

Portuguese translators' attitude to MT and its impact on their profession

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Abstract

Advances in Neural Machine Translation in recent years have brought these systems closer to delivering on the promise of universal, instant translatability. Magnified by the release of successive iterations of generative AI systems, recent news heralds both a new era for translation and the obsolescence of the translator. Drawing on data from recent language industry surveys produced by national and international organizations, as well as a specific survey on the Portuguese market with a longitudinal dimension, this paper seeks to determine the impact of technology, particularly MT, on the perceptions of translators and their career choices. The findings indicate that MT is widely used in the industry, but only a third of MT users rate their experience as positive. MT projects most frequently involve human participation as post-editors. MT is seen as having improved despite several shortcomings. However, greater incorporation of technology is seen as considerably reducing satisfaction and potentially triggering significant attrition. Knowledge of MT and first-hand experience are seen as positively influencing attitudes towards MT.

Keywords: translation technology; machine translation; working conditions; translator training; attrition

Introduction

Although largely invisible in their work, translators have historically been the agents of translation. Most of society may still think that this is the case, but Machine Translation now accounts for the vast majority of all translational action. Using data published by Google and an estimate of full-time professional translators and interpreters in the world, Pym and Torres-Simón highlighted that human mediators are producing “a mere 0.68% of what Google Translate is reported as processing” (2021, 3). The authors stress that much of this translated volume would never have been commissioned to a professional translator, as its content is not meant to be published or read. Still, this represents a remarkable shift, and advances in Neural Machine Translation (NMT) have made this technology increasingly reliable for many uses. In fact, Post-Editing Machine

Translation (PEMT) is now a generalized service offered by Language Service Providers (LSP) of all sizes.

Translation can thus be seen as a profession under pressure of technology, and recent advances in Large Language Models (LLM) that underlie Machine Translation (MT) and generative Artificial Intelligence (AI) chatbots are bound to accelerate change in the industry.

The impact of technology on translation and how it may shape its future has received significant scholarly attention, within the field of Translation Studies but also across the spectrum of Natural Language Processing research. However, comparatively little attention has been devoted to the perceptions of translators toward MT, either as a tool of trade or as an industry-changing phenomenon. In one of the early studies into this topic, Guerberof Arenas concluded that “[we] do not find a negative attitude towards working with MT (although the majority of translators might dislike it) but rather problems with how the task is paid or organized” (2013, 93). Cadwell, O’Brien, and Teixeira conducted research on the human factors that determine MT (non-) adoption, and their findings “suggest that translators sometimes find MT useful and that they can have positive experiences of it. It has been relatively rare to record positive statements from translators about MT. Though this does not qualify as decentering the human agent, it at least makes a step towards giving space to the material agent—in this case MT” (2018, 318). Nunes Vieira (2020) also addressed the topic using an analysis of translators’ discourse in blogs and forum postings regarding the incidence and nature of topics like machine translation, among others. Based on data spanning from 2010 to 2017, he concluded that MT was a secondary issue for translators (outranked, e.g., by pay) and that “most criticism of MT concerned primarily not a fear of being outperformed by MT systems or an intrinsic aversion to the technology, but rather MT’s current limitations and some of the business practices that surround its use” (Nunes Vieira 2020, 16). More recently, Pym and Torres-Simón (2021) assessed the effects of automation in the translation profession and concluded that there are strong signs of change in wage dispersion, and uneven growth in the industry, where large players have enjoyed massive growth rates and small players (including freelancers) actually saw their revenue drop. The authors also determined that company size is positively correlated with investment in technology and automation (of translation and other tasks).

Industry associations have published position papers on MT and its impact on translation and translators. FIT, e.g., has published position papers on the Future of Professional Translators (2017), Machine Translation (2019), and Post-Editing (2021), acknowledging that translation as a professional activity is changing and becoming increasingly influenced by technology. Little is actually said about working conditions or perceptions of translators, other than this transformation will require adaptation and that risks exist, like rate degradation (FIT 2017) and professional dissatisfaction

due to non-adaptive technologies (FIT 2021). AVTE (2021) also published a manifesto on MT in audiovisual translation (AVT) in response not only to the hype surrounding MT but also to reports on MT being adopted extensively by major international AVT agencies. The manifesto drew attention to aspects that affect MT output and that are specific to AVT, like sound and image, and to the lack of customized MT solutions. Ultimately, the manifesto argued, “[u]nscrupulous use of MT will increasingly lead to brain drain and talent crunch” (AVTE 2021, 2). This, in turn, would undermine the long-term sustainability of the industry. Although the manifesto draws on a number of sources for its assertions, it contains very limited empirical support for the suggested “talent crunch”.

Industry and professional associations also produce surveys on topics of interest for their members. Here is where the most relevant information on the perceptions of translators about their working conditions, including MT, can be picked up. However, systematic data collection on this topic can only be found in European Language Industry Survey (ELIS) reports.

In the 2023 edition of the ELIS survey, MT and AI were identified as top trends in the industry. However, the report also mentioned that “reported machine translation use remains well below popular estimations” (ELIA 2023b, 37). It noted a continued trend toward post-editing and automation across the industry, but among freelance translators the MT-related stress factor did not increase relative to 2022. In fact, while it was identified as a relevant stress factor, it was largely surpassed by the financial stress factors such as pay/rates and economic climate. According to the report results presentation deck, “[t]his seems to indicate that the freelance community is finding ways to cope with the technology although quite a few respondents are still struggling with it” (ELIA 2023a, 33). Surveys carried out by translator associations like AVTE or ITI only sporadically address the effects of automation, but the latest editions of the surveys from these two associations (2022/2023) make no mention of MT. No Portuguese association produces any such report.

This study therefore aims to address this informational gap, focusing on individual translators working with European Portuguese in Portugal. After an initial survey carried out in 2017 to determine whether MT instilled fear in translation professionals regarding their future, namely their livelihood and societal relevance, a second similar survey was carried out in 2023, adding a longitudinal dimension. The aim is to determine whether translators see technology as a threat or as an enhancement of their abilities and creativity; to acquire data on adaptation to a more technologically mediated profession; to assess job satisfaction and the potential impact of technology; and how these aspects have evolved over the period of 6 years that mediates both surveys.

1 Methodology

The main tool for this study was an online survey directed at translators with European Portuguese as a working language, with a special interest in professional translators domiciled in Portugal. The language of the survey and its delivery methods are aimed at narrowing respondents to the above target audience.

1.1 Survey population, sample, and coverage error

The field of professional translators in Portugal is made up of approximately 3,300 individuals, according to data from the national statistics office, Statistics Portugal. This number has not changed significantly between the two surveys. Considering the delivery method is based mostly on social media, a sample cannot be accurately determined other than by the number of members in the Facebook group called “Tradutores com Vida”. Translator associations were contacted for publicity, but they also mostly used their social media presence to reach out to their members.

Coverage error is expected to be very high because inclusion in the sample is highly dependent on Facebook's algorithms, and no direct contact is established with the survey population. As mentioned above, translator associations were contacted for publicity in order to mitigate this effect.

1.2 Language and tools

Since the primary intended survey population is professional translators domiciled in Portugal, the questionnaire is set up in Portuguese.

For the 2017 survey, the online tool EncuestaFacil was used to collect data. Data analysis was conducted using the analytics features of EncuestaFacil and Excel. For the 2023 survey, the online tool Qualtrics was used to collect data. Data analysis was done using the analytics features of Qualtrics and Excel. The tool change is related to a change in affiliation by the researcher, but there is no significant difference in functionality between the two. Both comply with GDPR standards.

1.3 Structure

The questionnaire is divided into four main sections. All questions were mandatory unless otherwise indicated. Section I presented the aims of the questionnaire and collected the informed consent from participants. Section II collected demographic data for sample characterization, including age, country, education, and translators' association affiliation. Section III collected professional data, including years of experience as a translator, whether translation is a part-time or full-time activity, the percentage of income earned from translation, and areas of expertise. Section IV

collected data on electronic tools and satisfaction, including which tools are used, personal satisfaction with compensation, social recognition, fulfillment and working conditions (5-point Likert), previous participation in projects explicitly involving MT and role in such projects, and satisfaction working in MT projects in different roles (5-point Likert). Participants were also asked to rate the evolution of MT systems in terms of accuracy, terminology used, style, and language variants (4-point Likert), and they were also given the opportunity to list the major hurdles facing MT systems (optional text field). The final three questions in this section dealt with the effect of greater incorporation of technology and satisfaction in the future (in terms of compensation, social recognition, fulfillment, and working conditions) (5-point Likert), whether such technological evolution might lead to a decision to switch to a different professional activity (Y/N), and a training needs assessment (optional).

No personally identifiable information was collected in mandatory fields. Participants were given the opportunity to share their email addresses for participation in a future qualitative stage of the study.

1.4 Delivery and rollout

In 2017, the main delivery mode was via a Facebook group called “Tradutores com Vida” (≈ 2750 members) and snowballing. In 2023, the same Facebook group was used (now at ≈ 3200 members), and three professional associations were contacted to distribute the questionnaire to their members: APT, APTrad, and ATAV. Snowballing and postings on LinkedIn were also used.

The delivery of the questionnaire in 2017 started on July 13 and ended on July 31. In 2023, the questionnaire was first delivered on September 13 and closed on October 15.

1.5 Response rates

In 2017, a total of 95 questionnaires were fully answered (out of 127 that were started). The figures in 2023 were very similar, totaling 92 fully answered questionnaires (out of 123 that were started). Considering an approximate sample size of ≈ 3200 units, the response rate in 2023 was 2.875%, slightly below the 2017 rate of 3.45%. This lower response rate was somewhat expected due to lower activity in the group.

For the analysis, only fully answered questionnaires are considered.

2 Results and discussion

The average age of respondents rose from 42.84 years in 2017 to 44.48 years in 2023. The mechanisms devised to target translators in Portugal have remained effective, capturing 91% of respondents located in Portugal (vs 89% in 2017).

Table 1 – *Education*

	2017	2023
Primary education	0%	0%
Secondary education	5%	0%
Higher education (Translation)	60%	65%
Higher education (other areas)	35%	35%

Table 1 shows the highest educational level attained by respondents. There are no significant changes from 2017 to 2023. Translators remain a highly qualified professional group. There is a significant number of translators with degrees in other areas, but holders of degrees in translation are on the rise. This trend is compatible with the creation of several BA programs in translation in the mid-2000s in response to the Bologna process, and more people being able to pursue a first- or second-cycle degree in translation. Prior to that, tertiary education specifically in translation was very limited. Considering the 83% of respondents with a degree in translation or interpreting in the ELIS report, this trend is expected to continue.

A significant shift was observed in professional translator association affiliation. In 2017, 69% of respondents reported not being members of any professional translator association. In 2023, only 36% of respondents reported not being members of any professional translator association. APTRAD is the largest Portuguese translator association, and its members had the largest representation in the survey, closely followed by ATAV, a specialized Portuguese translator association for AVT professionals. ATAV did not exist in 2017. It should be noted that respondents could select more than one option in this question, as it is not uncommon for professionals to belong to more than one association depending on their specialisms or countries where they offer their services.

The average professional experience of respondents rose slightly from 16.5 years in 2017 to 17.5 years in 2023. A trend toward specialization is also visible in Table 2, particularly in the rise of translators reporting full-time dedication to translation.

Table 2 – *Part-time/Full-time*

	2017	2023
Full-time	66%	86%
Part-time	31%	13%
Student	3%	1%

This is further corroborated by the weight of translation in the income of respondents: 80% reported earning 76-100% of their income from translation in the 2023 survey (vs 60% in 2017).

These figures are well above the average found in the ELIS survey, where only 66% reported earning enough as a freelancer.

As far as areas of specialization are concerned, a new category of Literary Translation was added since the 2017 survey. In 2023, 28% of respondents reported having Literary Translation as one of their specializations. General Translation remains at the top of areas of specialization (2023: 58% vs 2017: 66%), followed by Technical Translation (2023: 53% vs 2017: 61%) and Audiovisual Translation (2023: 42% vs 2017: 25%). Software Localization (2023: 11% vs 2017: 19%) and Transcreation (2023: 10% vs 2017: 7%) come at the bottom. The significant rise in AVT-specialized translators is potentially due to the fact that they now have their own association, which is known to be very active and it has seemingly very engaged members.

Table 3 – *Electronic tools*

	2017	2023
Electronic resources on disk or online	93%	96%
Word processor (Word, Pages, etc.)	90%	91%
Language checking tools	76%	74%
Subtitling software	26%	46%
CAT/TM tools (Trados, MemoQ, etc.)	71%	67%
Software localization tools	22%	5%
MT tools (Google Translate or APIs for Trados, MemoQ, etc.)	29%	53%
Other	3%	1%

There are no significant changes in the tools used by the participants, except for the significant pick-up in MT use, either as stand-alone or as part of a CAT tool. The variation in subtitling software may, again, be related to the support of this survey by the Portuguese AVT translator association.

When asked how satisfied they were with their professional situation as translators, participants reported feeling more satisfied with their Professional Fulfillment (avg. 3.76) and Working Conditions (avg. 3.76), and less so with their Income (avg. 2.77) and

Social Recognition (avg. 2.48). These results from 2023 do not display a significant variation from the data collected in 2017 for the same data points.

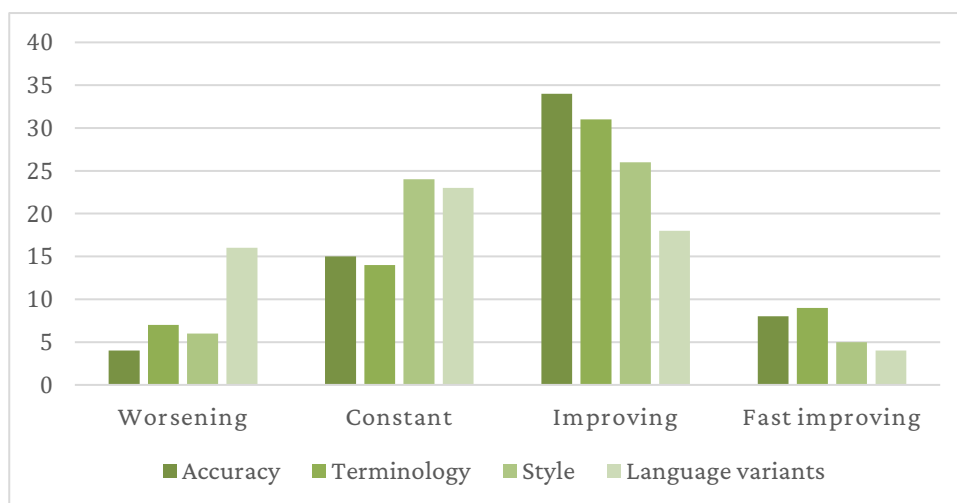
A significant variation can be observed in the participation in projects explicitly involving MT (i.e., the use of MT is known from the start). In 2017, 46% of respondents had never participated in projects involving MT, whereas in 2023 that figure dropped to 34%. In 2017, 26% of respondents rated their experience with MT in said projects as positive and 22% as negative. In 2023, 34% rated the experience as generally positive and 33% as generally negative. Although the use of of MT is becoming more widespread, dissatisfaction levels have risen disproportionately to satisfaction levels.

In projects involving MT, the most frequent role reported by the respondents is post-editor, followed by reviewer and translator. Professional satisfaction in such projects is lowest for reviewers (avg. 2.28) and post-editors (avg. 2.31), and somewhat higher for the role of translator (avg. 2.54). A correlation is noticeable between the ability to control the use of MT and satisfaction.

The main problems of MT systems working into European Portuguese, according to the respondents, are lack of awareness to context, terminology inconsistencies, inability to properly separate Brazilian Portuguese and European Portuguese, literal translations, and grammatical concordance issues. The inputs were obtained in an optional text field.

However, despite the low satisfaction levels reported with MT projects, respondents generally rated positively the evolution of MT over the last few years. Figure 1 shows that quality is perceived to be mostly improving or constant. Accuracy and terminology are the categories with the most significant perceived improvements, whereas style and proper handling of language variants fall behind.

Figure 1 - *Evolution of MT*



Asked how a greater incorporation of technology in translation (i.e., post-editing and reviewing becoming the norm) would impact their satisfaction, respondents indicated

that this would have a very significant impact, especially on their professional fulfillment and income.

Figure 2 - *Job satisfaction: current vs more MT*

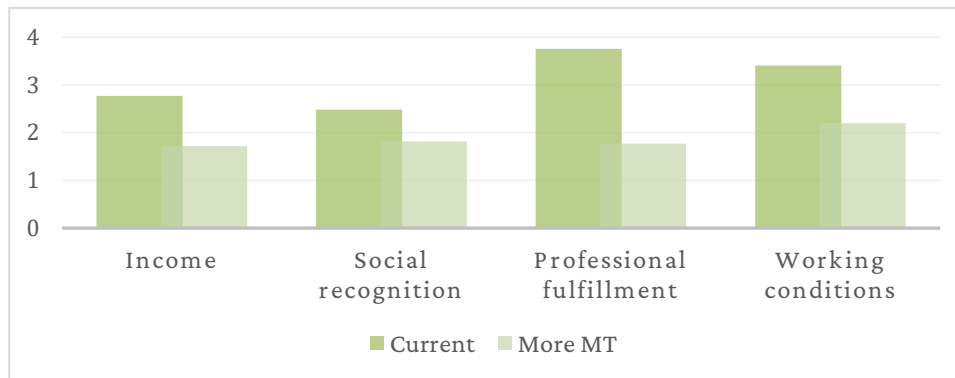
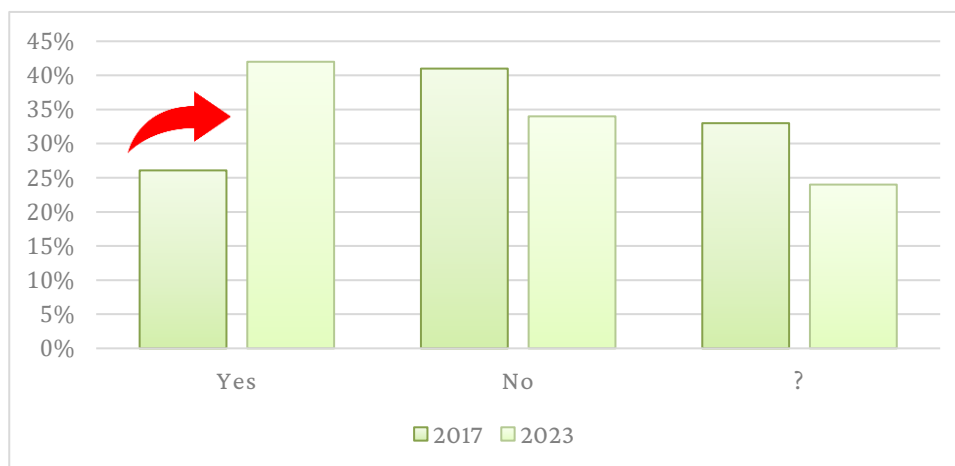


Figure 2 shows the magnitude of change in satisfaction across four different items. The proportions are similar to those recorded in 2017, except for Income. More experience with projects involving MT has turned respondents more pessimistic toward the impact of MT on their income from translation.

Figure 3 - *Willingness to change profession*



Consequently, survey participants were asked whether such a technological change (increased use of MT) might make them abandon the trade of translation. Figure 3 compares the results from the most recent survey to the results obtained 6 years ago. It is noticeable a significant leap in the number of people willing to change trades due to MT and greater technology integration.

For a better understanding of the factors influencing translator satisfaction and perceptions of the increased use of MT, further analysis was carried out. Demographic variables were used to ascertain potential correlations and provide a wider context.

The age groups showing more tolerance to the increased use of MT are those under 30 and over 61, whereas respondents aged 31 to 40 are those exhibiting greater willingness

to exit the market in such a scenario (69,2%). It should be noted that this is also the age group (31-40) with the greatest representation of AVT professionals, suggesting a stronger negative correlation between increased use of MT and satisfaction in this segment.

Education and continuous professional development (CPD) were also identified as relevant variables. As seen in Table 1, all survey participants hold a university degree. Holders of degrees in Translation are significantly less likely to abandon their current profession than those holding degrees in other areas. Survey participants who reported having had training in MT show significantly less risk of attrition in case of increased use of MT (< 30%) than survey participants who reject MT and MT-related training outright (72.2%). Willingness to change trades is significantly lower in participants who have taken part in projects explicitly involving MT and rated this as a positive experience (29%), somewhat higher among survey participants who never took part in such projects (35.5%), and significantly higher in participants who rated their participation in projects with MT as negative (64.5%). It is thus clear that knowledge of MT acquired through higher education, CPD, and professional experience positively influences the attitudes and perceptions of translators towards MT.

At the end of the day, however, more than 40% of the survey participants reported willingness to change trades due to diminishing job satisfaction with increased use of MT, and ultimately this might lead to adverse selection in the translation market.

Conclusions

Adverse selection occurs in the context of asymmetric information. Classically, it is a buyer/seller problem as illustrated by the inability of buyers to distinguish between a good and a bad used car, which ultimately can lead to bad decisions (Akerlof 1970). The concept has been applied by Chan to the translation market, arguing that low pay might cause adverse selection in the market, i.e., “good’ translators may leave the translation profession for other professions” (2009, iii). The current survey results also suggest that job satisfaction has the potential to stimulate translation professionals to switch careers to an extent that might cause significant market disruption.

Moreover, the translation sector in Portugal does not appear to be efficient in attracting talent. According to data released by the Directorate-General for Statistics in Education and Science (DGEEC) just over 300 students are admitted every year to BA programs in Translation or Languages with a significant track in Translation. Admitting that approximately 30% will drop out or change to another program, this still means around 200 new graduates every year. If we look at the number of freelancers and companies operating in Portugal published by Statistics Portugal, we notice some fluctuation in the number of freelancers and a healthier growth trend in company creation. Nevertheless, the net balance over 5 years: no more than 400 freelancers and 80

companies (most of them in the 2-10 employee bracket). The industry is seemingly unable to attract and/or absorb the graduates. That said, it should also be noted that official data from the DGEEC indicate very low unemployment among graduates from these programs, and consequently demand for their skills elsewhere. Hao and Pym (2022), in a study of the employment of Masters graduates from Melbourne University, found that only one-third of graduates go on to work as translators or interpreters, a figure that is at par with other international surveys on T&I graduates. The remaining graduates find employment in areas where their multilingual skills are in demand or carry on studying.

Portugal is currently facing a shortage of teachers in the public education system. In response, the Government is changing the rules for the training of teachers, namely by lowering the ECTS required in certain subjects to access teacher-training programs and by improving the working conditions of teachers. These upcoming changes may well make the education system more appealing to highly-trained professionals like translators who feel unhappy with the increasing technologization of translation, and who would enjoy greater financial stability and social recognition.

Financial matters are indeed highlighted as the main area of concern for translators in every single study quoted here, either academic or from the industry. The perceptions related to MT and the attitude toward this tool are not of outright rejection. Some usefulness is seen in MT, but translators are acutely aware of the limitations of MT, especially in their own fields of specialization. It is reminiscent of the introduction of Computer-Assisted Translation (CAT) tools and the still highly popular slogan of never having to translate the same sentence twice (and pay for it), which appealed in different ways to customers of translation and translators. Many translators have adopted CAT tools, and others have resisted them to this day. Nevertheless, CAT tools were developed to address the needs of translators, inviting them into the process, and also of larger LSPs. MT, LLMs and generative AI all but completely exclude translators from their development processes, and their workings are hard to grasp even for their own makers due to the machine-learning abilities and the large amounts of data needed for their training, a significant portion of which is uncontrolled. This should make us wonder whether the MT/AI industry currently sees translators as users of machine translation.

If so, AI should not focus solely on automation efficiency and emulation of human activity, but rather on the “amplification of human abilities and empowerment, while maintaining human control” e.g., using sensors to “amplify human cognitive abilities in translation through shifts in modality, timing, and levels of automation as starting points” (O’Brien 2023, 13). A truly human-centered approach to augmented translation seems key to retaining talent, as it does not immediately instill fear of replacement and may well refashion part of the industry as a technological, detail-oriented craft.

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