliance on technological tools. A convergence of these scenarios has led to the emergence of crowdsourced translation (Jiménez-Crespo, 2023a), where a large group of non-professionals are requested to create translations in an increasingly short period (Moorkens, 2017). Be that as it may, translation technology, embracing machine translation, AI, or large language models, has dramatically enhanced productivity, efficiency, and speed (Jiménez-Crespo, 2023b). More importantly, translation technology advancements have made certain tasks easier; it has paved the way for individuals to focus on more meaningful and complex projects, which are often less repetitive and can lead to a greater sense of fulfillment (Desjardins et al., 2021). It appears that AI-driven workflows have been created to potentially replace human function in certain tasks or content types, such as low-value content (Jiménez-Crespo, 2023b), and any new technology, such as large language models may encounter resistance from those who perceive it as a threat since it “marks a discontinuity with former practices and paradigms” (Mihalache, 2021, p. 31) or creates a fear of losing agency and replacement by machines (O’Brien, 2024).

Although the naïve notion of machines inevitably replacing translators is virtually unsubstantiated, demanding empirical investigation, it may negatively affect translators’ confidence in this age of automation (Sakamoto, 2021) or create uncertainty among some (Ehrensberger-Dow, 2021). In fact, the constant chatter about the potential impact of novel technologies on automating certain tasks, like translation—a topic frequently discussed on social media networks where people are actively exploring or experimenting with, for instance, the capabilities of AI dubbing—can erode translators’ self-efficacy and their belief in their unique value as translators. That is the reason why translators are unwilling to become ‘translational cyborgs’ (Jiménez-Crespo, 2023b)—who “can no longer be conceived of independently of the technologies with which they interact” (Cronin, 2003, p. 112), questioning their identity and autonomy. Overall, the adoption of translation-relevant technologies remains controversial among translators. This is likely due to a widespread fear of or resistance to technology and change, which could result in job losses or even the obsolescence of the profession (King, 2020), jeopardizing the future of translators’ careers and livelihoods (Hadley et al., 2022).

The emotional vulnerabilities caused by the emergence of sophisticated technologies or AI-driven workflows may bring about negative or positive emotions in translators since the emotional embeddedness perspective posits that emotions can be triggered by the translator’s working environment (Hunziker Heeb et al., 2021; Risku & Meinx, 2021). For instance, they may feel insecure and uncertain about their future and profession; however, some may feel empowered by AI to leverage its potential to become more effective in their work. Therefore, it is not necessarily accurate that professional vulnerability can only trigger negative emotions, such as fear, anxiety, and uncertainty—even though it does in certain scenarios—it is also possible for vulnerability to trigger positive emotions, which encourage individuals to recognize the potential benefits and opportunities (Lasky, 2005; Meihami & Esmaili, 2024).

There has been a vast body of literature on translation technology (O’Hagan, 2019; Sin-wai, 2023). However, research has not addressed the potential vulnerabilities that translators may face as a result of these technological advancements at present or in the future (see O’Brien’s (2024) discussion on human-centered augmented translation). Overall, this paper provides a nuanced understanding of translators’ perceptions in the context of AI advancements by addressing this question: How do Iranian translators perceive their professional vulnerability in light of AI advancements?

2. Theoretical Framework

2.1. Professional Vulnerability and Emotions

As a fluid and intricate concept, professional vulnerability cannot be defined by a single definition (Davenport & Hall, 2011). However, it encompasses the experience of professionals encountering significant setbacks and risks within their working conditions that can meaningfully affect their emotions, cognitions, and agency (Gao & Yuan, 2024). Vulnerability is an unavoidable aspect of the

human condition, stemming from the physical and psychological weaknesses that individuals have, as well as the various risks that they encounter in their daily life (Russell, 2023). It is linked to external factors and contextual elements like social and economic difficulties that make it challenging for people to deal with (Gao, 2011; Russell, 2023). Vulnerability reveals the emotions that arise when one's professional identity and moral integrity are challenged (Kelchtermans, 1996), which here implies weakness (Jackson, 2018). That is the reason why vulnerability has often been associated with being weak, threatened, or in danger (Jopling & Zimmermann, 2023). The other side of the coin of vulnerability is strength (Jackson, 2018), which suggests that one can learn from situations that are unknowing, foreign, and uncomfortable (Gilson, 2013), leading to personal and professional growth. A broader definition of vulnerability understands it as

a multidimensional, multifaceted emotional experience that individuals can feel in an array of contexts. It is a fluid state of being that can be influenced by the way people perceive their present situation as it interacts with their identity, beliefs, values, and sense of competence. It is a fluctuating state of being, with critical incidents acting as triggers to intensify or, in other ways, change a person's existing state of vulnerability (Lasky, 2005, p. 901).

Lasky's (2005) vulnerability theory posits a division between protectiveness and openness in professional contexts. Vulnerability can be caused by feelings of powerlessness or defenselessness in fear and anxiety-provoking situations; therefore, individuals may follow a defensive or protective stance, indicating that they do not feel safe and avoid taking any risks that may hurt them (Lasky, 2005). In contrast, people can have positive emotions when they willingly acknowledge their weaknesses and collaborate with others to overcome such difficulties (Lasky, 2005). The implication drawn from this view is that being vulnerable is a double-edged sword, causing both positive and negative emotions to arise. On one hand, such unsettling and negative experiences as disappointment or burnout can result in identity conflicts and crises. On the other hand, vulnerability may foster self-improvement and growth as it pushes the individual to navigate uncomfortable situations (Yuan et al., 2022).

Studying emotions in translation studies is crucial as the field has experienced an affective turn, emphasizing the pivotal role of the translator's personal and professional environment or context in triggering certain emotions (Hubscher-Davidson, 2021). Emotions are dynamic and are triggered by various internal or external stimuli, which are perceived as significant to the individual (Lehr, 2021, p. 298). Indeed, emotions are either triggered by something or are responses to something and are typically related to something (Ekkekakis, 2013). A translator's workplace, which embraces the translator's working conditions, such as job uncertainty, adaptation to working with new translation technologies, etc., can elicit positive and negative incidental emotions in translators (Lehr, 2021). Given that translators' working conditions, especially job insecurity or the emergence of new translation technologies, act as emotion-eliciting stimuli, it is important to understand and address translators' emotions in light of vulnerability caused by new sophisticated technologies. Overall, negative emotions signal potential threats in the translators' working environment, promoting them to identify and resolve problems. In contrast, positive emotions indicate a safe working environment, promoting diverse thoughts and actions, boosting creativity, and enhancing intellectual resources (Lehr, 2021). Despite the growing research on the intersection of vulnerability and emotions in related disciplines (e.g., Kamali & Nazari, 2024; Meihami & Esmaili, 2024), the application of this theory remains unexplored in the field of translation studies.

2.2. Conceptualizing Translator Vulnerability

Given that the meaning of professional vulnerability can differ depending on the specific context (Davenport & Hall, 2011), it should be contextually defined in terms of translator vulnerability. Four tenets and principles showcasing professional vulnerability (see Gao & Yuan, 2024) are used to conceptualize translator vulnerability. Initially, vulnerability is an inherent but unavoidable aspect of being a translator due to the potential impact of evolving technology on their profession. Second, vulnerability is a dynamic construct that changes over time, meaning that how translators experience vulnerability depends on the resources or capitals they access. For example, seasoned translators are likely to be less vulnerable to the challenges of the translation profession as they can rely on their symbolic capital, for instance, to attract potential clients. Third, translators' views on or perceptions of

professional development can trigger both negative and positive emotions. For example, translators' perceptions of vulnerability can be shaped by their self-perceptions or how they understand themselves. Fourth, the specific context in which translators operate can shape their vulnerability. For example, translators working in a culture where translation is understood as a task easily performed by any bilingual may feel more insecure. Overall, the translation industry and translators must adapt to the ever-changing environment and embrace the opportunities and challenges arising from new technologies, which can be a potential source of stress and growth for translators.

How translators emotionally experience vulnerabilities in the age of fast technological advancement warrants scholarly attention. Therefore, this paper offers fresh insights into the psychological and emotional experience of a select group of Iranian translators. This study helps draw researchers' attention to the factors that can shape translators' vulnerability.

3. Methodology

3.1. Design

Given the exploratory nature of the investigation, this research is underpinned by a constructivist epistemology, which assumes or posits that there is no objective reality; therefore, individuals construct and create their own reality of the world. This is precisely the aim of qualitative research, which is to discover multiple perspectives and interpretations (Cohen et al., 2018; Privitera & Ahlgrim-Delzell, 2018). A qualitative inquiry offers "in-depth insights and understanding of real-world problems", and its primary goal is not to "introduce treatments, manipulate or quantify predefined variable" (Moser & Korstjens, 2017, p. 271). This study is built on narrative research to examine individuals' experiences or views as they unfold in the stories they narrate. This approach acknowledges individuals' experiences and delves into the social, cultural, and institutional contexts that construct or influence these experiences; therefore, the narrative lives of these individuals are emphasized (Clandinin & Rosiek, 2019). Experience is perceived as a dynamic stream, which is continually molded by the association of human thought with personal, social, and material context (Clandinin & Rosiek, 2019).

3.2. Setting and Participants

Like in any country worldwide, new AI technologies, especially large language models, dominated Iranian people's conversations in 2023. However, AIs are not readily accessible in Iran. For example, both *OpenAI* and *Bard* block IPs from Iran; thus, Iranians cannot access them directly and have to use VPNs to change their IP or use third-party websites that provide access to these services. Among these, *BingAI* is available, and Iranians can access it. Hence, it would not be accurate to assert that all Iranians have likely utilized AI for their tasks, given these challenges. To the best of the researcher's knowledge, the extent to which Iranian translators utilize translation technologies, such as machine translation, translation memories, or large language models, has not been the focus of any research. Given that translation technology is taught at BA, MA, and PhD levels of translation programs in Iran, it is assumed that Iranian translators probably use them.

The participants of this study (Table 1) were five Iranian translators (two females) with varying degrees of experience (1 to 10 years). They all translated between English and Persian, and their age range was between 23 and 35. Among the translators, one held a translation certification from the Iranian judiciary, two were in-house translators for one of Iran's largest translation agencies, and four worked as freelancers. Translation was the primary source of income only for the certified translator. For two translators, translation accounted for the majority of their earnings, while for the remaining participants, it was not an income source. Except for one, all received formal translation education at university. The current research examined translators from different translation industry sectors for a few reasons. First, the goal was to identify differences and similarities in their professional vulnerability. Second, selecting translators from different sectors would provide a nuanced understanding of translators' professional vulnerability. Third, as already mentioned, personal, social, and material environments can shape translators' vulnerability and emotions (Risku & Meinx, 2021).

Table 1
Demographic Information of the Respondents

Pseudonym	Gender	Experience	Main specialty	Status	Education	Translation as a main source of income?
Dana	male	3 years	subtitling	freelancer	BA in language teaching	No
Narges	female	10 years	legal texts	certified translator	PhD in translation studies	Yes
Morteza	male	8 years	academic texts	freelancer/in-house translator	MA in translation studies	Mostly yes
Roya	female	6 years	academic texts	freelancer/in-house translator	MA in translation studies	Mostly yes
Ali	male	1 year	not developed yet	freelancer	BA student of translation	No

3.3. Procedure

Written or oral narratives were used to collect data from the translators. Typically, in narratives, the respondents shared their stories regarding the topic of the study. This data collection form was deliberately chosen to create a safe and supportive environment for participants to share their narratives at their own pace and in their own words. To encourage the translators to write their narratives more effectively, they were presented with prompts, which were carefully designed to avoid leading them toward a particular perspective (for example, the negative or positive aspects of AI). The translators were asked to describe their experiences or perceptions of AI in detail and to reflect on its impact on their professional lives as translators. Given that AI is a broad concept that encompasses a wide range of advanced technologies, such as machine translation, neural machine translation, translation memory, etc., the participants were told AI does not only mean *ChatGPT* or *Bard* and can include any technological-driven tools used for translating. They voluntarily attended the study and were assured of the confidentiality of the narratives they shared.

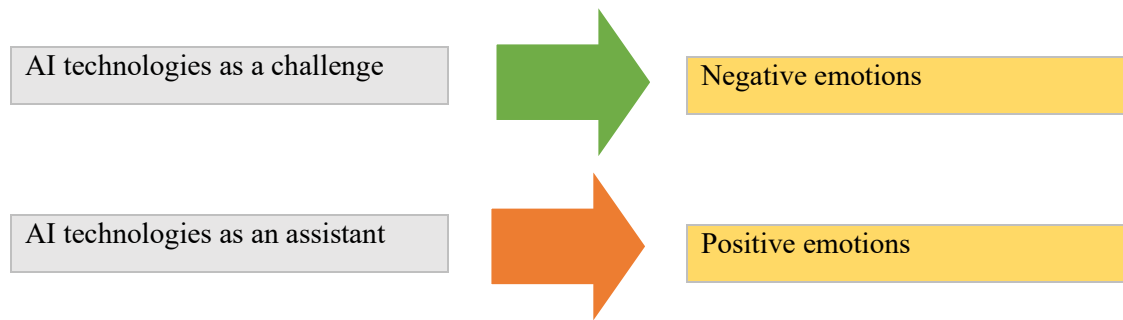
To identify patterns of meanings and recurring themes, “thematic analysis” was used as a qualitative data analysis method (Braun & Clarke, 2006). To ensure the integrity of the narratives, they were subjected to multiple readings to gain a comprehensive understanding of their content and find data related to vulnerability. Irrelevant information unrelated to the research objectives was discarded during this process. Iterative readings of the data resulted in the generation of tentative codes, serving as potential indicators of vulnerability faced by the participants (such as uncertainties, obstacles, opportunities, etc.) as well as their emotional, behavioral, and reflective responses to such vulnerabilities. Subsequently, potential themes were identified inductively from the codes and were given a name. This was followed by a moving backward and forward process, as well as reading relevant literature on vulnerability, through which final themes were fine-tuned and finalized. To ensure that the analysis and interpretation are not affected by my own ideology and preconceptions (being a professional, certified translator, and a university trainer) and to minimize the impact of subjective factors on the research findings, I tried to ‘bracket’ and suspend all my assumptions and preconceptions during the data analysis and interpretation (Tufford & Newman, 2010). It should be noted that achieving perfect objectivity is elusive.

4. Results

The thematic analysis of the narratives indicates that the respondents viewed AI as an assistance and a challenge, leading to mixed emotions (Figure 1). Although AI helps translators to feel more confident in their work, it also creates a sense of diminished self-assurance.

Figure 1

Schematic Representation of the Thematic Analysis of the Narratives



4.1. AI as a Challenge: The Uncertain Seas of Translation Profession

The analysis demonstrates that there are certain cases and scenarios that make translators feel insecure, consequently leading to an onslaught of negative emotions of uncertainty and fear. The respondents were concerned with the long-term impact of AI tools on translators. Morteza and Roya believed that the evolving role of human translators is beginning to emerge. Morteza implicitly shows concern about whether his skills will remain relevant and competitive in the face of AI-driven translation advancements:

The new chatbots were introduced around a year ago. Although I did not feel any kind of reduction in my workload as the company sends me translation projects like before (the company should be asked if they had any issue with the number of projects), I guess in the long-term, these may have a negative impact on our jobs. Look, the chatbots were only recently introduced; many Iranian people may not be aware of their capabilities in translation, or as you know, either these chatbots are blocked in Iran by the government, or the chatbots themselves block the IPs from Iran. I don't know, but I feel it casts a shadow on our future prospects.

Roya asked some rhetorical questions in her narrative. Roya is both a freelancer and a translator in a big translation agency in Iran. However, these dual forms of employment have not made her feel at ease with the swift emergence of AI tools. She appears to be grappling with the implications of these technological advancements on translation:

Why would clients send their abstracts or papers to us for translation when AIs can produce natural-sounding translations in English? Even people with a slight knowledge of English can have their texts translated through AIs. I can sense that, at least in terms of abstracts of students' theses, there's been a significant reduction [in the projects I receive]. Students can either send their thesis abstracts for translation to someone else or use ChatGPT to translate their abstracts into English.

Morteza and Roya's perspectives are valid in the context of translating academic (scientific) texts. Based on my own experience, machine translation systems like *Google Translate* have become proficient in generating natural-sounding translations of Persian academic content, and the quality has substantially increased with the advent of large language models, where the users can use prompts to guide the translation process, leading to more accurate and contextually appropriate renderings. Additionally, *Google* uses neural methods, which work more effectively in specialized knowledge areas on which they have been trained, and these certain areas make use of formulaic constructions that are recognizable and reproducible when abundant training data are presented (Hadley et al., 2022). Additionally, in fields where specialized or technical languages are used, like scientific-medical texts, machine translation has been more widely accepted (de los Reyes Lozano & Mejías-Climent, 2023).

However, Dana and Narges raised important points regarding the limitations of AI systems in other sectors. Dana views AI as helpful in certain cases, as will be presented later. However, they cannot create high-quality translations for dubbing and subtitling because they still cannot process images to

have more contextual information. Thus, as he says, they fail to adequately capture the specificities of audiovisual texts, leading to *stupid and boring translations of the film dialogues*. This can lead to a feeling of disappointment or anxiety if companies force translators to post-edit these AI-generated translations, as Dana had been asked to. Although technology plays a crucial role in subtitling, given that subtitles are created in software programs, the integration of machine translation for audiovisual texts seems contentious. This is partly due to the challenges caused by the complex nature of audiovisual texts, which combine visual and acoustic information (Burchardt et al., 2016; de los Reyes Lozano & Mejías-Climent, 2023).

Narges also says that all legal translations should be certified by the government. Hence, the clients still need certified translators, and *they can't ask ChatGPT for their translations, as translations without the translators' and the judiciary certification are useless*. This highlights an important area where human expertise continues to be absolutely necessary. Therefore, even with the advancements in AI, the role of certified human translators remains vital.

Ali, a translation trainee, raised a concern regarding the socioeconomic conditions of Iran and, consequently, their negative impact on the development of local computer-associated translation (CAT) tools. He expressed frustration with using existing CAT tools, like *MateCat*, for English-Persian pairs.

Many of the technologies introduced to us, or I'm aware of them, are products of the Western world. They have many bugs when it comes to Persian. Look at MateCat; many teachers teach it in the Translation and Technology course, but its functionality with Persian is unsatisfactory. It does have many issues, especially in recognizing the symbols. Developing Iranian programs should be prioritized, but requires funding from the governmental and private sectors, which is highly unlikely in Iran.

Ali's case is a good example of cognitive ergonomic issues resulting from the poor functionality of CAT tools. When these tools do not function effectively, they can hinder a translator's cognitive ergonomics, leading to poor performance, frustration, and stress. Ultimately, this can leave the translator feeling vulnerable as they are forced to adapt their cognitive processes to accommodate the limitations of the machine and not the other way around (Ehrensberger-Dow, 2017).

New translation technologies can put pressure on translators to learn new skills to maintain their competitive edge. Dana's story highlights several factors that can contribute to feelings of vulnerability and insecurity:

Some months ago, I received this message from an international client saying, "Hello! We have an ongoing daily MTPE [Machine Translation Post Editing] subtitling job in Persian. You will be assigned a 20–30-minute video with machine-generated subtitles every day, and you will be asked to post-edit using our online subtitling tool. The project is hosted on a platform called MediaNEXT. Your task will involve adding your own translations to the segments on the right, subtitling each 30-minute video, ensuring that the line breaks are perfect, and so on. The rate for the project is \$1.00 per video minute, and there will be a 30-minute video available each day for you to work on.

He shares his response to the client:

I had to turn down the request on three grounds. First, the rate was not good; second, when I saw a sample of the translations, the quality was so bad. I even didn't know why they used the machine at all. Third, I wasn't sure if I could work with MediaNEXT, which is a cloud-based media technology platform. I've never even heard the name of this platform.

Dana's story shows these factors: low payment, poor quality of machine translation, unfamiliarity with technologies, and feeling devalued. Discussing these from the perspective of professional vulnerability can lead us to the conclusion that a translator who is offered a low rate for a translation project may experience financial insecurity and be exploited by agencies. Dana's rejection of the project due to unfamiliarity with new technologies makes sense since his initial projects in the cloud platform can take

more time as he will be experimenting with the features of the platform; therefore, delay and errors may be expected, which may damage his reputation and make them more vulnerable to criticism by the client.

On a similar note, Roya shared her frustration with the increase in poorly machine-translated texts. She recounted instances where clients had attempted to pass off machine-generated translations as human-quality work, expecting her to edit these texts without disclosing their true origin and demanding a low rate since it is not translating from scratch:

This happens a lot. The client has translated the text through a machine or new AI, which does not operate very well in the case of translation into Persian, and asked me to edit without mentioning that it was translated by the machine. I reject such requests or ask for a full translation rate, as the translation has to be done from scratch.

Such uncertainty among professionals, as Ehrensberger-Dow (2021) asserts, arises from recent developments in neural machine translation that “have created such a hype that many laypeople believe that high-quality, fully automatic translation is just around the corner, which is contributing to uncertainty among professionals” (p. 153). However, Roya’s case also demonstrates that post-editing has not become a prevalent issue in the Iranian translation profession or at least among translators. Despite the lack of evidence regarding whether post-editing finds a place in the Iranian translation market, Dana’s case suggests that translators receive such requests. Therefore, the question that remains unanswered is to what extent Iranian translators are ready to handle post-edited projects. It should not be overlooked that machine translation of the English and Persian language pair does not always yield satisfactory results. Therefore, translators may prefer translating from scratch rather than investing time and energy in post-editing. Another issue worth investigating is that both Dana and Roya rejected post-editing projects. However, this client or agency may assign the project to others willing to accept post-editing. Therefore, these translators can be replaced with those who do not do post-editing and have not developed relevant skills.

Vulnerability can also arise from social pressure. Ali, a translator trainee at the university, expressed a sense of vulnerability. He is worried about whether he will be able to enter the job market and immerse fully like any successful translator in Iran:

Each time my classmates bring up the topic of AI, they all share the same concern: we may no longer be needed. If a program or robot can translate any form of text in the future, why would there be a need for human translators? Even if needed, experienced and seasoned translators would be the priority. As a newbie, I have nothing to offer or compete.

Ali’s concerns are understandable, given the rapid advancements in AI and the potential impact on the translation industry. Other translators who entered the job market before the AI revolution of 2023 had the opportunity to establish themselves and gain experience before AI became a significant factor. However, as a student, Ali is entering the job market at a time when AI is already a major presence, and he feels vulnerable because he lacks the experience and expertise of more seasoned translators. He is suffering from social pressure; hearing and seeing others worry about the impact of AI makes him worry and less confident and more insecure in turn. Therefore, mentoring new translators like Ali is a priority for industry and university. However, this is not shared by Narges. She appears to feel more confident, given that she is a certified translator with a Ph.D. and has over a decade of translating experience. Therefore, she has many resources for dealing with vulnerability and is less likely to experience it as a negative force, especially since her area of translation (legal translation) needs human expertise and verification, at least for the present time. A similar issue was raised by Dana:

Language teaching is my main source of income, although I also do subtitling. Lately, some of my friends and colleagues have been asking me if I am worried that people or agencies will not hire me (as a translator) for their projects. Or they send me Instagram posts wherein AI is doing some kind of dubbing. Honestly, the thought is frightening; translators may lose their jobs, or translation may become a profession of the past with no prospects.

Another source of vulnerability was mentioned by Morteza, as he was concerned with the negative impact of AI in inviting non-professionals to the translation industry who may rely on AI tools to mask

their lack of linguistic or translation capabilities and experience. He expresses a fear that they might be able to deceive clients and agencies into believing they are competent translators without actually possessing the necessary expertise. He says:

I've been in the translation industry for nearly a decade. I've worked with many Iranian translation agencies and private clients. I know the industry like the back of my hand. The Iranian translation industry has always been open to everyone who can translate—no matter what quality they offer. Look at the stupid type of translation offered by some agencies: Gold, Silver, and Bronze quality!!! [...] So, it's pretty competitive. What I fear is not just the AI itself but newcomers who might be very tech-savvy but less trained in translation. They can leverage the potential of AI to hide their linguistic inabilities, like what students do in their classes, cheating their assignments with chatbots. So, I guess the industry will be more competitive in the long run. But, I guess my experience and the network of clients I'd made over the years may save me, though the threat will be with us.

Morteza's concern about unqualified individuals using AI for translation more and less indicates a similar issue in paid crowdsourcing. There, the definition of 'translator' has expanded beyond highly qualified professionals to embrace bilinguals and para-/semi-professionals working under company supervision and with technology tools (Jiménez-Crespo, 2023b).

4.2. AI as an Assistant: A Boon to the Profession

Most respondents emphasized the positive role of CAT tools, such as *Trados Studio*, in their work and efficiency. The following quote from Roya well-captures her positive sentiment towards CAT tools:

I don't know who created (I never checked it 😊) Trados; his developer is a gem! It comes in handy in translating voluminous projects (like books), where its terminology database shines.

Ali brought into the discussion some good Iranian programs developed for editing Persian texts:

Virastyar and Paknevis have been good editing tools for Persian. They save me a lot of time on issues such as spelling, half-space, and accepted terminologies by the Academy of Persian Language and Literature. It has a few bugs, as at times it crashes or becomes slow, but I like it.

Dana, a newbie to the subtitling industry, praises the benefits of the new AI-driven plugin in his subtitling software, especially the speech-to-text function. He attributes these add-ons with significantly reducing her workload by producing transcriptions and pre-made subtitles for the videos he translates. Here's what he shares:

The speech-to-text feature of Subtitle Edit is a game-changer. I'm sure you will be amazed by this new AI feature that can accurately transcribe video files with 95% accuracy and find the ins and outs of subtitles. I used to create subtitles from scratch last year; now, with the introduction of this feature in the program, I can do more projects more quickly without lowering my translation pay rate. I hope they [clients] won't find out about this plugin soon enough!

Narges notes that she has seldom used AI-aided tools as she primarily translates legal documents such as birth certificates, marriage certificates, etc., for which translations are readily accessible to certified translators. However, she mentioned that she recently utilized *ChatGPT* to translate less conventional legal documents, such as outdated property deeds or recommendations. Here's what she shares:

The English translations of recommendations [by ChatGPT] are too good, professional, and accurate and, in many instances, surpass my own translations.

The same issue is also shared by Morteza, who used chatbots to translate scientific texts or edit his English translations from Persian:

[...] they're [chatbots] pretty accurate in translating Persian papers into English with well-chosen lexical items and grammatical structures. This helps me remain competitive in the translation industry and my company.

Later on in his narrative, Morteza shares how he used another technology and now has replaced it with newer and advanced technologies:

I used to use Grammarly for the final version of my English translations. It only spotted grammatical mistakes, and I had to pay for its premium version, which was effective but could not offer suggestions for improving the overall quality of my [English] translations. Then, I switched to ChatGPT, a new tool that can edit and generate text with AI.

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The above quote well-represents the positive emotions triggered by AI tools in translators: Admiration and gratitude (Roya), excitement and satisfaction (Dana), appreciation (Narges), and satisfaction and confidence (Morteza). Rather than succumbing to insecurity or vulnerability, translators proactively harnessed the potential of AI tools like CAT tools and large language models to enhance their work efficiency and quality. Hence, the ever-growing digitalization and technologization of the translation profession “is not a threat, but an opportunity to expand skill sets and take on new roles” (O’Brien, 2012, p. 112) and have afforded ample new opportunities to enhance productivity, efficiency, and speed (Jiménez-Crespo, 2023b). The results of the paper align with the findings of past research where European translators showed positive emotions concerning technology adoption (Koskinen & Ruokonen, 2017). An issue worth discussing here. Although translators experienced positive emotions as a result of leveraging the potential benefits of AI-driven tools, it is important to highlight the potential risks associated with over-reliance on technologies. Such an over-reliance can create a sense of vulnerability as translators may depend on these tools for their work. This dependence may lead to a decrease in their translation skills and the capability to translate without the aid of technology. In fact, they may not be able to critically evaluate the output of AI tools when they already lack the translation skills or have forgotten the basics. Concerns have already been raised regarding the potential over-reliance on AI systems, which may create “a potential loss of critical engagement and domain expertise” (Heer, 2019, p. 1844). To mitigate these risks, translators should follow a strategic approach to AI integration.

5. Discussion

This paper examined Iranian translators’ professional vulnerability in the era of sophisticated translation technologies. The analysis of five Iranian translators’ narratives offered fresh insights into the emotional impact of translation-relevant AIs or technologies. It was revealed that the boom of technological advancements in the translation industry, such as machine translation, translation memories, and large language models like *Bard* and *ChatGPT*, has induced positive and negative emotional vulnerabilities among translators. While the translators felt insecure in some instances where AI showcased impressive capabilities in handling certain translation tasks with high accuracy, they also recognized AI’s potential to facilitate and enhance their work in the translation industry. When they felt vulnerable or experienced the capabilities of AI technologies, they exhibited uncertainty, frustration, anxiety, and fear. These emotions appear to stem from a perceived threat or challenge to their imagined identity as professional translators. On the other hand, AI technologies also triggered such positive emotions as admiration, gratitude, excitement, satisfaction, appreciation, and confidence among translators, which augmented their capabilities and expertise. Augmentation has emerged as a recent topic in the translation technology literature, with scholars like O’Brien (2024) proposing the concept of ‘human-centered augmented translation’, which is a way of amplifying translators’ capabilities and empowering them while also allowing them to maintain control and be in charge of the process. Relatedly, the translators mentioned that their translation capabilities had been augmented by introducing translation-relevant AI technologies. Such tools have facilitated the work of translators and enhanced their performance. It seems that the more these tools are utilized by translators, the more skilled and competitive they become in the market. Notwithstanding this silver lining, one question that warrants further investigation is whether translators are using these tools with a critical eye or not since if translators do not use these tools strategically and do not develop new skills to stay competitive, they may be at risk of losing their jobs in the long run (Rothwell et al., 2023).

It is worth noting that emotional tensions were not, however, expressed unanimously among translators. Indeed, translators’ emotional susceptibility was also shaped by their employment status and area of

specialization. As indicated before, contextual factors are at play in shaping individuals' vulnerability to various risks and challenges. These factors can impact access to resources, support systems, and opportunities, ultimately shaping an individual's vulnerability (Gao & Yuan, 2024). More specifically, translating from Persian academic content into English, for instance, was found to engender greater fear and anxiety compared to the reverse direction, likely due to the enhanced accuracy and naturalness achieved by neural machine translation in this area. However, the translators did not show signs of powerlessness in other areas of specialization, such as subtitling and legal translation. This is because translating audiovisual texts needs a nuanced understanding of the audio and visual context, which is currently beyond the capabilities of AI technologies (de los Reyes Lozano & Mejías-Climent, 2023). Additionally, legal translations need to be certified, and AI cannot be used for self-production by the clients. In conclusion, translation-driven technologies, as King (2020) maintains, "have been greeted with emotions ranging from eager interest to total indifference, and even to dismay, fear and scorn among translators" (p. 155). Although AI advances and developments have made translators' work easier and more efficient, they have also brought about concerns among professionals regarding their future roles and livelihood.

An important theoretical implication of this paper is the introduction of translator vulnerability or emotional vulnerability in general. This introduction can open up new avenues for research and theoretical development of translation technology through the lens of psychological constructs. A further implication of the paper is raising awareness about the potential emotional impact of translation technology on translators. By highlighting the emotional vulnerability and concerns among professionals, the study calls for a deeper understanding of the human element in integrating AI into translation processes. AI promises, as rightly mentioned by Gholami and Al Abdwani (in press), considerable potential for enhancing human communication, yet it also presents risks that demand careful governance.

Given the exploratory and emerging nature of the study, the findings cannot be generalized but call for further research to examine the potentials and opportunities of AI technologies from new perspectives. Large language models were only recently introduced and are progressing quite fast. Therefore, translation agencies, translators, or clients may not have been well-familiar with them or have not fully explored the challenges and opportunities they offer. Therefore, the long-term impact of AI should be the focus of future studies. The study's sample was limited to a select group of Iranian translators. Future research could investigate the experiences of other translator groups, such as interpreters or translators working with different language pairs. Additionally, future researchers might consider examining this topic among translator trainees. Future research can also explore the coping strategies translators may adopt to mitigate their vulnerability. Finally, researchers can develop an emotions scale to measure translators' emotions in the face of AI developments to better understand their emotional vulnerabilities (see Pishghadam et al., 2016).

Disclosure Statement

The author claims no conflict of interest.

Funding

The research did not receive any specific grants from funding agencies.

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