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Placing Human Agency in the AI-Powered Media Localisation Industry

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Abstract

The media localisation industry, as audiovisual translation (AVT) is commonly known, has undergone radical changes with the accelerated deployment of AI-powered solutions transforming production processes. This article examines how different stakeholders navigate this changing landscape: an industry promoting automation to meet growing demands, translators concerned about working conditions and professional sustainability, academia developing future professionals while researching technological impact, and audiences whose evolving expectations shape industry practices. Drawing on stakeholder theory, the analysis reveals how the sustainability of AVT requires balancing technological efficiency with human expertise. While AI tools promise faster turnaround times and reduced costs, their implementation must ensure long-term professional viability and translation quality. The article argues that successful integration of AI depends on creating value for all stakeholders through collaborative approaches that recognise translators' agency and expertise. This requires conceptualising AI not merely as a cost-reduction tool but as part of a broader ecosystem where human expertise and technological capabilities complement each other to serve diverse global audiences.

Key words: audiovisual translation, media localisation, subtitling, machine translation, automation, augmentation, stakeholders, industry, academia, viewers, AI.

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Introduction

This article approaches the impact of technology on audiovisual translation (AVT) by bringing together the positions of the main stakeholders involved in discussions about the present and future of the sector: the industry, professional translators, academia and the audience as end-users. The review outlines the key motivations for stakeholders and their priorities as a way to understand their attitudes, but also as an opportunity to create a space of mutual recognition and understanding.

The AVT landscape has radically changed since the Covid-19 pandemic. Media localisation, as the industry normally refers to AVT, emerged as a solid sector after the pandemic, and this, coupled with the rapid development of technologies, is quickly changing how audiovisual translations are produced and how audiovisual translators work. The media industry's steady expansion, the rapidly growing audience expectations, and the demand for rapid translations have accelerated the deployment of computer-assisted translation (CAT) tools into AVT processes (see De Los Reyes Lozano & Mejías-Climent, 2023).

Amidst these changes, companies face pressure to scale up operations and deliver more content translated into more languages within shorter timeframes. Companies cite a shortage of language professionals, linguists, who can tackle the workloads of the language service providers (LSPs) (Estopace, 2017) as a constraint to expansion. According to industry representatives, a talent crunch that had been felt for some time peaked in 2022 (Iyuno SDI Group, 2022), with Slator stating there was "a shortage resulting from the trifecta of high demand around non-English content, simultaneous releases in multiple languages, and a talent pool that takes time to be developed" (Marking, 2022). In response, the industry is promoting hybrid and automated solutions (Papercup, 2022), a push that has accelerated since the release of accessible generative AI systems.

Even for a sector that keeps up to date with technological developments, the changes have been too fast and drastic, resulting in strong reactions from professionals. Professionals and professional associations disagree with the industry assessment, arguing working conditions, rather than a talent shortage, are the primary reasons. Statements by the American Translation Association[1] (ATA), SUBTLE[2], Asociación de Traducción y Adaptación Audiovisual de España[3] (ATRAE), AudioVisual Translators Europe[4] (AVTE), among others, express concerns about the potential devaluation of human expertise in the translation process and the lowering of quality standards for audiovisual translations.

Due to automated processes, viewers who consume audiovisual products may face varying quality levels and potential cultural misalignments. Their evolving expectations and experiences play a role

[1] https://www.atanet.org/advocacy-outreach/ata-calls-for-fair-working-conditions-for-translators-in-the-entertainment-industry/
[2] https://subtle-subtitlers.org.uk/not-ais-notes-subtly-about-subtitling-2/
[3] https://atrae.org/comunicado-sobre-la-posedicion/
[4] https://avteurope.eu/avte-machine-translation-manifesto/

in shaping industry practices and their conceptualisation of quality. Additionally, the availability of options and the enlarged offer require them to make some informed or, at least, consequential decisions: they can choose what to watch and can also decide which translation mode to use.

Academia finds itself at the intersection of these perspectives. Universities need to ensure that students develop market-ready skills while fostering a critical awareness of these changes. Graduates need a strategic and reflective mindset to develop a sustainable and successful career. We are also tasked with monitoring these practices and providing evidence to inform the debate and contribute to the configuration of fair, efficient, and sustainable practices.

As AI reshapes media localisation, all stakeholders must engage in dialogue and seek concerted agreements. The complex interactions among stakeholders can be understood through stakeholder theory (Freeman, 1984) which posits that organisations should create value for all stakeholders involved, not only shareholders. The various stakeholder groups have interconnected but often competing needs that must be balanced. Automation and AI offer potential benefits, but their implementation must be carefully managed to ensure fair and efficient practices that consider the interests of all parties involved. A growing body of literature is approaching sustainability as a model in the localisation industry (Fırat et al., 2024; Moorkens et al., 2024) and media localisation is called to do the same. By adopting a stakeholder theory approach, the industry can work towards more sustainable and ethical practices in this era of rapid technological change.

The sustainability of AI implementation in media localisation must be considered across multiple dimensions. While AI tools promise economic efficiency through faster turnaround times and reduced costs, sustainable implementation requires balancing these gains against social and professional impacts. The current focus on post-editing and subscription-based tools raises questions about professional sustainability: can translators maintain viable careers while constantly investing in new tools and skills? This connects directly to quality sustainability, as the profession's ability to attract and retain talent affects long-term translation quality. As Moorkens et al. (2024) argue in their Triple Bottom Line approach, sustainable automation must consider economic viability alongside social responsibility and professional development.

The industry's current implementation model, focused primarily on economic efficiency, risks undermining its sustainability by potentially diminishing the professional expertise needed for high-quality translation. A more sustainable approach would involve developing implementation strategies that maintain translation quality while ensuring professional viability. This requires viewing AI not merely as a cost-reduction tool but as part of a broader ecosystem where human expertise and technological capabilities complement each other to serve diverse global audiences (Moorkens, 2024; O'Brien, 2024).

1. How Did We Get Here?

The boom of the media localisation industry resembles the consolidation of localisation at large but is happening in a rather accelerated manner (Bywood & Nikolić, 2024). Steadily since the 1990s, technological tools have reshaped the production processes in the localisation industry with globalisation practices, translation environment tools, cloud-based solutions, machine translation (MT) and content management resources (van der Meer, 2020).

Technological developments in film and video are central to AVT. By 2024, translators work in a workstation almost fully migrated to the cloud, although some still use desktop applications or a combination of desktop and cloud-based tools (Bywood & Nikolić, 2024). The development of CAT has been primarily focused on text-based translation projects, leaving out instances of audiovisual translation, such as subtitling and game localisation (AudioVisual Translators Europe, 2022; Bywood et al., 2017). Until the beginning of the 2020s, however, the use of translation technologies to support the tasks specific to language transfer in AVT processes was limited (Georgakopoulou, 2018).

Subtitling is probably the AVT mode that has benefited the most from software development, with developments making fast progress only recently in dubbing and audio description. However, the 2000s technological revolution did not benefit the subtitling industry in the same way as it did with other forms of specialised translation. While data management tools have been standard in the localisation industry at large since the 1990s, subtitling software was developed to mostly support the technical aspect of subtitling (Georgakopoulou, 2020, p. 26). Although early on, software tools helped with tasks such as "spotting, shot changes, audio and speaker recognition and automatic colouring of text, the advances on the linguistic front have been much more modest" (Díaz Cintas & Remael, 2007, p. 243). This partial development has affected other forms of multimedia translation, such as video game translation, where it is still common for translators to work with lists of text strings in Excel files.

The adoption of translation environment tools and the re-use of data stored in translation memories allowed for a global localisation industry to consolidate in the 2000s and continue expanding and restructuring (Moorkens & Lewis, 2019). By 2024, media localisation will be consolidating as a key and profitable vertical in the industry, and the proliferation of audiovisual content in a growing and globalised media industry comes with increasing demands for fast translations into multiple languages and modes. The number of streaming users worldwide has steadily increased, and the rising trend is expected to continue. According to Statista,[5] there were 1.2 billion subscribers in 2023, and the number is expected to reach nearly 1.7 billion by 2027. From the perspective of a media localisation industry that follows the steps of the broad localisation industry, automation is the most efficient manner to answer these growing demands, leading to the development and deployment of

[5] https://0-www-statista-com.pugwash.lib.warwick.ac.uk/statistics/1235801/global-svod-subscriptions-and-subscribers/

automated solutions, including automatic speech recognition (ASR), MT, post-editing and synthetic dubbing (De Los Reyes Lozano & Mejías-Climent, 2023).

2. Automation in Audiovisual Translation

While the development and deployment of automated solutions in the industry have been limited, there has been an interest in these methods for some time and some of these resources have already been tested and even implemented. The special issue *The impact of machine translation in the audiovisual translation environment: professional and academic perspectives* of the journal *Linguistica Antverpiensia* edited by de los Reyes Lozano and Mejías-Climent (2023) offers an overview of key topics and developments by 2023.

Audiovisual translation is not only essential for the globalisation of the media industry but also a key tool in democratising access to information. The use of subtitling as an accessibility tool offered to the masses was heavily advanced by the popularity of YouTube. The video platform took a leap forward in 2009 with the introduction of automatic captions and MT. After adding subtitles to the platform in 2006 and allowing the translation of subtitles using Google Translate[6] in 2008, they launched automatic subtitle timing tools and "combined Google's automatic speech recognition (ASR) technology with the YouTube caption system to offer automatic captions" (Harrenstien, 2019, n.p.). The announcement recognised that the subtitles would "not always be perfect (…), but even when they're off, they can still be helpful" (Harrenstien, 2019, n.p.) and technology would continue improving.

Cross-sector cooperation between academia and the industry has also explored the use of automated tools in subtitling. Several projects have tried to integrate MT into the production of subtitles since the days of rule-based systems in the early 2000s, with varying results but suggesting continuous improvement. Popowich et al. (2000) developed the ALTo system to translate subtitles from English into Spanish for broadcasts in the USA. The results were largely positive, with users judging 70% of the subtitles in Spanish, translated from the English captions, as correct or acceptable.

The eTITLE project involved Catalan, Spanish, English and Czech and developed a cloud-based tool integrating machine translation and translation memories to "provide a much more cost-effective digital workflow" (Melero et al., 2006, p. 1). The high "demand on subtitlers to produce high-quality subtitles in an ever-diminishing space of time" motivated Armstrong et al. (2006, p. 1) to explore the use of example-based MT to produce German-into-English subtitle translations. The system showed promising results and demonstrated that the type of training data used has a direct impact on the quality of the subtitles. However, the study's findings were limited by its small training corpus of only 40,000 sentences.

[6] https://www.mattcutts.com/blog/youtube-subtitle-captions/

Early statistical MT studies achieved results that led to their deployment in market settings. Volk et al. (2010) presented a system for translating TV subtitles from Swedish into Danish and Norwegian in a professional subtitling workflow. In their model, the company provided "the subtitlers with the video, the original subtitle (e.g. in Swedish) and the draft subtitles produced by [the] MT systems (e.g. draft Danish subtitles)" (Volk et al., 2010, p. 60) and the subtitlers acted as post-editors.

Multiple EU projects have served as a proof-of-concept to evaluate the efficiency of automation in subtitling. These proposals combined technologies to support various stages in the subtitling process: ASR for transcription, MT for language transfer, and additional subtitling-specific editing resources for condensation and synchronisation. The early project MUSA (MUltilingual Subtitling of multimediA content) attempted to use ASR, MT and a subtitle-condensation system to translate subtitles into English, French and Greek (Piperidis et al., 2004). The SUMAT (SUbtitling by MAchine Translation) project (Bywood et al., 2017) addressed the concept of post-editing and proposed solutions in nine bidirectional language pairs to increase productivity. It can be argued that these industry-academia collaborations paved the way for implementing post-editing and automation in media localisation.

The examples above describe attempts at different combinations of automated systems to support the work of audiovisual translators and show the impactful influence of technology, but none had a large-scale impact on industry production processes. Unlike those, respeaking can be considered the most successful implementation of automation in AVT until recently. The use of ASR systems to support the work of re-speakers became a standard in the 2000s and fully changed the work of live subtitlers (Romero Fresco, 2011). The combination of respoken dialogues and ASR is more efficient and faster than most of the typing-dependent alternatives. However, re-speaking is also changing due to the quality improvement of ASR systems and the development towards machine-generated live subtitling (Alonso Bacigalupe & Romero Fresco, 2023).

3. The Push From the Industry

The rapid growth of the media and entertainment industries has led to growing demands on the language service industry. As a result, localisation windows have been shrinking as more content needs to be translated for an ever-growing number of locales to meet subscriber demands. However, the industry's drive for efficiency must be balanced against the interests of translators and end-users to ensure long-term sustainability.

According to Georgakopoulou, the commodification of audiovisual translated content will drive the industry to adopt technologies such as ASR and MT in translation processes to "become more streamlined and standardised in an attempt to make them more efficient" (Georgakopoulou, 2020, p. 28). Companies are aware that integrating automated processes has the potential to increase profit. The frenetic implementation of AI-driven solutions responds to decisive turns in production models "in an attempt to increase their efficiency but also with the anticipation to cut back production cycle time and therefore costs" (Bolaños García-Escribano & Declercq, 2023, p. 572).

According to industry surveys (ELIS Research, 2023; Nimdzi, 2024), media localisation and technology are becoming central to the industry. The 2024 Nimdzi 100[7] shows that media and entertainment services are offered by 48.2% of respondents. Subtitling ranks third and dubbing/audio services are seventh among the services offered by LSPs. In this survey, post-editing and MT rank second in the service list, right after standard translation. Similarly, the ELIS European Language Industry Survey 2023 reported a decrease in human translation activities "while voice-related activities, post-editing, MT services, and language technology are identified as the main growth-supporting activities" (ELIS Research, 2023, p. 13). The ELIS survey also showed that post-editing is currently the main growth driver in the industry, followed by standard translation, transcreation and multimedia translation.

The advances in technology and the demands on the media localisation industry are leading to different forms of integration of MT and AI into media localisation. In the case of subtitling, processes harness ASR and MT to quickly produce a timed, transcribed and translated output that can later be revised by a human professional. In live subtitling, the use of fully machine-generated subtitles is also gaining terrain driven by video-conferencing platforms (Nimdzi, 2023). Equally, advances in synthetic voice systems are making it possible for companies to explore AI dubbing and audio-description alternatives.

The use of post-editing in subtitling has followed the regular process implemented in the localisation industry. Post-editing, "to edit and correct machine translation output" (International Organization for Standardization, 2015, p. 2), assumes that local changes to automatically generated output can ensure translation quality. From a business perspective, the proposal for this slimmed-down production process is logical as it allows professionals to work faster and focus on the segments that are problematic for AI solutions. However, post-editing implementation does not always consider that this practice changes the nature and requirements of the tasks performed by translators. Do Carmo points out that concerns "about the viability of utilising MT output may have been discarded because of a general acceptance that [post-editing] was the only solution to answer the need to reduce time frames and budgets" (2020, p. 40). Standardisation alters the role of translators and removes the flexibility and autonomy of the profession, which might result in automated repetitive decision-making tasks negatively affecting job satisfaction and efficiency (Moorkens, 2020; Sakamoto et al., 2024).

Post-editing transfers the media industry demands from LSPs to translators and makes them responsible for the quality of the final product. The skills needed to identify and correct errors in machine-generated output are different from those needed for translating from scratch (Koponen, 2016). Professionals need to understand the systems, the nature of the errors that occur and what is expected from them. They need to familiarise themselves with the tools they are required to operate and adjust to the workflows. Often, the costs of this adaptation process are footed by the translators.

[7] https://www.nimdzi.com/nimdzi-100-top-lsp/

In AVT, translators operate with audiovisual content that embeds multiple codes: they need to navigate this multimodal product and integrate these codes at a global level to make local decisions. Even under efficient post-editing conditions in which changes made to the MT output are localised, "translators need to make complex decisions and control a demanding environment" (do Carmo, 2020, p. 45). Assessing subtitle reception, Guerberof-Arenas et al. showed that post-editing can be a viable option, but that "a substantial amount of edits are necessary to render the automatic subtitles publishable" (2024, p. 247). This raises questions about the alignment between the effort required and the reduced rates often associated with post-editing tasks. Audiovisual post-editing, unlike written-text post-editing, might not be as efficient because it still requires coordinating and negotiating multiple meaning modes that constitute a multimodal product. Post-editing seeks time efficiency, but post-editing audiovisual content, by nature, will take longer than post-editing written texts as more meaning modes need to be coordinated.

4. A Rapidly Changing Environment for Audiovisual Translators

AVTE, the European Federation of Audiovisual Translators, noted that the year 2021 marked the arrival of machine translation and post-editing to the AVT market on a big scale. Professional translators view the industry's push for automated solutions as detrimental to the profession and claim it undermines the work of human agents in the process.

Professional audiovisual translators "have been using technology as soon as it was available" (Georgakopoulou, 2020, p. 26) and embrace translation tools (Athanasiadi, 2019). However, professional translators feel that the industry is strongly pushing for post-editing as the only viable solution to the increasing demands, potentially compromising product quality and the translators' working conditions. The ELIS 2023 report indicates that professionals in all areas, not just AVT see AI "exclusively as a threat" (ELIS Research, 2024, p. 22). An AVTE 2023 survey of 1966 translators from 35 European countries reveals that these changes exacerbate precarious working conditions in the profession: 61% of the respondents earn at or below their country's median wage, and overall satisfaction is low, averaging 2.64 out of 5.

In October 2021, the Asociación de Traducción y Adaptación Audiovisual de España, ATRAE, published a statement[8] urging not to use post-editing, arguing that it leads to poor results that have an impact on all stakeholders involved: streamers, users, distributors, and translators. ATRAE asked Netflix and other platforms to require LSPs to trust the talent of human translators as "the only way" to ensure translated content will achieve high quality. In 2023, ATRAE[9] denounced that companies such as Iyuno and TransPerfect, two of the largest global LSPs, are unilaterally imposing post-editing practices in media localisation.

[8] https://atrae.org/comunicado-sobre-la-posedicion/
[9] https://atrae.org/comunicado-sobre-la-posedicion-en-el-dia-internacional-de-la-traduccion/

Professionals argue that automated or hybrid solutions prioritising efficiency over precision fail to recognise the complexity of AVT, particularly the nuanced understanding required to translate cultural products. They fear an overreliance on automation could lead to the loss of the human approach to translations, impacting the quality and authenticity of products. These complaints echo the normalisation of a search for efficiency in the maximisation of shareholder value over the well-being of other stakeholders, as denounced by Moorkens (2020).

There is a growing disconnect between professionals and the industry. The industry's focus on process optimisation often overlooks translators' agency and perspectives. Unfortunately, large LSPs that take the time to involve their translators in decision-making processes are scarce. There is an assumption that translators, as operational workers, will understand the rationale of the implementation of new processes and embrace the changes. The industry develops controlled and standardised processes that, in their views, lead to successful products and companies that go against this culture are "liable to make [themselves] uncompetitive in the sector of the market that prioritises cost and speed over quality" (Moorkens, 2020, p. 29). The main goal of LSPs is to generate products that will meet their clients' needs, allowing businesses to grow. LSPs' concept of quality embeds economic, time and other situational constraints that shape the translation process and the product. This approach has led to considering quality a "practical construct operationalized through a continuum of levels defined by situational criteria" (Jimenez-Crespo, 2017, p. 123). In some contexts, integrating post-editing, quality evaluation has been streamlined and made dependent on automated algorithmic decision-making. Algorithmic norms, as proposed by Moorkens, are "static and unchanging unless the algorithm is adjusted, and they are automatically and rigorously applied" (2024, p. 487).

AI tool implementation and the industry's shift to cloud-based solutions pressure translators to continuously develop their technical skills. This transition represents multiple challenges: translators must master multiple proprietary systems, upskill continuously while maintaining high-performance levels across platforms, and, in some cases, manage ongoing software subscription costs. While cloud-based systems offer benefits like improved connectivity, centralised coordination, and enhanced team communication, they also fundamentally change how translators work and what they must invest in. For companies, these online systems increase efficiency by streamlining end-to-end services and reducing manual processes. For translators, however, the shift mandates the adoption of software-as-a-service solutions. This reality replaces the previous model, where a one-time desktop software purchase could serve for years while allowing proficiency to develop naturally through regular use. The requirement for high-speed internet access also poses additional challenges in regions with unstable or expensive connectivity, particularly in the Global South. As Fırat (2021) demonstrated through the case of Turkey, this technological shift, combined with unstable working conditions and reduced bargaining power, contributes to the "uberisation" of translation.

For translators and associations, the priority remains on product quality and ensuring the livelihood of professionals, contrasting with the industry's focus on efficiency and cost reduction. This

fundamental difference, coupled with the need to adapt to new tools and processes, impacts translators' attitudes and approaches to their work. The resistance from professional translators highlights the importance of considering all stakeholder interests in order to find sustainable solutions. This is particularly essential to ensure the availability of qualified professionals.

5. Responses From Academia

Academia plays a crucial role in educating future translators, analysing changes in the industry, and researching the implications of technological changes. Translator education has evolved to encompass a comprehensive understanding of translation as a profession and translators as language professionals with multiple roles in the industry (Massey et al., 2023). Proposals such as the 2022 EMT Competence Framework emphasise a multi-layered translation competence and foster industry-relevant "knowledge and skills used to implement and advise on the use of present and future translation technologies within the translation process" (European Master's in Translation, 2022, p. 9). The framework also stresses the importance of tracing changes in the industry and identifying emerging profiles, as well as considering the ethical and social dimensions of the profession. Training programmes are not only increasingly industry-informed but also engage actively to update their offer. Academic proposals such as the EMT framework recognise that training future professionals requires a collaborative effort and demonstrate that higher education institutions have taken up this task while recognising that further in-job training and continuous professional development are essential to ensure a sustainable career.

Academics themselves face challenges in keeping up with technological developments. Regularly monitoring the changes and integrating them into the curriculum means trainers also need to continuously upskill not only to acquire and hone new skills but also to understand the impact of the changes. Dogru proposes actively engaging with this "technological inflation paradigm" (2024) to ensure that students are aware of them and their impact. Introducing this varied landscape as a challenge to monopolisation can, in itself, be an asset to empower future translators (Dogru, 2024).

These challenges raise broader discussions of sustainability. As technology evolves, academic institutions contribute to ongoing professional development by incorporating training on new technologies and workflows. A stakeholder-theory-informed curriculum integrates sustainability and a critical approach to AI and automation, as well as ethical decision-making. Academia has a role in educating critical professionals who can make informed decisions considering the well-being and the interests of different stakeholders. To achieve this, Tipton suggests fostering digital reflexivity to allow students to "bring to consciousness a source of difficulty or problem in the external environment, evaluate the adequacy of personal resources and moral frameworks to resolve it, and enact appropriate strategies to bridge gaps" (Tipton, 2024, p. 86). A reflective practice helps to understand the changing landscape and anticipate the impact technology will have on professional careers and the profession in general.

Research in academia is addressing the ethical dimension of the increasing reliance on automation to increase productivity and its consequences for translators (Moorkens, 2024; Moorkens et al., 2024), job displacement (Vieira, 2020), translation quality and the implications of automation for linguistic and cultural exchanges (Guerberof-Arenas & Toral, 2022; Hagström & Pedersen, 2022). Research-based insights position academics well in policy discussions and advocacy for ethical industry standards.

Experimental research on post-editing from a production perspective is limited, and the initial results challenge claims of improved productivity. Hagström and Pedersen evaluated the impact of post-editing on subtitle quality in Swedish and found that post-edited subtitles were "more fast-paced, more oral, less cohesive, less complete, and constructed with less meticulous punctuation and line-breaks than their predecessors" (Hagström & Pedersen, 2022, p. 223). The results from Guerberof et al. (2024), from a reception study using subtitles post-edited by two professionals, suggest post-edited subtitles can achieve similar audience reactions as subtitles translated from scratch, but the number of edits required might render post-editing not time or cost-effective. Vincent et al. found post-editing might require less technical and temporal effort, but also that "cognitive effort should be measured in future studies, given the exit survey sentiment that post-editing was sometimes harder and less interesting than" (2024, p. 570) human subtitling.

Academia plays a role by providing research and insights that can help balance the interests of various groups in the media localisation ecosystem. It considers the industry demands with a critical assessment of technological change considering the impact on professionals and society at large (Moorkens et al., 2024). Cross-sector collaborative initiatives are crucial for addressing these challenges comprehensively, involving all relevant stakeholders.

6. Tailoring Subtitling Processes in an AI-Powered Industry

The proposed adoption of AI in the media industry is being driven by the post-editing production process involving fixing errors in the machine-generated output. While this process has proved useful for some sectors of the industry and is expected to continue growing (ELIS Research, 2024; Nimdzi, 2023), business and production solutions in the media industry should explore alternative forms of implementation that accommodate the needs of multimodal products, and the interests of LSPs and professionals alike. Only the type of cooperation that addresses the priorities of all stakeholders can lead to more sustainable and widely accepted workflows that consider the needs of all involved parties.

Translators feel alienated and undervalued by the rapid implementation of AI (AudioVisual Translators Europe, 2023). Involving them in decision-making processes and creating spaces for them to exert their agency would be a step towards the augmentation of the translation profession (Karakanta et al., 2022; O'Brien, 2024), which still involves automated tasks.

The principle of post-editing in specialised translation is to fix problematic segments, address the errors present in the machine-translated output and produce an acceptable translation (Massardo et al., 2016; O'Brien, 2012). These operations occur at the segment level, the translation unit. The concept of the translation unit is the building block of translation environments and translation memories. However, already in regular localisation workflows, segmentation and performance evaluation have the potential to lead to low-quality translations and document-level inconsistencies (Castilho, 2021; Läubli et al., 2018, 2020; Toral et al., 2018). This poses bigger challenges in multimedia translation. In subtitling, what a translation memory would consider a translation unit could be split across multiple subtitles and require restructuring and high levels of adaptation. If subtitlers operate at the subtitle level only, this higher-level transfer is compromised.

When translating audiovisual products, translators look for innovative solutions that will surprise viewers and elevate cultural products (Romero Fresco & Brown, 2023). While AI tools have achieved a stage where they can provide support to translation tasks, their implementation into production processes also requires careful planning to ensure it achieves its promises. Large Language Models (LLMs) reproduce patterns as their "capabilities are confined to predicting the most probable subsequent words in a text sequence, based on patterns they've learned from vast amounts of data" (Moorkens et al., 2025, p. 189). They have limitations in dealing with creative types of translation. Successful media localisation requires innovative and customisable solutions to address the needs of cultural products and multiple audiences.

Current AI-driven models try to use machines to replicate human work rather than explore innovative ways to solve problems (O'Brien, 2024). While adding MT output to translation environments was a logical step for standard translation, the industry should reconsider how to integrate MT and AI into AVT effectively. As expressed by Georgakopoulou (2020, p. 27):

> It is only by properly testing such tools [ASR and MT] on relevant content that one can assess their level of maturity and overall quality, and thus envisage the scenarios in which they would be beneficial and the workflows that would be required to reap such benefits.

The proposed frameworks assume MT and LLMs are sources of truth that sometimes fail and require humans as error fixers who need to compensate for this failure (do Carmo, 2020). This view places humans and machines in contending positions. The expansion of AI should incentivise a careful consideration of its implementation. The definition of the role of the post-editor as an error-fixing agent reduces the agency of translators and focuses on the improvement of the system. On the contrary, conceptualising AI as an instrument for hybrid processes and refining genuine collaborative approaches would allow for the recognition of human expertise and its combination with the power that could be harnessed by LLMs (O'Brien, 2024). Limiting the role of human translators fails to recognise that their ability to produce successful translations comes from their understanding of end users. Evaluating the success of an audiovisual translation cannot be confined to the language in the product but to its reception. The ability to empathise and relate to other humans, and the users of their translations, and to make informed decisions about their reactions sets professionals apart and empowers them to craft multimodal target products.

The issue of how to conceptualise hybrid approaches is also prevalent in training. Translation training programmes aim to help students develop skills that provide them with the ability to make macro and micro decisions in their translation. Curricula now need to face the fact that the availability of AI could hinder learning processes. Professionals rely on their knowledge and expertise to assess the quality of the output generated by AI. However, if this expertise is developed primarily through AI systems, it could become harder to uncover errors and differentiate quality levels. Even more importantly, developing hybrid models that empower human translators is essential to ensure that trainees will become interested in the field and will pursue a career. If career prospects are not promising, it will be difficult to ensure the field remains attractive for future professionals.

7. Bringing Viewers Into the Equation

A key stakeholder in the media localisation landscape is the audience. Since users collectively hold financial power through subscription models, companies depend on user engagement for their success. The expansion of streaming services and the proliferation of platforms have come with increasing options for audiences, resulting in growing pressure on platforms to capture and maintain subscribers. Netflix faced losses in its subscriber base in the first half of 2022[10] for the first time in its history, raising an alarm across the sector. With more services available and cost and use concerns, subscribers have become selective about their consumption patterns. In the UK, a 2024 YouGov survey reported that consumers are complaining about subscription fatigue and considering cancelling due to financial and cost-benefit considerations.[11]

Audiovisual translators must keep the end user in their minds when making translation decisions (Kovačič, 1995). While audiences used to be understood based on country-level preferences (Media Consulting Group, 2011), viewers are no longer limited by options offered through broadcast, national borders and traditions (Flis & Szarkowska, 2024; Orrego-Carmona, 2014). Viewers make choices depending not just on the content but also on the options they have to access it (Orrego-Carmona, 2018). In 2023, surveys suggested the use of subtitles is becoming more common among younger audiences, even interlingual subtitles in countries such as the US (Greenwood, 2023) and the UK.[12] Translation might not be the first requirement in their minds when choosing a product, but there are indications of growing awareness about it.

Viewers are reactive to translations, as seen in high-profile cases where audiences' reactions led to subtitle revisions. In 2019, feedback on Netflix's decision to include Iberian Spanish intralingual subtitles for the Mexican film *Roma* (Cuarón, 2019) prompted the director to reject the subtitles, resulting in their removal. In the case of *Squid Game* (Hwang, 2021), audiences on social media

[10] https://www.statista.com/statistics/250934/quarterly-number-of-netflix-streaming-subscribers-worldwide/

[11] https://business.yougov.com/content/49117-svod-streaming-churn-research-2024

[12] https://yougov.co.uk/topics/entertainment/survey-results/daily/2023/02/24/9a34f/3

engaged in a careful comparison of the closed caption and interlingual subtitles to claim that the subtitles were incorrect and did not reflect the original. Since *Squid Game* was the most popular show online in 2021, thus triggering a public discussion about translation.

Viewer interventions are also complex. Professionals consider the multifaceted role of translation and companies see translation as part of localisation efforts. However, lay viewers tend to privilege the "equivalence paradigm, or the quest to convey identical meanings" (Gambier, 2023, p. 9). According to their view of translation, the "aim is to achieve a text in the target language that is 'of equal value', but a word or concept may connote different meanings in another" (Gambier, 2023, p. 9). Viewer expectations of quality are influenced by the fast-paced nature of global multimedia content (Orrego-Carmona, 2019) and its constant flow (Moorkens, 2020).

8. Placing Ourselves in a Wider Context

In a study exploring the short-term impact of ChatGPT on the employment outcomes of freelancers on Upwork, a large online platform, Hui et al. found that freelancers in affected occupations "experienced a decrease of 2% in the number of monthly jobs and a decrease of 5.2% in monthly earnings on the platform" (2023, p. 3). While this article has focused on the media localisation industry and, in particular, subtitling, automation affects society at large (Susskind, 2020) and drawing wider connections can help us understand the challenges. As we move rapidly into an AI-influenced world, we need to recognise that the discourse surrounding automated solutions extends beyond the hype and doom and already has consequences on everyday people's lives (Schuilenburg & Peeters, 2021).

Promoters of AI solutions often heighten the value of AI tools in benefitting humanity to support technological determinism. The connection between technology and societal betterment is deeply rooted in a search for progress. As Mosco put it when discussing the acceleration of digitalisation: "One generation after another has renewed the belief that, whatever was said about earlier technologies, the latest one will fulfil a radical and revolutionary promise" (Mosco, 2014, p. 8). When mentioned among AI evangelists, warnings about the risk of AI are often presented in apocalyptic proportions: the risk of AI gaining consciousness and turning against humanity. These magnified discussions take precedence over more immediate and systemic risks posed by AI, such as potential cultural insensitivity, exacerbating biases or deepening inequality (see, Aka et al., 2021; Bender et al., 2021; Johnson et al., 2022; Luccioni et al., 2023). A collective and informed recognition of the value and risk of AI, stakeholder-inclusive and addressing their different priorities could help materialise those benefits that are promised as part of the ongoing societal restructuring. To achieve this, the discussion needs to be reframed to incorporate the complexity of the implementation of AI in society as a whole.

9. Concluding Remarks

The language and media localisation industries have navigated numerous transformative moments, shaped by technological advancements that have become regular and, at times, drastically disruptive. The current wave of implementing AI-powered technology presents both challenges and opportunities that require careful consideration. In this dynamic landscape, the language industry must approach AI adoption holistically, not just as a response to immediate pressures and demands. Recognising the ongoing technological developments, understanding the experiences of professionals who have embraced emerging tools, integrating the reactions from viewers and leveraging research insights that analyse the benefits and shortcomings of AI are crucial elements to advance towards fair and equitable development.

Language experts bring a wealth of experience in dealing with disruptive changes, making their knowledge a valuable asset not only for the localisation industry but for cross-sector applications. This article has examined the diverse priorities and interests of key stakeholders: the industry, professionals, viewers, and academia. It emphasises the imperative for a collaborative approach where all stakeholders actively participate in shaping and tailoring production processes and responses.

The active engagement of industry leaders, professionals, and academics in decision-making extends beyond efficiency: it acknowledges that successful implementation requires a harmonious alignment of diverse perspectives. The long-term sustainability of the sector demands creating value for all stakeholders involved: the industry's need for streamlined processes and increased efficiency; the professionals' concerns about maintaining quality, ensuring job sustainability, and preserving their role in translation processes; the audience's willingness to engage with content, and the academic imperative to educate future professionals ethically and conduct rigorous and relevant research.

As we embrace the era of AI in language and media localisation, fostering open dialogues and collaborative frameworks becomes paramount. Bridging the gap between industry demands and professional expertise ensures that the adoption of automation not only meets immediate requirements but also aligns with ethical standards, quality expectations, and the sustainability of language professions. The intersection of these priorities creates a foundation for an industry that not only embraces innovation but does so with a fair, inclusive, and forward-looking perspective.

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