

MT Reshaping the Translator's Profile: The Impact of AI on the Role of Modern Translator

الترجمة الآلية وعملية إعادة رسم ملامح المترجم: أثر الذكاء الاصطناعي

على دور المترجم الحديث

BENTAHAR Fares¹ Université Alger 2

fares.bentahar@univ-alger2.dz

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Abstract:

This paper is an attempt to investigate the role the technology plays in reshaping the translator's profile, based on a diachronic study of the major changes occurred on translator's means and conditions of work, training programs and fields of work. It has been found that a pattern is taking a shape. A clear trend towards an over-reliance on technology in translation services providers, which insist broadly on the profile of Post-editor. More precisely, the technological inventions, especially AI-powered Machine Translation , are behind this shift in the translator's task, competences, and market. The modern translator is, therefore, at crossroads; he either continues as he is now and risks becoming obsolete, or adapts and updates his competence to fit into the new role. Of course, given the course of events, the safer decision is to adapt because this the nature of life.

Keywords: Machine translation, artificial intelligence, translator's competence, post-editing.

ملخص:

يعد هذا المقال محاولة للبحث في الدور الذي تلعبه التكنولوجيا في عملية إعادة رسم ملامح المترجم بالاعتماد على دراسة دياكرونية لأهم التغيرات التي طرأت على وسائل عمل المترجم وظروف نشاطه، وبرامج تكوينه، ومجالات عمله. ولقد تمت ملاحظة نسق في طور التشكل، وهو توجه واضح نحو الاعتماد المبالغ فيه على التكنولوجيا في شركات خدمات الترجمة، والتي تلح بشكل صريح على توفر مواصفات المحرر اللاحق. لنكون أكثر دقة فإن الاختراعات التكنولوجية ولاسيما الترجمة الآلية المدعومة بالذكاء الاصطناعي هي من تقف وراء هذا التغير في مهام المترجم

¹Corresponding author : Fares BENTAHAR

وكفاءاته وسوق عمله. وعليه فإن المترجم الحديث يجد نفسه في مفترق طرق، إما أن يستمر على ما هو عليه الآن ويخاطر بأن يعفو عليه الزمن، أو أن يكيف كفاءاته ويجهزها لتتماشى مع الدور الجديد المنوط به. وبطبيعة الحال، وبالنظر إلى سيورة الأحداث فإن القرار الأكثر أماناً هو التكيف لأنها هذه هي طبيعة الحياة.

كلمات مفتاحية: الترجمة الآلية، الذكاء الاصطناعي، كفاءة المترجم، التحرير اللاحق.

1- Introduction

Throughout history, humans have always searched for novel ways to aid and facilitate their day-to-day activities. Therefore, it is ingrained in their character to consider automating the various facets of their existence. This is further supported by the fact that they invented and developed every tool utilized in daily life, including communication tools and technologies.

Of course, communication means languages, and the diversity of the existing languages makes it more challenging, if not sometimes impossible. The fact that English is seen now as THE universal language (or the Lingua Franca) since it is used in political gatherings, academic settings, media etc. is not enough to ensure the global communication. Also, knowing foreign languages is sometimes not enough to ensure the complex task of communication. The last resort, then, to overcome the linguistic barriers is translation which “may be defined as a bilingual mediated communication” (Reiss, 1981, p. 121). In fact, “communication across languages and cultures is a markedly complex issue, and translation is more than just a careful linguistic transfer: it is a purposeful action designed to achieve the most effective result in a target group” (Sang & Zhang, 2008, p. 225). Even more so, “intercultural communication relies heavily on translation and interpretation, which are two very important tools for creating a bridge of meaning-crossing, from one language to another, and from one culture to another.” (Manaj, 2017, p. 99). Furthermore, translation doesn't only ensure communication between disparate civilizations and cultures, but it, also, plays the greatest role in the emergence and rise of civilizations. It “continues to be a powerful means of communication that influences the development of both the nation and the individual personality.” (Koljada, Kowalskaia, & Melkonyan, 2019, pp. 76-77). And since “it is not feasible to have human translators (HT) everywhere, [it has emerged a need for] effective approaches which do this job with as little human effort as possible” (Revanuru, Turlapaty, & Rao, 2017, p. 11). In fact, the notion of employing “mechanical dictionaries to overcome barriers of language was first suggested in the 17th century” (Hutchins & Somers, 1992, p. 5) predating the creation of the first computer by three century.

Nevertheless, this mechanization of human life does not come at no cost. People who work in such sectors become obsolete every time humans build a machine that can perform a certain task. Because, in contrast to humans, machines do not sleep, get ill, or go on strike—despite the fact that they occasionally break down and need maintenance. In less time and money, the machine can accomplish the same tasks as humans. Therefore, how does the machine contribute in reshaping the translator's profile?

2- Short history of Machine Translation (MT)

Machine translation (MT) is a term that “refers to computerized systems responsible for the production of translations with or without human assistance.” (Hutchins J. W., 1994). However, the real and ultimate goal of mechanizing the process of translation is the creation of a *Fully Automatic Machine Translation* (FAMT), which means no human assistance is required. The first implementation of an MT occurred in 1954 in the US where “a carefully selected sample of 49 Russian sentences was translated into English” (Hutchins W. J., s.d.). Since then, this technological breakthrough has known numerous changes and advancements based on the approach employed, which, from the viewpoint of methodology, can be broadly divided “into two categories: rule-based method and data-driven approach.” (Zhang & Zong, 2020, p. 2028).

Rule-Based-Machine-Translation systems (RBMT) fall under the first group and are based on a “collection of rules and a bilingual or multilingual lexicon” (Sreelekha, 2017). These types of systems require “a huge human effort to prepare the rules and linguistic resources” (Sreelekha, 2017). While the second group is called Data-Driven-Machine-Translation systems and that “aim at teaching computers to learn how to translate from lots of human-translated parallel sentence pairs (parallel corpus)” (Zhang & Zong, 2020, pp. 2028-2029). They require access to “existing large collections of data to learn to translate from one language to another. This includes not only parallel data from documents and their translations but also comparable corpora, monolingual corpora, bilingual dictionaries and other language (-pair)-specific resources” (Tiedemann, 2008, p. 159). There are three main approaches that fall under this category: first, there is the Example-Based Machine Translation (EBMT) which was replaced by Statistical Machine Translation (SMT). Lastly, the state-of-the-art of MT, Neural Machine Translation (NMT) that has superseded all other approaches.

3- The Rise of Artificial Intelligence (AI) in Translation

The first neural network computer was built in 1950 by “Warren McCulloch and Walter Pitts (1943) [and the] two undergraduate students at Harvard, Marvin Minsky and Dean Edmonds” (Russell & Norvig, 2010, p. 16). Nonetheless, its actual use wasn't realized until the beginning of the 21st century because of the lack of the required equipment. However, once deployed, AI has shown itself to be incredibly capable of handling some extremely challenging tasks that even humans find painful to complete. When it arrived at the translation domain, it quickly established itself as a leading solution for a task that has always been impenetrable for the machine. The difference, compared to the previous approaches, was so significant that “in 2016, a neural machine translation system won in almost all language pairs. In 2017, almost all submissions were neural machine translation systems” (Koehn, 2017, p. 10) at the shared task for machine translation organized by the Conference on Machine Translation (WMT).

Several commercial companies and international organizations, including Microsoft, Systran and the European Commission followed Google's AI-based NMT engine (Google Translate) as their model. This new invention was a revolutionary step into the automation of translation. Its principle of operation was different from the previous approaches, it “works on the principle of predicting the probability of a word sequence” (Benkova, Munkova, Benko, & Munk, 2021). These AI-powered engines, or at least the vast majority of them, produce very cohesive and elegant translations that it can occasionally be challenging to tell if the text is a translation or was originally written in that language.

Besides MT, AI has also been applied to the CAT tools. Translators usually use CAT tools to facilitate their job by providing them with help in estimating the quality of the MT output, verifying the suggested terminology and potentially propose alternatives, ensuring the consistency across the text etc. Now that AI has been integrated into these tools, the results are even greater. For instance, Automatic Post-Editing (APE) is another useful tool that uses AI. It, for example, helps the translator to avoid correcting the same repetitive errors by only one click.

4- Impact of different MT approaches on the translator and translation field

With the advent of the first generation of MT systems called RBMT “the general public and potential sponsors of MT research were led to believe that good quality output from automatic systems was achievable within a matter of a few years” (Hutchins J. , 2001). In fact, the scientific circles had, back then, already an idea about what is coming next “Garvin, reporting a the 1957 Round Table panel discussion, stated that machine translation of standard scientific information required no more post-editing (PE) than standard human translation” (Schairer, 1996, p. 96). Others expressed even more optimism; Franz L. Alt (1960, p. 203), for example, has openly declared, “it seems plausible that in a few years completely automatic translation of fair quality will be possible”.

D. Y. Panov², who saw translation as a purely mechanical operation that followed repeatable principles, was the one who was most certain that an FAMT was feasible. He consistently expressed his confidence in the results of the MT research, and even went so far as to undervalue the translation process. He believes that as a human learns how to translate, a machine can do the same if it is provided with appropriate programs; “it is entirely a matter of correct programming— of showing clearly and precisely what has to be done, and in what order. If this is established, the work can be carried out by a machine.” (Panov, 1960, p. 18). This conviction led him to believe that HTs would soon become obsolete “We have no doubt that, within a few years, machine translation will have great successes to its credit and that the machines will to a large extent relieve human beings of the task of translation.” (Panov, 1960, p. 21).

Despite all those hopes, the first generation of MT systems, RBMT, did not perform well, and the results were unsatisfying. In fact, it only performed well in extremely restricted domains as in the case of **METEO System** developed by **TAUM group** to translate the weather forecasts in Canada from 1977 to 2001. Furthermore, all the aspirations and hopes of the FAMT proponents have drastically dropped after the publication of the Automatic Language Processing Advisory Committee (ALPAC) report in 1966 that led to cut the government funding of research in the US. The report concluded that “MT was slower, less accurate and twice as expensive as human translation and that there is no immediate or predictable prospect of useful machine translation” (Hutchins W. J., s.d., pp. 5-6). Therefore, the idea of an FAMT was abandoned, and the focus was on developing some translator's aids such as electronic dictionaries, CAT tools and word-processing software. Those tools resulted in a change in the translator's competencies and the way he undertakes his task.

² Doctor of Science, Professor at the Moscow Institute of Physics and Technology

Fortunately, the research in MT has continued in other countries such as Canada, URSS, Japan, and Europe, which led to the development of the new approach called SMT, in the late eighties of the 20th century, and gave the idea of an FAMT a fresh life, especially given the improvement seen in its outputs. The comparatively good performance of SMT systems can be attributed to the computer's increased processing and storage capacity, and the widespread use of the internet that guaranteed a quick access to a large, both monolingual and bilingual, corpora (large amount of human previous translations). Those new systems were based on programs that statistically determine the best probability of various options. (Sreelekha, 2017)

With the advent of the SMT, the hopes in an FAMT were raised again, and once more, the translators came under the stress of losing their jobs to automation. In fact, this time, even the common people were encouraged to believe in the possibility of an FAMT. Those believes were led by the large campaigns of advertisements launched by some MT production businesses that “promise easy, automatic translation between languages, even for monolinguals” (Schairer, 1996, p. 97). And the spread of some extremely advanced technologies, namely, the “impressive advances in computer technology and the popularization of terms such as virtual reality, artificial intelligence, voice recognition, and information superhighway” (Schairer, 1996, p. 97).

Once more, voices are rising here and there, announcing the impending demise of the HT, Lehman-Wilzig (2000, p. 484) declared, “the most obvious economic consequence will be *the virtual disappearance of the translation profession*. First textual translation will disappear, and ultimately oral translators”. While Garcia (2009, p. 208) went even further in prophesying the end of the translation as a profession:

The new model will continue improving its cost effectiveness by reducing demands on those doing the post-editing, and this will almost certainly see the deputising of competent bilinguals in place of professional translators. The present cycle will then presumably close, as translation loses its professional status and returns to its millennial amateur paradigm.

Fortunately for the HTs, the results were insufficient, and they are still required to produce an accepted outcome, while the degree of their intervention depends on the quality of the output of the SMT, which, in turn, depends on the language pair, and the source text quality and domain. The type of errors that SMT produces are generally: untranslated, too literal, incorrect terminology, syntax error, preposition/particle error, which make it rather simple to locate them (Yamada, 2019). Moreover, the HTs knew, for the second time, how to benefit from the prevailing circumstances. The aids of the translator became the center of interest, and we witnessed the emergence of great Computer-Assisted Translation tools (CAT tools) such as Translation Memories (TM) (Granel, 2015).

In the second decade of the 21st century, precisely the year 2016, MT has witnessed another significant breakthrough when Google launched the first-ever NMT. Thanks to “the popularization of cloud computing technology and big data technology” (LingZhi, 2021, p. 2). This achievement is the outcome of the tremendous increase in the machines capacities, additionally to the great advances in the computer sciences that have led to the development of AI. The state-of-the-art of MT i.e. NMT has once again changed the translation's landscape. NMT, based on neural network algorithm, not only, “analyzes the best

answer through statistical information, [but] can use the self-learning function of neural network to continuously iterate and update in the model training and finally find the best result" (Lihua, 2023, p. 5). In contrast to the RBMT and SMT, NMT produces well-coherent and human-like quality translations. Even the types of errors it produces are different. In fact, the types of errors generated by NMT are more akin to those made by humans (Yamada, 2019), and this similarity makes the process of identifying them more challenging. Therefore, the translator—or, more accurately, the *Post-Editor*—must acquire new and appropriate competencies in order to post-edit the results of NMT effectively.

The results of NMT were impressive even for the literary genre to the point that it is not always obvious whether a human being or a machine have translated the text, and following this significant advancement AI translation can only be expected to become even better. Those results and expectation rose, again, the hopes in an FAMT (Visby, 2020).

We draw from what preceded that every time a new technology or system is established, voices, from here and there, begin shouting the end of the HT. As such, it is legitimate to the translators to feel uncomfortable, if not hostile, toward this new monster that stands in the way of their livelihood and career.

5- The Translator's Changing Landscape: From Classic Translator to Post-Editor

Predating the machines by thousands of years, HTs were long seen as the pivotal element in the translation field. They were tasked with "conveying the original message of SL in TL" (Prattipati, 2016, p. 253). A task where they "adapt messages to new purposes and make the foreign accessible to various degrees" (Pym & Torres-Simón, 2021) by creating a new text out of usually a single spoken or written source text. To undertake this task, the required translation competences were, among others, "excellent knowledge of both the languages, excellent knowledge about two cultures, a good understanding and command over the subject matter which is being translated..." (Prattipati, 2016, p. 253), and a good knowledge document information retrieval. The only necessary instruments were a pen, then replaced by a typewriter, and some paper. This kind of translation is known to some as "Manual Translation" and it "mainly relies on the translator's knowledge reserve and language accumulation." (LingZhi, 2021, p. 2). While, the most common translation genres were literary and religious texts.

After integrating MT, and in light of all the advancements and changes that have occurred, the translator's role and profile have been, and continue to be so, subject to many changes, be they in competencies, tools or texts' genres. It affected the work environment, the used tools and the texts' types and productivity. From being stuck in an office to the freelance mode which allow a complete flexibility in place and time. From the primitive and simple tools to the most sophisticated ones such as computers, cloud computing, and storage technology. From the literary and religious texts to pragmatic texts, and from a few pages to tens of pages a day. However, there is no consensus, among the translation scientific circles, on whether technology is beneficial or harmful to the translator; some view it as an aid, thanks to all the tools it presented, while others are afraid that it will outperform the human in the process in general (Esznyi, Bednárová-Gibová, & Robin, 2023).

Therefore, there are three points of view. The pessimists, who believe that the tools that once were welcomed to help translators increase their productivity are becoming more and more threatening; it “can result in high-quality translation output achieved in considerably shorter time and with much less effort compared to human translation.” (Esznyi, Bednárová-Gibová, & Robin, 2023, p. 109). The optimists who see it as a support and task simplifier for the human rather than a replacement (Kishore & Rajasekhar reddy, 2022). The skeptics who are not able to predict yet whether it will redeem or destroy the translators (Esznyi, Bednárová-Gibová, & Robin, 2023), but most likely, it is going to be of even greater help to the translator, and it should, seen as an opportunity to try a new but a similar career like “those of the translation technologist and the post-editor.” (Esznyi, Bednárová-Gibová, & Robin, 2023, p. 106).

a- From Translation Competence to Post-edition Competence

As it has been established in the previous paragraphs, technology has affected the translator's role, and new roles means new required competences. Despite the fact that even before the time of the technological explosion, there was no consensus on one set of translation competences. Actually, as a part of research in translator training, there have been quite a few attempts, from several scholars, to define the translation competence. The most exhaustive definition is the one made by Pym (2003, p. 10) who restricted it to two-fold functional competence: “the ability to generate a series of more than one viable target text (TT1, TT2 ... TTn) for a pertinent source text (ST); and the ability to select only one viable TT from this series, quickly and with justified confidence.”.

An overview of some studies in translation competence shows us that research in that matter can be divided into two periods: pre and post 1990s. before the 1990s, drawing from the works of Wilss (1976, pp. 118-120), Delisle (1984, pp. 235-236), Hewson and Martin (1991, p. 52), Nord (1992, p. 47) and others, we can resume the translation competencies in: translational (or transfer) competence, linguistic and extra-linguistic competence in SL and TL (understanding and producing), research competence. However, a shift in the translation skill sets is a necessary result to stay up with the task needs following the significant changes in translation practice brought about by modern technological advancements. As a result, the academics, after 1990s, Pym (2003, p. 10), Beeby et al. (2009, pp. 208-209), PACTE GROUP³ in Hurtado Albir (2017), Eser (2015, pp. 4-11), Öztürk Baydere (2023, p. 67) and Zhang (2022, p. 431) and others begun integrating certain technology-related competences with different names: computer, internet, instrumental, technical, information, technology, etc. Therefore, a pattern can be inferred from those scant investigations. Prioritizing linguistic and extralinguistic knowledge as the two primary facets of translation competency was prevalent in the beginning. But as technology has advanced, the significance of technological (information or instrumental) skill has risen significantly. In the last few years, the

³. The PACTE research group (Process in the Acquisition of Translation Competence and Evaluation) was formed in October 1997 to investigate the Acquisition of Translation Competence in written translation into and out of the L1 (direct and inverse translation). The founding members of the group were Allison Beeby, Doris Ensinger, Olivia Fox, Amparo Hurtado Albir, Nicole Martínez, Wilhelm Neunzig, Mariana Orozco and Marisa Presas.

information/technology competences have been competing with the linguistic/cultural competences. In summary, the translator increasingly resembles a post-editor.

b- Post-editing: the New role of translators

“Post-editing” is the term for the process in which HT is involved, and it “was conceived as something akin to a final step in the MT development workflow” (Vieira, Alonso, & Bywood, 2019). The process is simply “a human editor revising an MT output up to an acceptable level of quality” (Chunyu & Wong, 2015, p. 225). Consequently, “Post-editors are practically the first revisers of machine translated texts. Their task is to compare the source text with its machine translation, which is referred to as raw input and to check the fullness of content, comprehensibility, accuracy of language, terminology, formatting and style, among other features of the text.” (Esznyi, Bednárová-Gibová, & Robin, 2023, p. 106). Post-editors must therefore receive appropriate training to develop the following: a general knowledge of MT technology and computer-aided translation tools, a basic understanding of common errors that an MT system makes; and the knowledge and ability to establish whether editing MT output makes sense, in terms of time and effort estimation.

Some distinctions between a post-editor and a translator can be inferred from what preceded:

- The translator works on one text to produce another one, while the post-editor works on two already existing texts to create one final text.
- The translator works in one direction (from ST to TT) the post-editor works in both directions.
- Usually, the post-editor is exempted from conducting the documental research.
- The required cognitive effort to fulfill a translation from scratch depends on the translator's competence, while, in the case of post-editing, it depends on both the post-editor's competence and quality of the output of MT.

c- Human translator and AI-powered MT Collaboration

AI-powered MT is, undoubtedly, outperforming all its predecessors, it is seen as a great leap into the future, and no one knows what the future results will be given its current rate of growth. However, most likely, it will never equal humans, mainly because the machines “are logical and process language logically, while people are also irrational, emotional and imperfect and process language accordingly.” (Kishore & Rajasekhar reddy, 2022, p. 519). On the other hand, many studies, (Kliffer, 2005) , (Koponen, 2015) , (Witczak, 2016) , (Stasimioti & Sosoni, 2019) , (Arenas & Moorkens, 2019), (Çetiner & İşisağ, 2019) , (Yamada, 2019) , (Romaniuk-Cholewska, 2021), have proven that, whether be it in a training or professional situation, PEMT ensures high quality with less cognitive effort and spent time, and achieves higher scores compared to translating from scratch. Furthermore, some have even concluded that the translator using the combination MT-CAT tools-PE is far superior to the translator who works alone or the raw MT output. Therefore, the best solution to get the best out of both is to collaborate between AI-powered MT and HT. A notion shared by language service industry professionals who “believe that human assisted machine translation (HAMT) is the trend of the future” (Zhaohui, 2019, p. 392).

The ability of the translator to “interpret the context and convey the same meaning, rather than direct literal translation. The translator can understand the creative use of language, such as puns, metaphors, slogans, and so on.” (Lihua, 2023, p. 6) is one of the main benefits of conventional human translation. His “expertise, creativity and critical thinking in producing translations that resonate with the artistic value of the original work which cannot be understated.” (Škobo & Petričević, 2023, p. 332) are other skills he may contribute. However, the quantity of publications and the number of language pairings of work are both growing dramatically, make it impossible for the HTs to meet the demand for translation even if their number multiplies many times.

While MT “features short processing time and faster processing speed than human translation. One tool can complete the translation of multiple languages and master many more languages than human translation.” (Lihua, 2023, p. 6). It ensures “consistency and accuracy through AI-powered terminology management tools” (Škobo & Petričević, 2023, p. 332). Nevertheless, it is not always reliable, especially in literary or media texts that continue to provide a challenging obstacle for the machine, primarily because “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” (Škobo & Petričević, 2023, p. 332).

AI is just a tool, and it should be viewed as such. The purpose of tools is to make our tasks easier, smarter, and more productive. Using AI as a tool in the translation field has proven that “the overall translation efficiency is much higher than that of the traditional human model, the traditional CAT model, and the AI translation model alone.” (Zhaohui, 2019, p. 392). Combining machine and human translation yields results that show the job may be improved upon while maintaining the highest level of efficiency and quality. Therefore, “the future translation profession will be in an era of human-machine coexistence and human-machine complementarity” (Zhaohui, 2019, p. 392). Actually, “many translation companies are trying new models of artificial intelligence translation blending human translation” (Zong, 2018, p. 5) as a solution to this issue.

d- Training and Skills Enhancement

Considering the many developments in the translation field, it may be stated that “the human translator does no longer assume the ‘leading role’ in translation settings increasingly shaped by technology” (Öner Bulut, 2019, p. 1). Therefore, the translation curricula should keep up with all the changes in the translation’s market requirements, especially concerning the Technology Competence (tools and applications) which “includes all the knowledge and skills used to implement and advise on the use of present and future translation technologies” (European Commission, 2022). It is the natural flow of life for humans to continuously improve, evolve, and adapt; if someone does not follow this path, they will inevitably fall behind. Therefore, every translator is obliged to update and adjust his/her skills in any situation. All fields naturally undergo change, whether in the task's criteria, goals, or nature. As a service provider, a translator should continuously stay abreast of the demands of the market.

In order to keep up with the rapid changes in the labor market brought about by new inventions, young and inexperienced translators in particular should focus on learning the operating modes of PE and MT, especially the one powered by AI, and adapting their competencies to conform to the new requirements. Because the likelihood of being employed as a translator or post-editor may significantly decline in the near future, if it hasn't already happened, if one lacks digital savvy and domain experience. Therefore, "translator training in a tertiary education context in the age of globalisation and localisation must familiarise trainees with the essentials of the industry. It should also be aligned with the needs and specifications of the language and translation industry" (Mohammed & Al-Sowaidi, 2023, p. 564)

6- Challenges and Opportunities

However inevitable it may seem, the transitioning from the translator into the post-editor, does not always go as smoothly as it should be. Translators, particularly those who have been in the field for a while, continue to show some resistance. There is a number of reasons for this aversion to learning the new skills needed to adjust to the post-editor role. The most prevalent reason is the translator's attitude toward MT, which ranges from worry of losing originality to fear of being replaced. *Technophobia*, also known as the "negative affective and attitudinal response to technology which the technophobe [individuals who resist using computers when given the opportunity to use them] acknowledges to be irrational" (Brosnan, 1998, p. 10) is the reason for others' resistance to technology.

Technophobia is an individual matter that each translator has to deal with, and the fear of being replaced is something that no translator can escape, but the loss of creativity is a serious concern. Translation is a craft and maintaining the level of proficiency takes ongoing practice, consequently, translators need ongoing practice, much like writers, musicians, painters, and all other craftspeople and artists. The translator's creativity will undoubtedly be impacted if they constantly rely on half or even more than half finished product. However, the one genre of translation that requires a high degree of creativity is literary translation, and the good news is that literary translation is still beyond the reach of MT. In fact, in the case of literary texts, the quality of the outputs of MT remains unconvincing. As a result, the recent increase in demand on post-editing is restricted to the pragmatic texts where creativity is less valued. Nevertheless, in the event that MT technology makes another leap forward and begins to generate literary translations of a high quality, then certain safety measures need to be implemented. In case it happens, the only category of translators that can maintain their jobs are those who adapted their competences for PEMT.

7- Future Possibilities and Limitations

If one has to bet, it is always safer to bet on humans. AI-powered MT will advance further and undoubtedly produce even superior outcomes. We may even witness a MT engine that can translate even literary works with an elegance and beauty that rivals that of the greatest writers. But no matter how advanced it gets, it will never outperform a *good* HT. Why? The reason for this is that AI is not truly intelligent. It has no consciousness, no sense of wrong and right. It is just a software that imitates humans and draws on a database of human prior productions. There is no guarantee, nor will there ever be, that the output of the machine is accurate.

HT is benefiting from MT engines, and their benefits increase with their sophistication. Since we have established that a FAMT is not feasible, HTs will remain the safest resort in the end. However, MT is a great tool that can assist translators in meeting the growing demand for translation. The future is for the translators who will acquire the necessary competence to maximize MT's potential. To put it in another way, post-editors have the future.

8- Conclusion

The cadence of changes that have occurred in the world in the last few decades is unprecedented. What man has invented in this short period of time is much more and sophisticated than what has been invented in millennia. All this is attributed to the technology that has literally shook the world. Even the most complex tasks such as translation have known big changes. Translation is indisputably one of the most challenging undertaking human tasks. Being about languages is the main reason for that. Because language refers to ambiguity, emotions, moods etc. All those aspects are attributed only to humans. Those same aspects that make translation an even harder task to machine. Translator's role has evolved through the ages thanks to the technology and its invented tools that made translation for people easier and easier. Today's translator is far more proficient than they were in the past. Things became considerably simpler and easier with the advent of AI-powered MT. The translator is given materials that have already been translated and just need some post-editing. During this process, he is assisted by even more sophisticated tools that can highlight, suggest, check, draw attention, rearrange etc.

All those facts indicate that the translator have been subject to many changes over the years, in reality, he resembles a post-editor more than a real translator. He is, however, and will remain always, required and he cannot be replaced. All he needs is a little training to update his competences and adapt them to the new assignments, because as **Herbert George Wells** said "*Adapt or perish, now as ever, is nature's inexorable imperative*".

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