INTERPRETING-RELATED TECHNOLOGIES:

A LITERATURE REVIEW

Olesea BODEAN-VOZIAN,

Universitatea de Stat din Moldova

The digital tools available for interpreters and their usage and advantages has become a topic of interest in the field of interpreting and research has intensified in the last couple of years. Nevertheless, the studies, theoretical approaches or categorisations of the tools, in particular, computer-assisted interpreting (CAI) tools have not been that numerous. This article aims to contribute to the investigation of CAI tools, examine the available sources which touch upon the evolution of these instruments and describe their benefits. Our goal is to conduct an analysis of different perspectives, considering the pros and cons and see which are the perspectives related to the exploration of CAI tools. Professionals need to become more aware of CAI benefits and limitations, need to have a better understanding of such mechanisms to know how to embed them into their activity. Additionally, the article explores remote and machine interpreting as well as interpreters' concerns regarding the future of their profession in the context of the technological turn. Contrary to translators, who have embraced CAT tools, interpreters enjoy the traditional modus operandi and have difficulties in accepting the technology as part of their profession. Some professors and practitioners are encouraging interpreters to consider these tools and use them in their workflow, while others expressed their concern that the things we have today shape this domain in a detrimental manner and interpreters work in environments that fail to meet the best working practices.

Keywords: Simultaneous interpreting, consecutive interpreting, technology, tools, RSI, CAI, AI.

TEHNOLOGIILE ÎN INTERPRETARIAT : O REVISTĂ A LITERATURII

În ultimii ani, disponibilitatea instrumentelor digitale, beneficiile și aplicarea acestora de către interpreți a devenit una dintre principalele direcții de cercetare în domeniul interpretariatului. Însă, nu există prea multe studii, abordări teoretice sau clasificări ale instrumentelor, în special în privința celor menite să sprijine procesul de interpretare, prin urmare, prezenta lucrare își propune să realizeze o analiză bibliografică a literaturii de specialitate care pune în discuție instrumentarul, de la apariție până în prezent, dar și avantajele acestuia. Scopul este de a realiza un screening al diferitor abordări, luând în calcul avantajele și dezavantajele și de a examina perspectivele legate de explorarea interpretării asistate de calculator. Suntem de opinie că profesioniștii din domeniu trebuie să cunoască beneficiile, dar și limitările acesteia și să înțeleagă mai bine mecanismele date pentru o bună integrare a acestora în activitatea lor. În plus, ținând cont de noua paradigmă tehnologică, se va investiga preocuparea interpreților în ceea ce privește viitorul profesiei, dar și interpretarea la distanță și interpretarea automată. Spre deosebire de traducători, care utilizează activ diverse instrumente ce facilitează procesul de traducere, unii interpreții ezită să depășească cadrul tradițional și întâmpină dificultăți în a accepta tehnologia ca parte a vieții lor profesionale. Deși există unele voci din domeniu care recomandă acceptarea instrumentelor ca parte integrantă a procesului de lucru, alții cred că acestea vor configura și ar putea avea impact negativ asupra domeniului și în consecință, asupra interpreților.

Cuvinte-cheie: Traducere simultană, traducere consecutivă, tehnologie, instrumente, RSI, CAI, AI.

Introduction

In the ever-changing world of interpreting, we, as professionals embark on distinct odysseys only to find ourselves in different settings such as conferences, international meetings and diplomatic negotiations in which the main goal is to secure seamless, clear communication. A critical component of global communication is simultaneous interpreting – a "ballet" of words, emotions, motions, cultures and various contexts which enables real-time crafting and conveyance of a discourse from one language into another.

While interpreting long remained unaffected by the technological progress that transformed the translation industry, in the recent years, a paradigm shift led interpreters interact more intensely with the technology. As technology progresses, it is changing the realm of interpreting, offering new tools and methods that

make the workflow more efficient and qualitative. Although it presents both opportunities and challenges, the interaction between interpreters and technology will leave its print on the future of global communication. Embracing these changes while maintaining the essential qualities of effective interpreting will be key to fostering understanding across languages and cultures.

Theoretical Framework

The intersection between technology and interpreting is a subject matter attracting intense attention from researchers and practitioners. Technologies have gradually become an integral part of the translation process, in particular, in the last 20 years, making the human-machine interaction a topic of scholarly interest. Lately, the field of interpreting has been shaped by technological developments as well.

F. Pöchhacker [1] categorises the digitalisation of interpreting into three stages: telecommunications, technological tools and automation (including language processing and AI), while C. Fantinuoli [2, p. 2-3], in his work, *Interpreting and Technology* (2018) states that interpreting, as a field, has gone through at least two major technological breakthroughs: the first one occurred in the early 1920s, when wired systems for speech transmission were introduced that led to the rise of simultaneous interpreting, while the second was triggered by the emergence of the Internet in the 1990s, which radically changed the manner in which interpreters would acquire knowledge. The author considers that the third momentous change was the appearance of technologies to support interpreters, namely, computer-assisted interpreting (CAI), machine interpreting (MI) and remote interpreting (RI).

Computer-assisted interpreting (CAI) tools are software solutions that emerged around 15 years ago. Their goal is to assist interpreters in preparing for events but also during their assignment [3, p. 29]. CAI tools are classified as 1st generation (programs that were designed to help the interpreters with the terminology in a friendly manner – Interplex, Terminus, etc.) and 2nd generation (more advanced tools, such as Intragloss, InterpretBank) [4, p. 164-165], however, currently, a 3rd generation set of tools has emerged (Cymo Note, EABM, Interprebank ABM, Kudo Interpreter Assist and Smarterp). Additionally, digital pen technology and tablet interpreting, as well as automatic speech recognition (ASR) technology that converts speech into text automatically and voice-recording applications, online dictionaries and glossaries are considered CAI tools as well. F. Pöchhacker [5, p. 184] indicates that speech and text processing technologies such as ASR have the potential to benefit both simultaneous and consecutive interpreting. But even if we can think of these as the equivalent to what CAT tools are for translators, still, CAI tools do not enjoy the same level of acceptance by all – there are professional interpreters who tend to avoid these solutions either because they are mistrusted or because they remain unknown to them.

Machine Interpreting (MI) or speech-to-speech translation is an automated language translation process that converts spoken content from one language to another in the form of speech. The interpreting (either consecutive or simultaneous) takes place in real-time on the basis of a single presentation and is intended for immediate consumption. Machine interpreting uses artificial intelligence (AI), without the input of a human interpreter, combining voice recognition software and machine translation. It is considered that MI faces a multitude of challenges due to the complexity of human communication, which are further compounded in multilingual spoken exchanges and it depends exclusively on the information embedded in spoken language, overlooking essential communication elements such as non-verbal cues and vocal intonation. The conclusion is that the machines are lacking awareness of the context, speaker's intentions, or the interlocutors' reactions [6].

Remote interpreting (RI), distance interpreting or 'virtual interpreting technology' [7] can be defined as a modality of interpreting that is delivered by means of ICT and performed by an interpreter or a team of interpreters whose location is different from that of the speaker(s) [8, p. 227]. It can be provided from home or from an interpreting hub. This type of interpreting gained popularity during COVID-19 pandemic and AIIC [9], among other organisations, formulated a series of recommendations for both organisations and interpreters in terms of use of remote platforms, coordination between booth partners, sound quality, confidentiality etc. The tech companies in this area include names such as Webster, Interactio, Interprefy, Kudo, Zoom and actually, the list of RSI vendors increased lately. While remote interpretation offers numerous benefits, such as cost-effectiveness, convenience, and accessibility, it also presents unique challenges. These challenges

include managing communication flow, ensuring cultural sensitivity, and addressing technical issues that may arise during remote sessions. Moreover, conducting remote interpretation sessions can present various technical challenges, such as connectivity issues, software glitches, or hardware failures [10].

Remote interpretation increases an interpreter's mental workload and leads to fatigue and decline in performance faster than live interpretation. Under such circumstances, interpreters are effectively being asked to work in substandard conditions and many believe that RSI poses a significant danger of degrading and dehumanising the profession. Perhaps, the pandemic has changed our profession to such an extent for the first time since the emergence of simultaneous interpretation.

Conclusions

The fast development of artificial intelligence in recent years, drives the application of CAI tools in various interpreting settings, such as consecutive, simultaneous and remote interpreting. The findings of certain studies indicate that attention should not be restricted to how technology will replace human beings, but how wittingly exploit technology as a powerful weapon to improve interpreters' capacity. The emphasis must be placed thus on the proper use of technology rather than perceiving the technology as an enemy. The future does not bring an end to the profession but opens the door to a life where continuous learning goes hand in hand with the technological mastery. And hopefully, more scholars will contribute to this promising research field.

References:
1. PÖCHHACKER, F. *Introducing Interpreting Studies*. London: Routledge, 2004. 264 p.
2. FANTINUOLI, C. *Interpreting and technology: the upcoming technological turn*. In: Fantinuoli, C. (ed.). *Interpreting and Technology*. Berlin: Language Science Press, 2018a. p. 1-12.
3. PRANDI, B. *An exploratory study on CAI tools in simultaneous interpreting: Theoretical framework and stimulus validation*. In: Fantinuoli, C. (ed.). *Interpreting and Technology*. Berlin: Language Science Press, 2018, p. 29-59.
4. FANTINUOLI, C. *Computer-assisted Interpreting. Challenges and Future Perspectives.* In: *Trends in e-Tools and Resources for Translators and Interpreters: Challenges and Future Perspectives*. Corpas Pastor, G. & Durán-Muñoz, I. (eds.). Leiden/Boston: Brill-Rodopi, 2018b. p. 153-174.
5. PÖCHHACKER, F. *Introducing Interpreting Studies* (2nd ed.). Routledge 2016. 280 p.
6. *The Emergence of Machine Interpreting*. https://www.claudiofantinuoli.org/docs/ESTNL_May_2023.pdf
7. *VIT Feature Explorer*. https://www.nimdzi.com/vit/
8. SAEED, M.A. et al. *Connected yet Distant: An Experimental Study into the Visual Needs of the Interpreter in Remote Simultaneous Interpreting*. In: Kurosu, M. (eds) *Human-Computer Interaction. User Experience and Behavior*. HCII 2022. Lecture Notes in Computer Science, vol. 13304. Springer, Cham, p. 214-232.
9. *Reference Guide to Remote Simultaneous Interpreting.* https://aiic.ch/wp-content/uploads/2020/05/aiic-ch-reference-guide-to-rsi.pdf
10. *Remote Interpretation Mastery: Embracing Cultural Diversity in Every Session*. https://www.linkedin.com/pulse/remote-interpretation-mastery-embracing-cultural-diversity-every-wc9mc/

Date despre autor:
Olesea BODEAN-VOZIAN, doctor în filologie, conferențiar universitar, Facultatea de Litere, Universitatea de Stat din Moldova.
E-mail: oleseabodean@gmail.com
ORCID: 0000-0002-2945-0318