

Introduction to the Special Issue 2025 Looking Back and Looking Ahead: A Wide Angle Lens on Audiovisual Translation

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Abstract

This special issue provides a diachronic, critical examination of the accelerating challenges and transformations facing audiovisual translation (AVT)'s practice and research due to constant technological innovation. By tracing AVT's historical evolution, from silent film intertitles to modern Al-driven localization, this introduction to the special issue identifies precedents of adaptive practices and professional resilience. The transition from silent film to sound, which necessitated new workflows (dubbing/subtitling), is presented as a crucial historical analogue for interpreting the current AI upheaval. This analysis demonstrates that technological shifts invariably force the creation of new professional avenues and skills. The papers in this collection investigate the dynamic interplay between technology, evolving audience consumption (e.g., "Netflixication") and the expanding scope of AVT, particularly in accessibility modalities (audio description and SDH). The ultimate objective is to provide a nuanced perspective on how AVT can not only survive but also adapt and redefine the human factor within this rapidly evolving global media cosystem, positioning the field at a critical juncture between

Key words: diachronic evolution of audiovisual translation, technological innovation, professional resilience and adaptation, from silent film to sound, artificial intelligence.

automation and professional expertise.

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Introduction

The accelerating pace of technological innovation fundamentally challenges the traditional concept of the practice of audiovisual translation (AVT). These developments have generated significant professional anxiety, particularly the fear that the integration of Artificial Intelligence (AI) will lead to the displacement of human roles across the entire AVT supply chain, including screen translators, subtitlers, voice actors, project managers, and dialogue writers.

This special issue examines the past and present of AVT to address important and pressing questions about its future viability and form. It considers the possible trajectories this fundamental and complex industry segment might take for translation practice and research in an era where AI represents a profound challenge. This challenge is often framed in polarized terms either as an existential threat leading to widespread professional obsolescence or as a catalytic innovation promising radical efficiency and market expansion: Will it turn to highbrow experiences for intellectuals, or will it resiliently rise from the ashes of its own destruction? AI inception is portrayed either as a monster, taking human jobs away, or as the cure-all for all ills, a solution to all modern problems. By investigating these dynamics, this issue aims to provide a nuanced perspective on how AVT can not only survive but also resiliently adapt and redefine its role within this rapidly evolving global media ecosystem.

The field of AVT has undergone remarkable transformations since its inception. From the rudimentary practice of intertitles in the silent film era, it has evolved into a highly complex, technology-driven field, often encompassing sophisticated AI-powered systems for real-time subtitling, dubbing, and advanced localization across diverse media. Driven by the global aspiration of big media industries to reach international audiences, AVT has consistently served as an indispensable tool for transcending linguistic and cultural barriers, enabling the widespread dissemination of films, television series, live performances, and, more recently, videogames, on demand streaming content, corporate videos and Massive Open Online Courses (MOOCs), not to mention the plethora of reels and videos freely available on digital platforms. This introduction to this special issue examines the diachronic evolution of some media and AVT industries to identify precedents of adaptive practice as well as professional resilience in the face of disruptive changes.

From the earliest cinematic experiments to the global streaming platforms of today, creative media industries have continually experienced the tension between established practices and emerging innovations. Revisiting earlier periods of transformation offers a valuable sense of perspective and reassurance, as AI begins to revolutionize not only how audiovisual products are translated, adapted and localized for national markets, but also promises to reshape the future of cinema, television, and other media forms. The earthquake initiated by the introduction of sound, which necessitated the move from silent film intertitles to complex processes like dubbing and subtitling, serves as a particularly relevant historical analogue for interpreting AI-driven changes, demonstrating that technological advancement often forces the creation of entirely new linguistic and cultural mediation workflows.

Profound technological changes such as the introduction of sound, colour, digital technology, have historically done more than just alter production lines; they have also stirred uncertainty among media professionals. For example, the introduction of synchronised sound in the 1920s prompted widespread concern among silent film actors, many of whom feared that vocal performance would fundamentally alter their craft, potentially excluding those unable to adapt. This anxiety was poignantly dramatised in the film *The Artist* (Hazanvicius, 2011), in which a silent film star struggles with the decline of his career as the film industry transitions to sound, while a rising young actress embraces the new era. Their intertwining paths reveal the personal cost of technological change, but also the new opportunities it offers. In fact, the historical transition from silent film to sound also brought about the birth of AVT to cater for international audience demand for translated films. These cycles of historical change, often led by the introduction of new technology, remind us that while innovation often disrupts familiar workflows, it also opens up new avenues for creativity, adaptation, and fosters cross-fertilization and evolution. They also remind us that technological evolution in filmmaking progressed unevenly.

The Vitaphone, a sound-on-disc system that required manually linking a vinyl disc to a projector for synchronised audio, was a pivotal early development that drove the shift from silent to sound films. However, its significant limitations, chiefly synchronization difficulties and challenges with rerecording and editing, prompted major studios to seek better alternatives. This competition led to the introduction of rival systems like the Movietone and Photophone. The Movietone ultimately proved successful by evolving past disc-based audio to utilize optical sound, where the audio track was recorded directly onto transparent film. This advancement eliminated the need for separate discs and ensured more reliable synchronization between sound and image (Cavanagh, 2023). The culmination of these technological strides was marked by the release of The Jazz Singer (Crosland, 1927) by Warner Brothers, widely regarded as a watershed moment in cinematic history for its pioneering use of synchronized dialogue and musical performances. The advent of the "talkies" initiated sweeping, fundamental changes across the film industry, impacting on everything from recording methods and screenplay writing to the very architecture of cinema theatres (Gomery, 1992, p. 224). At the time, most films were accompanied by live orchestras, but movie houses lacked the equipment for sound projection and had to rapidly adapt to meet new demands (Cuff, 2018). The introduction of sound in films triggered both technical and creative upheaval. The most immediate human cost was the displacement of approximately 20,000 live musicians whose roles became obsolete:

At the time, musicians were outraged at being replaced by what they deemed "canned" or "robotic" performances. Their unionized campaigns in the trade press highlighted the thin acoustic depth of the first soundtracks, as well as recorded music's lack of human connectivity with audiences. (Cuff, 2018, p. 1)

Meanwhile, a different kind of innovation was required for the film scripts themselves. The sudden demand for screenplays featuring dialogue created an urgent need for experienced writers. Consequently, Hollywood aggressively recruited established playwrights, novelists, and critics—

including figures like Aldous Huxley and F. Scott Fitzgerald, among many others—who brought a new focus on sharp dialogue and complex narrative structure to the industry (Shultheiss, 1971, p. 17). On film sets, production practices transformed; actors had to limit their movements due to the fixed position of early microphones, and soundproofing became essential to eliminate unwanted noise. Directors responded by employing multiple camera angles to compensate for the actors' restricted mobility. Moreover, with the introduction of sound, silent-era performance, which had relied heavily on exaggerated physical gestures to convey emotion in the absence of dialogue, appeared overly theatrical and incompatible with the new medium (Jones, 2025). The transition to talkies not only revolutionized storytelling but also rendered many silent-era stars obsolete due to their accents, vocal limitations, or acting styles that did not translate well to sound cinema. In the 1950s, the story of this period was told in the popular film musical *Singin' in the Rain* (Kelly & Donen, 1952) narrating the story of an established silent film star and an aspiring actress who find their way through the uncertainty of the transition. As Taylor (2009, p. 1) observes, the film "embodies many of the issues that surrounded the unification of voice and body in film: those of gender, ethnicity, race, and class," highlighting how technological shifts in media often intersect with broader social dynamics:

Not just anyone's voice was validated by the media as worthy of being heard and appropriate for mass consumption. This discussion revealed that the unity of body and voice was a desirable thing, but only when there was a "match" between the social meanings of the voice and those of the image. (Taylor, 2009, p. 1)

According to Wilsbacher (2023, p. 61), generations of film scholars have dispelled the myth that the advent of so-called talkies caused Hollywood to change overnight. The industry adapted and responded to the introduction of sound technology in various ways, competing for the best technological solutions, and not always enthusiastically. As Burke states (2014) the prevailing attitude towards the introduction of sound was that it played a marginal role at best, serving merely as a backdrop, and at worst, a distraction, disrupting the flow of the performance. Charlie Chaplin himself was sceptical about the introduction of sound in moving pictures. One of his masterpieces, City Lights (1931) is a deliberate anomaly. Although pre-production began in 1928, when Hollywood was already caught up in the rush to convert to sound following the release of *The Jazz Singer*, Chaplin made *City* Lights as a silent film. By the time of its release in 1931, his lack of enthusiasm for talking pictures had not changed, and he expressed his view with a mix of defiance and defensiveness in a well-known and often quoted interview: "I'll give the talkies three years, that's all. "While his next film, Modern Times (Chaplin, 1936), incorporated sound effects and music, Chaplin still resisted dialogue, using speech merely as meaningless noise. This defiance set the stage for the dramatic impact of his next work, The Great Dictator (Chaplin, 1940). In this film, Chaplin finally embraced sound technology to deliver what became one of the greatest appeals to humankind in cinematic history. The final, powerful monologue, delivered with dramatic irony by the Jewish barber mistaken for the tyrannical dictator Hynkel, is a brilliant demonstration of how Chaplin ultimately harnessed the creative potential of sound film. Over eighty years later, its fervent humanitarian message still powerfully resonates with contemporary (and AI-driven) technological challenges:

We have developed speed, but we have shut ourselves in. Machinery that gives abundance has left us in want. Our knowledge has made us cynical, our cleverness hard and unkind. We think too much and feel too little. More than machinery, we need humanity. More than cleverness, we need kindness and gentleness. Without these qualities, life will be violent and all will be lost. The aeroplane and the radio have brought us closer together. The very nature of these inventions cries out for the goodness in men, cries out for universal brotherhood, for the unity of us all. Even now my voice is reaching millions throughout the world, millions of despairing men, women, and little children, victims of a system that makes men torture and imprison innocent people. (Chaplin, 1940)

Serenella Zanotti's contribution looks back at this silent era with a focus on the Italian context. Her case studies of the Italian intertitles of Charlie Chaplin's *Mutual comedies* explore the transformative practices involved in the transcreation of these intertitles focussing on how the translator enriched the original texts. Significantly, Zanotti works with archival materials that entail the physicality of going to libraries, turning pages of the books and papers she examines and handling material tapes and reels. The physicality of these tools is quite divorced from the ephemerality of materials involved in the contemporary modus operandi of AVT research.

Giuseppe De Bonis also looks to the past in his study, looking back from the perspective of a so-called dubbing country, Italy, forced to manage and create a realistic effect when multiple languages are present in one film. His case studies involve films about cross-language romance and those set in times of conflict and war, in other words he investigates the realm of translating conflicting emotions when they interface with conflicting cultures. De Bonis leads us along a path that began with no translation to deal with the foreign Other, turning in time to partial subtitling, and eventually shifting towards their revoicing.

It would appear that the apprehensions of early film industry professionals also find echoes in the contemporary unease among live-action actors facing the rapid advancement of animated filmmaking, which increasingly rivals traditional performance in both aesthetic quality and narrative flexibility. Concerns about translation authorship in the interaction with Generative AI resonates with reflections on the nature of actors' performance in the practice of PeCapt (performance capture): "when the product of acting starts as data and finishes as computer-generated images that preserve the source-actor's 'original' performance to varying degrees" (Kennedy, 2021, p. 1). For instance, films like Spider-Man: Into the Spider-Verse (Persichetti et al., 2018) combining computer animation with hand-drawn comic techniques, showcase how motion capture and stylized animation can deliver emotionally resonant performances without traditional live-action methods and above all, without human actors. Yet the making of this film has an interesting story to tell. The film's distinctive visual style was initially established by one individual animator, Alberto Mielgo. However, creative differences ultimately resulted in his dismissal, after which he was credited as a visual consultant (Mielgo, 2018). Despite the production crew quickly growing to comprise 60 animators, it soon became clear that they would not be able to meet the deadline due to the scale of the project. This scheduling pressure forced the studio to initiate a massive recruitment effort. The crew size surged dramatically, ultimately peaking at 177 animators, the largest crew that Sony Pictures Imageworks

had ever assembled for a single film. This rapid, massive growth in demand for specialized animators illustrates a core principle of technological evolution: whenever certain professions are displaced or fundamentally altered by technological shifts, new job opportunities often emerge in parallel.

This cycle of disruption and new necessity is not unique. For example, the transition from analogue to digital cinematography triggered resistance among Kodak film workers, whose anxieties about obsolescence and changing workflows closely mirror the current challenges confronting the subtitling and dubbing industry. Today, the rise of machine translation, AI and cloud-based dubbing platforms such as Deepdub and Al-driven voice synthesis tools are reshaping post-production workflows, raising profound concerns about job displacement and the erosion of human nuance in voice performance. Yet these trends will likely open up new perspectives that will take unpredictable directions and lead to the need for new, unexpected professions and professional skills. These historical parallels suggest that past responses to innovation can offer valuable insights into present transformations and help anticipate future trajectories in media production and audiovisual translation. The complex challenges of creating multiple language versions in the early days of sound film, when scenes were shot twice or more times with different casts or the same cast acted the same scene in different languages more than once, are highly relevant to the debates surrounding Netflix's in-house multilingual dubbing practices today. Silent film intertitles, TV docu-fiction pop-up captions, share a common function as brief, interruptive textual elements that mediate and enhance narrative or communicative experiences across different media, adding comedic or dramatic timing.

This special issue takes a wide-angled view of these cycles of change, arguing that the challenges and anxieties currently facing AVT are deeply echoed in the historical shifts of media production and consumption. The constant evolution of technology has not only influenced translation, which has had to adapt to the changing formats through which audiovisual products have been disseminated and consumed, but also the relationship with end-users. Dramatic changes have occurred within the media environment over the past few decades. The rise of social media and the spread of portable devices, which are now available to practically every age group, provide audiences with more choice and control over when, where and how they consume media (Rossato, 2022, p. 27). Internet-based technologies have provided increased opportunities for audiences to interact with their preferred media, giving feedback, suggestions and even expressing complaints. For the very first time, audiences have been provided with communicative tools that have enabled them to express their opinion directly to television providers and other TV users across-countries, at a global level (Napoli, 2010, p. 54). TV viewers have been given the opportunity to discuss dubbing solutions, as well as providers and distributors' choices and hence have had an influence on the media contents they have been offered. Both fans and casual viewers have become more willing to express their dissatisfaction with subtitled or dubbed content that does not meet their standards (Bucaria, 2023, p. 331) while they themselves have become producers and broadcasters of their own audiovisual contents through social media platforms (Napoli, 2010, p. 54).

Over the years, hundreds of studies have examined audience attitudes of the screen translations they watch both at the movies and on TV. In this issue, **Rachele Antonini** and **Chiara Bucaria** provide

readers with a comprehensive review of these studies, considering audience perception and reception in interlingual dubbing and subtitling. Their work insightfully charts the evolution of empirical research in interlingual dubbing and subtitling over the last two decades, highlighting a significant shift in AVT research, moving the focus away from analysing the product or process exclusively to prominently including the end-user perspective. This approach, they contend, acknowledges viewers' crucial dual role as active participants in the communication process and consumers whose reception critically influences the global commercial success of translated audiovisual products.

Despite its widespread use, AVT initially struggled for academic recognition, often dismissed as a practice rather than a legitimate field of study. This began to shift decisively in the 1990s and early 2000s, when scholars such as Delabastita (1989), Bollettieri Bosinelli (1994), Gottlieb (1994), Chiaro (1996), Gambier (1996), among others, began to thoroughly analyse AVT practices, processes and products, integrating them into the broader framework of Translation Studies. The publication of foundational texts (Baccolini et al., 1994; Heiss & Bollettieri Bosinelli, 1996; Chaume & Agost, 2001; Chaume, 2012; Chiaro, 2009; Chiaro et al., 2009; Gambier, 2003; Díaz Cintas, 2009), some of which promoted a historical approach (O'Sullivan, 2011; O'Sullivan & Cornu, 2019; Mereu & O'Sullivan, 2021), as well as the establishment of dedicated conferences (e.g. the Media for All conference series), the publication of special issues in translation journals, and the launch of the European Association for Screen Translation Studies (ESIST), helped to institutionalize AVT. This fostered interdisciplinary research drawing on linguistics, media studies, semiotics and, more recently, cognitive science. Eventually these studies began to focus on audience perception of dubbed and subtitled products. Pioneering examples include the work of Fuentes Luque (2003), Chiaro (2006), Bucaria and Chiaro (2007), and Antonini and Chiaro (2009), often synonymously confused with reception, which nevertheless prompted the literature review provided by Rachele Antonini and Chiara Bucaria, included in this issue, in an attempt to bring order to a rather chaotic field of study.

The emergence of accessibility-focused modalities, such as audio description for the visually impaired and subtitles for the deaf and hard of hearing (SDH), which also include end-user perspectives, further expanded the scope of AVT. These practices underscored the social and ethical dimensions of translation, positioning AVT as a key player in promoting inclusivity and equal access to media (Díaz Cintas et al., 2007; Maszerowska et al., 2014; Neves, 2019). Unsurprisingly accessibility has been a popular subject in this special issue. **Maria Eugenia Larreina Morales** and **Carme Mangiron** provide an exhaustive overview of problems and solutions for visually disabled gamers while one of the founders of accessibility studies connected to AVT, **Joselia Neves**, provides us with 10 answers to 9 questions on what is very much her own subject. Her reflections are far thinking and go way beyond making words accessible to those who do not speak a language, those who cannot hear an opera or cannot see a film. Accessibility according to Neves is about translating a world so as to include everyone. What are escalators and lifts if not translations of staircases? **Carolina Bergonzoni**'s contribution echoes this concept in her study of multisensory engagement in the audio description of live dance audio-description. Based on a number of Canadian projects, Bergonzoni explores the potential of incorporating poetic descriptions from the perspectives of the dancers involved

suggesting that languaging dance be seen as a lingua franca. Like Neves, Bergonzoni's discussion underscores the notion of translation in its widest sense.

This special issue traces a diachronic trajectory of AVT, exploring some of its major modalities and milestones in the past, and examining how new contexts, new international audiences and new consumption routines, along with fast-pace evolving technological advancements, are reshaping the landscape of audiovisual translation and accessibility in the digital age. By situating AVT within a broader socio-technological context, this special issue seeks to illuminate the dynamic interplay between culture, evolving translation, and technological innovation. While this collection of essays aims to provide a comprehensive overview of the development of audiovisual translation, tracing its evolution from early cinematic practices to contemporary technology-boosted workflows, this issue critically interrogates the future trajectory of the field. Specifically, it explores the impact of technological integration on long-standing human translation practices, highlighting both the potential efficiencies and the inherent limitations of these systems. By examining diverse key media, historical milestones, under different theoretical frameworks, the papers collected here span emerging trends in AVT, particularly in the accessibility of theatrical performances, interactive media (videogames), and educational content. Ultimately, this volume poses crucial ethical and methodological considerations regarding the future role of the human factor in audiovisual translation, positioning the field at a critical juncture between automation and professional expertise.

The last few centuries have been a whirlwind of innovation, and with each leap forward, entire industries and beloved products have faded into history. The annals of commercial history are imbued with a recurring theme of technological obsolescence, wherein entire economic sectors – once considered bedrock pillars of the global economy – have been deconstructed and superseded by more advanced and efficient innovations. These shifts illustrate a crucial dynamic: industries thrive when they solve a core human need, but they vanish when a better, cheaper, and often cleaner solution emerges to address the same need.

The most vivid examples come from foundational resources and communication. The ice harvesting Industry, which flourished from the 19th century into the early 20th century, relied on the laborious process of cutting and shipping natural ice from frozen lakes and rivers. This entire global trade was rendered obsolete by the invention and widespread adoption of mechanical refrigeration and the domestic refrigerator (Andersen, 1953/2016). Similarly, the whaling industry, once a vast maritime enterprise spanning from the 17th to 19th centuries, existed primarily to harvest whale oil for lighting, soap, and lubrication. This industry collapsed not due to moral shifts, but because of the emergence of petroleum and the subsequent refinement of kerosene and industrial lubricants, which offered superior, mass-producible, and less hazardous alternatives. Market forces drove the collapse of American whaling, relieving much of the ecological pressure on whale populations. (Hohman, 1928/2020). The same phenomenon is equally apparent in the realm of information and media. Telegraph services, which enabled long-distance communication via Morse code in the mid-19th century, were ultimately replaced by faster, more interactive technologies. First came the telephone,

then the radio, and eventually the digital revolution of the internet, rendering the slower, text-based, operator-dependent telegraph system redundant. A more recent, yet rapid, decline can be seen in the video rental store industry. Companies that specialized in renting physical media (VHS and DVDs) during the 1980s and 1990s quickly became obsolete with the rise of streaming services like Netflix and Prime Video, which offered instant, on-demand digital content.

This pervasive pattern of displacement, where an established industry or profession is made obsolete, is defined by the superior utility of the replacement technology. From the late 19th to the late 20th century, the typewriter manufacturing industry dominated office and personal writing. However, it was entirely replaced by personal computers and word processing software, which offered greater flexibility, editing capabilities, and ease of storage. Across all these cases, from ice harvesting to video rentals, the disappearance of the industry was driven by a single economic force: a new technological advancement that offered a paradigm shift in convenience, cost-effectiveness, and quality, making the old method unsustainable.

Valentina di Francesco and Angela Sileo examine a translational modality that is exclusive to Italian factual TV programming where traditional synched dubbing is frequently replaced by a pseudo dub, with no lip-synch that generally goes by the name of "Simil synch" and is significantly cheaper than traditional dubbing. This modality that has been around for decades is examined from its inception to the present day from the perspective of workers and stakeholders in the Italian AVT industry. The authors argue that this budget-focused modality is highly vulnerable and they suggest it is very likely to be replaced by the even faster and more cost-effective AI-driven automated dubbing practices, raising concerns about the resulting linguistic and cultural adaptation quality, which they illustrate using a sample of poorly translated idiomatic expressions.

While history is littered with industries that vanished due to technological obsolescence, an equally compelling narrative exists for those that have demonstrated remarkable resilience and adaptive evolution. These industries did not disappear; they successfully integrated new technologies, redefined their value propositions, or pivoted to different markets in the face of disruption. This transformation highlights that technology is not solely a destructive force but also a potent catalyst for reinvention. The evolution of radio broadcasting, for example, serves as a prime example of an industry that continuously absorbs new technology to remain relevant. Facing challenges from television and later the internet, radio did not simply fade out. Instead, it successfully integrated its core concept—audio content delivery—with digital platforms. Modern radio now thrives across multiple channels: traditional terrestrial signals, online streaming that provides global access, and, most significantly, the embrace of podcasting. Podcasts leverage radio's format but utilize the internet's on-demand flexibility, allowing broadcasters and new content creators to maintain and grow massive audiences in a fragmented media landscape.

In terms of adaptation and exploitation of on demand services, **Eponine Moreau** introduces the notion of Netflixication and its impact on subtitling. She examines the strength of a platform that has radically changed the way we watch, from bingeing to dual screening, from media dominated by US

English to the gradual infiltration of products in other languages, from all over the world. All this helped by dubbing – the stigmatized AVT modality in which few admit engaging, yet numbers show the reverse (Chiaro, 2021) including dubbing towards English. The present-day expansion of nonlinear platforms such as Netflix and Prime Video have promoted the availability of dubbed products into "translated" English voices (Chiaro, 2021) and there are studies in AVT which specifically address the peculiar features of this emerging and promising localization trend (Spiteri-Miggiani, 2021a, 2021b). **Xichen Sun** brings an interesting case study of AVT from Chinese into English by examining the evolving habitus of English translators/subtitlers working on films (1984–2024) by Chinese fifthgeneration directors Chen Kaige and Zhang Yimou. Initially dominated by native English speakers from the cultural industries or the Chinese studies circle, currently, the field of Chinese film translation has attracted native Chinese speakers with film industry or experience in AVT. The decreased reliance on foreign language experts and a corresponding increase in the selection of source-situated translators/subtitlers indicate a divergence from the norm of translating into one's first language.

Beyond mass media, highly traditional sectors have leveraged intangibles like craftsmanship and experience to not merely survive but thrive. The watchmaking industry, particularly the venerable Swiss houses, faced an existential threat from the accuracy and affordability of digital watches and the ubiquity of the smartphone clock. Instead of attempting to compete technologically, these brands pivoted. Houses like Rolex and Patek Philippe successfully emphasized their mechanical heritage, intricate artisanship, and luxury appeal. Consequently, the mechanical watch transcended its function as a timekeeper to become a premier status symbol and collectible asset, flourishing in the high-end luxury market (Donzé, 2018). Similarly, vinyl records, initially rendered obsolete by CDs and MP3s, have enjoyed a massive resurgence. They rebranded as a premium, nostalgic experience for audiophiles who value superior analogue sound and tangible packaging, driving a significant surge in sales among younger generations seeking authenticity. Considering these precedents of market transformation, a critical question emerges for audiovisual translation: whether human-voiced dubbing will follow a similar trajectory and become part of this luxury market, available only to intellectual connoisseurs who seek to revive a nostalgic experience and value the irreplaceable nuances of human performance.

Other industries secured their future by capitalizing on new market segments and evolving the user experience. The bicycle Industry, originally threatened by the automobile, found new life by diversifying into solutions for modern urban problems. The emergence of electric bikes (e-bikes) and specialized cargo bikes has tapped into the lucrative sustainable transport and last-mile delivery markets, demonstrating explosive growth. Likewise, book publishing, which initially seemed vulnerable to e-books, focused on enhancing the physical product. Publishers emphasized high-quality print editions, collector's items, and the visceral experience of reading a paper book, ensuring that print remains popular for education, gifting, and aesthetic value. This dynamic of adaptation, market pivot, and experiential enhancement proves that for many industries, disruptive technology ultimately leads not to extinction, but to redefinition. The evolutionary trajectory of resilient industries—those that adapt rather than disappear—provides a highly relevant framework for

understanding the current state and future direction of AVT following the introduction of AI-boosted automatic translation tools. A relatively new segment of business in AVT is based on education and MOOCs, a side-effect of the popularity of online education proposals. While the *concept* originated in 2008, the term gained widespread public recognition when courses from major universities (like those that formed platforms such as Coursera and edX) began launching in 2011 and 2012.

Translation for and of MOOCs are explored by **Tzu-yi Elaine Lee** who provides us with a comparison of lexical bundles in machine-translated (MT) and human-translated corpora of four Chinese language MOOCs hosted by a university in northern Taiwan. Findings indicate that MT-generated subtitles tend to align with a register that sounds more written, while human-translated subtitles display more features of orality. This stands to reason if we bear in mind that Large Language Models (LLMs) favour written texts. Blogs too are written and may provide LLMs with an oral flavour, but in terms of quantity, written English in these models outscores orality. Meanwhile based on data from mainland China, **Yuan Zou** and **Piotr Blumczynski** provide an overview of a popular MOOC devoted to Traditional Chinese Medicine and Culture to identify both challenges and elements of good practice. The authors provide us with food for thought regarding the enormous challenges faced in translating these courses for westerners whose mindsets embrace a very different perspective of the human body, illness and healing with respect to Chinese thought. How do we not lose millennia of very specific Chinese philosophy in translation? How are such diametrically opposing concepts put into words that make sense to westerners?

In a recent article published by The Guardian, Deepak Varuvel Dennison (2025) argues that LLMs are fundamentally limited by their massive training datasets. Despite their size, these datasets suffer from severe linguistic and cultural bias, which leads to significant gaps in human knowledge and understanding. This digital neglect arises because languages serve as vessels for centuries of deep, localised human experience, specialized expertise and socio-philosophical worldviews which often remain undocumented and oral and absent from accessible datasets such as Common Crawl, which feed generative AI systems. Consequently, although English dominates the digital space with 45% of the data, global languages such as Hindi, spoken by 7.5% of the world's population, account for only 0.2%. This results in around 97% of the world's languages being categorized as "low-resource" in computing contexts. This skewed representation is reinforced by the underlying mechanics of GenAl, which amplify statistically prevalent ideas in a manner akin to cultural hegemony, with roots in Western epistemological traditions. This process excludes marginalised knowledge, resulting in models that fail to capture the cultural and ecological contexts vital for addressing global challenges. Moorkens et al. (2024) also highlight imbalances in LLMs in terms of representativeness, even among Western languages. Despite this technology being perceived as cost-effective, they also question the sustainability of Al-boosted translation practices when environmental and social costs are considered.

The core challenge posed by AI to AVT professionals mirrors the crises faced by watchmakers and publishers: the technology (AI) handles the basic, high-volume functions (speed, scale, and base accuracy) far more efficiently than humans can. Just as the affordable digital watch rendered the

simple mechanical watch obsolete, Machine Translation (MT) and automated speech recognition systems are rapidly commoditizing raw subtitling and dubbing labour. AVT is certainly adapting to the fast rate of the ever-evolving technological and translation context, but which path AVT will follow is hard to say. AVT could follow the path of resilient industries pivoting to high value expertise, just like the luxury watch model, or the path of diversifying, just like the bike model, or redefining authenticity, in other words the vinyl record model. However, AVT could also help to reduce imbalances boosted by AI technology and find a new niche segment by making oral, traditional and non-mainstream languages and knowledge more accessible to large audiences via culturally aware human translators of MOOCs.

In sum, Al-boosted tools are not eliminating the AVT profession; they are forcing its ascent. The human AVT professional is evolving from a content producer into a quality controller, cultural mediator, and technical expert managing the complex intersection between machine capabilities and audience expectations. What does the future hold? Of course, this remains to be seen as, for all we know, subtitles and dubs may be replaced by some kind of transhumanistic device that will allow audiences to automatically absorb a product into their brains in the language of their choice. Only time will tell.

Contributorship

This article was designed and prepared jointly by the two authors. However, Linda Rossato is mainly responsible for pages 1–10, while Delia Chiaro is mainly responsible for pages 11–15.

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