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The Interpreters' Newsletter

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Contents

Editorial

Issue 28 of *The Interpreters' Newsletter* is born out of the numerous submissions received in 2023, which testify to the ever-present and constantly renewing interest of the international academic community in the realm of interpreting and Interpreting Studies.

The progression of the papers takes the reader to a journey through the different modalities of interpreting, the settings in which it is performed and the different research paradigms and approaches that have characterised the development of Interpreting Studies over the last few decades (Pöchhacker 2022). The contributions included in issue 28 of *The Interpreters' Newsletter* address and explore conference interpreting (consecutive and simultaneous) as well as dialogue interpreting, both onsite and remote, and cross-cutting aspects such as, among others, education, the perception of quality, research methods and AI-powered computer assisted interpreting.

The issue starts with two papers that deal with consecutive interpreting, though from different perspectives. Jiaqi Tan and Rongbo Fu report on an exploratory study that investigates the effects of directionality on novice interpreters' control of non-fluencies in Chinese<>English consecutive interpreting. The paper accurately describes how fifteen students' interpretations of a 2011 political bilateral meeting between Hu Jintao and Barack Obama were analysed and compared with authentic data of two expert interpreters' renditions of the same political speeches, with a view to gathering more insightful data. The focus on silent pauses, filled pauses, repetitions and false starts in the students' renditions is informed by an exhaustive review of relevant investigations drawn from the fields of Psycholinguistics and Interpreting Studies alike. The authors, thus, provide intriguing and convincing results that partially confirm Mead's (2000), contributing to fostering the adoption of a language-pair perspective in the study of directionality.

The second paper also deals with consecutive interpreting but explores one specific operational aspect of note-taking rather than analysing the prosodic features of interpreted speeches. Building on his Master's thesis, Ludovico Ricca describes an experimental study exploring the role and use of margins in consecutive interpreting. Drawing on traditional studies on the nature of the margin in consecutive interpreting (e.g. Matyssek 1989), the author investigates the extent to which this "dedicated space" on the interpreter's notepad can help them better understand the hierarchical value of each item of information within their notes. Based on the hypothesis that interpreters who use margins are more likely to report logical links and adverbial expressions accurately in the interpreted text, Ludovico Ricca manages to corroborate his initial hypothesis by illustrating the ways how two groups of five interpreting students each translated the same Italian speech into their B languages, with the former group using margins while taking down notes. Despite being confined to a training context and a small sample, Ricca's study provides an interesting contribution to the decades-old study of note-taking, offering additional insights to understand the partially unfathomable role of the margin in consecutive interpreting.

In the third contribution, attention is shifted to the theme of simultaneous interpreting quality. Esperanza Macarena Pradas Macías and Emilio Sánchez Santa-Bárbara present an empirical study on the perception of the quality of interpretations by a group of 62 laypersons (students from the Faculty of Political Sciences and Sociology) and a group of 54 semi-experts (students from the Faculty of Translation and Interpreting). The article explores whether participants' expectations concerning quality (implicit theories) match their actual evaluation of an interpreter's performance, and whether their own gender and the gender of the interpreter have an impact on such evaluation. The impact of gender on quality assessment in SI was studied by resorting to audio editing, whereby the authors changed the female voice of a German-Spanish simultaneous interpreter into a male voice before asking the participants in their survey to fill in a questionnaire. Despite being based on limited and non-probabilistic samples of participants - as the authors point out - the results shed light on gender-related professionalism issues. In this respect, Esperanza Macarena Pradas Macías and Emilio Sánchez Santa-Bárbara draw a promising research line that bridges the themes of quality, users' expectations and gender, laying the groundwork for future studies based on larger and more comprehensive samples.

A specific aspect of interpreter performance is studied by Claudio Russello and Matilde Carbutto who, building on a Master's thesis, present the results of an exploratory study on AI-powered computer-assisted interpreting (CAI) and accuracy in the rendition of numbers in interpreting students performing simultaneous interpreting. The pilot involved sixteen interpreting students (eight in the case and eight in the control group) and eight more students acting as boothmates; the case group interpreted a speech with AI-powered support, while the control group interpreted the same speech with the support of a boothmate prompting with pen and paper. The authors placed the focus of analysis on the rendition of numbers, but also had external judges evaluate the intelligibility of extracts of participants' renditions. While, as the authors specify, results from an exploratory study cannot lead to generalisable conclusions, the paper takes a step towards the goal of studying the impact of AI-powered CAI on teaching and on novice interpreters.

In the same realm of interpreter education, but with a different focus, Michelle Marie Pinzl reports on the perception of recent graduates and community partners of Viterbo University's undergraduate community interpreting certificate programme, focusing particularly on professional and social aspects. The author employs an action-research approach and both quantitative and qualitative methods to analyse survey responses by graduates from the programme and community stakeholders, with the goal of assessing the programme's impact. In such a research-action study, results are specifically relevant for the programme in question, and point at positive aspects as well as identifying areas of improvement for the course; more broadly, however, this study and the methodology employed add up to the research stream on the effectiveness of interpreter education materials and programmes, which is always very much needed in a field that is subject to constant and fast change.

In a similar vein, and in this case with the specific goal of offering educational materials based on an action-research approach, Sofía García-Beyaert reports and reflects upon the action-research methodology behind the creation and development of a set of recorded dialogues (called Situated Dialogues) for education in dialogue interpreting, with authentic speech and created with the collaboration of professionals from different fields of expertise. The specific focus of this approach and set of materials is on accuracy and on developing students' message-transfer skills which, the author argues, are as important as interactional ones in dialogue interpreting education. The paper offers a clear and thorough discussion of theoretical underpinnings, workflow, strengths and limitations of the methodology used to develop and pilot the Situated Dialogues collection of educational materials, thus constituting a valuable resource for educators and researchers interested in investigating dialogue interpreter education.

Carmen Bestué and Judith Raigal-Aran put forward a novel approach to analysing court interpreting interactions. Adopting a sociological perspective and building on Luhmann's (1968) concept of trust, the authors examine a corpus of transcriptions of criminal trials held in Barcelona in 2015 with interpreting services in English, French, and Romanian; the aim of their study is to develop a method enabling the identification and description of situations where judges exhibit a certain degree of distrust towards interpreters. By considering the discursive visibility of the interpreter and the judge's ability to understand and speak the foreign language as the primary variables in the analysis, Carmen Bestué and Judith Raigal-Aran manage to shed light on the crucial role that trust and distrust play in shaping interaction between the agents involved in this specific interpreting context, thereby yielding original and useful findings to understand, explore and illustrate significant interactional aspects in the criminal courtroom.

Also focusing on dialogue interpreting, Mathijs Verhaegen discusses the methodological challenges of researching video-mediated interpreting with mobile eye tracking technology. More specifically, the research methodology discussed aims at studying turn-taking (including gaze management) in three-point, video-mediated and face-to-face dialogue interpreting in educational settings. After discussing the theoretical underpinnings of this methodology, the author proposes an experimental set-up designed with a mixed-methods approach in mind, combining multimodal conversation analysis complemented by eye tracking data and post-hoc interviews in a simulated experimental setting. Overall, the paper contributes to the methodological

framework and discussion of how to integrate and triangulate different data collection tools and methods of analysis to study different configurations of technology-mediated dialogue interpreting.

Laura Picchio's paper also deals with video-mediated interpreting by presenting and illustrating a substantial number of examples of Italian<>English dialogue interpreting at the Giffoni film festival. Also owing to the Covid-19 pandemic, the data set used is particularly heterogeneous, as it includes onsite streamed (OS) events, distance streamed (DS) events and onsite non-streamed (ON) events. Drawing particularly on the concept of audience design (Bell 1984), Picchio's analysis focuses on the renditions of some film scenes in these three different interactional contexts, whose characteristics are accurately described throughout the paper. Notably, the author observes that the references to specific scenes are translated differently as the audience design changes across the three interactional contexts at issue. The results, obtained by means of a qualitative analysis, suggest that both the live-streaming feature and the distance scenario have an impact on interpreting performances. In this regard, Laura Picchio offers original insights into the distinctive and rapidly-evolving sphere of film festival interpreting (Merlini 2017), also providing the reader with a broader overview of the impact of the digital-video shift on interpreting services and practices.

Finally, Heidi Salaets and Geert Brône report on the first stage of an ongoing, AIIC-funded research project on the challenges and advantages of Remote Simultaneous Interpreting (RSI). In this first stage of the project, the authors report the results of the qualitative analysis of interviews to ten professional conference interpreters. The interviews explored topics such as the technological and interactional challenges and advantages of RSI, the transition from onsite to online, the management of multiple technological devices, preparation for assignments, teamwork and perception of interpreting quality. The results point at RSI being seen as not necessarily only challenging for professionals; for example, it is reported to reduce the stress induced by travelling and mobility and to help facilitate work-life balance. On the other hand, participants reported, among other things, technology-induced stress and more complex teamwork, which can be at least partially made up for by RSI platforms that allow boothmates to see each other.

As it can be inferred by this short overview, the papers in Issue 28 of *The Interpreters' Newsletter* are a representation of the multifacetedness and richness in points of view and approaches that characterise the ever-growing field of Interpreting Studies, and we hope it will be of interest for interpreting scholars, educators, students and practitioners alike. All these groups of readers will also have the opportunity to gain an insight into the volume entitled *Introducing New Hypertexts on Interpreting (Studies). A Tribute to Franz Pöchhacker* (Zwischenberger *et al*. 2023), thanks to the review written by Paola Gentile, an interpreting scholar working at the University of Trieste and a member of the Advisory Board of *The Interpreters' Newsletter*. Her thoughts on this recent work published by John Benjamins offer a clear and analytical overview of the heterogeneous contributions making up the volume, which reflects the entire range of Interpreting Studies, pays tribute to the work of Franz Pöchhacker and paves the way for future research.

Emanuele Brambilla
Nicoletta Spinolo

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Éditorial

Le numéro 28 de *The Interpreters' Newsletter* est né des nombreuses contributions reçues en 2023, qui témoignent de l'intérêt sans cesse renouvelé de la communauté universitaire internationale envers l'interprétation et l'interprétologie.

Les contributions de ce numéro emmènent le lecteur dans un voyage à travers la variété de modalités, de contextes, de paradigmes et d'approches de recherche qui ont caractérisé l'interprétation et son étude au cours des dernières décennies (Pöchhacker 2022). Elles se penchent sur l'interprétation de conférence (consécutive et simultanée) et l'interprétation de dialogue, tant *in situ* qu'à distance, et sur des aspects transversaux tels que la formation, la perception de la qualité, les méthodes de recherche et l'interprétation assistée par l'intelligence artificielle.

Le numéro s'ouvre sur deux articles qui traitent de l'interprétation consécutive sous deux angles différents. Jiaqi Tan et Rongbo Fu présentent une étude exploratoire sur les effets de la directionnalité sur le contrôle de la fluence par des interprètes novices en interprétation consécutive chinois<>anglais. La contribution décrit avec précision comment quinze restitutions d'une réunion politique bilatérale tenue en 2011 entre Hu Jintao et Barack Obama, effectuées par des étudiants, ont été analysées et comparées aux restitutions authentiques des mêmes discours effectuées par deux interprètes experts, dans le but de recueillir des données éclairantes. L'étude des pauses silencieuses, des pauses remplies, des répétitions et des faux départs dans les restitutions estudiantines repose sur l'examen exhaustif des recherches pertinentes menées en psycholinguistique et en interprétologie. Les auteurs fournissent ainsi des résultats surprenants et convaincants qui confirment en partie ceux de Mead (2000), ce qui pousse à l'adoption d'une approche fondée sur les paires de langues pour l'étude de la directionnalité.

Le deuxième article explore non pas les caractéristiques prosodiques des discours interprétés, mais un aspect opérationnel spécifique de la prise de notes en interprétation consécutive. Sur la base de son mémoire de Master, Ludovico Ricca décrit une étude expérimentale portant sur le rôle et l'utilisation des marges en consécutive. S'appuyant sur les études classiques à propos de la nature de la marge en consécutive (e.g. Matyssek 1989), l'auteur cherche à savoir dans quelle mesure cet espace spécifique peut aider l'interprète à mieux saisir la valeur hiérarchique des éléments d'information figurant dans ses notes. Ludovico Ricca part de l'hypothèse que les interprètes qui utilisent les marges sont plus susceptibles de restituer avec précision les liens logiques et les expressions adverbiales. Il parvient à corroborer son hypothèse initiale en illustrant la manière dont deux groupes de cinq apprentis interprètes ont restitué le même discours italien dans leur langue B, le premier groupe ayant utilisé les marges lors de la prise de notes. Bien que limitée au contexte pédagogique et à un petit échantillon, la recherche de Ricca est une contribution intéressante à l'étude de la prise de notes, remontant à plusieurs décennies, car elle offre des éléments supplémentaires pour comprendre le rôle relativement méconnu de la marge en interprétation consécutive.

Le troisième article entraîne le lecteur dans une réflexion sur la qualité de l'interprétation simultanée. Esperanza Macarena Pradas Macías et Emilio Sánchez Santa-Bárbara présentent une étude empirique sur la perception de la qualité de l'interprétation par un groupe de 62 profanes (étudiants d'une Faculté de sciences politiques et de sociologie) et un groupe de 54 semi-experts (étudiants d'une Faculté de traduction et d'interprétation). L'article examine si les attentes des participants en matière de qualité (théories implicites) correspondent à leur évaluation réelle de la prestation de l'interprète, et si leur propre genre et celui de l'interprète ont une incidence sur cette évaluation. Ce dernier aspect a été étudié par le biais d'un montage audio : les auteurs ont transformé la voix féminine de l'interprète travaillant en simultanée allemand-espagnol en une voix masculine. Les répondants ont ensuite été invités à remplir un questionnaire. Comme le soulignent les auteurs eux-mêmes, bien que les résultats reposent sur des échantillons limités et non probabilistes de participants, ils mettent en lumière des questions liant professionnalisme et genre. À cet égard, Esperanza Macarena Pradas Macías et Emilio Sánchez Santa-Bárbara tracent une ligne de recherche prometteuse qui relie les thèmes de la qualité, des attentes des utilisateurs et du genre. Ils ouvrent ainsi la voie à de futures études basées sur des échantillons plus larges et plus représentatifs.

Claudio Russello et Matilde Carbutto se penchent sur un aspect spécifique de la performance des interprètes, à savoir l'interprétation assistée par ordinateur (IAO) et la précision de la restitution des nombres chez des étudiants en interprétation simultanée. Leur étude exploratoire se base sur une thèse de Master. Le projet pilote a impliqué seize étudiants en interprétation (huit dans le groupe de référence et huit dans le groupe de contrôle), ainsi que huit autres étudiants jouant le rôle de coéquipiers de cabine. Le groupe de référence a interprété un discours à l'aide de l'intelligence artificielle, tandis que le groupe de contrôle a interprété le même discours avec l'assistance d'un coéquipier muni d'un stylo et d'une feuille de papier. Les auteurs ont centré l'analyse sur la restitution des nombres, mais ont également demandé à des juges externes d'évaluer l'intelligibilité d'extraits interprétés. Même si, comme le précisent les auteurs, les résultats d'une étude exploratoire ne peuvent donner lieu à des conclusions généra-

sables, l'article constitue un pas de plus pour atteindre l'objectif d'étudier l'influence de l'IAO/IA sur l'enseignement et la performance des interprètes débutants.

Toujours dans le domaine de la formation des interprètes mais avec un objectif différent, Michelle Marie Pinzl rend compte de la perception du Certificat en interprétation communautaire (premier cycle) de l'Université de Viterbo, exprimée par des jeunes diplômés et des partenaires du terrain (hôpitaux, écoles, organisations non lucratives, etc.). Les aspects professionnels et sociaux sont au centre de son attention. Dans le but d'évaluer les effets du programme de formation, l'auteure a recours à une recherche-action et à des méthodes quantitatives et qualitatives pour analyser les réponses à l'enquête remplie par des diplômés du programme et des acteurs du terrain. La recherche-action rend les résultats pertinents pour le programme étudié, et en souligne les aspects positifs tout en identifiant les possibilités d'amélioration. Plus largement, cette étude et la méthodologie employée alimentent le courant de recherche portant sur l'efficacité des programmes de formation des interprètes et du matériel pédagogique, ce qui reste crucial dans ce domaine qui connaît des changements constants et rapides.

Dans le même ordre d'idées, avec cette fois pour objectif spécifique de développer du matériel pédagogique grâce à une recherche-action, Sofía García-Beyaert élabore sur la méthodologie de la recherche-action pour créer une série de dialogues enregistrés (appelés Dialogues Situés) à des fins de formation en interprétation de dialogue. Ces dialogues authentiques sont rédigés en collaboration avec des professionnels de différents domaines d'expertise. L'accent est mis sur la précision et sur le développement des compétences des étudiants en matière de transmission du message qui, selon l'auteure, sont aussi importantes que les compétences interactionnelles dans la formation en interprétation de dialogue. L'article offre une discussion claire et approfondie des fondements théoriques, du déroulement, des points forts et des limites de la méthodologie utilisée pour développer et tester cette collection de Dialogues Situés. Ces supports pédagogiques constituent ainsi une ressource précieuse pour les formateurs et les chercheurs qui veulent explorer la formation des interprètes de dialogue.

Carmen Bestué et Judith Raigal-Aran proposent une approche innovante pour analyser les interactions interprétées devant les tribunaux. Depuis une perspective sociologique et en s'appuyant sur le concept de confiance de Luhmann (1968), les auteures examinent un corpus de transcriptions de procès pénaux interprétés en anglais, français et roumain qui se sont tenus à Barcelone en 2015. Leur objectif est de mettre au point une méthode permettant d'identifier et de décrire les situations où les juges font preuve d'un certain degré de méfiance à l'égard des interprètes. En prenant pour principales variables la visibilité discursive de l'interprète et la capacité du juge à comprendre et à parler la langue étrangère, Carmen Bestué et Judith Raigal-Aran parviennent à mettre en lumière le rôle crucial que jouent la confiance et la méfiance dans le déroulement des interactions entre les acteurs de ce contexte d'interprétation spécifique. Leur méthode donne des résultats originaux et utiles pour appréhender, explorer et illustrer des aspects interactionnels significatifs lors d'un procès pénal.

Toujours en interprétation de dialogue, Mathijs Verhaegen se penche sur les défis méthodologiques que pose la recherche sur l'interprétation en visioconférence menée à l'aide de l'oculométrie. La méthodologie discutée vise à étudier la gestion des tours de parole (y compris la gestion des regards) lors d'une interprétation de dialogue à trois points, en visioconférence et en face à face, et ce, en contexte éducatif. Après

avoir discuté les fondements théoriques de cette méthodologie, l'auteur propose un dispositif expérimental inspiré de méthodes mixtes : il associe analyse conversationnelle multimodale, données oculométriques et entretiens post-hoc dans un dispositif expérimental simulé. Cet article contribue à la discussion du cadre méthodologique, de l'intégration et de la triangulation des données et des méthodes d'analyse qui sont appropriés à l'étude de l'interprétation de dialogue assistée par la technologie dans différentes configurations.

L'article de Laura Picchio traite également de l'interprétation de dialogue par visioconférence en présentant un grand nombre d'exemples italien<>anglais récoltés lors du festival du film de Giffoni. La pandémie de Covid-19 a permis de collecter un corpus de données particulièrement hétérogène, puisqu'il comprend des événements diffusés sur place, des événements diffusés à distance, et des événements ayant lieu sur place et non diffusés. Basée sur le modèle de la conception du public (*audience design*, Bell 1984), l'analyse de Picchio se centre sur les restitutions de scènes de films dans ces trois contextes interactionnels. Leurs spécificités sont décrites avec précision tout au long de l'article. L'auteure observe notamment que les références à des scènes spécifiques sont restituées différemment étant donné que la conception du public est modifiée en fonction du contexte interactionnel. Les résultats de cette analyse qualitative suggèrent que la diffusion en direct et la diffusion à distance influencent les performances des interprètes. Laura Picchio offre ainsi des éléments de compréhension originaux pour mieux appréhender l'interprétation dans les festivals de films (Merlini 2017), un contexte particulier en pleine évolution. Sa contribution met également en perspective les effets du virage numérique vidéo sur les services et les pratiques en interprétation.

Enfin, Heidi Salaets et Geert Brône rendent compte de la première étape d'un projet de recherche en cours, financé par l'AIIC, sur les défis et les avantages de l'interprétation simultanée à distance (ISD). Les auteurs présentent les résultats de l'analyse qualitative d'entretiens menés avec dix interprètes de conférence professionnels. Les entretiens ont porté sur des sujets tels que les défis et les avantages technologiques et interactionnels de l'ISD, la transition de l'interprétation *in situ* à l'interprétation en ligne, la gestion de dispositifs technologiques multiples, la préparation aux missions, le travail d'équipe et la perception de la qualité de l'interprétation. Les résultats indiquent que l'ISD n'est pas uniquement considérée comme un défi. Elle réduit en effet le stress induit par les déplacements et contribue à faciliter l'équilibre entre vie professionnelle et vie privée. Cependant, les répondants ont notamment signalé le stress suscité par la technologie et la complexité du travail d'équipe. Ce dernier facteur peut être partiellement compensé par les plateformes de visio-téléinterprétation qui permettent aux coéquipiers de se voir.

Comme le montre ce bref survol, les articles du numéro 28 de *The Interpreters' Newsletter* reflètent la pluralité et la richesse des points de vue et des approches qui caractérisent l'interprétologie, domaine en expansion constante. Nous espérons qu'ils susciteront l'intérêt des chercheurs en interprétation, des formateurs, des étudiants et des praticiens. Les lecteurs auront également l'occasion de découvrir le volume intitulé *Introducing New Hypertexts on Interpreting (Studies). A Tribute to Franz Pöchhacker* (Zwischenberger et coll. 2023) grâce à la recension rédigée par Paola Gentile, chercheuse en interprétation à l'Université de Trieste et membre du Comité scientifique de *The Interpreters' Newsletter*. Elle offre une vue d'ensemble claire et

analytique des différentes contributions à cet ouvrage récent publié chez John Benjamins. Ce volume reflète toute la palette de l'interprétologie, rend hommage à l'œuvre de Franz Pöchhacker et ouvre la voie à de futures recherches.

Emanuele Brambilla
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Non-fluencies in bidirectional Chinese/English consecutive interpreting: an exploratory study of novice interpreters' performances

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Abstract

The pattern of non-fluencies, often viewed as a major indicator of an interpreter's fluency, has thus far received considerable attention from interpreting scholars. This exploratory study aims to investigate the effects of directionality on novice interpreters' control of such features in a Chinese/English consecutive interpreting task. To do so, four main types of non-fluencies including silent pauses, filled pauses, repetitions and false starts were selected for the analysis. Our results confirm plausible directional effects on the novices' production of non-fluencies, suggesting that interpreting into English produces a far greater number of total and individual non-fluencies than interpreting into Chinese. Furthermore, the study reveals a significant contrast: silent pauses exhibit longer durations in the non-native language compared to the native language. This contradicts the previous conclusions about directional effects on pausing behaviour and highlights the influence of language-pair specific differences. The study underscores the importance of silent pauses in facilitating the delivery of interpreting, shedding light on the acquisition of fluency skills during interpreter training.

Keywords

Consecutive interpreting, non-fluencies, directionality, novice, cognitive load.

Introduction

Human speech is often peppered with various forms of fluency problems such as interruptions, hesitations, repairs etc. due to processing difficulties in the course of speech planning and production (Corley/Stewart 2008). The same situation is more likely to occur in interpreting as it involves rapid bilingual switching which entails great time pressure and cognitive constraints. Due to their potential to provide valuable insights into the black box of interpreters, speech disruptions have garnered growing attention from researchers in the field of Interpreting Studies. Typically, non-fluencies in interpreting are investigated in terms of their occurrences related to various situational variables, such as directionality (e.g., Mead 2000), source speech rate (e.g., Cecot 2001), lexical density (e.g., Plevoets/Defrancq 2016). However, different types of non-fluencies are often explored in separate endeavours and a full picture of global features associated with interpreters' (re)production problems still awaits further research. Moreover, current discussions on the topic have been largely confined to simultaneous interpreting (SI) (e.g. Tissi 2000; Bendazzoli *et al*. 2011; Magnifico/Defrancq 2019; Dayter 2020), whereas the mode of consecutive interpreting (CI) has received relatively less attention (e.g. Mead 2000; Bóna/Bakti 2020).

In view of the above, the present exploratory study aims to generate some fresh findings regarding the effects of directionality on the control of non-fluencies in the delivery of novice interpreters in Chinese/English CI. In an effort to present a more interesting discussion, authentic data of two expert interpreters' performances of the same source speech materials are also included for comparison purposes. This is also because interpretations of expert and novice interpreters are usually examined in relative isolation and Liu's (2008) observation that not many studies have investigated expert-novice differences in interpretation delivery remains valid until today.

The remainder of this paper is structured as follows: Section 1 presents an overview of existing research on non-fluencies in Interpreting Studies. Section 2 describes the methodology used in this research, which is then followed by analyses in Section 3 and a subsequent discussion in Section 4 respectively. Finally, Section 5 concludes this paper with a summary of major findings and some suggestions for future research.

1. Research on non-fluencies in interpreting

The study of non-fluencies in the activity of interpreting is a relatively recent endeavour compared to their long-standing research in monolingual spontaneous speech (e.g., Goffman 1981; Hieke 1981; Duez 1982; Levelt 1983; Postma/Kolk 1992; Fox Tree 1995; Pöchhacker 1995; Tissi 2000; Cecot 2001; Petite 2005). Given its close resemblance to impromptu speech production, interpreting has been of particular interest to researchers with a focus on psycholinguistic and cognitive aspects. Features of orality such as the occurrence of various types of non-fluencies are studied as one major area of psycholinguistic and cognitive research on interpreting as they can be seen "as a 'window' on the cognitive planning activity intrinsic to speech production" (Pöchhacker 2016: 123). Constrained by stringent requirements on processing capacity that could account for a potential "production crisis" (Goffman 1981: 172), conference interpreting becomes the natural choice of context in which research on

speech non-fluencies in interpreters' performances has been continuously conducted until now.

While a usual distinction between CI and SI can be made with regard to conference interpreting, a brief glance at relevant references in the literature shows that research on non-fluencies in interpreting has largely focused on the latter. Among others, Pöchhacker (1995) compares slips and shifts in the outputs of SI between interpreters and speakers in a three-day conference and finds that although interpreters on the whole produce more such features than speakers, there are instances where certain subcategories such as false starts are high in both forms of speech production. In an experimental study involving simultaneous interpretation by students, Tissi (2000) comes up with a comprehensive scheme of non-fluencies and applies it to a descriptive analysis of the extent to which silent pauses and disfluencies in the source text are associated with similar features in the target text. She concludes that although certain links between non-fluencies in source and target texts can be confirmed, they are not as direct as assumed. In a similar experiment, Cecot (2001) compares the performances of 11 professional interpreters in different conditions (faster vs. slower source speech rates). The findings indicate that pause occurrence is less frequent when source speech rate is higher, suggesting a necessary correlation in terms of speech prosody between the source and target text production. Her study also highlights the importance of interpreters' awareness of their own delivery in SI.

In addition to case-based and experimental studies, the recent use of corpus-based methodologies has also contributed to the body of knowledge on non-fluencies in interpreting. For example, Petite's (2005) probe into the mechanism of repair in SI is among the earliest of such endeavours. Adapting Levelt's (1983) theoretical account of speech monitoring and repair to specificities in SI, she distinguishes between input- and output-generated repairs and explores their manifestation in the outputs of 8 professional interpreters recorded in authentic conference settings. Her manual search results suggest that interpreters' use of repairs is aimed at a variety of different purposes, shedding new light on the decision-making process in SI. Also, the development and application of large-scale machine-readable interpreting corpora, the European Parliament Interpreting Corpus (EPIC) in particular, has given a further boost to research on non-fluencies in SI. Bendazzoli *et al.* (2011), for example, analyze mispronounced words and truncated words occurring in both the source and target texts with a formidable mix of three languages and all directions in EPIC. Their major hypothesis that interpreters produce more such features than speakers is however only partially borne out by subsequent quantitative results. More recently, Plevoets/Defrancq (2016, 2018) adopt both parallel (comparing input and output in interpreting) and comparable (comparing interpreted and non-interpreted texts) approaches to investigate the cognitive load of interpreters. They achieve this by modelling the frequency of *uh*(m) in relation to informational measures like lexical density and formulaicity. Their findings suggest, inter alia, that interpreters experience more production difficulties when source text lexical density increases or target text formulaicity decreases, lending support to theoretical models of interpreting which highlight the competing nature of different efforts for limited attentional resources (Gile 2009; Seeber 2011).

Compared with the broad spectrum of research foci in SI, the research on non-fluencies in CI has received limited attention. Based on the PACCEL-S corpus, Dai (2011) investigates the influence of gender on the patterns of disfluencies in interpre-

tation and finds that male students tend to use more phoneme correction and deletion techniques, while their female counterparts prefer to employ more lexical and grammatical correction in their outputs. Cardoen (2013) probes into the relation between note-taking and interpreting performance of student interpreters via an empirical experiment. In her study, the composition of notes includes four parameters: full words, abbreviations, symbols and note quantity, and the target-text fluency is measured by speaking rate, disruptive silent pauses and voiced hesitations (including filled pauses, false starts, repetitions and slips of the tongue). Her results show that too many notes might hinder fluent production, and a greater incorporation of full words within the notes corresponds to a more fluent output.

It is also important to note that the variable of directionality (i.e., whether interpreters work from their first language into a second language or vice versa) may also affect the patterns of non-fluencies of interpretations. Despite the longstanding concern that interpreting into-B leads to inferior quality, such a belief, as Gile (2005: 10) points out, has built on "a mix of personal experience, ideology and tradition" rather than empirically tangible evidence. Only a very small number of studies have tackled the issue of directionality in CI. Among them, Mead (2000, 2002) conducts a fine-grained analysis of pause-related temporal variables and delves into the effects of directionality and expertise on the control of pauses in interpretations as well as the perceived reasons that trigger them. He basically extrapolates that interpreting into native language is more fluent than into acquired language. A similar conclusion is drawn in Chen (2020) where she examines the impact of directionality on professional interpreters' processes and products of CI. Specifically, she finds higher speech rate, fewer silent pauses and lower pause duration in the L2 (English) to L1 (Chinese) direction than vice versa. Also, in a recent study focusing on Chinese undergraduate and postgraduate student interpreters attending a nationwide interpreting competition, Chou *et al.* (2021) explore the directional effects on interpreting performances using four measures: speech rate, information completeness, delivery and quality of expression. They observe an advantage in students' delivery when interpreting from L2 (English) to L1 (Chinese) in the form of interpreting quality. While the present research resembles Chou *et al.*'s study (*Ibid.*) in terms of its focus on non-fluencies and language combination, the two differ in the choice of participants and the topics of source materials. On the one hand, Chou *et al.* (*Ibid.*) recruit 66 Chinese undergraduate and postgraduate student interpreters and indiscriminately label them as "student interpreters". This might be problematic as the task proficiencies of the participants may vary considerably (e.g. more or less advanced) due to their differences in the amount of interpreter training they have received. On the other hand, source materials selected by Chou *et al.* (*Ibid.*) are mixed in themes, covering the fields of economy, sports, health, diplomacy, environment, etc. Given that extralinguistic knowledge (including encyclopaedic, thematic and bicultural knowledge) is shown to be conducive to text anticipation and comprehension during the interpreting process (Gile 2009), the fluency of certain participants may be affected to some extent due to their unfamiliarity with the topics. Therefore, topics should also be controlled as a variable that may play a role in affecting the linguistic and paralinguistic patterns of interpreting in experimental conditions.

Overall, the above review, inexhaustive as it is, helps capture some general characteristics associated with the study of non-fluencies in interpreting. It can be argued

that, while current research offers some insights into various fluency interruptions and the underlying factors that might lead to their occurrences, there are aspects that remain largely overlooked and point to a need for follow-up investigation. First and foremost, despite the usefulness of non-fluencies in revealing the cognitive processes involved in an interpreting task, many of them are examined in a patchy manner: one or two specific types are addressed in a single study (e.g. Mead 2000; Petite 2005; Plevoets/Defrancq 2016; Magnifico/Defrancq 2019) and relatively fewer studies have attempted to provide a fuller picture (e.g. Tissi 2000; Bendazzoli *et al*. 2011; Dayter 2020). Secondly, there is an imbalance as far as the mode of interpreting is concerned: much more research focuses on SI whereas less is known about the situation in CI (cf. Andres 2015). Thirdly, with few exceptions (Mead 2000, 2002), researchers seem to have targeted either professional or trainee interpreters in their respective inquiries, leaving the issue of novice-expert differences almost untapped.

In the light of the above considerations, the study in this article takes a step further by incorporating into the research design contextual elements that have seldom co-occurred in studies so far, i.e., interpreting mode (CI), directionality and multiple non-fluencies (silent pauses, filled pauses, repetitions and false starts). More specifically, the following sections aim to investigate the effects of directionality on the control of non-fluencies in Chinese/English CI performed by novice interpreters.

2. Methodology

This section provides a concise overview of the definition of non-fluencies adopted in the study, as well as details about the participants, the materials, and the experimental procedures.

2.1 Definition of non-fluencies

The term non-fluencies, as the name implies, is a generic label that describes a spectrum of detectable fluency interruptions in speech. These phenomena are often seen as manifestations of the efforts of reasoning and formulation which accompany linguistic production (Goffman 1981: 172). A review of relevant literature suggests considerable variety in terms of what can be counted as a non-fluency and how they are classified. The present study chooses to focus on items widely explored by researchers in the psycholinguistic field (Goffman 1981; Hieke 1981; Duez 1982; Fox Tree 1995; Gósy 2007) as well as in Interpreting Studies (Tissi 2000; Cecot 2001; Mead 2001; Dayter 2020). Specifically, the category of non-fluencies in this study is operationalized to include a subset of four types, namely silent pauses, filled pauses, repetitions and false starts. Unlike silent pauses which could function communicatively depending on context of use (Duez 1982: 12), the other three are basically referred to as speech errors that "do not add propositional content to an utterance" (Gósy 2007: 93). Among them, filled pauses are defined as any disruptions characterized by meaningless vocalizations of any length, typically taking the form of 'ahh', 'uhm', 'err', 'urn', 'hmm', etc. (Tissi 2000: 113); repetitions take place when the speaker

utters the same word or phrase - partial or complete - in a succession (Postma/Kolk 1992: 539); false starts, however, occur when the speaker interrupts an utterance and begins anew without completing it (Tissi 2000: 114). It is noteworthy that, distinct from repetitions and false starts, pauses are often characterized as one of the temporal variables in speech (Mead 2005), hence the need to further specify their durations for investigative purposes. In this study, we adopted the widely acknowledged minimum threshold of 0.25 seconds, as established in prior relevant works (Goldman-Eisler 1968; Duez 1982; Tissi 2000; Mead 2002), for the purpose of detecting and analysing silent pauses within our dataset.

2.2 Participants

Fifteen college final-year undergraduates (designated N1-N15) with above-average level of English proficiency were recruited to participate in the study. Among them, four are male (marked with asterisks in Tables 2 and 3) and the others are female. All participants were English majors and their English proficiency was tested based on their scores in Test for English Majors Band 4 (TEM-4), which is administered by the National Advisory Commission on Foreign Language Teaching in Higher Education in China and enjoys nationwide recognition as a major benchmark of English proficiency (Jin/Fan 2011). To minimize the impact of English knowledge on data, only those with a score above 'good' (≥70 out of 100 points) took part in the study. They had learned English as a foreign language for more than ten years and received a full year of CI training in which they attended four interpreting courses totalling 128 hours of classroom instruction in basic skills such as note-taking and logical analysis. Thus, the participants were generally unbalanced Chinese-English bilinguals with limited experience of interpreting and could be classified as novice interpreters. They were asked to interpret two speech segments, i.e., one in Chinese and the other in English selected from the same event. Prior to the formal experiment, the participants were required to sign informed consents after being told about the research purposes and the anonymity of their information and responses. Furthermore, to facilitate comparison, we also gathered the respective interpretations of two professional interpreters (referred to as E1 and E2) who were actively providing interpretation during the recorded sessions. Both professional interpreters worked into their non-native languages and had regularly been seen on TV to interpret for important meetings, talks and negotiations between the Chinese and US governments and thus were fully qualified as experts. The research was conducted in line with ethical principles after obtaining the required permission from the university where the corresponding author works.

2.3 Materials

For the purpose of maximum comparability between task materials for both interpreting directions, source speech texts from the same event were targeted. Specifically, we selected excerpts from the speeches given by the former Chinese president Hu Jintao and the US president Barack Obama during the 2011 Joint Press Conference. The

two leaders took questions from the journalists and answered in their mother tongues. Their speeches were rendered consecutively into the other language by their respective interpreters on the scene. While interpreting for such a high-stakes setting might be perceived as highly challenging for novices, the fact that both leaders addressed the media impromptu means that it could be less so. In addition, to further adjust and balance difficulty levels between Chinese and English originals, the following steps were taken successively to decide on materials for this study: (1) extracting speech segments which are similar in length and which respond to the same question to ensure a shared general topic; (2) inviting three instructors of interpreting courses in the same faculty to evaluate the general difficulty level of extracted materials on a 5-point scale from 1 (very easy) to 5 (very difficult) in terms of speed, topic and intelligibility, and notably, no major differences emerged among the raters; (3) assessing the difficulty of selected materials via quantifiable measures (see Liu 2008) such as lexical density (ratio of content words to total, including nouns, verbs, adjectives, adverbs, numbers, and pronouns) and structural complexity (words per utterance). Overall, as summarized in Table 1, material difficulty between the selected Chinese and English source speech segments proves to be broadly comparable (all numbers are rounded to one decimal place except speech duration).

Language	Duration	Speech rate (syllables per minute)	Lexical density (%)	Structural complexity	Instructors' average score
Chinese	2'13''	177	67.9	10.4	2.3
English	2'10''	170	63.5	11.5	2.6

Table 1. Information on selected source speech materials

2.4 Procedure

To create an optimal experimental environment that closely replicates the original event for the students, the following steps were taken. First, the interpreting task was arranged to take place in a quiet language lab with digital broadcasting and recording facilities where each student, one at a time, performed the interpreting task. Second, we ensured that the students were briefed on the experimental procedures. This orientation began with an introduction to the topic and context concerning the task, featuring slides from the original event and the broadcasted questions posed by journalists. Third, during the experiment, the students received signals to start interpreting on a segment-by-segment basis and their performances were recorded for further evaluation and analysis. Each segment was meticulously controlled to match the same length as those interpreted by the two professional interpreters during the original scenario. Finally, the recordings containing the interpretations of all participants (including those of two experts) were manually transcribed by the first author in an orthographic manner along with the non-fluencies in question. Subsequently, the transcriptions were reviewed and verified by the other author.

In terms of transcription, we applied the software Adobe Audition 1.5 to better capture various non-fluencies and have them properly represented in the transcripts.

As an initial step, each recording was converted into an oscillogram on which duration of pauses can be conveniently cued and measured, using functions provided by the software. In light of our definition, only silent pauses above the minimum threshold of 0.25s were considered. For the pauses which are mixed in nature, i.e., silent and filled pauses occur in succession, we followed Mead's (2002) advice and treated them as filled ones only. With regard to repetitions and false starts, the software also allowed handy control of playing back and forward any chosen segment in view, making the beginnings and endings easily detectable. For the purpose of differentiation, the four types of non-fluencies were marked as SP, FP, RPT, and FST on the oscillogram, standing for silent pauses, filled pauses, repetitions, and false starts respectively. For silent and filled pauses, their durations were further specified for calculation purposes. Consequently, all non-fluencies in a specific recording were marked on the oscillogram they were associated with. They were then annotated one-by-one in the transcript of that recording, with each of them corresponding to their occurrences in the oscillogram in terms of location and length (in the case of pauses). Marking for each type of non-fluencies in the transcripts was indicated in square brackets (see the example in Section 4.4).

Finally, quantitative analysis was conducted to calculate, on the one hand, total duration of pausing in each recording; on the other, total frequency of each non-fluency type in every recording. Average pause duration per minute and average occurrence of all non-fluencies per minute (rounded to the nearest integer) in the novice interpretations in both directions were further calculated and compared using paired t-test.

3. Results

Tables 2 and 3 present rounded average occurrences of non-fluencies and average pause durations per minute in the novice interpreters' output respectively. Data for the experts are also juxtaposed for comparative purposes.

	Non-fluencies in Chinese					Non-fluencies in English				
	SP	FP	RPT	FST	Total	SP	FP	RPT	FST	Total
N1	10	14	7	6	38	18	8	6	7	39
N2	21	8	2	4	36	24	5	3	3	35
N3	12	9	1	7	28	17	11	5	5	37
N4	11	10	1	7	29	17	6	5	4	32
N5	9	12	3	7	31	10	12	3	7	32
N6	9	19	3	3	35	19	7	4	4	34
N7*	15	3	6	6	29	16	3	7	6	33
N8*	11	15	3	5	33	13	14	7	3	37
N9	13	15	2	3	32	19	10	1	3	33
N10	7	12	3	10	31	9	11	2	4	26
N11*	7	6	0	1	15	15	6	1	2	23

N12	9	14	8	7	39	11	15	10	3	40
N13	11	8	2	5	25	21	6	9	3	39
N14*	22	2	1	2	27	22	5	1	2	29
N15	6	11	2	5	24	7	16	3	4	30
Mean	11	11	3	5	30	16	9	4	4	33
E 1	18	3	1	1	23	/	/	/	/	/
E 2	/	/	/	/	/	26	0	0	0	26

Table 2. Average frequency of non-fluencies per minute in the output of both novice and expert interpreters

	Pause duration in Chinese			Pause duration in English		
	SP	FP	Total	SP	FP	Total
N1	4.708	9.541	14.249	12.768	6.914	19.682
N2	15.833	11.405	27.238	21.278	9.908	31.186
N3	6.785	9.189	15.974	12.309	11.898	24.207
N4	6.038	5.649	11.687	8.582	7.263	15.845
N5	3.398	8.893	12.291	5.142	14.447	19.589
N6	4.638	18.540	23.178	10.695	9.410	20.105
N7*	14.721	4.367	19.088	8.822	3.316	12.138
N8*	5.214	17.141	22.355	10.803	21.848	32.651
N9	6.951	18.575	25.526	8.405	14.653	23.058
N10	5.581	14.585	20.166	3.662	9.759	13.421
N11*	3.161	4.553	7.714	7.756	10.119	17.875
N12	4.556	9.111	13.667	4.941	14.872	19.813
N13	7.992	14.358	22.350	16.278	8.839	25.117
N14*	10.397	1.069	11.466	11.196	7.429	18.625
N15	3.525	7.999	11.524	3.368	11.780	15.148
Mean	6.900	10.332	17.232	9.734	10.830	20.564
E1	7.116	1.259	8.375	/	/	/
E2	/	/	/	14.332	0	14.332

Table 3. Average pause duration in the output of the novice and expert interpreters (seconds per minute)

To compare the general patterns of non-fluencies in the novices' output in two directions, total occurrence and percentage for all four non-fluency types are further calculated and presented accordingly in Figure 1.

First, as Figure 1 shows, directionality on the whole does exert a strong impact on the occurrence of each non-fluency type under investigation. Specifically, interpreting into Chinese generates a higher percentage of filled pauses and false starts but a lower proportion of silent pauses and repetitions than interpreting into English. Moreover, the total amount of non-fluencies in the English interpretations is substantially higher than that in Chinese (1453 vs. 820), and the same is true of the number of individual non-fluencies. This clearly reflects that maintaining fluency in the former has been much more challenging than in the latter, considering similar lengths of the source speech materials. Interestingly, though, the chances that the novices pause in their production, silently and audibly together, seem generally insensitive to the influence of directionality (73.5% in Chinese and 74.7% in English). The same can also be claimed for the combination of repetitions and false starts combined. This suggests that there could be a bidirectional shift between the occurrences of silent pauses and filled pauses as well as between repetitions and false starts as a result of change in interpreting direction.

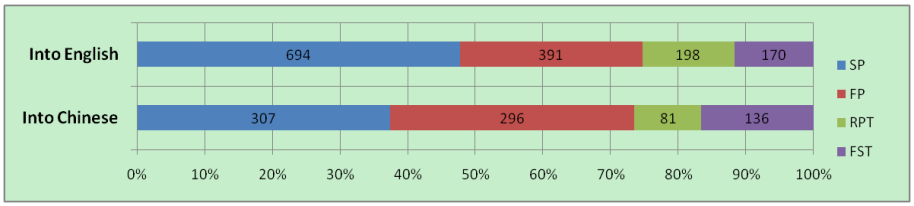

Figure 1. Total occurrence and percentage of non-fluencies in novice interpreters' output in two directions.

Secondly, in terms of average frequency per minute, statistical analysis based on results in Table 2 shows that silent pauses are significantly more frequent in English than in Chinese interpretations (t=4.854, p= .000). At the significance level of p = 0.05, similar effects of directionality can be found on repetitions (t=2.588, p= .021) and total non-fluencies (t=2.597, p= .021). However, there is no significant difference between the frequencies of filled pauses in English and Chinese (t=-1.435, p= .173). As for false starts, by contrast, they are found to be significantly more frequent in Chinese than in English (t= -2.316, p= .036). In addition, there is a significant positive correlation between average frequencies of silent pauses in English and Chinese (Pearson correlation coefficient = 0.747, p = .001). A similarly significant correlation is also found between average frequencies of repetitions in both directions (Pearson correlation coefficient = 0.628, p = .012), suggesting a habitual use of disfluent features among the novices irrespective of interpreting directions. Further, there is a negative correlation between average frequencies of silent pauses and filled pauses in English (Pearson correlation coefficient = -0.758, p = .001).

Thirdly, statistical tests involving the additional parameter of average pause durations in both directions (see Table 3) reveal significantly longer silent and total pause durations in English than in Chinese (t= 2.812, p= .014 and t= 2.289, p= .038 respec-

tively). However, durations for filled pauses do not vary significantly between the two interpreting directions (t= 0.391, *p*= .701). These results apparently find their echoes in the foregoing analysis of average non-fluency frequencies.

Last but not least, as can be seen in Table 2, pausing takes up a predominant proportion of the totality of non-fluencies produced by the novices in both languages. While regular use of silent pauses is indispensable to any speech production due to the common need of stopping to breathe, there seems a divergence, albeit tentative given the imbalance of our samples, in terms of the pausing pattern between the novices and the experts: on average, the novices pause almost as much as the experts per minute (novice group mean versus expert is 22 : 21 in Chinese and 25 : 26 in English), but they on the whole tend to fill silences with vocalized pauses more frequently than the experts do. Such a tendency is also consistent with the results in Table 3. That is, on average, the novices pause longer than the experts per minute, yet they generally spend less time in silence than the experts do. The difference seems more prominent when all the interpreters (including E2) were doing a retour, i.e., interpreting into the non-native language of English (see Table 3).

In addition, although there appears a stylistic difference in pausing strategies between the two experts (E2 paused more frequently and longer than E1), they seem to display good consistency in controlling repair-related features of non-fluencies such as repetitions and false starts. In contrast, the two types are found to be excessively evident in the novices' interpretations, an unsurprising indication that their maintenance of fluency is more problematic and less effective than that of the experts.

4. Discussion

The purpose of the present study was to examine the effects of directionality on the novices' control of non-fluencies in CI. While the results obtained from our small-sized samples can only provide a limited basis for discussion, they do reveal some general trends that help shed light on the novice interpreters' struggle with production challenges in different interpreting directions.

Apparently, directionality proves to be a significant factor responsible for the changing pattern of occurrence of various interruptions in the novices' interpretations. To summarize, the effects of directionality on the production of non-fluencies in the present study are three-fold, namely the relative proportion of individual non-fluency types, the average frequency of non-fluencies per minute and the average pause durations per minute.

4.1 Relative proportion of individual non-fluency types

Essentially, the fact that the English interpretations contain a far greater number of non-fluencies than the interpretations in Chinese arguably lends support to Mead's (2000) hypothesis that production is more fluent when interpreters work into their native language than into a non-native one. More importantly, as findings in Mead's study are based on the analysis of pauses only, results from the present study never-

theless substantiate his claim from a more comprehensive perspective. Also, changes in the proportion of individual non-fluency types are observable between the two directions of interpreting. In particular, as Table 3 indicates, whereas interpreting into non-native English seems to result in a higher level of silent pauses, interpreting into native Chinese is likely to generate more percentages of filled pauses and false starts.

In addition, the percentage rise of filled pauses and false starts in Chinese as opposed to English interpretations provides some insights into the novices' management of cognitive resources. From the point of view of Gile's (2009) Effort Model for CI, reformulation in the target language involves well-balanced allocation of limited processing capacity between four efforts, namely note-reading, remembering, production and coordination. These four efforts are presumed to cooperate with each other whilst competing for necessary attentional resources in order to carry fluent message delivery into the target language. Such operations are not always smooth, as interpreters, particularly novices, are expected to encounter various problem triggers that might have an effect on the above efforts (Gile, 2009). This means processing capacity available for each effort or for overall efforts may no longer suffice and may consequently lead to breakdowns in performance which are typically manifested in the form of non-fluencies such as filled pauses and false starts.

As far as the direction of interpreting in the present study is concerned, production in native Chinese obviously means presumably much lower pressure on syntactic structuring and lexical access for novices compared with that in their less proficient English. However, while the increased proportion of false starts in Chinese might be attributed to more cognitive resources available for self-monitoring and self-correction of target output whenever necessary, the reasons for the greater proportion of filled pauses in Chinese than in English seem unclear. As filled pauses signal more explicitly planning difficulties (Fox Tree 2002), one tentative explanation might be less effective message retention of non-native English speech segments in the first phase of CI (Gile 2009: 175-176) where good interaction between listening and analyzing, note-taking and memory skills could become more challenging for novices. This in turn may offset at times the benefits of production in native Chinese in phase two and make them vocalize their hesitations.

4.2 Average frequency of non-fluencies per minute

Results concerning the average frequency per minute for individual and total number of non-fluencies in the Chinese and English interpretations allow for a comparison of the directional effects on the incidence of such features. Presumably, the tendency to resort to more frequent false starts yet less frequent repetitions in Chinese and vice versa in English, is inherently associated with different proficiencies that the novices have for the two languages. As in spontaneous speech, repetitions in interpreting function no differently from filled pauses as they delay the production of new lexical and syntactic elements and are thus labelled by Dörnyei (1995: 57-58 as "lexicalized pause fillers". False starts, however, are often followed by repair operations which involve more active control of the speaker's self-monitoring (Levelt 1983, 1989). Obviously, the advantage of interpreting into native Chinese offered more leeway for

the novices to do so. That said, frequent false starts and repetitions in both directions are symptomatic of their serious management problems of cognitive resources during the interpreting process which led to a number of unwanted speech errors.

Also, a significant difference is found between average occurrences of silent pauses in the two languages, with the English interpretations containing more frequent silences. This could arguably be attributable to the gap of language constituent availability between Chinese and English, i.e., production availability is higher in native language than in acquired language (Gile 2009: 237). In reality, while the issue of linguistic knowledge availability could haunt unbalanced bilinguals of varying proficiencies, its negative effects on fluency can be minimized by maneuvering silent pauses more strategically, as evidenced in the following discussion of the experts' performances in Section 4.3. Further, a significant strong negative correlation between the average frequencies of silent pauses and filled pauses in English implies an inverse association between the two. In other words, the novices tend to use one more frequently when they use the other less frequently. Interestingly, Mead (2000) also reports on a similarly strong correlation between average times of silent pauses and filled pauses in English (Pearson correlation coefficient = -0.633, $p = 0.05$), yet no significant difference is detected on such a dimension in the present study (Pearson correlation coefficient =-0.187, $p = .505$). Subsequent replication studies involving different language pairs and larger samples are absolutely necessary to gain a more in-depth look at the interplay of pauses and beyond.

4.3 Average pause durations per minute

It is no surprise to identify consistency between average pause durations and average pause frequencies in terms of their association with directionality, i.e., the more frequently the novices paused on average, the longer their pause durations would be. And yet, statistical results in the present study seem to contradict the relevant findings in Mead (2000). Specifically, while a significant effect of directionality is identified on total pause frequency, in the present study it is silent pauses in lieu of filled pauses that are found to be significantly longer in non-native language than in native language, i.e., English and Chinese respectively. Causes at the root of such a discrepancy could be many, yet language-pair specific differences might be a major contributing factor. This is particularly salient in the sense that average frequencies of filled pauses in English in both studies show a small difference (12.63 in Mead (2000) and 10.83 in the present study), whereas those in Chinese and Italian are noticeably wider in gap (7.17 in Mead (2000) and 10.332 in the present study). Also, according to Gile (2009: 197), similarity or lack thereof between languages in lexical, syntactic and informational terms is a strong determinant of word retrieval and sentence planning efficiency. It can thus be inferred that working in a cognate language pair with shared historical roots (e.g., Italian and English) poses less processing constraints than switching between a non-cognate one (e.g., Chinese and English). Again, this partially explains the phenomenon that average frequencies of individual types of pause and of total pauses in the present study are generally higher than those in Mead (2000) in both directions, with filled pause frequencies in English being the only exception.

4.4 Novice-expert differences in the production of non-fluencies

In addition to the impacts of directionality on the production of non-fluencies, juxtaposing the experts' behaviours with those of the novices provides an interesting point of reference in examining the role of expertise in fluency strategies. Unlike SI, in which overlap between listening and speaking can lead to increased risk of production crisis, speech production in CI is self-paced and does not impose high pressure on the interpreter (Gile 2009: 184). Nevertheless, our preliminary findings show in a way that the novices are more susceptible to casual breakdowns of speech flow than the experts. In comparison, the experts showed much greater reliance on silent pauses while resorting to few audible features that could hamper their delivery fluency; the novices, though on the whole paused as frequently, often fell into the pits of vocalized hesitations or corrections, rendering their interpretations less fluent. This demonstrates that the novices are yet to become more skilful in controlling their output in such a way, as Goffman (1981: 172) suggests, that hides efforts of reasoning and formulation backstage. Tactics as such include, among others, the use of silent pauses in coincidence with boundaries of meaningful units (Deese 1980; Setton 1999: 50). This approach can be particularly contributory to fluency enhancement in interpreting, as exemplified in pausing strategies adopted by the expert (E2) in contrast to the novice (N14) when interpreting the same segment as follows.

ST:正像刚才这位记者先生所讲的，当今世界，人类面临着许多全球性的挑战。我还要强调的是，任何一个国家都难以在这些挑战面前独善其身，也都无法独自地来加以应对。(Gloss: Just as the journalist said, in the world today people face many global challenges. I also want to stress that no country is free from these challenges and is able to cope with them relying on their own power.)

E2: As the journalist who raised that question said [SP 0.616], that in today's world mankind faces [SP 0.412] more and more global challenges. [SP 0.632] And I would like to stress here [SP 0.740] that [SP 0.394] no country [SP 0.694] can remain unscathed in face [SP 0.328] of so many global challenges. [SP 0.636] And no country [SP 0.453] can single-handedly [SP 0.550] tackle global challenges.

N14: As the [SP 0.324] journalist [SP 0.271] mentioned just now [SP 0.408] today the world [SP 0.623] and the people [SP 0.405] are facing [SP 0.301] different kind of international issues. [SP 0.835] and now I would like to emphasize that [SP 0.550] any country [SP 0.297] is [SP 0.777] [FST] will find it very difficult to solve problems by themselves. And it is impossible for them [SP 0.726] to solve them in an [SP 0.314] appropriate way [SP 0.290] by themselves [SP 0.398] as well.

The above example suggests that an appropriate number of silent pauses is essential to maintaining speech fluency in interpreting. As the task of interpreting poses similar, if not the same, requirements of cognitive processing on the novices and the experts respectively, the need for them to stop speaking for reasons such as breathing and lexical retrieval is realistically inevitable. The difference is, the experts have acquired and honed their skill of "smart pausing" in their day in and day out real-life interpreting practice, but the novices were short on awareness of the functional use of silent pauses in the planning and production of target speech. Of course, the less effective control of pauses by the novices is necessarily associated with their lan-

guage competences (particularly foreign language given their status as unbalanced bilinguals) and skill proficiency such as the efficient use of note-taking and memory. However, while the development of such linguistic and extralinguistic knowledge involves long-term exercises and drills, heightened attention to the role of silent pauses in improving target language fluency is believed to be helpful to the progression of essential interpreting skill sets on a personal level.

5. Conclusions

The present research attempted to explore the role of directionality in novices' handling of non-fluencies in Chinese/English CI. Our findings confirm plausible effects of directionality on the novices' production of non-fluencies and provide support to Mead's (2000) hypothesis that interpreting into native language tends to be more fluent than into non-native language. Nevertheless, results concerning pause behaviour in this study also show some inconsistencies with Mead (2000), inter alia, silent pauses rather than filled pauses are identified to be significantly longer in non-native language than in native language. It is believed that possible language-pair specific differences in comprehension and production may have played a part in forming such distinct patterns.

Also, the inclusion of the expert data provides a few insights, though fairly limited, into the ways production difficulties are managed as a result of different levels of expertise. The experts' efforts in carefully keeping production difficulties backstage are assumed to have contributed to the rare occurrence of audible disfluent features such as repetitions and false starts in their output. Indeed, tactical use of silent pauses and effective suppression of salient speech faults are perhaps what distinguishes experts from novices in terms of fluency strategies. While many factors could be operative in achieving fluency, increased awareness about the significance of silent pauses to smooth delivery is apparently essential to the development of interpreting expertise. Therefore, it is recommended that trainees receive guidance on this aspect throughout their CI training, particularly during the initial phases.

In conclusion, findings in the present study are largely preliminary and further research involving more balanced and larger sample sizes, as well as different language pairs, is necessary for validating or modifying the current conclusions. Also, conducting retrospective interviews, in order to gain greater insight into the probable reasons or motivations behind the occurrence of various non-fluencies, is expected to help detect specific problem triggers on an individual basis and devise pertinent solutions to improve quality of interpreting.

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L'utilisation de la marge en interprétation consécutive : une étude expérimentale

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Abstract

The aim of this paper is to investigate the use of margins in consecutive interpreting. After exploring the relevant scientific literature, a list of elements that the interpreter is advised to insert in the margins – such as logical connectors, indication of time and place – was drafted. On the basis of the initial hypothesis that interpreters using margins are more likely to correctly report such target elements in their delivery, an experiment was carried out. The same text in Italian was interpreted into their B-language by two groups of five interpreting students each: group 1 used margins, whereas group 2 did not. When taking into account each category of target elements, group 2 sometimes performed equally as well (3 out of 8 categories) or even better (1 out of 8 categories) than group 1. On average, however, the group using margins correctly included more target elements in the delivery (65,5 % vs 48,2 %), thus confirming the initial hypothesis.

Keywords

Interprétation, consécutive, prise de notes, marge, liens logiques.

Introduction

Cet article est un extrait du mémoire de master "L'utilisation de la marge en interprétation consécutive : une étude expérimentale", soutenu en 2023 auprès de l'Université de Trieste. En interprétation consécutive (IC), la marge est l'espace sur le bloc de prise de notes compris entre le côté gauche du bloc de consécutive et une ligne tracée à deux/trois centimètres de ce dernier. Cet outil n'est pas utilisé par l'ensemble des interprètes. De plus, l'utilisation de la marge peut varier grandement en fonction du style de prise de notes de chaque interprète. L'hypothèse à la base de ce travail est que l'utilisation de la marge peut permettre de rendre plus correctement certains éléments du discours. Par ailleurs, force est de constater que l'utilisation de la marge est une technique que les étudiants doivent apprendre par la pratique. La marge est en effet un élément supplémentaire à gérer pendant la prise de notes et c'est pourquoi elle pourrait avoir un impact négatif sur la prestation de l'étudiant-interprète, notamment lorsqu'il ne maîtrise pas encore parfaitement la technique de la prise de notes.

Cette étude expérimentale se propose d'analyser d'une part la prise de notes avec une marge d'un groupe d'étudiants, et à la comparer ensuite avec la prise de notes sans marge d'un autre groupe. Selon Andres (2002 : 140), les interprètes qui n'ont pas de marge ont la tendance à placer sur le bord gauche de leur bloc de notes certains types d'éléments. Ils utiliseraient alors une marge imaginaire.

1. La marge

La marge a la fonction de séparer clairement les éléments qui y sont contenus du reste du bloc de notes. En littérature, Van Hoof est le premier à souligner l'importance de consacrer une certaine partie de la feuille à la marge (1962 : 73), même s'il ne parle pas de marge. Matyssek, quant à lui, parle d'une marge proprement dite (1989 : 76), en soulignant l'importance que celle-ci a pour la prise de notes. Il conseille d'utiliser la marge notamment pour indiquer les liens logiques et le sujet de l'idée exprimée. Sergio Allioni (1998 : 126) décrit largement l'utilisation de la marge et y décèle trois caractéristiques principales :

- La marge montre très clairement l'acheminement des idées présentes sur le bloc de consécutive ;
- Comme les éléments contenus dans la marge ont un impact sur la bonne élaboration des éléments hors de la marge, il est nécessaire de bien noter les éléments présents dans la marge. L'élaboration de ces éléments est fondamentale pour bien organiser les idées principales ;
- Comme il est possible de noter dans la marge plus d'un élément pour chaque phrase, il peut être utile de noter l'élément de la marge à la même hauteur que l'élément auquel il fait référence.

Allioni propose la liste suivante d'éléments qui sont censés être placés dans la marge : liens logiques, indications de temps et de lieu, fonction de la personne qui parle, vocatifs, référence au sujet de l'idée, verbes d'opinions. Ces derniers sont également conseillés par Valeria Darò (1999 : 296) laquelle affirme que la marge est utile pour noter les liens logiques, les indications de temps et de lieu et les phrases interroga-

tives. Andres Dörte y fait rentrer les liens logiques, les indicateurs du sujet de l'idée, les phrases à thèmes et les dates (2002 : 140). Enfin, Andrew Gillies élabore une liste d'éléments qui comprennent liens logiques, digressions, verbes d'opinions et phrases interrogatives. Selon l'auteur la marge peut être utilisée pour tout élément considéré comme nécessaire par l'interprète (2017 : 137).

1.1 Les liens logiques

Les liens logiques assurent la cohésion entre les différents concepts qui composent un discours. Ils sont d'ailleurs mentionnés par tous les auteurs qui traitent de la marge. En littérature, ces éléments prennent diverses appellations, telles que "liens logiques", "liens syntactique-conceptuels", "éléments de cohésion". Pour ce travail, le terme "lien logique" est utilisé pour désigner la macrocatégorie de ces éléments, qui s'organise en trois sous-catégories : liens syntactique-conceptuels, transcription des relations entre propositions et énumération explicite des parties du discours.

Falbo, qui part de la grammaire traditionnelle en y apportant les modifications nécessaires à la prise de notes, propose une liste de "liens syntactique-conceptuels" (1999 : 273) où elle divise les types de dépendances entre les concepts qui composent un discours en coordination, subordination et corrélation. Le rôle des éléments de coordination peut varier pour différentes motivations. La coordination adversative est particulièrement importante pour la succession des concepts dans un discours parce qu'elle introduit une opposition entre un concept et le suivant. Pour l'interprète, l'omission de ce type de lien logique risque de provoquer une véritable erreur de sens. Il est donc nécessaire de noter ces liens logiques dès qu'ils sont entendus. En introduisant un choix entre deux éléments, la coordination disjonctive revêt également une importance considérable pour la structuration du discours. Il est par conséquent essentiel de noter ce type d'élément dès qu'il est entendu. Dans la catégorie de la subordination, les phrases causales, finales, consécutives, temporelles, comparatives, conditionnelles et concessives sont particulièrement importantes. Enfin, la corrélation est un type de lien entre les propositions qui peut relever à la fois de la coordination et de la subordination et qui comprend des opérateurs de conjonction tels que "si d'une part ... d'autre part", "ainsi que", "dans la mesure où".

Allioni (1998 : 130) appelle "éléments de cohésion" les éléments qui assurent la cohésion des notes et qui mettent en évidence les relations logiques et sémantiques de disjonction, de conjonction, d'opposition et de subordination. L'auteur précise également que les transcriptions des relations entre des propositions telles que "en guise d'introduction/conclusion" et l'énumération explicite des parties du discours jouent un rôle comparable aux liens logiques (*Ibid*: 131). Les orateurs décident souvent de numéroter les parties de leur discours, bien que parfois, après avoir atteint le troisième ou le quatrième point, ils perdent le compte (Gillies 2017 : 138). Pour l'interprète, il est important de suivre cette énumération parce qu'elle balise le discours avec précision. Des exemples de cette catégorie sont "en premier/deuxième/troisième lieu", "tout d'abord", "numéro un/deux/trois... ". Il se peut que l'orateur commence ce type d'énumération par une phrase telle que "aujourd'hui, nous allons parler de cinq problèmes". Si l'interprète craint d'avoir oublié un point ou s'il a des doutes sur la liste

de ces “problèmes”, il est préférable qu’il généralise en traduisant, par exemple, “aujourd’hui, nous allons parler des problèmes suivants”. Le cas inverse peut également se produire. L’orateur annonce cinq points, mais il en énumère ensuite moins ou plus. Dans ce cas, l’interprète doit être en mesure de corriger cette incohérence dans son interprétation.

1.2 Catégories de points-cibles présentes dans la marge

À partir des études concernant la marge, j’ai élaboré la liste suivante de points-cibles qui sont censés s’y trouver.

Liens logiques :

- La pandémie est désormais derrière nous. *Toutefois*, l’économie a du mal à reprendre le chemin de la croissance.

Indications du thème de l’idée exprimée :

- Je vous remercie d’être aussi nombreux. *Aujourd’hui il sera question de la situation écologique au Mali*. Il s’agit d’un thème qui me tient particulièrement à chœur parce que j’ai longtemps travaillé dans ce pays.

Phrases à thème :

- *Les experts nous disent qu’*il faut accélérer le pas dans la lutte contre les changements climatiques. Il est fondamental que chacun apporte sa pierre à l’édifice.

Fonction de la personne qui parle :

- *En tant que Ministre de l’Économie* il relève de mes compétences de vous décrire les perspectives économiques pour l’année prochaine.

Compléments de temps :

- L’Europe a traversé une période très difficile. Tout d’abord, la crise due à la Covid19 a bouleversé nos vies. Par la suite, le déclenchement de la guerre en Ukraine, *en février 2022*, a apporté un autre coup dur à notre maison européenne.

Compléments de lieu :

- Nous avons affirmé à Paris la nécessité d’endiguer l’augmentation de la température terrestre en dessous de 2 degrés, voire 1,5 degré.

Verbes d’opinion :

- Le gouvernement *estime* qu’il est nécessaire de prendre des mesures plus strictes pour faire face à la nouvelle vague de Covid19.

Phrases interrogatives :

- J’ai une question à vous poser. À votre avis, en Italie combien de personnes perdent leur vie chaque année à cause de la pollution de l’air ? La réponse à cette question pourrait vous surprendre.

Digressions :

- Il est extraordinaire de pouvoir prendre la parole dans un contexte aussi merveilleux que la ville de Padoue. *D’ailleurs, ici j’ai entamé mon parcours d’études*. Aujourd’hui je suis avec vous pour vous décrire les perspectives concernant le développement durable du nord de l’Italie.

Émotions de l’orateur :

- *C’est avec grand regret* que je dois vous annoncer que le Président ne pourra pas être avec nous aujourd’hui à cause d’un empêchement soudain.

Vocatifs :

- Mesdames et messieurs, je suis ravi de pouvoir prendre la parole devant un public aussi nombreux.

Emphase :

- La crise climatique est la crise la plus urgente car elle alimente toutes les autres crises. *Il est impératif de faire mieux que par le passé*. C'est crucial si nous voulons atteindre les objectifs que nous nous sommes fixés.

2. Étude expérimentale : méthodologie

L'objectif de cette étude est d'évaluer si l'utilisation de la marge peut permettre de rendre plus correctement certains éléments du discours censés être pris en note dans la marge. J'ai vérifié si les catégories d'éléments décrites en littérature correspondent effectivement aux éléments que les étudiants en interprétation prennent en notes dans la marge. Nous analyserons ensuite la façon dont ceux qui n'utilisent pas de marge gèrent les éléments-cibles en la comparant avec l'usage qu'en font ceux qui utilisent ce moyen.

2.1 Présentation des groupes

L'étude expérimentale qui va être décrite s'appuie sur la participation de 10 étudiants en interprétation qui ont eu leurs examens en interprétation consécutive de deuxième année de master. Ces 10 étudiants ont comme langue B soit l'allemand soit le français et comme langue A l'italien. Ils proviennent des universités de Trieste, Forlì (Bologne) et Heidelberg. Ils ont été partagés en deux groupes : le groupe 1 se compose de (A), (B), (C), (D), (E) qui utilisent la marge, le groupe 2 est formé par (F), (G), (H), (I), (L) qui ne font pas usage de la marge.

Groupe 1	Groupe 2
Étudiant A – langue B allemand	Étudiant F – langue B français
Étudiant B – langue B français	Étudiant G – langue B allemand
Étudiant C – langue B allemand	Étudiant H – langue B allemand
Étudiant D – langue B allemand	Étudiant I – langue B français
Étudiant E - langue B français	Étudiant L - langue B français

Tableau 1. Groupe 1 et Groupe 2

2.2 Discours de départ et points-cibles

Le discours de départ est en langue italienne. Il a été prononcé le 31 mars 2016 par le ministre italien de l'Environnement de l'époque, Gian Luca Galletti qui l'a tenu lors de l'ouverture de la première consultation pour la préparation de la Nouvelle Stratégie

Nationale de Développement Durable au ministère de l'Environnement. Le texte est tiré du site web "www.asvis.it" de l'Alliance pour le Développement Durable. Ce discours remplit les critères d'un discours public. L'introduction comprend des salutations initiales, une référence au lieu et à l'événement. Dans la partie centrale, l'orateur souligne l'importance de la Stratégie Nationale de Développement Durable pour un nouveau modèle entièrement durable. Enfin, le discours comprend une conclusion et des remerciements finaux. Le ministre conclut en affirmant la nécessité de planifier et de construire le développement durable dans la durée. Il remercie également les membres de l'Alliance pour le Développement Durable de leur travail. En outre, l'orateur passe sans cesse du développement durable à la Stratégie de Développement Durable, ce qui donne néanmoins une certaine vivacité au discours et assure l'enchainement des idées présentées. Le discours original, tout comme la version adaptée pour cette étude, sont divisés en paragraphes qui se concentrent sur l'un des deux thèmes. Le sujet du discours – le thème du développement durable – étant très actuel, il est souvent abordé dans les cours universitaires en interprétation de conférence. En outre, ce discours ne contient aucune difficulté terminologique. Pour ces raisons, l'étudiant peut l'interpréter même s'il ne s'est pas préparé au préalable. Au niveau syntaxique, la longueur des phrases qui entretiennent une relation de parataxe peut engendrer des difficultés dans certaines parties du discours, comme dans le suivant cas :

l'adozione dell'Agenda 2030 delle Nazioni Unite sullo Sviluppo Sostenibile che con i suoi 17 obiettivi e 169 target copre una grande varietà di temi tra loro interconnessi e rappresenta l'occasione per rilanciare a livello nazionale lo sviluppo sostenibile come orientamento principale nella definizione delle politiche economiche, sociali ed ambientali.[1]

En outre, le discours est en partie informatif, caractéristique typique des textes préparés pour la lecture. Des termes appartenant à un registre assez soutenu sont également présents, tels que "annoverato", "rappresenta l'occasione", "affinché", "ha imperato", "la forchetta delle diseguaglianze", "operare", ce qui pourrait constituer un élément de difficulté dans la restitution, bien qu'il s'agisse d'un registre auquel les étudiants devraient être habitués. Pour faciliter la compréhension, les termes clés, dont la traduction peut être problématique, ont préalablement été fournis dans un petit glossaire. Le temps pour un examen consécutif étant d'environ 6 minutes, il a fallu réduire la durée du discours original à 6 minutes et 10 secondes. De plus, quelques changements ont été apportés à ce dernier afin d'y inclure certains points-cibles qui n'étaient pas présents. Ces changements n'ont eu aucun impact sur la logique et la cohérence de la version originale. Le discours de départ contient 22 éléments cibles qui relèvent de 8 sur 12 catégories d'éléments censés être présents. Chaque catégorie affiche au moins deux éléments pour vérifier si l'étudiant maitrise une technique pour laquelle il utilise la marge pour certains éléments. Dans le discours de départ les points-cibles suivants ont été décelés : 2 vocatifs, 2 phrases interrogatives, 2 verbes d'opinion, 2 émotions de l'orateur, 3 compléments de temps, 2 compléments de lieu, 2 phrases à thème, 7 liens logiques.

1 L'adoption de l'Agenda 2030 des Nations unies sur le développement durable, avec ses 17 objectifs et 169 cibles, couvre une grande variété de questions interconnectées et représente une opportunité de relancer au niveau national le développement durable comme ligne directrice principale dans la définition des politiques économiques, sociales et environnementales

2.3 Déroulement

Le texte est lu par une étudiante ayant l'italien comme langue A du Master en Interprétation de l'Université de Trieste. Le discours est prononcé en respectant les pauses entre les énoncés et en donnant au texte la prosodie de la langue parlé. La vitesse du discours de départ est de 109 mots par minute. Le discours a été enregistré avec MS Teams et une caméra vidéo haute définition IPEVO VZ-R avec microphone intégré.

Les participants ont effectué l'IC du discours de départ en distanciel. Les étudiants, indépendamment les uns des autres, ont effectué leurs restitutions depuis un lieu de leur choix réunissant les conditions nécessaires pour effectuer l'IC à distance, c'est-à-dire une pièce avec une connexion Internet stable et sans bruit ni distraction. Ils se sont connectés sur Microsoft Teams et ont reçu la vidéo du discours de départ et un briefing pour contextualiser le discours, qui prévoyait les informations suivantes : sujet du discours, nom de l'orateur, date et lieu du discours, public auquel s'adresse l'orateur. Un petit glossaire de 8 mots a été fourni aux étudiants qui disposaient de quelques minutes pour en assimiler le contenu. Ils ont ensuite écouté la vidéo du discours de départ en prenant des notes et ont réalisé la restitution, qui a été enregistrée avec OBS Studio. Chaque étudiant a fourni des photos de ses notes, qui ont servi de support à la phase d'analyse.

3. Résultats et analyse

Dans cette section nous analysons les résultats à l'aide de tableaux réunissant les données dont il est question. L'analyse est également accompagnée de photos de la prise de notes des participants à cette étude.

3.1 Résultats globaux

Dans le tableau suivant sont présentés les résultats globaux, sans distinction entre groupe qui utilise la marge et groupe qui ne l'utilise pas. En comparant le discours de départ et l'interprétation de chaque participant, les restitutions des dix participants, pour chaque point-cible, sont inscrites dans les catégories suivantes : restitution correcte, restitution partiellement incorrecte ou incomplète, fausse restitution, point-cible absent dans la restitution.

	restitution correcte	restitution partiellement incorrecte ou incomplète	fausse restitution	point-cible absent dans la restitution
point-cible 1	10	-	-	-
point-cible 2	6	2	1	1
point-cible 3	5	-	2	3
point-cible 4	4	-	-	6
point-cible 5	6	-	-	4
point-cible 6	7	-	2 (1)	1
point-cible 7	6	-	-	4
point-cible 8	5	-	-	5
point-cible 9	8	-	-	2
point-cible 10	6	3	-	1
point-cible 11	6	3	-	1
point-cible 12	-	5	-	5
point-cible 13	1	-	-	9
point-cible 14	10 (1)	-	-	-
point-cible 15	5 (1)	1	2	2
point-cible 16	4	1	-	5
point-cible 17	6	-	1	3
point-cible 18	5	-	-	5
point-cible 19	7	-	-	3
point-cible 20	4 (1)	1	- (1)	5
point-cible 21	8	-	-	2
point-cible 22	6	-	2 (1)	2

Tableau 2. Résultats concernant les points-cibles (entre parenthèses des points-cibles présents dans la restitution qui toutefois ne se trouvent pas dans la prise de notes)

3.2 Résultats individuels

Dans cette section, il est possible d'avoir une vision d'ensemble de la performance de chaque participant. À la différence de la section précédente réunissant les données pour chaque point-cible, cette partie présente la moyenne des restitutions complètes, incomplète, fausse ou absent pour chaque participant à l'étude.

	restitution correcte	restitution partiellement incorrect ou incomplète	fausse restitution	point-cible absent dans la restitution
A	14	1	2	5
B	11	3	2	6
C	18	1	1	2
D	14	1	1	6
E	13	1	2	6
F	11	2	2	7
G	9	-	-	13
H	9	1	2	10
I	8	2	1	11
L	16	1	1	4

Tableau 3. Résultats individuels

3.3 Les points-cibles

Le tableau 4 montre le nombre de points-cibles de chaque catégorie qui ont été notés dans la marge et/ou juste à côté. Les tableaux 4 et 5 montrent que les liens logiques sont la catégorie la plus présente dans la marge. L'ensemble des participant notent dans la marge plus de la moitié des liens logiques ou, plus rarement, juste à côté. De même, la totalité des participants, à la seule exception de (A), utilisent la marge pour les compléments de temps et les phrases à thème. Les vocatifs sont également, en moyenne, présents dans la marge. En revanche, la marge est en général moins utilisée pour les compléments de temps, les émotions de l'orateur, les phrases interrogatives et les verbes.

Comme la plupart des participants notent parfois des éléments juste à côté de la marge, j'ai jugé approprié d'inclure également des données sur le nombre d'éléments placés dans cette position.

	Liens logiques [7]	Compléments de lieu [2]	Compléments de temps [3]	Vocatifs [2]	Phrases interrogatives [2]	Émotions de l'orateur [2]	Phrases à thème [2]	Verbes d'opinion [2]
A	4 (2)	0	0	2	0	0	0	0
B	4 (3)	0	2	0	1	0	2	0
C	6	1	2 (1)	0 (2)	1	0	2	1 ½*
D	4 (2)	1	2 (1)	1	0	1	1	0
E	6	0	1 (1)	1	0 (1)	½*	½*+½*	0

Tableau 4. Points-cibles dans la marge (points-cibles immédiatement à côté de la marge)

*la première partie du point-cible est dans la marge tandis que la seconde est à droite de la ligne de la marge

Le tableau 5 rassemble des données concernant les éléments non-cibles dans la marge. Des liens logiques, des compléments de temps et de lieu non-cibles sont présents dans les marges des participants. En outre, (B) utilise la marge pour indiquer le thème de l'idée exprimée et pour des solutions improvisées telles que l'insertion de verbes. Dans ce texte, l'orateur ponctue son discours en alternant "Stratégie de développement durable" et "développement durable". Pour gérer cette alternance, la stratégie de (B) peut être efficace pour bien rendre ce passage constant. Cependant, la marge n'est pas toujours suffisante. En effet, bien que la note soit correcte et que (B) utilise la marge, (B) dit le mot "stratégie" à un endroit où il n'est pas présent dans le discours de départ. (E) insère également un verbe dans la marge et y indique, à une occasion, le thème de l'idée exprimée.

	Liens logiques	Compléments de lieu	Complément de temps	Vocatifs	Phrases interrogativess	Émotions de l'orateur	Verbes d'opinions	Indicateurs du sujet de l'idée	Autre
A	14	0	1	1	0	0	0	0	0
B	3	0	1	0	0	0	0	3	2
C	5	1	3	0	0	0	0	0	1
D	4	0	2	0	0	0	0	0	2
E	7	0	0	0	0	0	0	1	3

Tableau 5. Prise de notes dans la marge des éléments qui ne sont pas des points-cibles

A : "cari Amici dell'Allenza per lo Sviluppo Sostenibile", "per cui", "che", "come", "come", "in cui", "affinché", "che", "che", simbolo per "contemporaneamente", "e", "che", "come", "ma", "come", "perciò";

B : "oggi", "parlare di strategia di sviluppo sostenibile", "strategia di sviluppo sostenibile di cui si parla", "anche e soprattutto", "ma", "strategia di sviluppo sostenibile", "perciò";

C : "se", "oggi", "se", "non quando", "se", "in Italia", "ma", "continuamente", "perciò";

D : "oggi come mai", "se"; "oggi", "VS" per indicare un'opposizione, "per questo", "ma";

E : "=" per "che sono", "=" per "c'est", "no.sì" per "non più.. ma", "perché?", "=" per "c'est", "ma";

Autre :

B : “remember”, “confirm”;
C : “esempio”;

D : “17 obiettivi e target”, “secondo i target dell’accordo europeo” ha messo solo secondo nel margine;

E : “oui”, “avere”, “secondo” gli obiettivi dell’accordo europeo, “strategia di sviluppo sostenibile”.

3.4 La prise de notes du groupe 1

Dans la photo (B) montre qu’il n’y a pas de différence substantielle dans sa prise de notes entre la position à droite de la ligne de la marge et celle standard dans la marge. (B) place les liens logiques “en premier lieu” (1) et “en deuxième lieu” (2) dans la marge.

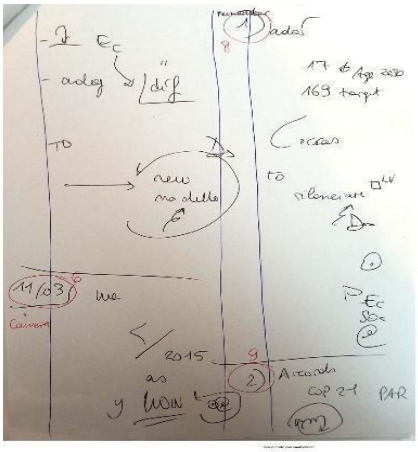

Photo 1. Prise de notes de (B)

Cependant, il gère de manière différente les deux liens logiques suivants. (B) place “enfin” (10) et “au-delà de ceux-ci” (11) à droite de la ligne de la marge. Cette position ne se confond pas avec la position S, notamment parce que, dans le cas de (B), les deux liens logiques sont davantage mis en valeur. En effet, (B) utilise une parenthèse ou écrit une note de dimension majeure.

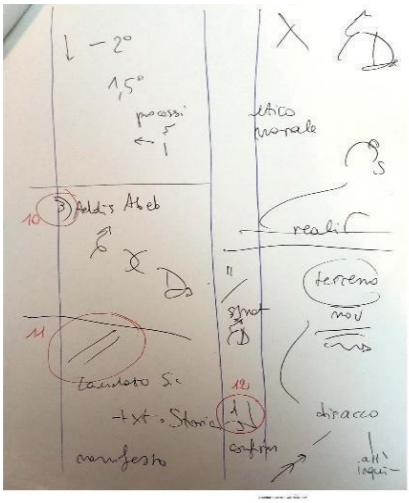

Photo 2. Prise de notes de (B)

Les notes de (D) présentent la même caractéristique. (D) écrit “d’abord” (8) à côté de la marge, tandis que “ensuite” (9) et “enfin” (10) sont placés dans la marge. (A) place également les points-cibles “d’abord”, “ensuite”, “qu’est-ce que cela signifie concrètement ?”, “ensuite” et “parce que” à côté de la marge, au-dessus de la position du sujet. De plus, (A) confirme que cette position n’est pas équivalente à la position du sujet.

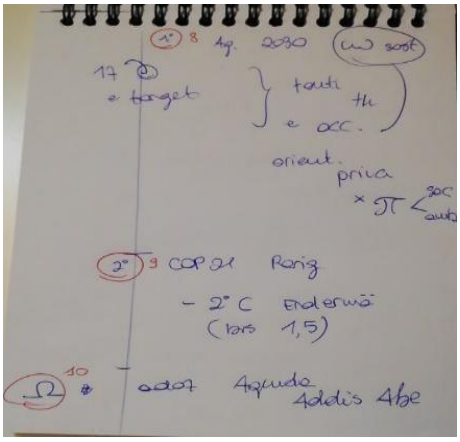

Photo 3. Prises de note de (D)

Dans la prise de notes de A, la conjonction “et” est immédiatement à côté de la marge, alors que le sujet du noyau suivant “nous” se trouve à quelques centimètres de celle-ci. Le sujet “nous” est en fait plus éloigné de la ligne de la marge que la conjonction “et” et se trouve donc en position de sujet.

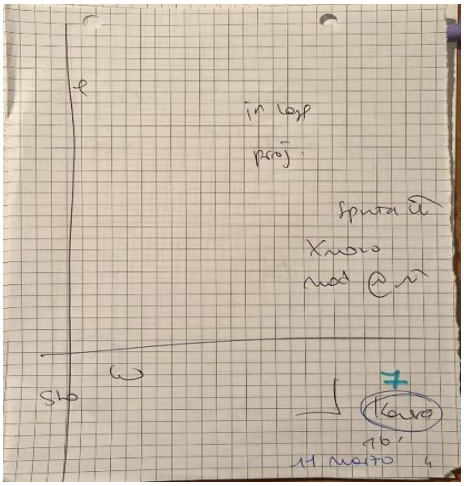

Photo 4. Prise de notes de (A)

Tous les participants du groupe 1, à l'exception de (A), placent également le premier complément de temps "à quelques jours de" à côté de la marge. Cependant, cette position a probablement une explication différente des cas précédents. En effet, l'ensemble du groupe utilise moins la marge dans la phase initiale du texte que dans la suite du discours. En moyenne, le groupe 1 note les vocatifs dans la marge. Toutefois, le premier vocatif "Chers amis de l'Alliance pour le développement durable" n'est pas placé dans la marge. (B), (C) et (D) le placent en position sujet et verbe. De plus, le premier point cible "je suis heureux de" ne se trouve que dans la marge de (E). Les deux points-cibles suivants, le complément de temps "dans quelques jours" et le complément de lieu "à la Chambre des députés", sont également placés en dehors de la marge. En revanche, au fur et à mesure que le texte se déroule, ces mêmes catégories d'éléments sont insérées de plus en plus dans la marge.

Les notes de (D) et (E) montre une autre caractéristique. Les deux n'insèrent qu'un seul élément à la fois dans la marge. Si dans la même idée il y a deux éléments censés être placés dans la marge, le deuxième est déplacé hors de celle-ci. Dans la photo suivante, la marge est déjà occupée par "oui". (E) décide de noter "parce que" (17) en dehors de la marge.

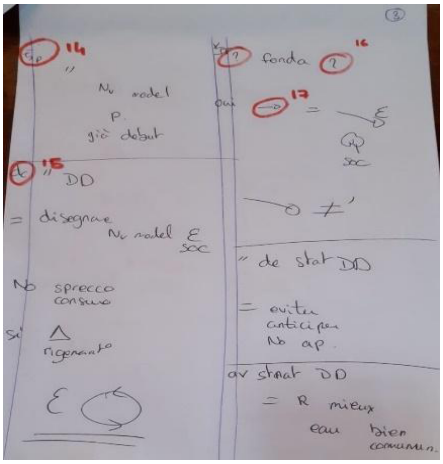

Photo 5. Prise de notes de (E)

En outre, on constate une différence essentielle en termes d'utilisation de la marge. (A) a placé 7 éléments dans la marge, (E) 12. Les autres participants l'utilisent plus largement, (D) y plaçant 18 éléments, (B) 23 et (C) 27. Par ailleurs, sur 53 points non-cibles placés dans la marge, seuls 8 n'entrent pas dans les 12 catégories identifiées préalablement.

Après leur restitution, il a été également demandé aux participants du groupe 1 de noter les point-cibles qui n'était pas présents à l'intérieur de leurs notes. À quelques exceptions près, les choix des participants ont confirmé ce qu'ils avaient fait lors de la prise de notes. (A) place un complément de temps, un complément de lieu et une expression de l'émotion de l'orateur en dehors de la marge. Cela montre que (A) tend à moins utiliser la marge par rapport aux autres participants. À l'exception de (A), l'ensemble des participants du groupe 1 placent les liens logiques et les compléments de temps dans la marge. Les vocatifs sont également placés dans la marge. La gestion des phrases interrogatives varie selon le style de l'interprète. Les participants (B) et (D) utilisent la marge pour noter cette catégorie d'éléments, tandis que (E) ne l'utilise pas. (A) et (E) confirment la tendance à ne pas utiliser la marge pour les émotions de l'orateur, tandis que (C) insère ce type d'éléments dans la marge, ce qui confirme une utilisation plus large de cet outil que les autres participants. En ce qui concerne les verbes d'opinion, (D) les note en dehors de la marge, tandis que (E) place le verbe d'opinion non noté dans la marge. Les données pour les phrases à thème ne sont pas suffisantes parce qu'il n'y a qu'un seul cas, dans lequel (D) note une phrase à thème non rendue en dehors de la marge.

3.5 La prises de notes du groupe 2

Dans la plupart des cas, les participants du groupe 2, sans marge, consacrent aux points-cibles, aux liens logiques en particulier, l'espace en haut à gauche, au début de chaque idée. À chaque fois que (F) insère des éléments dans cet espace, il le met en

exergue en traçant une ligne diagonale qui forme un triangle. Les autres étudiants-interprètes ne tracent pas ce genre de ligne. Néanmoins, il est évident qu'ils consacrent principalement l'espace en haut à gauche, au début de chaque idée, aux éléments cibles. S'il y a deux éléments censés être placés dans cette position, (G), (I) et (H) placent le deuxième élément à droite, formant ce que l'on peut définir comme une "marge horizontale", comme dans le cas des points-cibles 2 et 3 dans la photo suivante. D'autre part, bien qu'imaginaire, la marge verticale classique est également présente, au moins en partie. En effet, une fois occupée la position supérieure gauche, l'espace en dessous reste généralement vide. Cette caractéristique est particulièrement marquée dans la prise de notes de (L).

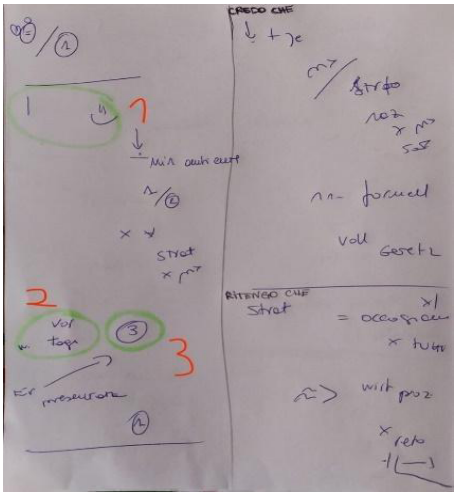

Photo 6. Prise de notes de (H)

3.6 Comparaison entre groupe 1 et groupe 2

Le groupe 1, qui utilise la marge, a rendu correctement 72 points-cibles, tandis que le groupe sans marge affiche un résultat de 53 points cibles. En ajoutant les points-cibles partiellement délivrés, la moyenne du groupe 1 s'élève à 79 tandis que celle du groupe 2 monte à 59. Le nombre moyen de points-cibles correctement rendus par le groupe avec marge est de 14,4 alors que le groupe sans marge se situe à 10,6. La différence est de 3,8 points. Si l'on ajoute les points-cibles partiellement rendus, cette différence augmente, quoique légèrement, à 4 points, le groupe avec marge ayant une moyenne de 15,8 points cibles, le groupe sans marge de 11,8.

Malgré ces différences, l'ensemble des participants a correctement rendu l'émotion de l'orateur "je suis content de", point-cible 1, et la phrase à thème "les experts calculent que", point-cible 14. En revanche, il y a un cas où dans presque la totalité des restitutions un point-cible est absent. En effet, (C) est le seul à dire dans son IC la phrase interrogative "qu'est-ce que ça veut dire concrètement ?", point-cible numéro 13.

	Liens syntactiques-conceptuels (10)	Transcriptions des relations entre les propositions (10)	Énumérations des parties du discours (15)	Total (35)
Groupe 1	6	8	13	27
Groupe 2	5	6	6	17

Tableau 6. Liens logiques

Dans le tableau ci-dessous sont présentées les données concernant les points-cibles bien rendus par les deux groupes d'autres catégories.

	Émotions de l'orateur (10)	Compléments de temps (15)	Compléments de lieu (10)	Verbes d'opinion (10)	Phrases interrogatives (10)	Phrases à thème (10)	Vocatifs (10)
Groupe 1	7	9	6	6	3	10	5
Groupe 2	7	9	6	4	1	7	6

Tableau 7. Autres catégories

Au sein de la catégorie des liens logiques, la différence la plus marquée entre les deux groupes atteint 10 points. De plus, la différence dans le nombre des "Énumérations des parties du discours" est particulièrement évidente, 7 points de plus pour ceux qui utilisent la marge.

Le groupe 1 affiche également de meilleurs résultats dans les catégories des verbes d'opinion, des phrases interrogatives et à thème, avec des différences de 2 à 3 points. Les vocatifs sont la seule catégorie pour laquelle le groupe 2 rapporte plus de points que le premier, mais avec une différence d'un point seulement. Enfin, des valeurs identiques sont enregistrées pour l'expression de l'émotion de l'orateur, les compléments de temps et de lieu.

Ces données montrent qu'en moyenne, dans les restitutions des deux groupes, il y a une différence en faveur de ceux qui utilisent la marge, ce qui corrobore l'hypothèse de la présente étude, à savoir que la marge permettrait de mieux rendre certains éléments. Cependant, en analysant les catégories cibles, force est de constater que cette hypothèse n'est pas entièrement corroborée, elle ne l'est que pour les liens logiques, les verbes d'opinion, les questions et les phrases à thème.

Conclusion

L'objectif de ce travail était d'étudier l'utilisation de la marge en interprétation consécutive, les éléments qui s'y trouvent et si l'utilisation de cet outil constitue un avantage pour ceux qui l'utilisent par rapport à ceux qui ne l'utilisent pas. L'hypothèse initiale a été confirmée. Le groupe 1, qui utilise la marge, a rendu correctement plus de points-cibles en moyenne que le groupe 2, qui n'utilise pas la marge. J'ai également consta-

té que la marge est principalement utilisée pour certaines des catégories décrites en littérature. Les liens logiques sont présents dans l'ensemble des marges du groupe 1. La plupart des participants placent également les compléments de temps, les phrases à thème et les vocatifs dans la marge. La marge est cependant moins utilisée pour les compléments de lieu, les phrases interrogatives, les verbes d'opinion et les émotions de l'orateur. De plus, l'utilisation de la marge est hétérogène et varie en fonction du style de prise de notes et des besoins de l'étudiant-interprète. Il a été également observé que même ceux qui n'utilisent pas la marge consacrent généralement le même espace aux éléments-cibles, à savoir l'espace en haut à gauche de chaque idée.

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Same interpretation – different gender. Do implicit theories determine the perception of simultaneous interpreting quality?

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Abstract

This empirical study analyses the impact of a psychological factor, namely implicit theories (IT), on the perception of the quality of a simultaneous interpretation (SI). The study aims to contribute to research into interpreting quality by analysing the interrelationship between recipients' IT and their evaluation of a SI. Research on IT has focused on the answer to questions such as what makes a success or failure in different domains. Building on a perspective initiated in 2019 in which the study of IT was adapted for interpreting quality research, this study presents a new audio manipulation method that enabled the researchers to change the female voice of a German-Spanish SI (Audio A) into a male voice (Audio B), in order to study the impact of gender on quality assessment in SI. The quality expectations of 63 users (laypersons) and 54 interpreter trainees (semi-experts) are also analysed. The results lend empirical support for the IT hypothesis regarding gender-related professionalism. In addition, in accordance with the IT hypothesis, being a layperson or semi-expert moderates the effect of the evaluation of different aspects measured in both audios on the perceived overall quality of the interpreter's work.

Keywords

Interpreting quality, implicit theories, gender, voice, expectations, evaluation, audio manipulation, moderation analysis.

Empirical research on quality in SI was initiated by Bühler in 1986 in answer to the quest for determining quality in interpreting (*e.g.* Shlesinger *et al*. 1997). Her methodology consisted of a questionnaire distributed to IACI (International Association of Conference Interpreters) members to determine their expectations regarding interpreting quality by responding to content and form-related quality criteria (*e.g.* terminology use versus intonation). This article presents an empirical study drawing on implicit theories (IT) from psychology considering this classic duality of content and form and also applying the two-pronged approach to analysing quality in interpreting. Initiated by Collados Aís (1998), this kind of analysis gave rise to what Pöchhacker (2013: 39) called "the Granada paradigm in experimental research on interpreting quality". In his words (*Ibid*), this survey-based approach "links up interpreting service users' generic expectations of interpreting quality with their judgments of a given interpreting performance," thus allowing a very clear "distinction between expectations and assessment".

This double perspective enables researchers to demonstrate that initial quality expectations of users and experts do not necessarily coincide with their evaluation of a given interpretation. What is more, approaching the analysis of interpreting quality evaluation by comparing the evaluation of a given interpretation by service users/clients and/or experts has revealed the important role that non-verbal factors play in the evaluation of interpretations (see Collados Aís *et al*. 2007).

Non-verbal factors may be very wide-ranging and thus also encompass psychological aspects. In this sense, theories in psychology can help us to gain further insight on quality evaluation. Precisely for this reason, the authors applied IT to interpreting quality research (see section 1.3.). The study of IT arose in relation to personality, intelligence and morality (Dweck *et al*. 1993). For decades, IT have sought to find answers to questions such as what leads to success or failure in different fields. IT impact on the goals, motivation, attributions, expectations and behaviour of participants in a certain context, and affect both the self-perception of a person and his or her perception of others.

With this in mind, and in order to explore the interrelationship between recipients' IT and their evaluation of a SI, the authors designed the present correlational study (see section 2).

The analysis considers the quality expectations of 63 laypersons (potential interpreting service users) and 54 interpreter trainees, as well as their evaluation of one of 2 SI (Audio A, original SI rendered by a woman or Audio B, a manipulated version of Audio A so as to seem to be rendered by a man). These data, obtained by means of a survey carried out in the University of Granada (Spain) (see section 3), are discussed in the final sections, with a view to ascertain why laypersons and semi-experts evaluate in the way they do and, last but not least, to identify the IT of potential interpreting service users and interpreter trainees with respect to the profession itself and to the profile of the interpreter.

1. Interpreting quality research

As mentioned in the introduction, Bühler (1986) launched the first quality survey on expectations in conference interpreting. In her questionnaire, she asked members of AIIC to rate the importance of various linguistic and extra-linguistic (pragmatic) criteria for an interpretation. And, as Zwischenberger (2010: 128) puts it, "her list of criteria became something like the backbone of empirical research into quality". The main aim of the present study is to determine which factors predict the quality of SI and which characteristics define the interpreter. Accordingly, we will focus on a review of those criteria that are indicators of quality, according to the many descriptive analyses of empirical studies (for a review, see *e.g*. Collados Aís *et al*. 2011).

A consistent finding in survey studies has been that respondents consider the quality of an interpretation to lie above all in the correctness of content criteria such as the following: *correct and complete transmission of the information of the original speech* (also called *faithfulness to the original speech*), *terminology* and *logical cohesion* (*e.g*. Collados Aís *et al*. 2011). At the same time, other criteria such as *voice*, *intonation* or *accent* are considered less important. Following the sociological definition of "expectations" as a preconceived idea based on personal beliefs about how an individual or group should behave and what is likely to take place in the future, it is understandable that laypersons as well as experts associate the most complete and correct reproduction possible with the quality of the interpreted discourse. Non-verbal or formal criteria have always been regarded as least important. Specifically, *voice* and *accent* tend to be relegated to the last positions, although with some differences between the groups of laypersons (Kurz *e.g*. 1993) and interpreting experts (Bühler 1986). The latter have attached more importance to voice than laypersons. Collados Aís (1998) was the first researcher to explore whether the expectations that an interpreting service receiver expressed *a priori* coincided with the evaluation s/he made after listening to a given interpretation. In her study, respondents (interpreters and users) were asked to evaluate one interpretation with errors of content but with a lively intonation, and another with no errors of content but with a monotonous intonation. The results led her to conclude that a formal aspect, i.e. a non-verbal criterion such as *intonation*, acquired far greater importance in the actual evaluation than the interpreters and users had indicated in their expectations.

Shortly afterwards, in 2000, Collados Aís formed the ECIS research group. In the course of diverse projects, ECIS followed the same dual methodology to investigate other formal criteria commonly included in quality research: *accent*, *diction*, *fluency*, *style* and *voice*. All these studies (Collados Aís *et al*. 2007) confirmed that the priority ranking of content and formal criteria changes when users actually evaluate a specific interpretation.

In this respect, the criterion *fluency* is particularly striking. In expectations, respondents almost always place it in the middle of the priority scale (cf. Collados Aís *et al*. 2007), yet its impact on evaluation is important (*e.g*. Pradas Macías 2003 or Rennert 2019). Pradas Macías (2003) conducted an extensive interdisciplinary review of the concept of fluency without finding a definition of its nature, while Chiaro and Nocella (2004) even stated that it is practically impossible to associate fluency clearly with either category, *i*.e. that of verbal or non-verbal criteria.

As indicated by Pradas Macías (2019), this fact suggests that fluency has a dual nature: while it is perceived through the occurrence of what may be considered representative elements of fluency, such as pauses, hesitations, *etc*. (*e.g*. Pradas Macías 2003), these elements seem at the same time to have a psychological effect on the listener, influencing his or her perception of the content.

In the light of such findings, researchers have increasingly turned to psychology to unravel what influences the evaluation of quality in SI.

A case in point is García Becerra (2012), who carried out a study in which diverse groups of respondents were asked to assess the same series of interpretations (from high to low quality) but presented in a different order (*Ibid.*). She drew specifically on the theory of the *priming effect* (when an individual's exposure to a certain stimulus subconsciously influences his or her response to a subsequent stimulus). The results showed that receivers alter their evaluation of a particular interpretation depending on which interpretation they have heard before.

1.1 The influence of gender on interpreting quality

As indicated by Du (2020), compared with the amount of work on gender in Translation Studies, very little research has been conducted to explore gender-related issues in interpreting. Moreover, this research perspective is relatively recent, arising in the 21st century.

Nevertheless, various approaches to the topic of gender in Interpreting Studies have been undertaken. Most of these have centred on gender-based *differences* in interpreting (*e.g*. Magnifico/Defrancq 2015; Russo 2016; Cámara Aguilera/Pradas Macías 2019; Xiaoshu *et al*. 2021), but there are also studies which take a historiographical perspective (*e.g*. Baer/Massardier-Kenney 2015; Defrancq *et al*. 2021). Other scholars have centred on quality and the associated expectations regarding the interpreter's role (Zwischenberger 2013) and, last but not least, on the incidence of gender on interpretation recipients (*e.g*. López Varela 2016; Christen y Gracia 2020).

We will briefly dwell on the research by Christen y Gracia (2020) because it deals in a similar way to this article with the impact of a male or female voice on the quality of a performance. Her focus lies specifically on the need for interpreters to be aware of the importance of vocal hygiene for health, timbre and vocal range. 63 subjects participated in her study evaluating the recorded performances of 4 interpreters: 2 novice interpreters (male and female) and 2 experienced interpreters (male and female). The sample of listeners was stratified by age group and gender. As Christen y Gracia (2020) points out, "the findings reveal the respondents' preference for male and novice interpreters. Female voices were judged more harshly, especially those of older interpreters".

1.2 IT in psychology and their application to interpreting quality research

The study of IT arose in relation to personality, intelligence and morality (Dweck *et al*. 1993). Encompassing elements of social psychology research such as personali-

ty attributes, IT refer to the ideas of collective groups regarding how a professional should act within his or her sphere of activity.

The IT approach has had and continues to have a great impact in different areas of psychology – not only in social psychology – from the initial publications, *e.g*. Dweck and Elliot (1983), to their extension of the model (Dweck *et al*. 1995) to include other facets such as stereotypes, cross-cultural differences and the origins of IT.

The origins of the approach go back to Kelly's (1955) studies on personal constructs or theories of non-experts – the ones we use in our daily lives – and how these affect perceptions of self and others. The approach has been applied to many research areas, including personality, intelligence, interpersonal and affective relationships, emotion, leadership, sports performance, creativity, moral character or ability (for a review, see Dweck 2012).

IT are basic assumptions that people have about themselves and the world. These beliefs guide a person's goals, either towards evaluating, judging and measuring an attribute when it is considered fixed, or towards developing the attribute or understanding its dynamics when it is considered malleable.

IT have also been studied with promising results in the field of translation and interpreting, as well as in language learning (Ryan/Mercer 2012; Enríquez Raído 2018; Chodkiewicz 2020). Research also provides insights into the impact of gender on IT, resulting in no (or small) gender differences in abstract conceptions, but larger differences between men and women when people perceive the phenomenon in real-life contexts (Glück *et al*. 2009).

Sánchez Santa-Bárbara and Pradas Macías (2019) included IT and theory about stereotypes in a study aiming to link up users' generic expectations with their judgments of a given interpreting performance. The aim was to establish if there is a difference between the beliefs and expectations of users with more or less experience of interpreting services. Following the logic of Roach (1978), users without experience are likely to categorise interpreters on the basis of exemplars (*e.g*. a specific interpreter), while more experienced users will resort to abstractions (more *elaborated* mental syntheses). Such processes of abstract categorization are characteristic of experts in a specific field of knowledge. This in turn led to the hypothesis that the IT of professional interpreters and users are likely to be different, as is also the case with trainee interpreters and potential users of professional services; and that these differences will depend on their degree of exposure to the field of knowledge.

In addition, the researchers added a new element to the theoretical framework, namely the gender stereotypes by which certain psychological and behavioural characteristics are assigned differently to men and women.

The most surprising result of this study was that the participants evaluated the interpretation differently depending on whether the interpreter was a man or woman, with a more favourable evaluation for the man. This finding encouraged us to explore the influence of the interpreters' gender in greater detail in the present study.

2. Methodology

2.1 Research question and hypotheses

IT enable subjects to identify characteristics associated with a certain domain (in this case, interpreters) and to develop expectations about how these professionals will act and behave. These IT are acquired through experience in a particular setting.

According to this approach, laypeople and practitioners may have different IT about interpreters' skills, because they have had different knowledge and expertise in relation to this profession. In line with this premise, the hypotheses are formulated as follows:

H1: To the extent that the interpreter's verbal and non-verbal behaviour matches the service users' expectations as well as other characteristics contained in their prototype, the interpreter's work will be perceived as highly effective.

H2: IT about the interpreting profession may have an associated gender profile. Depending on this association, the evaluation of an interpretation will be different depending on whether it is performed by a man or a woman.

2.2 Objectives

The descriptive objectives of this study are:

O1: To analyse what semi-experts (interpreter trainees) and laypersons expect from an interpreter and an interpretation, and to correlate their expectations with their perceptions of overall quality.

O2: To determine whether the evaluation of the quality of the interpreter's work differs depending on the gender of the interpreter and if so, which criteria are significantly affected.

O3: To analyse the evaluation rendered by semi-experts and by laypersons in contrast with their appreciation of quality expectations.

2.3 Participants

To achieve these objectives, a correlational cross-sectional study was carried out to identify the content of interpreter expectations and the evaluation of a given interpretation. 117 students of the University of Granada participated in the study, although the final sample is made up of 116, as one student did not answer the question regarding his/her gender. 54 subjects were from the Faculty of Translation and Interpreting and are considered semi-experts in the framework of this study (11 men and 43 women). The rest of the sample consists of 62 students from the Faculty of Political

Sciences and Sociology who are considered laypersons in this study (19 men and 43 women). The participants were recruited expressly on the basis of their differing levels of knowledge of the professional work of an interpreter. The criterion for selecting the group of semi-experts was that the interpreter trainees had already taken the core courses in interpreting of the Bachelor's Degree in Translation and Interpreting.

2.4 Material

For evaluation by the 2 groups, 2 audio recordings of a SI were prepared. The material was selected from the ECIS corpus (ECIS Research Group 2003) and consisted of the interpretation into Spanish of a speech delivered by a female German politician in a session of the European Parliament. The interpretation (Audio A), performed by a female interpreter, had 1,185 words, a duration of 568 seconds and a speed of 125.18 w/m. It was chosen because in a previous evaluation by experts it had achieved 4 points for the overall quality of the interpretation on a five-point Likert scale, this being the most positive evaluation by experts for a female interpretation in the corpus[1].

To achieve the greatest correspondence between the 2 recordings, the female voice was modified so that it sounded like that of a man (Audio B). This was done by using Audacity, the free audio editing program, and manipulating the option *Effect,* specifically *Change tone*[2], selecting a reduction of -19% in the pop-up window[3].

To ensure that recipients do indeed perceive Audio B as rendered by a man, the authors asked potential interpreting service users from their faculties to indicate whether they would use the female or male interpretation for research purposes. To do this, they played different segments of Audio A and Audio B, so that they would not be recognised as being identical. The potential users expressed no doubt as to which gender was associated with the voice in each version.

Nevertheless, for maximum assurance, after the survey the subjects were asked to indicate by a show of hands who had heard the version with the female voice and who had listened to the male version. The results coincided with the researchers' data on the distribution of the 2 audios.

Subjects voluntarily agreed to participate in the survey[4]. In a first step, the expectations questionnaire was distributed. After completing the questionnaire, participants were given receivers with headphones, one containing the recording of version A and

1 The audios of the ECIS Research Corpus were evaluated by interpreters as part of the research project *Evaluación de la calidad en Interpretación Simultánea: Parámetros de incidencia* funded by the Spanish Ministry of Science and Technology (ref. BFF2002-00579).

2 The main difference between the voice of a male and a female is the Fundamental Frequency (F0) (see García/Tapias Merino 2000).

3 We would like to express our special thanks to the laboratory technician at the Faculty of Translation and Interpreting, Juan Carlos Rodríguez García, for this technological achievement.

4 To test the method beforehand, on the 1st March 2022 a pilot study was carried out with 2 groups of SI students, one with English as their B language and the other with French, enrolled in the Degree programme in Translation and Interpreting at the University Pablo de Olavide (Seville, Spain). The aim of this pilot study was to confirm the suitability of the survey material and procedure.

the other of version B. Each version was randomly distributed to one half of the group. It was felt that subjects should receive the SI as is usual in conference rooms, *i.e*. with receivers and headphones, rather than in a laboratory, which would have added an element of artificiality. The researchers also avoided artificially editing the audio fragment, as this might have been perceived as an attempt to manipulate the audio. Instead, they explained that after 2 or 3 minutes they would give a signal to indicate that the participants should stop listening to the recording. The explanation was that this duration was sufficient to get an idea of the content and presentation of the performance.

After listening to the interpretations (A or B), the researchers distributed the evaluation questionnaire and asked participants to indicate on the first sheet the number of the receiver they had listened to. This way, the researchers could identify the questionnaires that evaluated audio A or audio B. Furthermore, both questionnaires (expectations and interpretations) could be matched with the 5 final numbers of each subject's mobile phone, which was a data required in both.

2.5 Survey on SI expectations and evaluation

As mentioned above, the survey included a questionnaire[5] about expectations and another one to evaluate the interpretation (Audio A or Audio B). The expectations survey was distributed at the start of the study and featured 13 aspects related to the extent to which interpreters are likely to be *x*…; together with 14 further skills and characteristics (see Appendix). The subjects indicated their answers on a seven-point Likert scale.

Subsequently, the participants listened to version A or B and then filled in the evaluation questionnaire. In the first part, they were asked to assess 13 aspects of the interpreter on a seven-point Likert scale ranging from negative to positive (see Table 1). The second set of questions covered 14 quality criteria related to the interpretation (see Table 2). The questionnaire included the following aspects as representative of 7 evaluation criteria regarding the interpreter and the interpretation: *profile*, *voice and appearance*, *form*, *fluency*, *time-lag*, *presentation style* and *perception* of the interpretation. The negative/positive extremes of each item were alternated to avoid the tendency to mark one side or the other automatically.

5 The expectations questionnaire was designed by the group of researchers in the framework of a broader project, QINV: http://qinv.ugr.es/index-en.htm. The list of criteria related to skills, characteristics and inherent qualities is based on the consolidated questionnaire design of ECIS (http://ecis.ugr.es/index-en.htm) and on methods commonly used in social psychology.

I found the interpreter (Profile)	- unconfident/confident - expressive/inexpressive - not very skilled at communicating the ideas effectively/highly skilled at communicating the ideas effectively - highly competent/not very competent - not very reliable/highly reliable - highly professional/not very professional - highly decisive/not very decisive
The interpreter (Voice and appearance)	- had an unpleasant voice/pleasant voice - acted calmly under stress/acted nervously under stress
The presence of the interpreter was (Appearance)	- scarcely noticeable/highly noticeable
The interpreter's intonation was (Form)	-monotonous/lively
The interpreter's articulation was (Form)	- not very clear/very clear
The interpreter's pronunciation was (Form)	- native/non-native

Table 1. Aspects of the profile and professionality of the interpreter

The speed of the interpretation was (Form)	- slow/fast
The rhythm of the interpretation was (Form)	- not very fluent/very fluent - constant/interrupted
In the interpretation there were (Fluency)	- many pauses/few pauses - few hesitations/many hesitations - pauses at inappropriate moments/pauses only at appropriate moments - complete sentences/incomplete sentences
The duration of most of the pauses was (Time-lag)	- short/long
The register was (Presentation)	- highly appropriate to the situation/not very appropriate to the situation
I found the expression in the interpretation (Presentation)	- confusing/clear
I found the interpretation (Perception)	- difficult to understand/easy to understand - not very coherent/highly coherent - difficult to follow/easy to follow - not very faithful to the original speech/ highly faithful to the original speech

Table 2. Quality criteria related to the SI

Following the classification initiated by Bühler (1986), we distinguished between criteria related to the content of the interpretation (*e.g.* expression, clarity, adaptation to the user) and others related to the form, essentially fluency, intonation, voice and accent.

At the end of the questionnaire, participants were asked to mark the overall quality of the interpretation from 1 to 10.

2.6 Analysis procedure

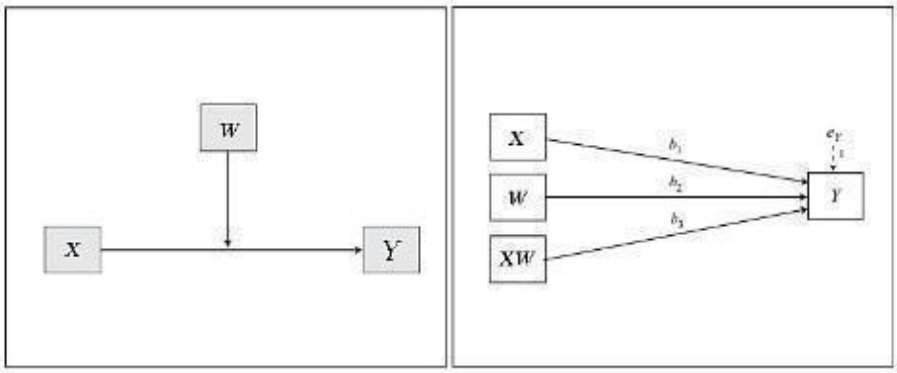
In order to ensure that the 2 groups did not differ in other variables that could affect the objectives, different mean comparison and contingency table analyses were performed.

To predict the value of the quality of interpretation from different explanatory variables, the authors used a procedure which allowed them to work with a reduced set of relevant variables. First, descriptive and bivariate analyses were carried out in order to test for similarities and differences between the 2 groups.

Secondly, a multiple linear regression analysis was carried out to predict the overall quality of the interpretation on the basis of the dimensions or factors taken from the recipients' evaluations. Next, a multiple linear regression analysis was performed using the "stepwise" procedure, so that all variables which did not meet the criterion of statistical significance were excluded.

In addition, an analysis of simple moderation with a moderating qualitative variable was run with the SPSS version of PROCESS (Model 1) to test whether the moderating variable (W = Status of the evaluator: Laypersons versus Semi-experts) moderates the impact of the effect of the independent variable (X = perception of the interpretation listened to) on the dependent variable (Y = perceived quality). In other words, PROCESS was used to carry out a multiple regression analysis to obtain 3 coefficients: $\beta 1$, which quantifies the principal effect of X on Y; $\beta 2$, which quantifies the principal effect of W on Y; and $\beta 3$, which quantifies the principal effect of the interaction between X and W on Y.

To fulfil the requirements of the statistical software PROCESS (see Figure 1), X (Evaluation) was measured as the median of the values given to all characteristics of the interpretation and was then transformed to obtain a measure as a dichotomous variable (with -0.5 codified as lower and 0.5 as higher). W (Status) is naturally dichotomous (Laypersons/Semi-experts) and Y (Overall Quality) was also dichotomized (with -0.5 codified as lower and 0.5 as higher). In order to dichotomize variables X and Y, the median of each variable was used to divide the scores between higher and lower.



Conceptual and statistical diagram for a simple moderation analysis
Source: Hayes (2013)

Figure 1: Statistical software PROCESS

3. Results

3.1 Results for expectations

The means analysis of the expectation responses yields some statistically significant results which allow us to draw some conclusions about differences in expectations according to gender and status group (laypersons and semi-experts).

The results (see Appendix 1) reflect that the semi-experts in general have higher expectations of the interpreters than the laypersons in the following items: [interpreters are likely to] 'be competent', 'be flexible', 'be resolute', 'be audacious', 'go unnoticed', 'adapt to the user', 'show confidence' and [the interpretation is] 'fluent', 'faithful to OS' and 'easy to understand'. The only item in which laypersons have higher expectations than the semi-experts is 'have a monotonous intonation'.

With regard to men and women, the scores are evenly distributed and there are no significant differences.

3.2 Results for evaluation

3.2.1 Evaluation of *profile*

Figure 2 shows the results of participants' evaluation depending on their gender or status. Statistically relevant values show that men (5.61) consider the female interpreter more skilled at communicating ideas effectively than women do (4.82) and that laypersons consider her less competent (3.90) than semi-experts do (2.96).

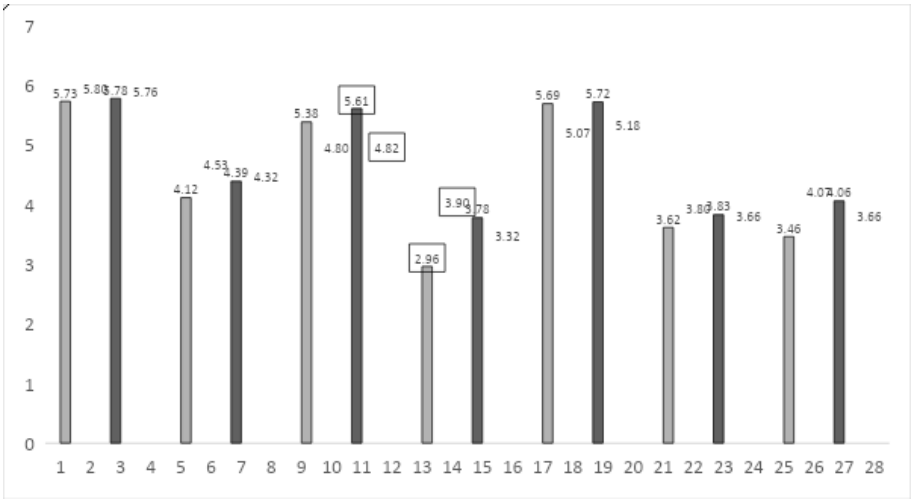


Figure 2: Evaluation of *profile* in the female interpreter's performance

In Figure 3 the most salient result is that men consider the male interpreter less confident (5.75) than women do (4.79) and that laypersons consider the male interpreter less competent (4.39) than semi-experts (3.39), although both status groups perceive the male interpreter as more competent than the female interpreter.

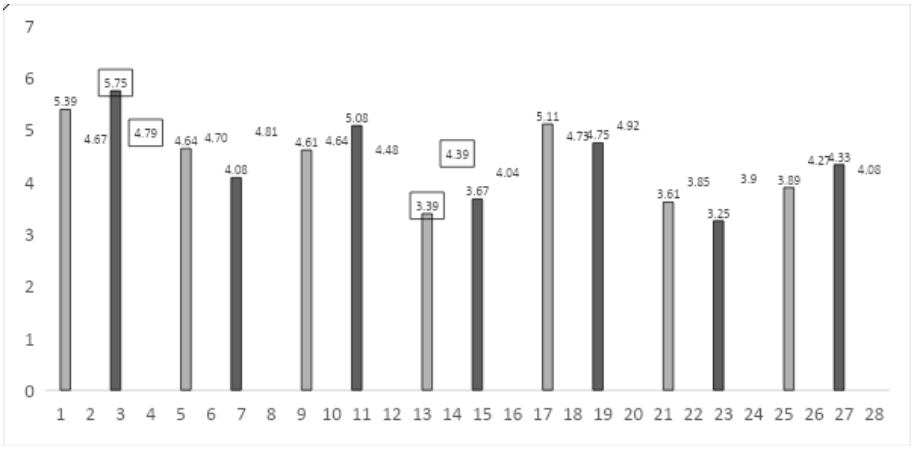


Figure 3: Evaluation of *profile* in the male's performance

3.2.2 Evaluation of *voice and appearance*

The most salient result in Figure 4 is that semi-experts evaluate the voice of the female interpreter as considerably more pleasant (5.65) than laypersons do (4.9).

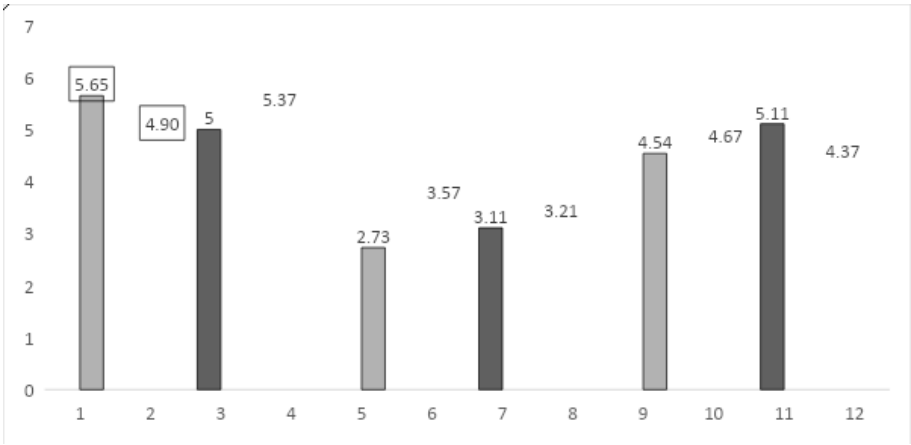


Figure 4: Evaluation of *voice and appearance* in the female interpreter's performance

In the case of the male interpreter, Figure 5 again shows that semi-experts clearly evaluate the voice more positively (5.71) than laypersons do (4.64). Moreover, while semi-experts provide a very similar evaluation of the female voice (5.65; see Figure 4) and of the male voice (5.71; see Figure 5), laypersons evaluate the male voice worse (4.64; see Figure 5) than the female voice (4.90; see Figure 4).

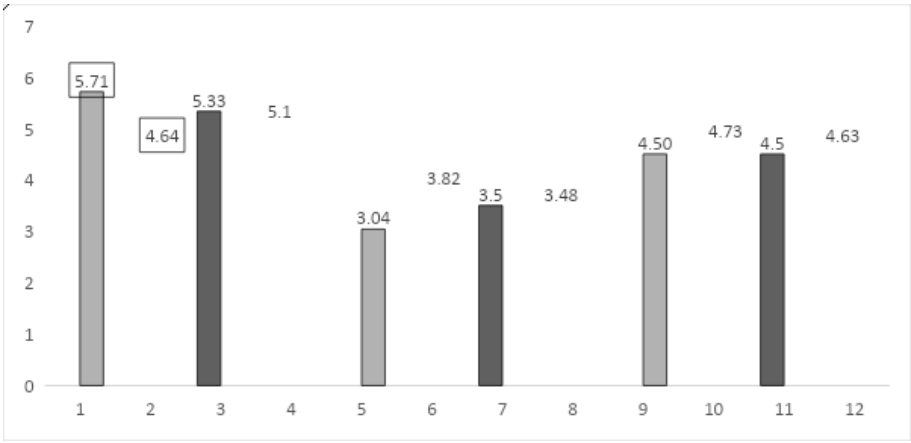


Figure 5: Evaluation of *voice and appearance* in the male interpreter's performance

3.2.3 Evaluation of *form*

The evaluation of non-verbal criteria included in the tag *form* (see Figure 6 and Figure 7) shows that semi-experts attribute nearly the maximum value of 7 to native accent in both interpretations (6.84 and 6.75). In the case of the female interpreter's output, semi-experts also consider the interpretation to be very clear (6.28).

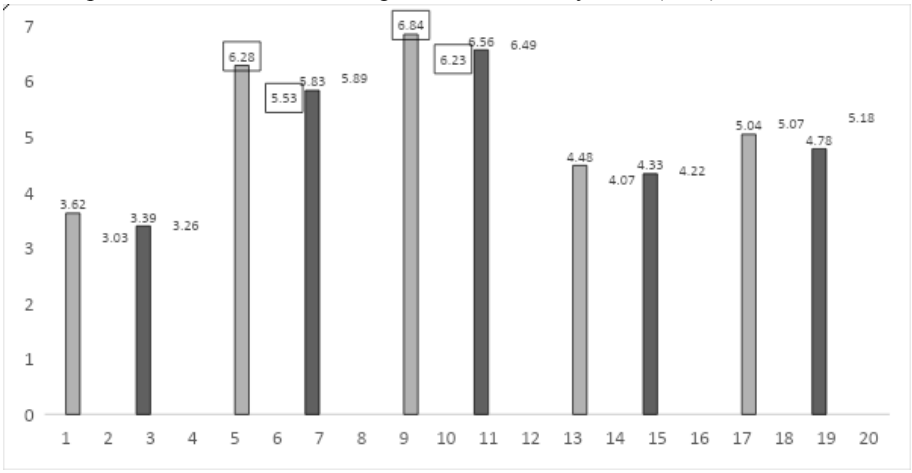


Figure 6: Evaluation of *form* in the female interpreter's performance

In the male interpreter's performance (see Figure 7), semi-experts consider the interpretation significantly more fluent than laypersons do (5.46 versus 4.36).

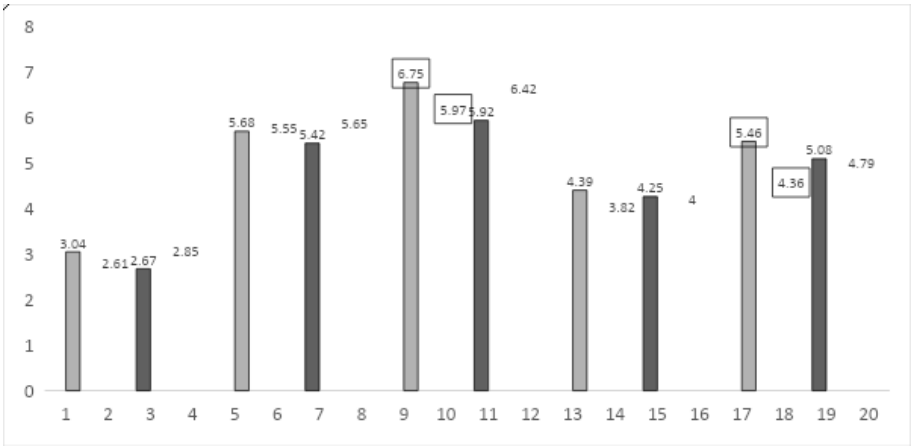


Figure 7: Evaluation of *form* in the male interpreter's performance

3.2.4 Evaluation of *fluency*

In Figures 8 and 9 no results with significant values were reached. Most evaluation values are around 5. The only remarkable aspect is that laypersons consider that there are many hesitations in both performances (values below 4).

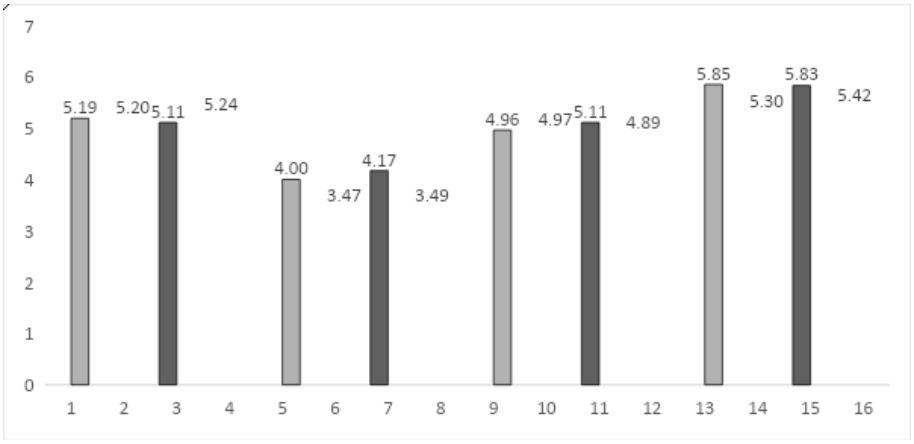


Figure 8: Evaluation of *fluency* in the female interpreter's performance

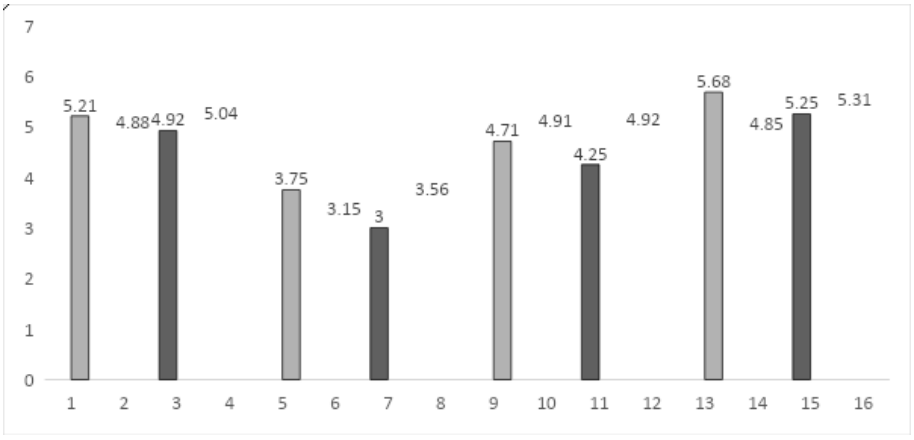


Figure 9: Evaluation of *fluency* in the male interpreter's performance

3.2.5 Evaluation of *time-lag*

Figures 10 and 11 show that there are significant differences in the evaluation by semi-experts and laypersons with regard to *time-lag*. Laypersons indicate exactly the same rating (3.27) for the female and male interpretation, and consider the pauses longer than semi-experts do (2.1 and 2.11).

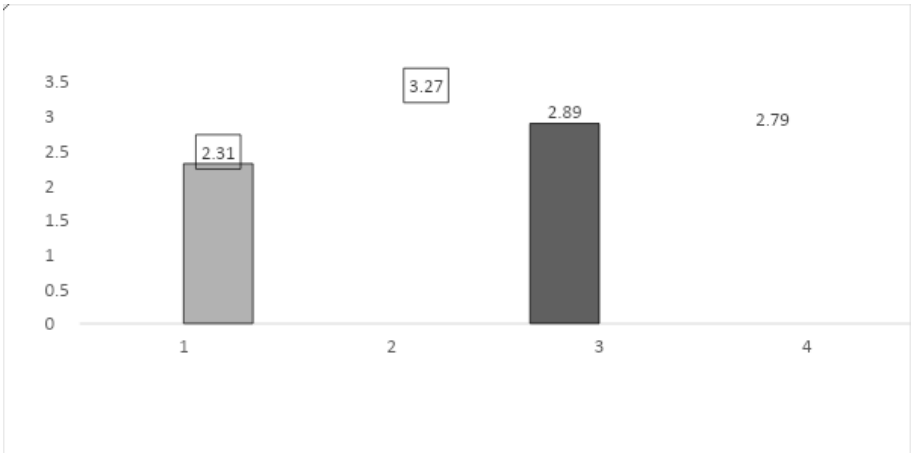


Figure 10: Evaluation of *time-lag* in the female interpreter's performance

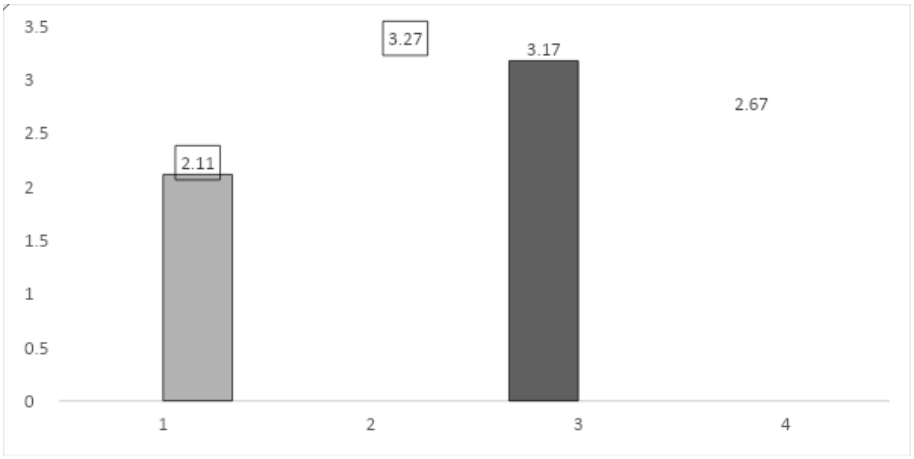


Figure 11: Evaluation of *time-lag* in the male interpreter's performance

3.2.6 Evaluation of *presentation*

Figures 12 and 13 show no significant differences for *presentation*.

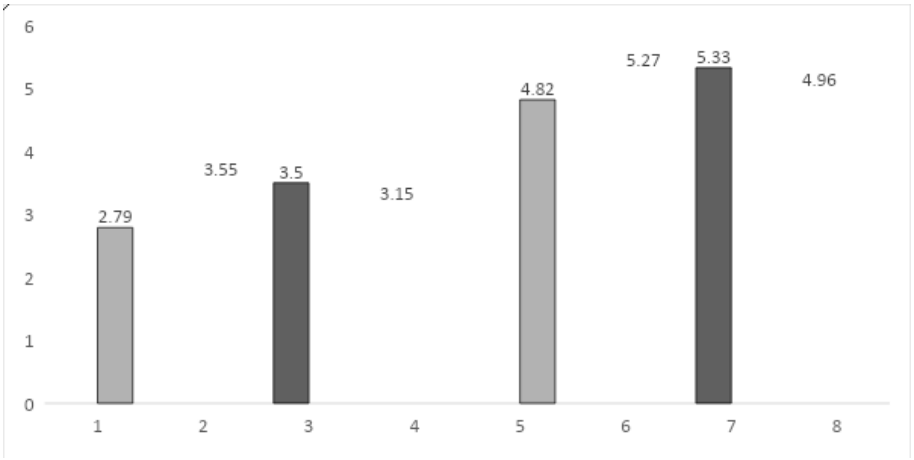


Figure 12: Evaluation of *presentation* in the female interpreter's performance

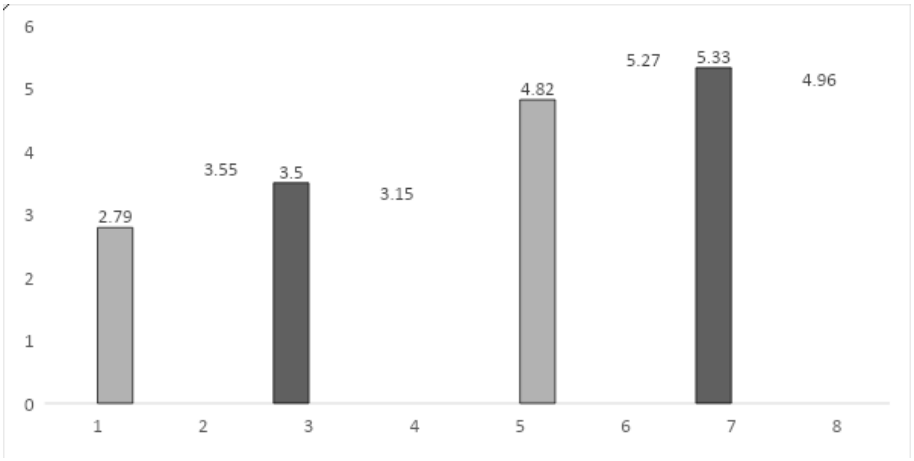


Figure 13: Evaluation of *presentation* in the male interpreter's performance

3.2.7 Evaluation of *perception*

Figure 14 shows a significant result in the evaluation of *perception* of the female interpreter's performance for *overall quality*. While semi-experts rate it 8.09, laypersons rate it 7.07.

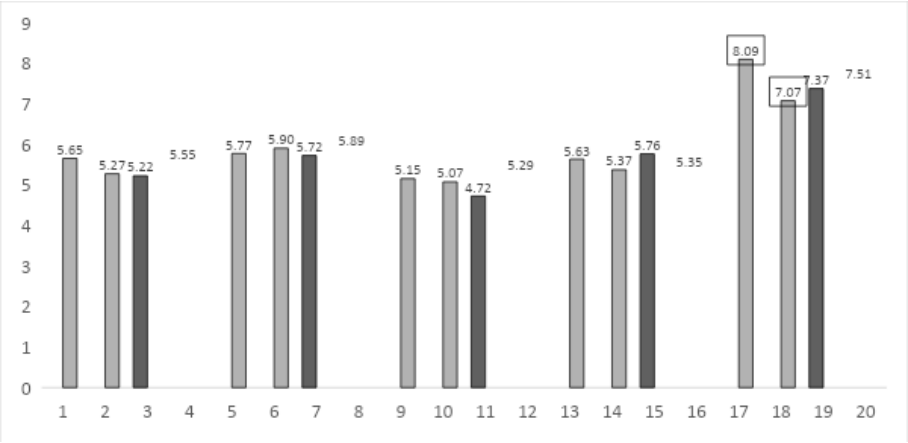


Figure 14: Evaluation of *perception* of the female interpreter's performance

Regarding the evaluation of *perception* of the male interpreter's performance, Figure 15 shows significant values for *difficult to understand / easy to understand*.

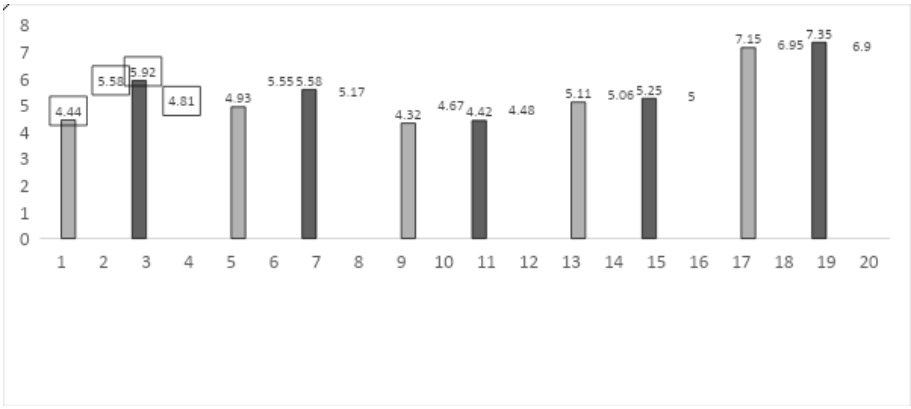


Figure 15: Evaluation of *perception* of the male interpreter's performance

3.3 Expectations correlated with overall quality

In order to operationalize the data for IT, the results from the expectation survey were correlated with the results of overall quality. The analysis was carried out separating the groups (semi-experts and laypersons).

In the case of semi-experts, statistically significant correlations were observed for the aspects 'interpreters are likely to be confident' (r= 0.349, p= 0.023), 'interpreters have specialized knowledge' (r= 0.321, p= 0.023), 'interpreters are likely to go unnoticed' (r= -0.322, p= 0.043) and 'interpreters are likely to speak fast' (r= -0.318, p= 0.049).

Regarding the group of laypersons, the only significant result was obtained for the aspect 'interpreters are likely to have a monotonous intonation' (r= -0.340, p= 0.039).

3.4 Results of the regression analysis

The regression analysis performed to predict overall quality was based on 5 evaluation dimensions: *Form, time-lag, fluency, perception and profile* (see Table 3). The results show that these dimensions predict 68% of the *overall quality* (R2= 0.680; p= 0.000; see Table 4).

Model	R	R2	Adjusted R2	Standard Error
1	0.825a	0.680	0.664	0.9316

Predictors: (Constant), *Form*, *Time-Lag*, *Fluency*, *Perception*, *Profile*

Table 3. Predictive evaluation dimensions

Model				Standardized Coefficients Beta	t Lower Limit (LLCI)	p Upper Limit (ULCI)	Confidence Interval 95,0% for B	
1	(Constant)	1.437	0.857		1.676	0.097	-0.264	3.139
	Fluency	0.285	0.110	-0.163	2.587	0.011	-0.504	-0.066
	Perception	0.620	0.086	0.490	7.209	0.000	0.449	0.791
	Profile	0.326	0.100	0.229	3.268	0.001	0.128	0.524
	Time-Lag	0.125	0.064	0.125	1.967	0.052	0.001	0.251
	Form	0.277	0.139	0.129	1.998	0.049	0.002	0.553

Table 4. Dependent Variable: *Overall quality*

All 5 of these dimensions of *evaluation* are statistically significant for predicting the dependent variable *overall quality*: *Perception* (β= 0.620; t= 7.209; p= 0.000 [0.449, 0.791]; *Profile* (β= 0.326; t= 3.268; p= 0.001 [0.128, 0.524]; *Fluency* (β=-0.285; t= -2.587; p=0.011 [-0.504, -0.066]; *Form* (β= 0.277; t= 1.998; p= 0.049 [0.002, 0.553]; *Time-lag* (β= 0.125; t= 1.967; p= 0.0529 [-0.001, 0.251].

The 5 dimensions were integrated in a new dichotomized variable to be included in the moderation analysis to generate a theoretical model. To do this, a new variable

evaluation was created as the mean of these 5 dimensions and then dichotomized (Lower/Higher), taking into account the median of the new variable.

A linear regression analysis (see Table 5) was run to test the influence of W (*status of the evaluator)*, X (*evaluation*) and WX (*interaction*) on Y (*overall quality*).

Model	coeff β	SE	Z	*p*	LLCI	ULCI
Constant	0.7077	0.3098	2.284	0.0224	0.1004	1.3149
Status	1.6132	0.6197	2.6033	0.0092	0.3986	2.8277
Evaluation	2.594	0.6197	4.1861	0.0000	1.3795	3.8085
Interaction	2.4909	1.2394	2.0098	0.0444	0.0618	4.9200

Table 5. Linear regression analysis

The statistically significant results in β1, β2, and for the most part in β3, confirm the presence of a moderation effect.

β1 (Y: Evaluation) = 2.594 p=0.000: The *evaluation* of characteristics of the interpreter and his/her interpretation influences the perception of the *overall quality* of the interpreter's performance.

β2 (W: Status) = 1.613 p=0.009: The *status* of the evaluator (layperson versus semi-expert) influences the perception of the *overall quality* of the interpreter's performance.

β3 (WX: Interaction) = 2.491 p=0.044: The *status* (layperson versus semi-expert) intervenes in the effect of the *evaluation* on the perception of the *overall quality* of an interpreter's performance.

The results obtained (see Figure 2 and Table 6) show a conditional effect of the *evaluation* on the perception of *overall quality* in both status groups (laypersons versus semi-experts) β (Laypersons -0.5) = 1.349, p=0.013; β (Semi-experts -0.5) = 3.839, p=0.001.

Status	Effect	SE	Z	*P*	LLCI	ULCI
-0.5	1.3486	0.5435	2.4812	0.013	0.2833	2.4138
0.5	3.839	1.1138	3.4471	0.001	1.6564	6.0225

Table 6. Conditional effects of the focal predictor according to moderator values

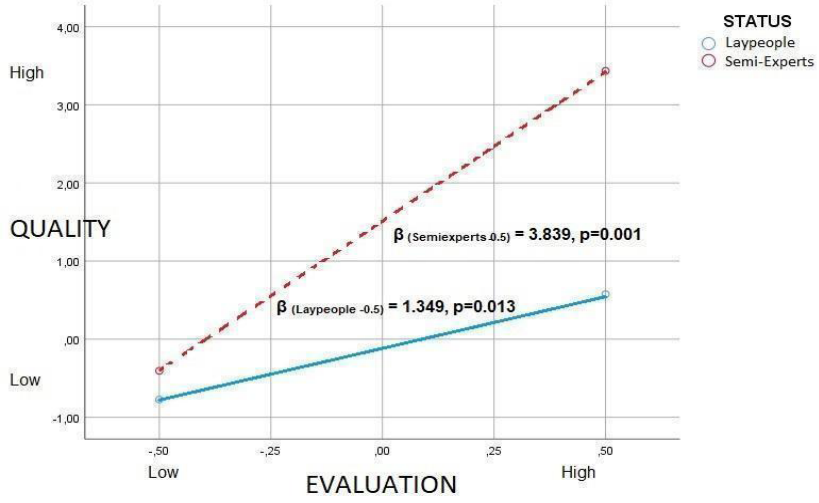


Figure 16: Effect of *overall quality* on status groups

4. Discussion and conclusions

4.1 Quality expectations

The criteria in which the semi-experts have higher expectations than the laypersons correspond to the innate and acquired skills of an interpreting professional, and also encompass aspects related to what may be called 'intrinsic mechanism' (Sánchez Santa-Bárbara/Pradas Macías 2019), referring to variables related to the interpreting process itself.

The one expectation criterion in which the laypersons have a significantly higher score than the semi-experts refer to the belief that interpretations have a monotonous intonation. Moreover, it appears that this expectation was confirmed when they listened to the SI and that they penalized this aspect in their evaluation, even though it formed part of their expectations.

With regard to the differences between expectations of men and women, women have higher expectations regarding the structure of the interpretation, expecting it to be well structured. They also expect to a greater degree than men that the interpreter will adapt to the original speaker.

4.2 Quality evaluation

4.2.1 Regression analysis

The regression analyses enabled us to identify which dimensions function better as predictors of the overall quality. In line with other previous research (see section 2),

aspects related to the evaluation of the delivery and professionality were considered less important than *perception*, *profile*, *fluency*, *form* and *time-lag*.

The analysis shows that the criteria *perception*, *form, fluency*, *presentation* and *time-lag* predict 68% of the overall perceived quality. This may be regarded as statistical proof that formal aspects have a salient impact on quality perception, as has been observed in previous studies with a two-pronged approach (*e.g*. Collados Aís 1998; Collados Aís *et al*. 2007). Indeed, the results in this study show that formal variables carry more weight than content variables, and even seem to dominate in the quality evaluation of a SI. What is more, fluency seems to play a determinant role. These results are highly interesting in the light of the discussion in different research fields about whether the criterion *fluency* should be associated with formal presentation or content (see section 2).

Researchers such as Pradas Macías (2003) and Rennert (2010, 2019) have specifically observed the impact of pauses (whether silent or with sound) on fluency and quality perception. The results of the present study point to an understanding of fluency as a dual-nature criterion, instead of assigning it to either the formal or content category.

4.2.2 Means analysis

Regarding the evaluation of *profile*, men consider the female interpreter better at communicating ideas effectively. This result, together with the results obtained for *overall quality* in the case of the female interpreter's performance and *difficult to understand / easy to understand* in the case of the male interpreter's performance, suggests a possible gender-related difference in the evaluation.

Semi-experts consider the interpreters to have high competence, while laypersons evaluate the competence of both interpreters less favourably than the semi-experts do.

A further issue to consider is that the semi-experts consider the interpreters' voice more pleasant than laypersons do, and the latter consistently evaluate the time-lag worse than semi-experts do. The original interpretation selected by the researchers for the study is consistent with the intonation denominated by Shlesinger (1994) *sui generis intonation*, with the characteristic time-lag or silence pattern of SI (Pradas Macías 2015). A possible explanation, therefore, is that laypersons associate the criterion *voice* with *intonation*, while semi-experts do not (see Fernández Iglesias 2007).

This explanation is reinforced by the statistical difference between semi-experts and laypersons in the evaluation of native-like pronunciation. Nearly 100% of semi-experts identify the interpreter's pronunciation as native. Furthermore, semi-experts clearly rate *fluency* more favourably than laypersons. Despite the fact that laypersons evaluate the interpretation better with regard to coherence and find it easier to follow, these aspects lead them to make a worse evaluation of the overall quality of the interpretation.

4.3 Quality perception depending on status

The moderation analysis confirmed that the IT held by people with more or less knowledge about interpreting have a significant impact on their evaluation of the quality of the interpretation they had listened to. According to this result, the higher or lower perception of the overall quality of the interpretation not only depends on the higher or lower evaluation of the interpreter's characteristics and performance, but is also moderated by the status of the evaluators, both in the case of the laypersons and the semi-experts. In other words, if the evaluation of these aspects is considered lower or higher (below or above the median value), it will produce a different overall quality affected not only by the previous evaluation of the specific aspects, but also by the status of the person as someone with lower or higher expertise in the field. This finding is consistent with results in other domains in which IT have been studied (see section 2) and provides support for applying IT to the area of interpreting quality.

4.4 Operationalization of IT

Correlating expectations with overall quality shows that the IT of semi-experts include aspects that are basic to interpretation training.

Regarding laypersons, bearing in mind that IT are acquired through experience in a particular setting (see 3.2.) and, that interpreters do indeed seem to have a *sui generis intonation* (Shlesinger 1994, see 5.2.2), intonation seems to be a clearly established criterion in laypersons' IT regarding interpreters.

4.5 Final remarks

As with any research, this study has some limitations. First, the characteristics of the sample (convenience and non-probabilistic, as well as the reduced size in both the laypersons and the semi-experts group) reduce the external validity of the study.

Our intention in future studies is to access 3 subsamples: experts (professional interpreters), semi-experts (interpreter trainees) and laypersons (potential users of interpreting services), and to ensure that all 3 subsamples are of a larger size. This would enable us to test our hypotheses about expectations, gender and IT more deeply and thus further improve our understanding of the perception of quality.

Nevertheless, our results also lead us to question the assumption that professional interpreters should be considered "experts" in the perception of quality in interpreting. Professional interpreters rarely use interpreting services, so the "experts" might well be non-interpreters who have considerable experience in listening to experienced interpreters. We have seen that interpreting quality expectations differ depending on the IT of evaluators, but it is indeed interesting that "laypersons" believe that interpreters have a monotonous intonation. There may thus be a need to clarify what the subjects in quality studies are experts in: performing interpreting services or using interpreting services? In this respect, perhaps a finer-grained profile of subjects than "experts" and "laypersons" would be desirable.

A further aim for future research is to explore the relationship between expectations, evaluation, gender of the interpreter and the evaluator, IT of quality in interpreting and the perception of quality.

Our objective in this respect is to generate a moderated mediation model which would include not only, as in this case, the participants' status or evaluation, in order to explain the quality of the interpreter and his or her work; but would also take into account variables related to the expectations and the gender of the interpreter and evaluator.

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Appendix

Appendix 1. Expectations results by group and gender

	Status	Mean	t	df	*p*	sig
Interpreters are likely to be confident	Semi-experts	6.07	1.529	114	0.129	ns
	Laypersons	5.77				
Interpreters are likely to be competent	Semi-experts	**6.65**	4.341	94.366	0.000	***
	Laypersons	5.94				
Interpreters are likely to be organized	Semi-experts	**6.31**	2.256	113.255	0.026	*
	Laypersons	5.89				
Interpreters are likely to be reliable	Semi-experts	**6.35**	2.569	114	0.011	*
	Laypersons	5.87				
Interpreters are likely to be flexible	Semi-experts	**6.21**	3.333	113	0.001	**
	Laypersons	5.48				
Interpreters are likely to be calm	Semi-experts	**4.96**	2.144	113	0.034	*
	Laypersons	5.52				
Interpreters are likely to be good at communicating	Semi-experts	6.59	0.819	114	0.415	ns
	Laypersons	6.47				
Interpreters are likely to be neutral	Semi-experts	6.08	1.870	109.784	0.064	ns
	Laypersons	5.60				
Interpreters are likely to be professional	Semi-experts	6.63	1.288	114	0.200	ns
	Laypersons	6.42				
Interpreters are likely to be pleasant	Semi-experts	5.52	0.345	112	0.730	ns
	Laypersons	5.44				
Interpreters are likely to be resolute	Semi-experts	**6.57**	3.475	111.770	0.001	**
	Laypersons	5.94				
Interpreters are likely to be audacious	Semi-experts	**6.29**	3.466	107.641	0.001	**
	Laypersons	5.52				
Interpreters are likely to be expressive	Semi-experts	5.80	0.925	114	0.357	ns
	Laypersons	6.02				
Interpreters are likely to have a pleasant voice	Semi-experts	5.28	1.323	113	0.189	ns
	Laypersons	5.60				
Interpreters are likely to have specialized knowledge about the topic	Semi-experts	5.83	1.874	113	0.064	ns
	Laypersons	5.55				
Interpreters are likely to have a monotonous intonation	Semi-experts	2.61	4.109	112.194	0.000	***
	Laypersons	**3.89**				

	Status	Mean	t	df	*p*	sig
Interpreters are likely to have specialized vocabulary	Semi-experts	**5.61**	2.486	114	0.014	*
	Laypersons	5.00				
Interpreters are likely to be calm under pressure	Semi-experts	6.20	0.333	113	0.740	ns
	Laypersons	5.73				
Interpreters are likely to have native-like pronunciation	Semi-experts	4.60	0.333	113	0.740	ns
	Laypersons	4.52				
Interpreters are likely to vocalize clearly	Semi-experts	6.37	1.171	114	0.244	ns
	Laypersons	6.16				
Interpreters are likely to speak fast	Semi-experts	3.81	0.361	112	0.719	ns
	Laypersons	3.92				
Interpreters are likely to speak similarly to the original speaker	Semi-experts	5.19	0.134	113	0.894	ns
	Laypersons	5.23				
Interpreters are likely to use formal register	Semi-experts	5.21	1.540	113	0.126	ns
	Laypersons	4.82				
Interpreters are likely to speak correctly	Semi-experts	**6.24**	2.380	114	0.019	*
	Laypersons	5.81				
Interpreters are likely to go unnoticed	Semi-experts	**5.17**	3.235	112	0.002	**
	Laypersons	4.16				
Interpreters are likely to adapt to the user	Semi-experts	**6.32**	2.723	106.158	0.008	**
	Laypersons	5.74				
Interpreters are likely to show confidence	Semi-experts	**6.37**	2.679	114	0.008	**
	Laypersons	5.90				
The interpretation is fluent	Semi-experts	**6.30**	2.232	114	0.028	*
	Laypersons	5.92				
The speed of the interpretation is fast	Semi-experts	4.17	1.097	114.000	0.275	ns
	Laypersons	4.48				
The rhythm of the interpretation is similar to that of the OS	Semi-experts	5.83	1.589	112.167	0.115	ns
	Laypersons	5.48				
The speed of the interpretation is similar to that of the OS	Semi-experts	5.61	0.563	114.000	0.575	ns
	Laypersons	5.48				
The interpretation has speed variations	Semi-experts	4.74	0.272	103.420	0.787	ns
	Laypersons	4.82				
The interpretation is faithful to OS	Semi-experts	**6.22**	2.811	105.967	0.006	**
	Laypersons	5.56				
The interpretation is complete	Semi-experts	5.47	0.542	113.000	0.589	ns
	Laypersons	5.60				

	Status	Mean	t	df	*p*	sig
The interpretation has few pauses	Semi-experts	4.92	1.146	112.000	0.254	ns
	Laypersons	4.58				
The interpretation is well structured	Semi-experts	6.22	0.858	114.000	0.393	ns
	Laypersons	6.06				
The interpretation has inappropriate pauses	Semi-experts	2.75	0.821	112.000	0.413	ns
	Laypersons	3.02				
The interpretation has incomplete sentences	Semi-experts	2.13	1.849	111.286	0.067	ns
	Laypersons	2.65				
The interpretation has long pauses	Semi-experts	2.56	1.226	112.000	0.223	ns
	Laypersons	2.92				
The interpretation is clear	Semi-experts	**6.54**	2.359	91.662	0.020	*
	Laypersons	6.08				
The interpretation is easy to understand	Semi-experts	6.50	3.474	89.805	0.001	**
	Laypersons	**5.81**				

* p<0.05; ** p<0.01 *** p<0.001

	Gender	Mean	t	df	*p*	sig
Interpreters are likely to be confident	Male	5.93	0.156	113.000	0.876	ns
	Female	5.90				
Interpreters are likely to be competent	Male	6.24	0.123	113.000	0.902	ns
	Female	6.27				
Interpreters are likely to be organized	Male	6.03	0.258	113.000	0.797	ns
	Female	6.09				
Interpreters are likely to be reliable	Male	6.10	0.099	113.000	0.921	ns
	Female	6.08				
Interpreters are likely to be flexible	Male	5.76	0.248	112.000	0.804	ns
	Female	5.82				
Interpreters are likely to be calm	Male	5.34	0.441	112.000	0.660	ns
	Female	5.21				
Interpreters are likely to be good at communicating	Male	6.38	1.082	113.000	0.281	ns
	Female	6.57				
Interpreters are likely to be neutral	Male	5.79	0.061	112.000	0.952	ns
	Female	5.81				
Interpreters are likely to be professional	Male	6.55	0.272	113.000	0.786	ns
	Female	6.50				

	Gender	Mean	t	df	*p*	sig
Interpreters are likely to be pleasant	Male	5.29	0.941	58.889	0.351	ns
	Female	5.52				
Interpreters are likely to be resolute	Male	5.93	1.749	112.000	0.083	ns
	Female	6.32				
Interpreters are likely to be audacious	Male	5.50	1.711	110.000	0.090	ns
	Female	5.98				
Interpreters are likely to be expressive	Male	5.69	1.047	113.000	0.297	ns
	Female	5.98				
Interpreters are likely to have a pleasant voice	Male	5.21	1.323	113.000	0.189	ns
	Female	5.52				
Interpreters are likely to have specialized knowledge about the topic	Male	5.28	1.874	113.000	0.064	ns
	Female	5.80				
Interpreters are likely to have a monotonous intonation	Male	3.55	0.908	113.000	0.366	ns
	Female	3.20				
Interpreters are likely to have specialized vocabulary	Male	5.03	1.088	113.000	0.279	ns
	Female	5.35				
Interpreters are likely to be calm under pressure	Male	**5.64**	1.759	110.000	0.081	ns
	Female	6.02				
Interpreters are likely to have native-like pronunciation	Male	4.97	1.808	112.000	0.073	ns
	Female	4.42				
The interpreters vocalise clearly	Male	6.28	0.153	113.000	0.879	ns
	Female	6.24				
Interpreters are likely to speak fast	Male	4.28	1.600	111.000	0.113	ns
	Female	3.71				
Interpreters are likely to speak similarly to the original speaker	Male	4.90	1.257	112.000	0.211	ns
	Female	5.29				
Interpreters are likely to use formal register	Male	5.03	0.242	112.000	0.809	ns
	Female	4.96				
Interpreters are likely to speak correctly	Male	5.86	0.858	113.000	0.393	ns
	Female	6.05				
Interpreters are likely to go unnoticed	Male	4.21	1.461	111.000	0.147	ns
	Female	4.75				
Interpreters are likely to adapt to the user	Male	5.45	2.434	36.863	0.020	*
	Female	6.19				
Interpreters are likely to show confidence	Male	**5.76**	1.883	35.896	0.068	ns
	Female	6.23				

	Gender	Mean	t	df	*p*	sig
The interpretation is fluent	Male	5.83	1.766	113.000	0.080	ns
	Female	6.17				
The speed of the interpretation is fast	Male	4.72	1.625	113.000	0.107	ns
	Female	4.19				
The rhythm of the interpretation is similar to that of the OS	Male	5.38	1.320	113.000	0.189	ns
	Female	5.72				
The speed of the interpretation is similar to that of the OS	Male	5.62	0.463	113.000	0.644	ns
	Female	5.50				
The interpretation has speed variations	Male	4.76	0.059	113.000	0.953	ns
	Female	4.78				
The interpretation is faithful to OS	Male	5.72	0.638	113.000	0.525	ns
	Female	5.91				
The interpretation is complete	Male	5.66	0.653	112.000	0.515	ns
	Female	5.48				
The interpretation has few pauses	Male	4.86	0.533	111.000	0.595	ns
	Female	4.68				
The interpretation is well structured	Male	5.69	2.278	35.401	0.029	*
	Female	6.28				
The interpretation has inappropriate pauses	Male	**3.24**	1.201	111.000	0.232	ns
	Female	2.80				
The interpretation has incomplete sentences	Male	2.86	1.811	113.000	0.073	ns
	Female	2.27				
The interpretation has long pauses	Male	3.14	1.501	111.000	0.136	ns
	Female	2.63				
The interpretation is clear	Male	5.97	1.828	113.000	0.070	ns
	Female	6.40				
The interpretation is easy to understand	Male	5.86	1.387	113.000	0.168	ns
	Female	6.21				

* $p<0.05$; ** $p<0.01$ *** $p<0.001$

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Enhancing numerical accuracy in simultaneous interpreting students: an exploratory study comparing human and AI-based support

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Abstract

Simultaneous interpreting (SI) of numerical elements is a complex task and numbers are widely acknowledged as a problem trigger and a source of errors for interpreters. However, the latest advancements in Natural Language Processing (NLP), Artificial Intelligence (AI) and Automatic Speech Recognition (ASR) integrated into Computer-Assisted Interpreting (CAI) tools have shown potential in enhancing accuracy during SI of numerical elements, as well as of other parts of speech, such as specialised terminology. Although many recent studies are focusing on this area, research comparing the impact of CAI tool support during SI against the support provided by human boothmates is scarce. This paper aims to address this gap within this emerging field of research by comparing the performances of interpreting students using the ASR-powered CAI tool InterpretBank with those who worked with the support of a human boothmate while interpreting a source text (ST) with a high density of numbers. The pilot study assesses the accuracy and intelligibility rates of numerical renditions obtained by novice interpreters. The findings show that CAI tools can improve interpretation quality, and the digital boothmate provides equivalent support to a human boothmate in terms of accuracy of numerical rendition, while considering latency limitations.

Keywords

Computer-Assisted Interpreting (CAI), Automatic Speech Recognition (ASR), Artificial Intelligence (AI), interpreting technologies, digital boothmate, *InterpretBank*, numbers

The field of conference interpreting is a broad and diverse area of study that is constantly evolving. The rapid technological advances affecting many language professions are having a significant impact on the field of conference interpreting as well, shaping new training paradigms, transforming the job market, and changing the relationship between interpreters and the technology they use on a daily basis. These premises make it easy to comprehend the increasing interest of the scientific and professional communities in the various manifestations of possible human-machine (or interpreter-machine) interactions.

Undoubtedly, technology has always played a fundamental role in the field of interpreting, e.g. by enabling the emergence of SI after the Second World War, and over the years it has significantly revolutionised the methods used to carry out interpreting assignments.

In addition to the technologies enabling Remote Interpreting (RI), which have been transforming the settings in which interpreters work since the 1970s (Baigorri-Jalón 2014), the last two decades have witnessed the emergence and proliferation of CAI tools (Fantinuoli 2018a; Braun 2020). While the first generation of CAI tools was primarily designed to support interpreters in the preparation phase (before the event), subsequent generations have led to the more sophisticated CAI tools available today, which offer a wealth of possibilities that can assist professionals at every stage of their assignments (including during the event).

In fact, the advances in the field of NLP, AI and ASR have paved the way for the development of new CAI tools that can directly assist interpreters in their work by proposing in real time the automatic transcription and translation of the full ST or of the main problem triggers extracted from the speaker's speech, such as numbers, named entities and complex terminology, through suggestions that interpreters can consult directly on their monitor.

Among these tools, *InterpretBank* (Fantinuoli 2017), the software used for this study, includes a feature called Artificial Boothmate, which integrates ASR systems into a user-friendly web-based interface for interpreters. It should be noted that there are other technological solutions emerging in the interpreting industry that offer similar real-time human-machine interaction support such as *Cymo Note* (Goldsmith 2023), *KUDO Interpreter Assist* (Fantinuoli *et al*. 2022), *SmarTerp* (Rodriguez *et al*. 2021), to name but a few (see §1).

It seems reasonable to assume that the proliferation of these technological solutions and the growing interest of professionals in the possibility of receiving suggestions from a digital boothmate, in contrast to their initial reluctance (Fantinuoli 2018b), are motivated not only by technological advances that now make the available tools reliable enough to be used in interpreting, but also by the significant increase in RI. As evidenced by recent studies (Raaya/Martin 2022) Remote Simultaneous Interpreting (RSI) is no longer an incidental or sporadic activity, as it may have been before the outbreak of the Covid-19 pandemic or during the subsequent lockdown period but is now fully integrated into the normal workflow of many interpreters.

Indeed, although many interpreting delivery platforms (IDPs) now have built-in features specifically designed for interpreters (e.g. for managing handovers or pri-

vate communication through a dedicated chat), having a booth partner who is remote means that the teamwork is very difficult to maintain (Ordeig 2019). As working remotely becomes more prevalent, the absence of a physical booth partner poses a challenge for interpreters. Therefore, while the possibility of relying on a boothmate is diminishing, the availability of automated solutions that can provide interpreters with the suggestions traditionally offered by a boothmate is increasing.

This paper presents a pilot experimental study designed to explore the effectiveness of CAI tools with integrated ASR and AI in aiding novice interpreters with accurate and intelligible interpretation of numerical data in STs.

The following two sections provide an overview of the state-of-the-art CAI tools available today and the related studies already conducted in this area. Then, the experimental setup and materials are presented, together with the accuracy results obtained by the control group, which interpreted a text with a high density of numbers with the help of a boothmate, and by the experimental group, who worked with the support of the software. The study will also analyse the responses to an evaluation questionnaire provided to a sample of independent listeners who assessed the overall intelligibility and impact of pauses in the renditions.

1. Computer-assisted interpreting tools

One of the first publications in the field of Interpreting Studies that explored the possible use of software specifically designed to assist interpreting is that of Rütten (2004). The author presented a comprehensive theoretical model of CAI tools, envisioning a software prototype that could assist interpreters at each stage of the process. This includes a language-oriented terminology module, a content-oriented documentation module, and a general situation-oriented module. This concept served as the basis for the development of CAI tools, which were initially limited in scope and focused on managing bilingual glossaries. Since then, they have evolved to become a resource for assisting interpreters in a more holistic manner.

InterpretBank is one of such comprehensive CAI tools that was developed between 2008 and 2012 at the University of Mainz/Germersheim. The tool is designed to serve as an efficient workstation that facilitates interpreters in streamlining their workflow before and during an event. The software offers a range of features that support interpreters, including machine translation of the glossary's entries, terminology collection from online resources, seamless integration of preparatory material, automatic extraction of relevant specialised terminology, concordance searches, and a memorisation interface for learning the terminology contained in the glossaries. In terms of the functionalities that can be employed during an assignment, the software encompasses two key features: a manual query function that enables users to conduct manual searches within the glossary, and an ASR-based functionality. The latter, namely the Artificial Boothmate feature, is a cloud-based function that automatically searches for terminology, proper names, and numbers during interpretation by listening to the original speaker, displaying in real-time on the interpreter's screen all the numbers pronounced by the speaker and the terms present in the glossary in use.

InterpretBank has been the subject of several studies testing its performance in SI, and most of them seem to agree that the software helps interpreters render terms

and numbers more accurately (Prandi 2015, 2018; Guo *et al.* 2023: 94; Pisani/Fantinuoli 2021; Fantinuoli *et al.* 2022). However, there is some disagreement among SI scholars. For instance, Zhou (2019 in Guo *et al.* 2023: 94) found that although *InterpretBank* may improve overall performance, some participants' renditions were negatively affected.

Advancements in technology have resulted in the creation of further advanced CAI tools that aim to cater to all the needs of interpreters, offering a range of features such as remote interpreting, terminology management, and live support during assignments. Among the many advanced CAI tools of this kind available, this section will provide an overview of *Cymo Note, Kudo Interpreter Assist and SmartTerp*, as referenced above, as they can assist interpreters specifically with numbers pronounced by speakers, which is pertinent to our research.

Cymo Note is a professional multilingual note-taking software designed to provide automatic speech recognition in various interpreting settings, including remote, onsite, and hybrid meetings, and modalities such as simultaneous, consecutive, and hybrid approaches. The tool allows users to add names and terms to the glossary and highlights them in the running transcription. *Cymo Note* offers a pay-per-minute pricing system based on the type of speech recognition engine used, including *Microsoft ASR*, *Tencent Speech-to-text*, *iFlytek Speech-to-text*, and the proprietary *Cymo Speech Engine*. The software supports over 15 languages and allows users to build their glossary and copy and paste entire glossaries for repeat clients. Furthermore, the consecutive interpreting feature of *Cymo Note* is its most innovative aspect, with its ability to divide the screen into two, transcription on the left and a blank space for taking notes on the right, using the drawing mode to take notes anywhere on the page (Goldsmith 2023).

Kudo Interpreter Assist has emerged as a popular CAI tool in recent years, designed specifically for integration into RSI scenarios. Its primary objective is to reduce preparation time and improve the accuracy of interpretation in highly specialised events (Fantinuoli *et al.* 2022). *Interpreter Assist*'s salient features comprise an automatic glossary creation tool and a real-time suggestion system. Utilising this tool from a user's standpoint involves creating a project, identifying the event topic, optionally assessing the automatically generated multilingual resources, sharing resources with team members, and conducting RSI with real-time suggestions. From the machine's perspective, the process encompasses the creation of a mono or multilingual domain-specific corpus, extraction of monolingual terminology from the corpus, translation of the terminology into target language(s), fine-tuning of baseline models with generated resources, optional fine-tuning with client-generated information, and automatic access to resources in real-time via the interpreter console.

Finally, *SmarTerp* is an EU-funded Innovation Activity aimed at developing a remote simultaneous interpreting platform with an ASR- and AI-powered CAI tool. The RSI system aims to provide high-quality RSI services with ISO-compliant audio and video quality, communication options with all actors involved in the assignment, and an RSI console that allows interpreters to perform all key actions required by this interpreting mode (Frittella/Rodríguez 2022). The ASR/CAI tool employs sophisticated algorithms to transcribe spoken language into written text, supporting interpreters in rendering common problem triggers such as named entities, acronyms, specialised terms,

and numbers. The CAI tool has undergone significant development, and ongoing research and development activities related to system performance and accessibility are improving both *SmarTerp* components. Overall, *SmarTerp* is a promising CAI tool that has the potential to enhance the quality of interpreting in various settings (*Ibid.*).

In general, CAI tools are already revolutionising the interpreting field by facilitating easier and more efficient work for interpreters, as they offer valuable support and can enhance the quality of interpreting in various contexts. The objective of the present pilot study is to focus on the assistance offered by CAI tools for numbers to interpreting trainees. The rationale for focusing on the analysis of number management during interpretation stems from the widely shared belief among professional interpreters and academic experts in the field regarding the criticality of handling numerical elements during SI (see §2). This criticality is reflected in a high error rate, as will be discussed in the subsequent section. Therefore, other applications of interpreting technologies, including remote interpreting, corpus-driven preparation, computer-assisted consecutive interpreting (CACI), computer-assisted interpreters' training (CAIT), and hybrid interpreting modalities, among others, will not be considered in this study.

2. Related studies

There appears to be a general consensus among professional interpreters and scholars in the field regarding the criticality of dealing with numbers in a ST as actual problem triggers during SI (Gile 2009; Setton/Dawrant 2016; Frittella 2019). As a result, they are often the cause of declining quality in SI, with error rates ranging from 21% to 70%, as shown by several empirical studies focused on this topic (Braun/Clarici 1996; Lamberger-Felber 2001; Mazza 2001; Pinochi 2009; Desmet *et al.* 2018; Collard 2019; Frittella 2019; Kajzer-Wietrzny *et al.* 2021). Despite the critique offered by Frittella (2022: 33) regarding the calculation of error rates and the ambiguity surrounding the definition of "number," as well as the potential impact of methodological variations in some of those publications, it is undeniable that there is a growing interest in computer-assisted SI research. This interest is driven by both scientific and academic, as well as technological and market considerations, with a focus on techniques and specific approaches to address these disruptions through interpreter-machine interaction (Desmet *et al.* 2018; Canali 2019; Defrancq/Fantinuoli 2020; Pisani/Fantinuoli 2021, Guo *et al*. 2023).

Within the experimental studies on interpreters' performance relating to number rendition in SI, one factor that seems to play a crucial role is the presence, or absence thereof, of some form of visual support during the interpretation, regardless of whether it consists of: A) the note jotted down by the interpreter or the boothmate as soon as he or she hears a number, B) a text provided to the interpreters with the speech to be interpreted or C) a suggestion shown shortly after the speaker pronounces the number provided by a technological support based on ASR.

Based on the scientific literature, it seems clear that the first two cases have noticeable advantages. Lamberger-Felber (2001) reported an increase in accuracy of approximately 50% when interpreters are provided with a text, and Mazza (2001: 96) observed an accuracy increase of up to 10% when a human boothmate is present.

Additionally, two corpus studies based on the EPTIC corpus, which includes speeches from the European Parliament and their interpretations, found varying error rates for numbers. In one case, the error rate was around 18% (Collard/Defrancq 2017), and in another, it ranged from 4 to 7%, albeit with a 20% omission rate (Kajzer-Wietrzny *et al.* 2021). These error rates are much lower than the average of previous studies and far from the peak value of 70% reported by Braun and Clarici (1996). Regarding these results, however, in Desmet *et al.* (2018: 15 it is pointed out that the difference between experimental and corpus results may be attributed to the presence of a colleague in the booth assisting the interpreter with taking down numbers. This assistance is often not available in experimental settings, as participants usually work alone in the booth.

However, while assistance and visual input have been found to enhance performance, these factors are often beyond the control of the interpreter. To overcome this limitation, interpreters have today the opportunity to get help from the software that displays the relevant numbers on a screen in the booth immediately after they are mentioned. In the following, we will present a diachronic analysis of experimental research on this approach. The results obtained so far have been quite promising.

The increasing research interest in the analysis of interpreter-machine interaction through automatic software querying research tools started with the introduction of the first prototype CAI tool with integrated ASR software for interpreters by Fantinuoli (2017). The results of the empirical study in question aimed - at this pioneering stage - at evaluating the performance of the experimental Artificial Boothmate functionality of the *InterpretBank* software, without yet investigating the possible results of the interpreter's use of the CAI tool. The study showed that, although ASR engines were not yet perfectly adequate and presented problems in certain circumstances, such as in listening to non-native accents, managing sectoral terminology, and others, they could already be successfully used as a technology for SI. Furthermore, Fantinuoli (2017) emphasised the need for further studies to determine whether the support of ASR-powered CAI tools could increase the overall quality of interpreters' performances.

Subsequently, further experiments on the rendition of numbers using mock-up systems, which involved the projection of the decontextualised numbers contained in the ST on the interpreters' computer screen immediately after the numbers were pronounced by the speakers, confirmed a noticeable reduction of error rates from 43.5% to 13.5% (gain 30%) in Desmet *et al*. (2018) and from 64% to 25% (gain 39%) in Canali (2019). It must be emphasised here that experimental designs with mock-up systems are not based on the actual automatic recognition of numbers in a given speech. ASR systems do not achieve (yet) perfect recognition and minimal software latency (the delay between a user's action and a web application's response to that action) as the mock-up system does (see §3.5). Therefore, the results describe the maximum performance that could be achieved with an ideal system, in terms of accuracy and even more so latency.

A turning point was reached with a new experiment conducted by Defrancq and Fantinuoli (2020), in which they applied a real output produced by the CAI software in real-time and a different visualisation approach: the numbers were incorporated into the complete transcription and highlighted, recording a reduction in the error rate from 32.3% to 9.8%.

More recently, there have been several lines of research dealing with the rendering of numbers in computer-aided SI, with a particular focus on improving CAI tool suggestions. Brunetti (2023), for example, conducted an experimental investigation on the "spillover effect", a frequently observed issue when rendering number-accompanying items, by designing an experimental mock-up support interface. The study involved SI from English to Italian and vice versa of the same speeches using two different supports. The control group used *InterpretBank*'s Artificial Boothmate feature, displaying only the figures mentioned and some lexical items, mainly adverbs of time. On the other hand, the experimental group used the mock-up support, which provided both figures and their referent, as well as the use of punctuation to delimit the order of magnitude of the numbers in the ST. The experimental support led to an accuracy increase of 28.5% EN>IT interpreting and 28% in IT>EN interpreting, confirming the initial hypothesis that providing the lexical elements after the number up to the punctuation mark could be an effective solution to the "spillover effect". In this study, several categories of errors were considered to assess the participants' performances, referring to criteria such as syntactic, lexical, approximation and omission errors. Additionally, the hypothesis that providing numbers including punctuation increases the comprehensibility of the numbers and, consequently, the accuracy of their interpretation was also confirmed. It is important to note that this study did not feature software latency or misrecognition, as specified for the mock-up system used by Desmet *et al.* (2018). The study also proposed a modification regarding the selection of numerical elements to display as suggestions, eliminating simple numbers (one, two) or commonly repeated contents, such as in the case of Covid-19.

As a matter of fact, one of the main limitations of such systems is to be found in the lack of selectivity in the choice of suggestions proposed on the interpreter's screen. Especially in the case of numbers, the subject of the present research, no distinction is made between complex and simple ones, which leads the system to display numbers such as 100 and 153,867 indiscriminately, even though these have different levels of difficulty (Pisani/Fantinuoli 2021: 184). This entails several disadvantages, such as the overabundance of unfiltered suggestions received by the interpreter, who might therefore experience a cognitive overload, a possible cause of an overall decrease in the quality of the rendition.

One additional limitation that emerges from the aforementioned empirical studies is the impact of software latency on hint display. The delay caused by system latency affects the ear-voice span (EVS), as it influences the time interpreters have to wait before incorporating suggestions into their delivery. This delay can often render CAI support ineffective and even undermine the performance of the interpreters. For instance, Zhang (2020 in Guo *et al.* 2023: 94) found that consecutive interpreters who use ASR experience significantly higher latency and are generally less fluent and more prone to false starts, hesitation, and filler words. An empirical study conducted by Fantinuoli/Montecchio (2023) found that interpreters can incorporate suggestions by temporarily expanding their EVS for up to 2 seconds without any negative impact on their performance. They can even extend it to 3 seconds without significant disruption. However, if the system latency exceeds this point, the precision of such suggestions is severely compromised, and there is a risk of losing important information in the interpretation. These findings align with the study by He (2018 in Guo *et al.* 2023:

94), which found that delaying ASR results by more than 5 seconds negatively affects performance.

In addition to numerical support, it is worth noting that several experimental studies have been conducted on automated lookup tools for specialised terminology (Prandi 2015,2018,2022 as well as Biagini 2015; Zhou 2019 and Zhang 2020 in Guo *et al.* 2023: 94). These studies have indicated the potential to enhance the final output quality, albeit with modest improvement due to additional cognitive load and perceived distraction during user-machine interaction. However, as this research area is beyond the scope of the current study, it will not be further explored.

3. Exploratory study on the use of CAI/ASR vs human support in SI

In order to explore the current state of CAI tools powered by ASR, specifically the effectiveness of the experimental Artificial Boothmate feature of *InterpretBank* when compared to a human boothmate, a study was conducted with a group of non-professional interpreters[1]. Its main objective is to determine to what extent such features can be integrated into the workflow of simultaneous interpreting trainees in a functional manner, particularly when dealing with numerical information. Additionally, the study aims to assess the potential of the systems under investigation in conceivably substituting traditional interpreting assistance techniques, such as the presence of a boothmate.

The following sections will provide details on the methodology used in the study, by introducing the participants (§3.1), the experimental materials and setup (§3.2 and §3.3), the evaluation criteria applied to assess performance (§3.4), followed by the results of the ASR system (§3.5) and the methodological limitations (§3.6). Finally, Section 3.7 and 3.8 will analyse respectively the accuracy and the intelligibility results obtained.

3.1. Participants

The experiment involved 16 second-year students who were enrolled in the Master's Degree course in Interpreting and Translation at Università degli Studi Internazionali di Roma – UNINT, with 8 participants each in the control and experimental groups. Additionally, 8 more participants took part in the experiment as confederates acting as boothmates (see also Chmiel/Spinolo 2022) for students in the control group. All participants had completed the EN-IT introductory course in simultaneous and consecutive interpreting during their first year, followed by the EN-IT simultaneous and consecutive interpreting course during their second year. The reason for including students instead of professional interpreters was because they were a homogeneous group with comparable overall training in interpreting and confirmed knowledge of the software utilised, having completed a course that covered new technologies for

1 This article is grounded in Carbutto's Master's thesis (2022), functioning as both its fundamental basis and primary source of collected data.

conference interpreting, with a particular emphasis on CAI tools and their integration into SI. However, it is possible that most participants had not previously applied their skills in this area in a professional setting. Moreover, no advance preparation for computer-assisted interpreting was necessary, and no information about the software to be used was provided before the experiment.

For this exploratory study, a between-subject design was chosen to maintain consistency and minimise variations resulting from the use of different STs, although within-subject designs are typically preferred to account for individual differences, especially with a small sample size. This allowed to test an experimental procedure that could then be applied to larger groups of participants.

3.2. Experimental materials

In order to analyse the rendition of numbers in the context of assisted SI, a report on labour market indicators during the Covid-19 pandemic from the European Commission's Directorate-General for Employment, Social Affairs and Inclusion was selected. The original text[2] was edited to include complex numbers (cf. Appendix A). A native English-speaking interpreter provided a voice recording of the resulting text, with an average delivery rate of approximately 118 words per minute, considered adequate for SI purposes by previous studies (Seeber 2015: 85), as it does not noticeably impair the interpreter's performance. The speaker prosodically emphasised specific terms and passages deemed relevant, with numbers pronounced clearly and slightly slower than the rest of the speech. The final text contains 1,082 words, with 64 of those being numerical, and the audio recording has a total duration of 9:19 minutes.

3.3. Experimental setup

Prior to starting the experiment, the participants were briefed on the procedure and five minutes before the experiment, they were provided with a glossary in paper format containing 17 technical terms that they could consult during the interpretation. Each control group participant was randomly paired with one of the eight confederates acting as boothmates who could assist the student in transcribing numbers. The boothmates were instructed to only note down the numbers without suggesting terminology translations or replacing the interpreter.

To ensure uniform conditions for all experimental group participants, a single-screen recording was used instead of allowing each interpreter to use their own PC. This recording featured the audio of the speech to be interpreted and *InterpretBank*'s Artificial Boothmate. The two windows had been arranged on the screen next to each other in such a manner that the terminology column in the software window was not shown, as it was not relevant to the experiment under study, as shown in Figure 1.

2 Joint Employment Report 2021, as adopted by the Council on 9 March 2021: <https://ec.europa.eu/social/BlobServlet?docId=23156&langId=en> (last accessed 12/12/2023).

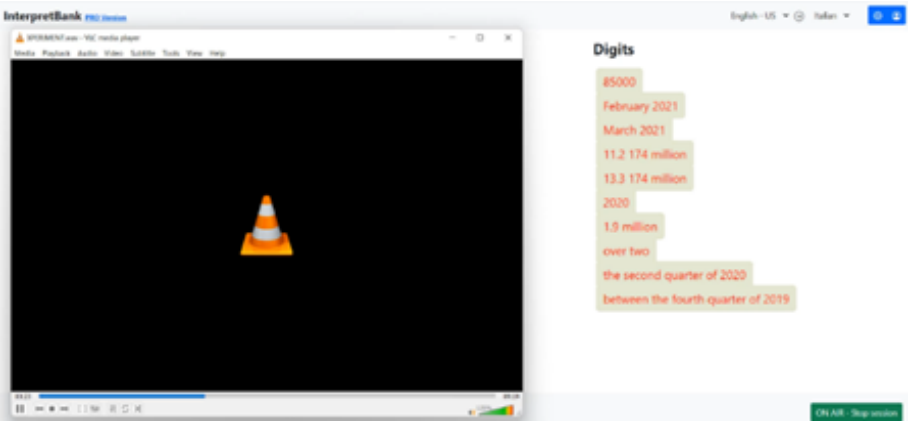

Figure 1: Sample of the screen provided to the experimental group

After a 5-minute warm-up session to help the interpreters get settled and successfully test the system, they were asked to record their interpretation using a mobile device and were assured that the recordings would be used anonymously for the study. To this end, participants were administered written informed consent, outlining the study purpose, data collection procedures, and steps taken to protect anonymity. Detailed information on data treatment, including the removal of personally identifiable information, was also provided. Following the interpretation, the interpreters were asked to submit their recordings and complete a questionnaire about their performance and booth support.

3.4. Evaluation criteria

As early as 1982, AIIC described interpreting quality as "that elusive something" that "no one can define", making it one of the most extensively researched topics in conference interpreting. Numerous researchers, including Chevalier and Gile (2015), have postulated that both "informational fidelity" and "presentation" are quality components. Therefore, a "hybrid" quality assessment method was chosen for this study to measure both intelligibility and fidelity. Intelligibility was assessed using the intelligibility scale originally proposed by Carroll (1966) and later adapted for interpreting by Tiselius (2009), using the same approach adopted by Pisani and Fantinuoli (2021) to compare speech-to-text translation and human interpreting. In addition, two extra questions were included in the questionnaires provided to the evaluators so that they could provide their assessment of the impact of pauses in the renditions of the participants being tested.

For content analysis and the assessment of the degree of informativeness of the target texts (TT) with respect to the ST, a method entirely focused on the rendering of numbers in SI was adopted. This method has been used in similar studies, such as those of Braun and Clarici (1996), Pinochi (2009), Desmet *et al.* (2018) and Pisani and Fantinuoli (2021). For the evaluation of the TTs and the classification of errors, we applied

the error categories defined in similar studies on the interpretation of numbers (Braun/Clarici 1996; Pinochi 2009; Pisani/Fantinuoli 2021). The error typologies considered were the following: (1) omissions, where the number is either omitted or replaced by a generic expression like "some"; (2) approximations, where the number is rounded off; (3) lexical errors, where the order of magnitude is correct but one or more digits are misinterpreted, for instance, 35.3 instead of 35.5; (4) syntactic errors, where the number is of the wrong order of magnitude, for example, 15 thousand instead of 15 million; (5) phonological errors, where the error is believed to be due to a phonetically incorrect perception of the number, like 65 million instead of 16.5 million; (6) inversion errors, where the digits are correct but pronounced in the wrong order, such as 19 million instead of 91 million; and (7) other types of errors, which is a macro-category that includes all errors that do not fit entirely into any of the other categories.

For the purpose of this study, 16 tables were filled out, one for each interpretation, as shown in Table 1. In the first two columns on the left, the numbers pronounced by the original speaker and the numerical class of each number were transcribed. Then, the numbers as pronounced by the interpreters in the TT were included. The last three columns indicated whether the number was interpreted correctly, and, if possible, categorised the type or types of error made by the interpreter. For the analysis of the renditions of the participants in the experimental group, two additional columns indicated whether the number was successfully transcribed by the software or not, and the actual transcription.

Number in ST	Numerical Class	Number in TT	Correct	Type of Error	Type of Error	Transcribed	Transcription
2021	K	2021	TRUE			TRUE	2021
2013	K	/	FALSE	Omission		FALSE	/
6.2 million	M	6,2 milioni	TRUE			FALSE	/
4th	U	1°	FALSE	Lexical		TRUE	Fourth
2019	K	/	FALSE	Omission		TRUE	2019
2nd	U	2°	TRUE			TRUE	Second
2020	K	2020	TRUE			TRUE	2020
2	U	/	FALSE	Omission		TRUE	2
1.9 million	M	/	FALSE	Omission		TRUE	1.9 million
2020	K	2020	TRUE			TRUE	2020
13.374 million	M	13%	FALSE	Syntactic	Approxi-mation	TRUE	13.374 million
11.274 million	M	174 milioni	FALSE	Phono-logical		TRUE	11.2 174 million
2021	K	2021	TRUE			TRUE	2021

Table 1: Table for evaluation

In accordance with the approach adopted by Pisani and Fantinuoli (2021), instances where multiple types of errors were identified for the same number were treated as a single error, despite the distinct types being indicated in the respective error type columns. Consequently, discrepancies arose between the total number of errors and the number of errors categorised by type.

3.5. ASR results

The ASR system transcribed 56 of the 64 numbers contained in the ST, which accounts for 87.5%. Of those 56, 51 were transcribed completely accurately, representing 79.7% of the total numbers in the text.

Upon scrutinising the software latency, it was observed that the mean latency stood at 4.2 seconds, (*SD*= 3.9). The data exhibited a median latency of 2.67 seconds. The recorded latencies ranged between a minimum of 1 second and a maximum of 18.75 seconds, highlighting the variance within the system's performance. The software exhibited increased latency or even failed to display the number on screen in the more discursive sections of the ST, which had a lower density of numbers. However, in the sections with a high concentration of numbers, the software was able to transcribe and return them on the screen correctly, with minimal latency.

Despite the rather high accuracy, the primary disruptive element and source of difficulty associated with the software lies precisely in the latency factor. In addition to the omissions made by the ASR system, the most significant errors were found in the high numerical class numbers, such as those on the order of millions and complex numbers, like "1.931 million", transcribed as "1.9 130 1 million" in its final form, possibly because some numbers were pronounced somewhat slower than the rest of the text (§3.2), causing considerable difficulties for the interpreters. Finally, it is worth noting that in correspondence with time references, the software transcribed not only the year, such as "2019", but also a portion of the context of use, such as "in the last months of" and this is likely to have increased the interpreters' cognitive load as they were faced with more information to process visually and seamlessly integrate into their oral workflow.

3.6. Limitations

As it is always the case, our exploratory study is not without its limitations that need addressing. The primary constraints include the restricted participant pool and an experimental design that omitted the collection of handwritten notes from human boothmates. The inclusion of such notes in future studies could provide valuable insights for comparing the numbers transcribed by the CAI tool with those recorded by human boothmates, facilitating cross-comparisons with the interpretations given by the experimental and control groups in those specific circumstances.

Moreover, it should be borne in mind that the participants in our study were novices, and it's conceivable that different results may manifest in a similar study involving expert interpreters.

These acknowledged limitations highlight the necessity for additional exploration in more specialised settings to validate our initial findings and to advance the research in the field of human-machine interaction within the broader context of interpretation and technology.

3.7. Accuracy results

This contribution aims to evaluate the effectiveness and practical application of ASR-enhanced CAI tools to potentially replace the need for human support in interpreting numerical information during SI.

Upon analysing the data, it was found that the control group, who worked with a boothmate, had an error rate of 55.6%, while the experimental group, who utilised the ASR software, had an error rate of 50%. It is worth noting that the underlying cause for such a low degree of precision can be attributed to the significant concentration of numbers in the ST, which had been revised to be suitable for experimental purposes, coupled with the fact that participants were novices.

After a more fine-grained analysis of the error types made by each group, it became clear that omissions were the most common error committed by both groups. Other types of errors were also present, but they were distributed fairly evenly. A comprehensive overview will be presented below, accounting for the various numerical categories and the corresponding frequency of each error type.

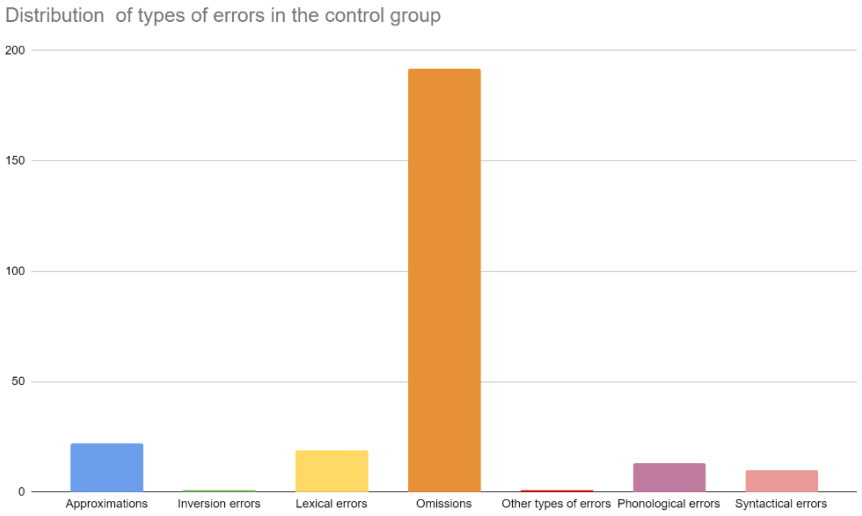

Figure 2: Distribution of types of errors in the control group

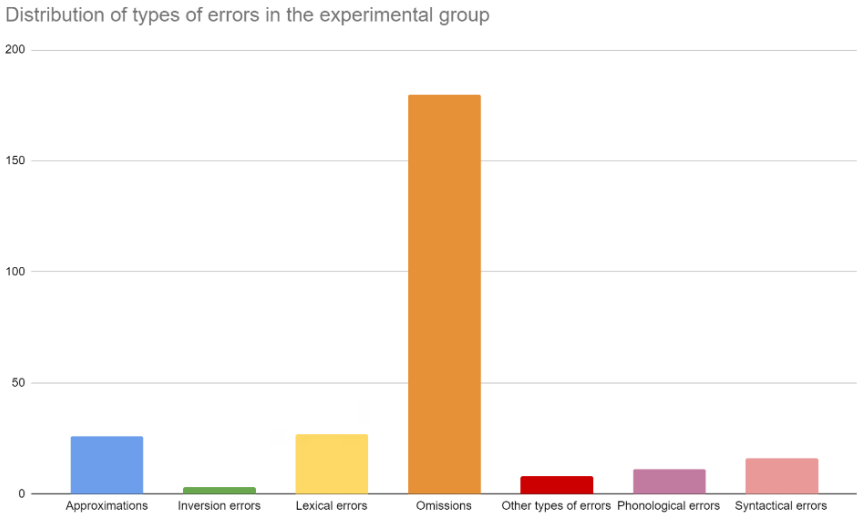

Figure 3: Distribution of types of errors in the experimental group

As can be seen from the Figures 2 and 3, the most common error is omission, in fact for the control group out of a total of 249 errors, there were 192 omissions, while for the experimental group out of a total of 257 errors, 180 were omissions. It is important to note that errors categorised as omissions, whether total or partial, can be construed as either outright errors or as strategies. Frequently, interpreters opt to strategically omit the pronunciation of numbers to avert cognitive overload and, thus, to avoid compromising overall performance, despite the concomitant sacrifice of numerical precision. Indeed, as retrieved from the analysis of the recorded performances, this phenomenon occurred in the control group particularly in those parts of speech that contained a higher density of numbers, while in the experimental group, the phenomenon was attributable to the failure of the computer system to transcribe the numbers or to latency times that were too prolonged for interpreters to avail themselves of the tool's support by pronouncing the numbers in the TT. This outcome for the experimental group also seems to corroborate the notion of participants exhibiting an over-reliance on the tool, a phenomenon that has been documented in previous research (Prandi 2015; Defrancq/Fantinuoli 2020; Frittella 2022). Although, regarding the distribution of omissions per numerical class, there seem to be no remarkable differences between the two groups, it is noteworthy that omissions constituted 75% of the total errors in the control group and 66% in the experimental group, underscoring the software's effectiveness in mitigating a type of error that could substantially diminish the overall informativeness of a TT.

Regarding the other types of errors, approximation emerges as a prominent strategy utilised to a considerable extent by interpreters in both the experimental and the control group. It constitutes 8.9% of errors in the control group and 9.6% in the experimental group. Although the control group appeared to have a better overall performance, such results may actually point at a possibly higher effectiveness of computer

assistance in the interpreting booth. As a matter of fact, the participants of the control group working with a boothmate often avoided translating particularly complex numbers like "11.274 million" or "1.931 million", possibly due to their boothmate's inability to prompt them. In contrast, those who employed the software succeeded in at least partially expressing the number, resorting to solutions such as "11 million" and "almost two million", despite the system's erroneous transcription ("11,2 174 million" and "1.9 130 1 million"). Furthermore, the single-digit numbers (e.g. "over the past 5 years") approximated by participants in the control group, utilising phrases such as "some" and "in recent years" were mostly reported correctly in the experimental group.

Examination of the dataset produced an unforeseen insight with regard to the prevalence of lexical errors (19 in the control group and 27 in the experimental group) and syntactic errors (10 in the control group and 16 in the experimental group), which together constituted 11.4% of errors in the control group and 16% in the experimental group. Syntactic errors, which have more serious implications as they result in the translation of a much larger or smaller number, occurred only 16 times among all participants in the experimental group, averaging to 2 syntactic errors per interpreter. This represents only a small fraction of the 64 numbers included in the original speech. Upon deeper analysis, it became evident that, in the experimental group, this type of error almost always occurred in conjunction with incorrect or incomplete transcriptions by the software, such as the above-mentioned instance of "1.931 million". Additionally, in half of the instances, the aforementioned error occurred when dealing with numerical values in the millions range, whereas in 7 cases out of the total number of 16, the error occurred while processing numbers that included a decimal point.

Conversely, inversion errors were not a significant finding in either group. The only instances in which inversion errors occurred, a total of two occurrences, were observed in the renditions of the experimental group, specifically when dealing with complex and million-order numbers, as in the case of 13.374 million interpreted (in Italian) as 31.174 million. This was an anticipated outcome, given that the language of the source speech, namely English, has a linear numerical system that corresponds to the Italian system. The likely reason for these errors, as revealed by the analysis of the screen recording, is the system's delay in transmitting the transcripts to the interpreters' screens.

Likewise, the "other typology" errors, which fall outside the established error categories and are limited to the experimental group, are not significant and therefore do not require in-depth analysis. In fact, the inaccurate transcriptions produced by the software were the main cause of the varied errors committed by the interpreters. These findings emphasise the pressing requirement for enhanced accuracy in the software's transcription of complex and large numbers (e.g. 11.274 million, 2.359 million and 1.931 million in our ST). It is these particular types of numbers that present the most significant challenges and cognitive load for simultaneous interpreters (Frittella 2019; Mazza 2001). Consequently, it is crucial for the software to offer reliable and precise support specifically for complex numbers, given that they are the most demanding to comprehend, process and interpret.

On the contrary, the phonological error distribution, which accounted for 5% of the total errors in the control group and 4% in the experimental group, provides ev-

idence of the software's validity in transcribing simple and decimal numbers, even when included in a dense list of numerical information. As a matter of fact, the participants who used the ASR system made fewer errors in phonetic perception, with an average of 1.6 errors per participant in the control group and 1 error per participant in the experimental group, presumably due to the more effective transcription of numbers by the ASR software compared to the transcription by boothmates in the control group.

3.8. Intelligibility results

Drawing on the evaluation theories proposed by Tiselius (2009) and Carroll (1966), 12 native Italian speakers between the ages of 24 and 69 with no prior training or experience in the field of SI were involved as evaluators. Each evaluator was asked to listen to four short extracts of four different performers, two belonging to the control group and two to the experimental group, totalling approximately three minutes in total for each performer. Each extract was therefore listened to and evaluated by 3 different evaluators, according to the following scheme:

EVALUATOR 1	PART A1	PART A8	PART B1	PART B8
EVALUATOR 2	PART A2	PART A7	PART B2	PART B7
EVALUATOR 3	PART A3	PART A6	PART B3	PART B6
EVALUATOR 4	PART A4	PART A5	PART B4	PART B5
EVALUATOR 5	PART A1	PART A2	PART B1	PART B2
EVALUATOR 6	PART A3	PART A4	PART B3	PART B4
EVALUATOR 7	PART A5	PART A6	PART B5	PART B6
EVALUATOR 8	PART A7	PART A8	PART B7	PART B8
EVALUATOR 9	PART B3	PART A3	PART B1	PART A4
EVALUATOR 10	PART B2	PART A5	PART B4	PART A6
EVALUATOR 11	PART B6	PART A7	PART B8	PART A8
EVALUATOR 12	PART B5	PART A1	PART B7	PART A2

Table 2: Distribution of audio extracts among the evaluators

The evaluators were required to assess the intelligibility of each interpreting performance on a 6-point scale, where 1 was totally unintelligible and 6 perfectly intelligible, and the impact of pauses in the renditions, on a 5-point scale, with 5 indicating the most adverse impact. The results showed that the intelligibility score of both groups was identical, with an average score of 3.375 points out of 6, corresponding to a comprehensible rendition despite syntactic errors and poor lexical choices.

However, the analysis of the answers concerning pauses in the pronunciation of numbers in the TT showed a problematic factor related to the software's display of the numbers on the screen. The control group recorded an average score of 2.5 out of 5 points concerning the negative impact of pauses on the overall quality of interpretation, while the experimental group recorded a score of 3 out of 5 points. The types of pauses

were also different between the two groups, with the control group having a higher rate of long, empty pauses and the experimental group having a prevalence of short pauses[3].

The analysis of the intelligibility results seemed to suggest that the ASR system may have improved the naturalness in the delivery of the interpreting trainees and their confidence in returning the numbers in the target language.

4. Conclusions

The aim of this study was to analyse the impact of new technologies in the domain of conference interpreting, with a specific focus on the advantages and disadvantages of employing a CAI tool featuring integrated ASR software. The research sought to investigate the quality of output and handling of specific elements, such as numbers, and address the question of whether in-booth technological support tools could replace the work of the boothmate.

Preliminary analyses indicated that the software achieved an accuracy rate of approximately 80% in transcribing numbers.

With regard to the accuracy and completeness of the information content detected in the participants' renditions, the experimental group that received assistance from the software displayed slightly higher accuracy rates and fewer omissions compared to the control group. However, the latency of the software in transmitting transcriptions of numbers on the screen presented a problematic factor that reduced the possibility of using the hints provided while interpreting and affected the occurrence and distribution of omissions.

The quality of the TTs was then assessed in terms of intelligibility, which was found to be low for both groups. Various factors, including the high density of numbers in the ST, participants being students rather than expert users, human-machine interaction aspects, and tool usability, might contribute to this outcome. Nonetheless, it is important to note that the results suggest that external support, whether human or technological, cannot ensure precise interpreting or rendering of numbers.

As students and professionals alike become more interested in using computer assistance for interpreting, it is clear that becoming more familiar with these technological tools could lead to a shift in perception regarding their usefulness and potential benefits. To this end, it seems reasonable to suggest that a more comprehensive and focused training period could help current and future interpreters adjust their interpreting techniques to better handle software limitations, such as by developing specialised strategies to minimise the impact of software latency.

Despite the exploratory nature of our study and the presence of various methodological limitations and constraints, as mentioned above, we firmly believe that this subject deserves deeper investigation and could prove valuable for better integrating state-of-the-art CAI tools into the curriculum of trainee interpreters.

As a final reflection on the overall quality resulting from the twofold approach used to evaluate the TTs, the results of our study seem to suggest that replacing a

3 We opted not to provide guidelines to evaluators on distinguishing long and short pauses, wanting to capture their personal perception without overly binding criteria.

human boothmate with a digital boothmate would not lead to a significant decrease in the quality of a novice interpreter's rendition. In fact, it may even slightly improve it.

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Good morning, everyone and thank you for being here. For my presentation, I will focus on the most important labour market indicators during the last years to give you an overlook on the EU employment rates, comparing pre-pandemic levels with the most recent data, based on surveys conducted in the first months of 2021.

Before the COVID-19 crisis hit, the EU was experiencing a steady, though decelerating employment growth. Continuing the positive performance in the labour markets that started in 2013, employment further expanded in 2019, reaching a record level at the end of the year. Reform efforts by Member States in the aftermath of the financial crisis contributed to this job-rich economic growth, though challenges persisted in some Member States and regions.

The COVID-19 pandemic reversed this trend, suddenly changing our ways of working and living. It has taken a significant toll in terms of human lives and caused an unprecedented economic shock, with great social impacts. The response by national authorities and European institutions has been swift. Member States have provided support to the groups and sectors that have been particularly affected. The implementation of these measures has, so far, avoided the emergence of a massive employment and social crisis across the EU. Yet, many uncertainties remain, especially about how long the pandemic will last, when a sustainable economic recovery will materialise, and about the consequences for people in vulnerable situations. The situation differs across countries, and Member States that already experienced serious socio-economic challenges before the pandemic are now even more exposed to vulnerabilities.

So, let's look at the situation in more detail.

Though signs of slowdown in employment growth were already evident in the second half of 2019, most labour market indicators have interrupted their positive trend at the outbreak of the pandemic. Total employment, which had increased by 15 million since mid-2013, fell by 6.2 million people between the fourth quarter of 2019 and the second quarter of 2020. This has been the sharpest decline ever observed over two successive quarters. It then increased slightly by 1.9 million in 2020.

According to Eurostat, the statistical office of the European Union, 13.374 million men and women in the EU, of whom 11.274 million in the euro area, were unemployed in March 2021. Compared with February 2021, the number of persons unemployed decreased by 85.000 in the EU and by 76.000 in the euro area. Compared with March 2020, unemployment decreased by 2.359 million in the EU and by 1.931 million in the euro area.

The swift adoption of short-time work schemes and other labour market retention measures, together with a decline in activity rates, have so far led to only a moderate increase in the unemployment rate. In this regard, youth unemployment, regarding people aged 15-24, increased more markedly than unemployment for other age groups, and the share of young people neither in employment, nor in education or training (NEET) soared.

In 2021, the youth unemployment ratio was 6.5%, regarding all people aged 15-24 who were unemployed. This share amounts to 16.6% if only the young people in the labour force are taken into account, the so-called youth unemployment rate. The youth unemployment ratio in the EU ranged from 2.2% in Czechia to 13.4% in Swe-

den, while the youth unemployment rate ranged from 6.9% in Germany to 35.5% in Greece.

Non-EU born workers have also been severely affected. These outcomes vary significantly across countries, regions and sectors and require close monitoring and policy efforts to avoid a more negative impact in the medium to long term. Before the crisis, this indicator, in the age group 20-64, rose steadily until 2019. It then dropped to 62.7% in 2020, corresponding to a decrease in absolute terms of 1.5 million persons, from 16.5 million in 2019 to 15 million in 2020, and almost 9% in relative terms.

As already mentioned before, massive use of short-time work schemes helped mitigate the consequences of the shock to the labour market, therefore the hours worked per worker fell abruptly, by 11.7% in 2020 compared to the last quarter of 2019. At the same time, absences from work increased significantly, from 9% in 2019 to 18.7% in 2020, and around half of this increase is due to temporary lay-offs.

Moving on to rates by sex, the gender gap in employment stagnated and the one in pay narrowed over the past five years, but the crisis has created new risks and underlined the need for reforms and investments. While female employment rates increased, the gender gap in pay has only improved slightly since 2013, in spite of the higher average educational attainment of women. In 2019, the employment rate of women has increased to 67.3%, 0.8 percentage points more than in the previous year. Indeed, women's over-representation in lower paid sectors and occupations, as well as in part-time employment, makes them particularly vulnerable in the labour markets struck by the COVID-19 crisis. Gender gaps are larger for women with young children: in 2019, they faced a negative employment gap of 14.3 percentage points in contrast to women without children, whereas men in the same situation saw a positive gap of 9.6 percentage points. Employment outcomes are poorer in particular for older, non-EU born and low-skilled women and women with disabilities. Female labour market participation could be strengthened by reforms and investments in early childhood education and care as well as long-term care services, and work-life balance policies.

Lastly, before the COVID-19 crisis, the number of people at risk of poverty or social exclusion was declining for the seventh consecutive year, though slow progress in countries with higher poverty rates hints at challenges for social protection systems. In 2019, more than 91.3 million people were at risk of poverty or social exclusion, which is 3.39 million fewer people compared to the previous year. These positive developments were nonetheless showing some deceleration in many Member States. The COVID-19 crisis, with the associated increase in unemployment and inactivity, makes the achievement of the Europe 2020 target of 20 million fewer people in poverty or social exclusion, compared to 2008, highly unlikely. The current situation poses increased challenges for social protection systems, in particular in relation to sustainably ensuring adequate incomes and the provision of quality services especially for all those who need them most.

If you'd like to know more about this, please visit our website where you can read everything about employment statistics in the EU and have a look at the data. Thank you for your attention.

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Professional and social impacts of Viterbo University's undergraduate community interpreting certificate program: Perceptions of recent graduates and community partners

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Abstract

Although community interpreting has professionalized significantly in the US in recent decades, the depth and effectiveness of training and education in the field has been varied and difficult to measure. This study examines the Community Interpreting Certificate at Viterbo University and its influence on graduates and community stakeholders. Surveys of both alumni of the program and community partners are analyzed via mixed-methods (quantitative and qualitative analysis of survey responses) to better understand the impact of this program on regional, national, and immigrant populations. Results reveal that a curriculum that incorporates High-Impact Practices (HIPs) and formative assessment has the potential to empower communities to center the voices of the underrepresented in public and private spheres. Thus, trained interpreters are positioned as powerful community agents, instruments of cultural change, and direct contributors to language justice.

Keywords

Action research, community interpreting, High-Impact Practices, language justice, social constructivism.

Introduction

The state of community interpreting in the US today is influenced by a plethora of factors that includes state and federal language access laws, certifying agencies, and professional associations. The cultural knowledge, awareness, and ideologies specific to regional communities also significantly impact the way interpreting as a profession continues to develop (Sawyer 2004). The growing number of training options available and the professionalization of the field over recent decades have created a need for continued research in the realm of assessing training for community interpreters. Inevitably, such research must consider methods and strategies carried out in the interpreting classroom and how such education is perceived to affect students beyond their studies. The impact of trained community interpreters in local communities underpins the quality of language access in private and public spheres.

Within Translation and Interpreting Studies (TIS) there is a growing body of literature that encourages action research (AR) for the purpose of examining teaching and practice, while also forewarning the need for careful design and implementation when employing this methodology (Angelelli/Baer 2016). Because AR is a methodological approach common in educational research and often employed with the objective of curriculum innovation (Hale/Napier 2013), it has been employed for the purpose of the present study as a means of program assessment for Viterbo University's Community Interpreting Certificate program. The action research "spiral," as defined by Burns (2010), requires recurrent planning, information collecting, data compilation, and implementation of new strategies. AR also aligns naturally with reflective teaching practice that is carried out for continual course, curriculum, and program improvement. With the joint, overarching objectives of reflective teaching practice and program enrichment, the action research of this study specifically examines (1) graduates' perceptions of the certificate and its influence, and (2) the insights of community stakeholders who worked directly with the former students. By involving both recent graduates and external community members in this research process, the conclusions of this article can be viewed as the co-construction of knowledge, as a practical social engagement, and ultimately as a means for teaching and program improvement.

This study departs from a social constructivist approach, born within the fields of social psychology and sociology (Gergen 2019; Berger/Luckmann 1966). Within the realm of education, social constructivism points to the collaborative nature of learning within the classroom and, perhaps more importantly, in relationship to the larger community within which students practice, work, learn, and live. This shifts traditional teacher-student power dynamics toward the student-focused classroom where learners actively participate and collaborate in their learning processes, make sense of their own experiences, and eventually make their own offerings to co-constructed knowledge (Amineh/Asl, 2015). Within the field of translation studies, Kiraly asserts, "The development of true expertise can only be developed on the basis of authentic situated action, the collaborative construction of knowledge, and personal experience" (2014: 3). Therefore, social constructivist epistemology, in the present study, seeks to gather information around *how* community interpreting is co-constructed in this specific community between students and other external stakeholders participating in the program.

1. Literature review

As interpreter training programs and credentialing systems around the world advance, the need for more specific and extensive training in community interpreting has grown and gained more attention. Indeed, according to the International Organization for Standardization (ISO) guidelines, community interpreting is considered "… a profession, not … an informal practice such as interpreting performed by friends, family members, children, or other persons who do not have the competences and qualifications specified in this International Standard or who do not follow a relevant Code of Ethics" (ISO 2014). Therefore, the professionalization of the field has led testing and certification processes to come together with interpreter education (Hlavac 2015) so that interpreting programs, in many ways, guide trained interpreters to pass certification exams. Though credentialing systems are increasingly requiring or strongly suggesting complementary training and development, in some countries, certification still only requires one-time evaluations of interpreting competencies (Hlavac 2015). The growing scope of skill sets that are required to certify interpreters, therefore, reflects the bi-directional relationship of interpreter education and certification.

Beyond market-specific conditions driven by certification exams, the quality of the curriculum in interpreting programs is also influenced by a plethora of other cultural, legislative, political, organizational, and institutional intersections that may vary by country or region (Sawyer 2004). In the US, professional associations such as the American Translators Association (ATA) and the National Council on Interpreting in Health Care (NCIHC) are examples of important stakeholders that shape how the interpreting profession and interpreter training evolve and develop. These professional associations develop codes of ethics and standards of practice, are involved in local and national politics that advocate for language access for limited-English proficient (LEP) individuals, and provide professional development for interpreters. As part of a long-term strategy for advancing the field of interpreting in healthcare, for example, the NCIHC released National Standards for Healthcare Interpreter Training Programs (2011), which provides direction for interpreters, educators, and administrators. In turn, many educators use standards and recommendations from professional associations as a starting point for training (Fadeeva 2011).

In the realm of higher education, a significant study on one graduate translation and interpreting program argues that effective interpreting studies education is preceded by thoughtful curriculum design and assessment (Sawyer 2004). The present study, though focused on a smaller, undergraduate interpreting certificate, also seeks to evaluate both curriculum and assessment components of Viterbo's program. Here, the focus is on student and community perceptions of the program's influence as well as the application of the skills former students gained beyond graduation. Three significant teaching challenges highlighted in Sawyer's study are essential when examining Viterbo's smaller undergraduate certificate: (1) designing curricula and the need for their regular revision; (2) effective and recurrent assessment; (3) successful pedagogical practices (i.e., teaching methods) (*Ibid*: 5). These essential elements of any university interpreting program are studied in the present article by examining student-centered High-Impact Practices throughout the curriculum.

High-Impact Practices (HIPs), endorsed by the Association of American Colleges and Universities (AAC&U), are defined as time-intensive curriculum compo-

nents that encourage learning and growth beyond the classroom, are rooted in significant connections with faculty and other students, foster cooperation with diverse individuals, and are supported with consistent and meaningful feedback (Kuh 2008). The incorporation of HIPs in undergraduate curricula has also been proven to promote deep learning and a variety of positive outcomes for undergraduate students, particularly when it comes to historically underserved minority groups in higher education (AAC&U 2023). As a strategic way to strengthen and grow the Community Interpreting Certificate at Viterbo, a HIP framework was integrated across the curriculum in alignment with student learning outcomes. The HIPs examined in this article include the fostering of collaborative projects and learning communities, e-portfolios, community-based learning, internships, and diversity/global learning. Each of these HIPs will be described in the results and discussion section of this paper, supported by the literature on these approaches and illustrated with reported student perceptions.

In terms of dialogue interpreting specifically, current literature calls for competent interpreting instructors, education, and training informed by research (Angelelli 2017). Cirillo and Niemants (2017) encourage continued empirical studies around curriculum components and assessment that may advance high-quality interpreting education and practice. In this study, the teacher and administrator of the interpreting program is also the researcher, who aims to effectively train students by bridging research, theory, and practice. While the positionality of this action research is subjective, it may also lead to quality improvement of the curriculum, assessment, community outreach strategies, and overall impact of such education. AR has been proven to center the voice of students and improve the quality of the curriculum (Kur *et al.* 2008), the aim of AR in this study is also to better understand how the HIPs of this interpreting program have been effective (or not) in the quest for language justice in our communities. As Mehl *et al.* (2021: 1) affirm:

> Language Justice is the right that we each have to communicate in the language(s) we feel most powerful; [...] Language Justice brings an analysis of power and privilege to the practices of interpretation, translation and facilitation; it […] seeks to create and sustain spaces where people can speak the language in which they dream, joke, cry, and hope, and where the intimacy of language as a part of who we are is valued and upheld.

The above definition in mind, and in conjunction with research-based pedagogy, this Community Interpreting Certificate program aspires to promote language justice within communities by empowering non-professional interpreters and student-interpreters to practice more effectively.

2. Methodology

This 13-credit certificate consists of four undergraduate courses (Interpreting Principles, Interpreting for Cultural Humility and Ethics, Interpreting for Medical and Social Contexts and Interpreting for Business and Legal Contexts). All courses include skill-building exercises in the three major modes of interpreting (consecutive, simultaneous, and sight translation). The certificate also includes a practicum experience

in which students observe a certified interpreter in the community for 10 hours and practice another 30 hours of interpreting under supervision.

It is important to note that while the researcher of this study was the sole professor, curriculum designer, practicum coordinator, and director of the Community Interpreting Certificate program of all 8 cohorts of students studied here, the curricular components of each cohort varied slightly, based on students' particular needs (specific grammar or vocabulary support based on language profiles, hard or soft skills based on life or professional experience, etc.). As the program has evolved and as a function of reflective teaching practice, assignments have been changed, modified, added, or eliminated. At times, challenging external factors (a global pandemic, expulsion of immigrants in area communities, etc.), also led to differences in teaching methods, classroom dynamics, activities, or assignments from one year to another.

Though previous empirical research had been done on specific curriculum components of this certificate, such as undergraduate research and unscripted role-playing in a simulation setting (Pinzl 2023; Pinzl forthcoming), an overall assessment of the entire program had yet to be carried out. Thus, two surveys were designed for this study, one for graduates of the certificate and one for community partners. The overarching objectives of these surveys were to (1) examine how alumni of the Community Interpreting Certificate at Viterbo University perceived their experience in the program and its influence in their work as professionals after graduation and (2) examine how community partners perceived working with the students, graduates, and faculty of the interpreting program.

In this study, graduates from 8 academic cohorts (2015-2022) completed student surveys. Community partners included those that had close contact with the Community Interpreting Certificate from 2015 to 2022 (individuals from three hospitals and clinics, four school districts, three small businesses, two non-profit organizations, one national organization, one law firm and one bank).

The demographics portion of the surveys allowed participants to enter their understanding of their own identities in a text box rather than selecting from boxes constructed by institutions or other social norms. They were asked to fill in statements such as "in terms of (ethnicity, race, sexual orientation, etc.)___, I identify as: _____." While an in-depth exploration of the intersectionality of survey participants may help us to see the complex and compounding challenges that underrepresented students face (Crenshaw, 1989), the focus of the present study was limited to observing the overall outcomes of the student experience. However, investigation about how differing identities of survey takers may be linked to their experience with community interpreting is a compelling topic for further research.

After demographics, the student survey examined the students' (1) experience in interpreting before and after the program, (2) perception of curriculum components, (3) perceptions of their internships on their future endeavors, and (4) awareness of notions related to diversity, equity, and inclusion in the communities they have served. As for community partners, surveys explored community members' (1) experience in working with Community Interpreting Certificate students, graduates, and faculty, (2) perception of working with student-interpreters during their internship experiences, and (3) awareness of notions related to diversity, equity, and inclusion in the workplace. Because the graduate survey (comprised of 43 open-questions, 30 closed questions, two multiple-option dropdown questions, and one Likert scale question) in-

cluded an extensive section about curriculum components, it was significantly longer than that of the community partners (28 open questions, 13 closed questions, two multiple-option dropdown questions, and one Likert scale question).

The surveys were distributed via email with the software Qualtrics and kept open for 19 days. Since the researcher was also the trainer in this study, measures to reduce the risk of significantly influencing the respondents were necessary. The first page of the survey was an information and consent form, which included survey objectives, risks and benefits of participation, data privacy, and the rights of participants.[1] Only former students who had completed the program were invited to participate in the survey; current students were not allowed to participate to avoid potential skewing of results due to the fear of academic repercussions. Since both closed and open-ended questions were included in the survey, mixed methods were used to analyze results. More specifically, the quantitative results of yes / no or Liker-scale questions were complemented with the thematic qualitative results revealed through open-ended questions (670 qualitative responses from former students and 211 from community members). Notably, the teacher / researcher of this study maintained active relationships with most graduates and community partners over an eight-year time period. This likely accounted for the particularly high survey return overall, with a 77% (41 of 53) response rate of graduates of the Community Interpreting Certificate (2015-2022) and a 76% (19 of 25) response rate from community partners. The number of student graduates surveyed was more than double that of community partners. This, in addition to the fact that the community partner survey was shorter, accounted for significantly fewer qualitative insights of the latter, as observed in the following section.

3. Results and discussion

3.1 Graduates of the Community Interpreting Certificate

The following section includes four sub-sections. The first illustrates graduate demographics. The second reveals graduates' experience with interpreting before enrollment and after program completion. The third examines graduates' perceptions on the high-impact curriculum components of the certificate. This section contains additional sub-titles that outline the four high-impact practices on which students provide feedback (collaborative projects and learning communities, e-portfolios, community-based learning, and diversity/global learning). The fourth and final sub-section reports the challenges, growing edges, and resiliency that students reveal as they made their way through this interpreting certificate program.

1 The rights of participants stated the following: "Participation in this study is entirely voluntary and participants may choose to not participate without penalty. Participants also have the right to change their mind and withdraw from the study even after clicking the informed consent 'next' button below. All participants also have the right to withdraw and have their data deleted without penalty if they change their mind. Your decision to participate in this study will not affect your relationship with Viterbo University in any way."

3.1.1 Demographics

The demographics of the interpreting graduates studied here reflect exceptional diversity, with largely differing life-experience and identities. The language pairs students worked with were mostly Spanish <> English and occasionally French <> English. Ranging from the ages of 18 to 71, some students enrolled in the program as early as their junior year of high school. Others were adult bilingual community members looking to enhance their skills, supplement current employment, or transition into a new career or retirement. The classroom, therefore, includes bilingual youth who have served as communication brokers for their families since childhood, single mothers, and older professionals with years of experience in the workplace. Such diversity in age, life experience, and professional skills provides an enriching space for exchange, reciprocal mentorship, and learning in the interpreting studies classroom.

In terms of country of origin, 41% of surveyed graduates were born outside of the United States mainland (32% in Mexico, 2% in Puerto Rico, 5% in Colombia, and 2% in China). Regardless of whether born within or outside of the United States mainland, many students in this program grew up speaking Spanish in the home, and thus, are considered heritage speakers. Indeed, 45% percent of respondents indicated Spanish as their first language and 50% English, comprising a richly diverse and complimentary classroom for linguistic skill-building.

As for ethnicity, most students identified as Hispanic (54%), followed by non-Hispanic (37%). In terms of race, 65% of respondents self-identified as White or Caucasian, 3% as Mestiza and 3% as Asian. Twenty-nine percent were grouped in a "non-traditional race" category since the designations they self-identified (Mexican, human, etc.) are not usually included as socially constructed race options. Twenty-six percent of surveyed students had an immigration status other than US citizen such as undocumented or DACA (Deferred Action for Childhood Arrival) status. While individuals of any immigration status may enroll in the Community Interpreting Certificate at Viterbo, such factors may influence the type of opportunities available to certificate program participants after graduation. While the complex details of immigration statuses are beyond the scope of this paper, in order to understand the importance of this certificate in the community, it is essential to have an idea of the diverse landscape of immigrant identities within the program.[2]

3.1.2 Experience before enrollment and after program completion

Given the aforementioned demographics, it is not surprising that 68% of graduates indicated that they interpreted for their family or community before enrolling in the Community Interpreting Certificate. Indeed, many graduates are in consistent contact with, or living within, immigrant communities in the United States, thus responding to the immense need for dialogue interpreting within such spaces. As is documented in non-professional interpreting research, the inherent position and socialization of

2 For a visual representation of key demographics of survey participants, see Figure 1 in section 3.2.1.

such informal language brokers contributes significantly to the social inclusion of immigrant communities (Antonini *et al.* 2017). It may also be noted that bilingual youth may often feel obligated to help their families (Angelelli 2010). Indeed, 34% of survey respondents offered information specifically about interpreting for their families as children. One confirms that they interpreted "[j]ust for things like doctor's appointments, at a store, school related activities like conferences, and other little things like helping my parents talk to English speakers." In essence, graduates who were previously child language brokers often interpreted to facilitate contact between their families and the mainstream public from a young age, contributing to their extensive first-hand knowledge about the stakes of community interpreting, even if considered within the broader field of TIS as non-professional interpreters.

Some respondents who interpreted non-professionally before enrolling in the program were also students who did not live within the context of immigrant communities as native speakers or heritage speakers of Spanish, but who had exposure to international or immigrant individuals in other US contexts, where immigration is a constant contributor to local communities. One graduate explains, "For 15 years I picked apples during the autumn at a commercial orchard. As an '*ad hoc*' interpreter, I regularly assisted conversations between my *hispanohablante* co-workers and the orchard manager." Even internationally, several graduates elicit memories of family vacations or other experiences abroad where they facilitated language access between US English-speakers and locals in countries outside of the United States.

Though many students who enrolled in this community interpreting certificate interpreted long before beginning the program, currently only 46% are working in the field. That said, 85% affirmed they had interpreted for family or community members at some point after completing the program. Overall, graduates report having interpreted in an ever-growing radius as they continued into their professional lives: a total of four different US states (Wisconsin, Minnesota, Iowa, and Florida), 26 different US cities, and one city in Nicaragua. These interpreters have provided language access in eight clinics, hospitals, and community health centers; six public-school systems and two universities; five businesses and organizations; four local government agencies; and one US military base. Furthermore, several interpreters work as freelancers for interpreting service provider agencies, and 27% report volunteering as interpreters in some capacity. Indeed, the scope of services that are being provided over time in a range of local, rural, urban, and even international spaces is remarkable, even if most graduates are not currently working consistently in language access services.

Overall, graduates are also currently working in a large spectrum of fields outside translation and interpreting (T&I), some finding ways to make use of the communication and facilitation skills gained from the certificate program even if not formally interpreting. They found work as real estate agents, export specialists, store managers, executive and legal assistants, financial support coordinators, national field support supervisors, and employees in international business. Others hold positions in local schools, healthcare, or research. Those who are not currently working or volunteering as interpreters mostly attributed their lack of participation in the field to conflicts with other work, school, or full-time parenting. Several mention their previous work in interpreting as a gateway toward another career or report that they hope to interpret in the future. Some graduates expressed that they did not find their language skills to be sufficient or that they lacked a connection to the communities in need of language

access for their language pairs. However, language access advocacy may still remain a focus in their current professional roles as exemplified here:

> After finishing the Interpreting Program, I continued my education, followed by starting a career. Though I am interested in interpreting, I am concerned that my skills have regressed and that I also do not know my community in the same capacity that I did while in the Interpreting Program and living in the La Crosse area. I also feel that my skills/education are better suited for interpreting/language advocacy.

Finally, respondents raised the issue of low pay and lack of opportunity, particularly for students whose legal status restricts their access to most formal work in the US. In light of the success and obstacles that former students experience beyond the program, we examine what curricular elements and high-impact practices of the certificate are perceived to have impacted graduates in their current endeavors in the following section.

3.1.3 Perceptions on High-Impact Curricular Components

3.1.3.1 Collaborative Projects and Learning Communities

Collaborative projects are described by the AAC&U as having two principal objectives: (1) learning to problem-solve and cooperate as a team, and (2) gaining insight and understanding via active listening about individuals with differing lived experiences and backgrounds (2023). Learning communities are established when such collaboration occurs over two or more linked courses as a group, and when shared topics "that matter beyond the classroom" are explored from the perspective of various disciplines (*Ibid*.). Within interpreting studies, Krystallidou et al. (2018) affirm the benefits for all participants of collaborative interprofessional practice carried out via role-playing and subsequent feedback exercises.

Indeed, the collaborative curriculum component that students found most beneficial of the certificate program was the role-play scenarios carried out in the clinical simulation lab[3], which resulted in the creation of a learning community with students from other disciplines (i.e., nursing, social work, other pre-health professions tracks). These simulated exercises took place throughout the entire sequence of coursework, giving interpreting students the opportunity to practice, assess, and work to improve their performance over the academic year(s) that they were enrolled (Pinzl forthcoming). Eighty-five percent of graduates reported these hands-on simulated real-world

3 Viterbo's Clinical Simulation Learning Center is equipped with simulation technology to prepare future health professionals to provide excellent patient care and practice medical scenarios before entering their careers in the real world. In the role-plays carried out here, nursing, social work, pre-medical and interpreting students carried out their corresponding roles to care for community members with limited English proficiency (who acted as patients). For a detailed account of these role-plays, see Pinzl (forthcoming) in the references section of this paper.

experiences to positively influence their future endeavors, fostering an understanding of the stakes of the field and explaining how these scenarios led them to find work or additional research projects within the field. Others mention how these scenarios helped them to see their proficiency levels more clearly, work through feeling uncomfortable, gain confidence, and practice the vulnerability of peer-feedback in a low-stakes environment as illustrated here:

> It was great practice, to know how I would work in a real-life scenario. We would sometimes challenge each other so we could prepare for real life situations. … [H]aving classmates observing and giving feedback was so helpful. Until this day, I go back to my practice and what I learned, especially in regards to professionalism, boundaries, and how to go about an uncomfortable situation.

By role-playing in the simulation lab, students lowered their affective filters and found "a safe place to make mistakes," where they felt they constructed understandings "without being embarrassed." Because interpreting studies education research affirms that conversation in concert with classroom role-playing may offer students authentic ways to problem solve interpreting scenarios (Niemants/Stokoe 2017), these simulated role-plays are always followed by debriefing with peers and the instructor and recorded via the simulation lab equipment. Graduates asserted that follow-up assignments that required them to watch their own performance gave them the opportunity to self-reflect, develop their skills, observe their progress, and carry collaborative skills into their professional careers.

3.1.3.2 E-portfolios

E-portfolios are a formative learning and assessment process with positive outcomes for students and teachers (Pujolà 2019). As outlined by the AAC&U, electronic portfolios guide students to compile their work over time, observe and analyze their personal and academic development, and share selections with others (peers, teachers, etc.) (2023). The compilation of e-portfolios was required for all graduates of the interpreting program as a high-impact, student-centered curriculum and assessment component. From the lens of a social constructivist approach in the T&I classroom, assessment for the purpose of students partaking in the learning process has become the recommendation in lieu of a teacher's assessment of student learning (Fadeeva 2011). Research in T&I training affirms that effective assessment methods must be carried out regularly throughout a curriculum and should encourage students' participation in the process, fostering self-assessment skills that can reach beyond the time a student is enrolled in a program (Fadeeva 2011; Sawyer 2004).

Students of the Community Interpreting Certificate uploaded weekly audio recordings of their oral interpreting exercises into a virtual cloud that was also accessible to the instructor. Then, students were frequently required to listen to their recordings, reflect on their performance, and identify strategies for continued improvement. These reflections served as a foundation for constructive dialogue with the instructor throughout each academic semester and encouraged greater metalinguistic and metacognitive self-awareness. Seventy-two percent of graduates found e-portfolios

to have influenced them after graduation, indicating improved self-assessment skills and abilities to observe their personal progress. One graduate affirmed, "It [the electronic portfolio] had such a great influence on me. I still look back at my recordings to fix what I used to be not so good at." Several also highlighted how their e-portfolio helped them to prepare for the oral portion of the national medical interpreter Certified Commission for Healthcare Interpreters (CCHI) exam.

3.1.3.3 Community-Based Learning

Community-Based Learning is an opportunity in which students apply knowledge and skills learned in class to real-world settings and then debrief these experiences with peers in the classroom (AAU&C 2023). The internship experiences of students of this interpreting program are considered community-based learning because they are carried out locally and without remuneration. Students' personal and peer-reflections about these internship experiences are carried out in the classroom in addition to a final reflection / capstone project. While some students wrote final papers about their practicum experience in the community, others designed a final poster project that they then presented at the interpreting symposium and graduation celebration at the end of the program.

Many graduates named their internship as the most beneficial component of the interpreting certificate, primarily emphasizing the benefit of real-world experience, practice, and skill building, which led students to see their own improvement. Moreover, internships seem to help boost student confidence and overcome the anxiety of starting a career as an interpreter. Community connections and mentorship from supervisors and preceptors were also considered invaluable as exemplified here:

> During my internship, I learned more than maybe any other time in my adult life. I was able to shadow and interpret under the observation of professionals from at least five countries, all with varied dialects and interpreting styles. The environment of my internship was one of deep mutual respect and daily continuing education. People in my department consistently ask one another's opinions regarding interpretation and ethical dilemmas. I also was able to receive immediate feedback when I interpreted, while having a team of people who believed in me, supported me, and were there to step in if I needed help. It also led to me being hired as an interpreter into the same department. Interning […] was honestly one of the best decisions of my life.

Indeed, 88% of surveyed graduates report that the skills that they learned within their practicum were applicable in their lives beyond the program. Specifically, they reported gaining professional, memory and interpersonal communication skills, expanding on linguistic and cultural awareness, learning to affirm boundaries, and time management. In terms of language and presentational skills, several former students report advances in public speaking and improved vocabulary when it came to specific fields and linguistic varieties (of Spanish). They assert that their internships allowed them to practice strategies and problem-solving when it came to unfamiliar terminology. Though general interpreting skills were covered thoroughly within the coursework of the interpreting program, within their internships, graduates reported truly practicing

their abilities to manage emotions, adapt to changes, listen actively, increase speed and fluidity, and take notes.

3.1.3.4 Diversity / Global Learning

The High-Impact Practice of incorporating diversity or global learning into the curriculum consists of fostering the exploration of cultures and perspectives that contrast students' own experiences. The AAU&C (2023) explains that global learning incorporates diversity that occurs nationally and/or internationally, examines challenging differences that result in inequities (racial, ethnic, gender-based, etc.) or ongoing global issues pertaining to human rights, freedom and/or power. Furthermore, global learning may be enhanced via community experiences related to DEI.

Ninety-four percent of surveyed graduates found they had learned something new about diversity, equity, and inclusion (DEI) while enrolled in the program. Throughout the certificate, students examine social identities and their relationship to privilege and power, systemic injustices, and contrasting cultural and personal views on ethics. Many referenced improved cultural humility and empathy for underrepresented communities, particularly LGBTQ+ populations. One respondent posits that the most beneficial or useful element of the Community Interpreting Certificate was:

> Exposure to the systemic and historic structure of interpreting and how it relates to modern systems of power and socio-economic status. Learning the real-life implication of language and how LEP speakers, especially of languages of limited diffusion, are disadvantaged despite there being laws to provide assistance to them.

Language access laws were explored within the framework of language justice, which supports the beliefs that individuals have a right to express themselves in the language of their choice, that dialoguing across language allows for co-creation of aspirations, experiences, and communities, and that the de-centering of English in mainstream society is a form of empowerment before English dominance (Mehl *et al.* 2021). The graduate's comment above underscores a deep understanding of the concepts of equity, inclusion, and language justice as related to the field of community interpreting.

Equally important, we see a recurrent inward gaze, indicating self-reflection, as students move through the world with their own identities. Indeed, Angelleli (2010) encourages instructors of bilingual youth, like the many in this interpreting program, to foster self-reflection on students' bilingualism with the objective of supporting them in exploring their own identities. Several young heritage speakers of Spanish in this study made comments about how contact with a variety of Spanish dialects helped them to understand language diversity. One such individual reports, "[T]here are so many different ways of saying things in Spanish. Just because someone speaks Spanish doesn't mean they speak the same Spanish as you". One L2 Spanish-speaker also explains, "Listening (and being part of the discussion) with peers of racially and ethnically diverse backgrounds […] helped me reflect on my own privilege". Apart from identity-building and cultivating respect for difference, graduate comments also affirmed that exploring other perspectives allowed them to improve their critical thinking, ethical decision-making, and capability to remain neutral in the role of interpreter.

Beyond the program, graduates were also able to identify problems or solutions in their current professional lives as related to DEI. Systemic and organizational issues in the form of racism, discrimination, and lack of equal opportunity were most salient. These former students offered interesting solutions to address structural issues such as creating work groups and data dashboards that could be used to quantify challenges and realities that need improvement in the workforce. A significant number also commented on using clarification and other communication skills as interpreters to address language variance and cultural diversity.

3.1.4 Challenges, Growing Edges and Resiliency

It goes without saying that the topics covered in the Community Interpreting Certificate at Viterbo, particularly as related to struggles around diversity, equity, and inclusion, can be heavy and potentially even re-traumatizing to those who have experienced racism, discrimination, and other inequities in their personal and professional lives. Undocumented students and students of DACA status are particularly vulnerable to high stress levels related to social, economic, and political uncertainties (immigration status of themselves and their families, lack of job opportunities, etc.) that may significantly affect their emotional and mental health (Gámez *et al.* 2017). To better understand how addressing such topics within the field of interpreting affected students, several questions around mental health were included in surveys for graduates. Many revealed that their mental health was sometimes affected negatively, though most of these students expressed a growth mindset, considering the difficulties that they encountered to be a necessary part of the process. The most prominent challenge reported was the stress of completing coursework while juggling the rest of life's obligations (work, family, school, etc.). Several students also mentioned feelings of anxiety or low self-worth as they were challenged by interpreting exercises and assignments. As one person explained:

> I […] started to doubt my capabilities to interpret while in the program. Looking back at it now, I think it was because in the past, I tended to compare myself with others while also having thoughts like "Why aren't you at that level?", "Why are you behind?". As I think about this now, I learned that everyone has their own growth, and it takes time.

Finding space for gentleness and self-care in the process of studying and carrying out community interpreting is a central learning objective for this program. Some graduates did mention their increased awareness of the need to care for their own mental health as an interpreter. One alumnus reflected:

> At times my mental health took a toll when we would discuss difficult topics (mistreatment of LGBTQIA+ communities, the separation and deportation of families, etc.) but I always felt that I had the support I needed to work through it.

While the above graduate felt support, unfortunately 58% of surveyed respondents did not know that they had access to mental health services should they need them at Viterbo, and only 11% reported making use of such services to cope with stress or emo-

tional trauma. This is clearly an area of improvement for this interpreting program, in need of further examination for the well-being of future students.

One means of resilience before such challenges was the overwhelming sense of community reported both internal and external to the program, which seemed to inspire students to complete the certificate. As one recounted, "[…] I made some great friends along the way, and we helped motivate each other. I was always excited to meet every week and see the group". Students also felt inspired by future goals, credentials, and career aspirations in the field of interpreting (i.e., presenting for the CCHI medical interpreting certification). Others had the people in their life and their former experience in mind as they completed the program:

> [It was] My family and people around me that are limited English proficient. They reminded me that in the future, as I use my future interpreting skills, it will give them the confidence to know that their thoughts, questions and opinions are important. I also remembered about my life as a kid when I could not understand English as I had recently entered the United States with my family. I remembered how I felt and that gave me more motivation to continue whenever I started to lose motivation.

The above sentiments align with recent research (Gámez *et al.* 2017) that reflects the grit, resilience, and intrinsic impetus of immigrant students to provide a better life for themselves and their families and communities. Some also cite their parents as motivating factors for finishing, or the help of a professor who was able to encourage perseverance via mentorship. Most salient, however, was the intrinsic motivation students have to build inclusive communities.

3.2 Community partners of the Community Interpreting Certificate

The following section includes two sub-sections that illustrate (1) the demographics of the community partners of this study and (2) their perceptions about working with student interns and graduates of the program. This section helps to triangulate the qualitative survey data of this study to provide a more comprehensive understanding of how this interpreting program has contributed to community-building via quality language access education and services.

3.2.1 Demographics

In this study, community partners were individuals who worked with student-interpreters during their practicum hours, with graduates after their completion of the program, or with the internship facilitator more generally. These community stakeholders held positions within major hospital systems, rural community health centers, free clinics, school districts, small businesses, non-profit organizations, and legal settings. Their job titles ranged from managers, directors, outreach specialists, lawyers, and business owners, to educators, counselors, interpreters, and banking representatives.

Community partners were overall older as compared to former students of the program, ranging from 35-72. In terms of ethnicity, 63% of respondents identified

as non-Hispanic. In terms of self-identified race, 84% of respondents identified as White or Caucasian. As for country of origin, 90% of respondents indicated the United States. The majority (73%) indicated English as their first language. None of the community partner respondents were foreign born or indicated immigration statuses other than US citizens. Community partners also earned significantly higher levels of education than graduates of the interpreting certificate. Fifty-two percent of these survey participants were first generation college students (as compared to 61% of graduates).

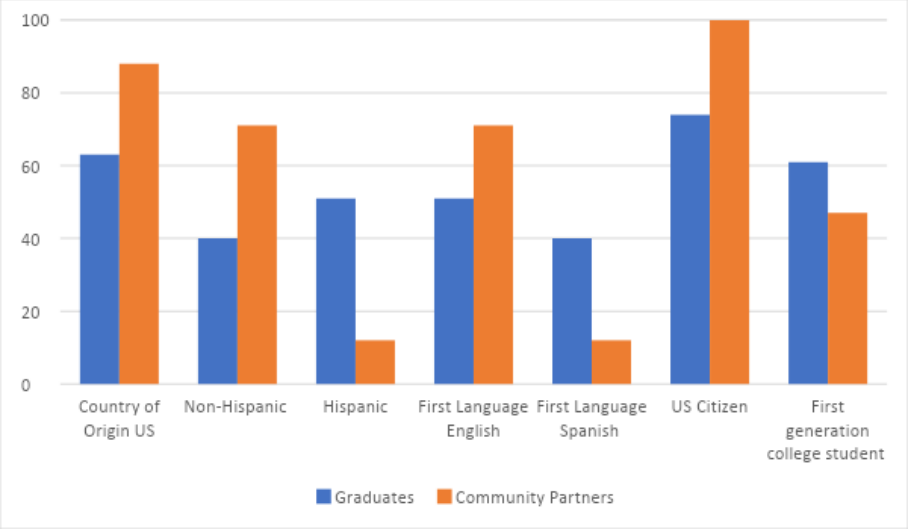

Figure 1. Key demographics of graduates and community partners

Thus, in comparing the demographics of graduates of the Community Interpreting Certificate and community partners of the program as illustrated in Figure 1, it is evident that community stakeholders are significantly more likely to be born in the US (thus US citizens), to be non-Hispanic, and to speak English as a first language. Furthermore, they are less likely to have been the first in their families to go to college. While the privilege and power dynamics highlighted here may be perceived more acutely for some (likely the foreign-born, Hispanic, first-generation former students who speak Spanish as a first language), it is uncertain in what ways these social identity undercurrents play out when community stakeholders and students come together. Further studies may reveal how such differences manifest in professional spaces where language access is required.

3.2.2 Working with interns and graduates

Community partners also report overall positive experiences working with aspiring professional interpreters from the interpreting certificate, with 83% reporting they had learned something new from interns. They also observe students' potential and growth

during their practice in the field, reporting that students "shine and thrive," and commenting on their "increased confidence," their professionalism, and their attention to detail, even as they continue to learn.

When it came to working with graduates who had completed the interpreting program, community partners also described their experiences as rewarding and depicted graduates' services to be of exceptional quality. After working with students from the program, these professionals felt more comfortable and confident about seeking language access services. They also looked forward to encouraging new community members to enroll for the sake of continued community building and developed a greater sense of empathy toward interpreters. Moreover, 83% reported gaining a greater sense of community. As one reflected:

> My perspective on the critical importance of trained and professional in-person interpreters cannot be underestimated. Early on in my professional career, I did not have enough of an appreciation of the impact of professionally trained language support for our patients. I learned through the program how essential that language support is.

The above quote underscores how learning is constructed together between interpreters and community members via contact, engagement, and shared experience.

One important suggestion that arose as a theme in the data was the lack of resources or training for future freelance interpreters. One owner of a language service agency stated that while graduates are "very professional and ready to work hard," they also "might need to know more about how to get freelance work". Several community partners also mentioned students' lack of freelance skills such as setting rates and communicating their needs as independent contractors.

The advanced skills that community partners noticed in interns was broad. Most salient were students' bilingual language skills, their professionalism, and their community and cultural awareness. As one reported, "My interpreter brings her Latino (Mexican) culture and native tongue as a huge advantage. She is a member of the community here". On the other hand, some indicated that students still need to work on improving their professionalism within the field, particularly in regard to learning how to communicate, schedule, take notes, use simultaneous equipment, and understand the communities and cultures within which they are working. Other preceptors underlined the need for continued support of confidence and language skills related to fluency and terminology. These suggestions are valuable insights for program improvement.

4. Limitations

It must be acknowledged that the survey data collected here was exclusively written feedback, and further probing questions were limited by the nature of the instruments employed. With the objective of collecting additional qualitative data for future publication, the next phase of this research aims to employ focus groups or interviews that may reveal more nuanced accounts of the initial information that this study has provided. Future inquiries intend to examine the dramatically differing intersectional identities that exist between graduates and community partners to better understand how these differences might contribute to challenges such as discrimination and op-

pression across communities in the workplace. In particular, focus groups and interviews with community partners may help add more information to the initial qualitative results of this study, because smaller numbers of stakeholders (as compared to graduates) yielded fewer insights in this first phase of research.

The subjectivity of this work is also a limitation, considering that this action research is based on personal and reflective processes of graduates, community partners, and the director / professor of the program. Finally, these findings are clearly non-generalizable in that this study examined one undergraduate program at one university in the United States. Nevertheless, this study compiles feedback from students and community members working with the program between 2015-2022, illustrating the influence of such education on former students and their communities over time.

5. Conclusions

The action research carried out and described in this article via surveys and mixed-method analysis explores the effects of High-Impact Practices (HIPs) and varied assessment methods within the realm of one 13-credit university interpreting certificate. Results illustrate how this interpreting program reaches beyond the immediate spaces within which students learn, with the support of a social constructivist framework that encourages both students and community members at large to collaborate on mutual understandings of how community interpreting manifests and develops within their personal and professional lives. Areas of growth for this program are also revealed through this work, inspiring program improvement and recursive action thanks to the feedback of former students and community members who have engaged with the program. Thus, this study is an earnest attempt to connect curriculum design and classroom methodologies to language justice in our communities as well as to continue to encourage and better support the construction of knowledge around interpreting in both local and farther-reaching communities.

The perceptions of graduates of the Community Interpreting Certificate at Viterbo University reveal that this program was a stepping-stone for their future professional and academic endeavors, helping them to gain confidence and the social engagement necessary for both personal development and professional success. Working within the realms of healthcare, education, government, military, social services, law firms, and other local businesses and organizations, graduates have inserted themselves professionally in communities that extend well beyond La Crosse, Wisconsin. Moreover, their understandings of diversity, equity, inclusion, and language justice were bolstered through their studies, experiences, and the relationships forged via their internships. Overall, a sense of civic engagement and empowerment is notable in these aspiring community interpreters. Community stakeholders also found that their interactions with students, graduates, and program faculty were overwhelmingly positive, fostering a deeper understanding about the experiences of interpreters, underrepresented community members, and language access in community settings. While community partners found interns and graduates to have an excellent foundation of professional skills, they also noted room for growth as these young professionals entered the field.

As for areas of improvement of the interpreting program itself, students may benefit from better training on how to obtain and carry out professional work as free-lance

interpreters. This seems particularly important for undocumented students, considering that several graduates affirm they did not pursue further work in the field of interpreting because they did not see a viable professional path due to their immigration status. Since even undocumented students *could* find ways to work as freelancers in the United States, a more intentional focus on honing freelance skills and opportunities could benefit students with an undocumented legal status as well as their communities. Assuring that students understand where and how to access mental health services is another important way to better support students in future cohorts.

Though many of the graduates studied here began as non-professional interpreters or child language brokers who facilitated communication informally between mainstream and transient immigration populations, this study posits that the integration of a variety of high-impact educational practices into an interpreting certificate curriculum may have noteworthy professional and social impacts on communities in US contexts. Moreover, community interpreting training may serve as a stepping-stone toward more professional interpreting credentials within the field (e.g., court or medical interpreter certification, higher degrees in interpreting or translation) and beyond.

Finally, through the provision of language access, well-trained community interpreters participate in centering the voices of the underrepresented in public and private spheres, leveraging their own lived experiences to bridge linguistic and cultural difference. Similarly, community stakeholders gain understanding around language access with the help of these newly trained language semi-professionals who are agents of cultural change and direct contributors to language justice. In this way, communities may build knowledge together and become empowered to develop and grow collaboratively.

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Accuracy and Beyond: Situated Dialogues for Strong Message Transfer Practice in Interactional Interpreting

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Abstract

This paper discusses the value of bringing to the fore skills-development for accurate message-transfer in dialogue interpreter training. This is the rationale behind the methodology for creating Situated Dialogues, a collection of materials that support message-transfer practice. After several rounds of action-research (some of them publicly funded) today the collection includes 43 dialogues in 8 language pairs. Strengths, limitations, and opportunities for future development of this collection are discussed under the frame of supporting skills for accuracy. I argue that an emphasis on accuracy should be of co-equal importance with attention to the interactional dimension of dialogue interpreting. While a sophisticated understanding through empirical research of the interactional aspect of dialogue interpreting has successfully highlighted the uniqueness of this kind of interpreting (especially as opposed to conference interpreting), interpreting is still interpreting, and its message-transfer essence is both challenging and defining across modes. A collection of practice materials that helps interpreters develop skills for accuracy in an interactionally relevant way and across settings, also effectively highlights the shared stem of all interpreting.

Keywords

Dialogue interpreting, interpreter education, accuracy, interaction, training materials, community interpreting, situated learning.

Introduction

Dialogue interpreting is ubiquitous, and it does not always follow professional standards. In many cases, professional aspirations are simply not present (see Hlavac 2014; Martínez-Gómez 2015; Antonini *et al.* 2017; Gil-Bardaji 2020 or Ross 2020 for some examples of a growing scholarly interest in non-professional interpreting). Even when professional aspirations are present, professional quality is not always achieved. Lack of accuracy and completeness in message transfer is demonstrable and alarming (Gómez Díez 2010; Keselman *et al.* 2010; Lee 2014; Nápoles *et al.* 2015; Arumí Ribas *et al.* 2017; Hale *et al.* 2019). However, the emergence of a scholarly interest in public service interpreting—in which dialogue prevails—has helped this mode gain centrality within the interpreter education landscape. Researchers have explored and documented the complexity inherent in mediated interlinguistic communication in settings such as healthcare services, the judiciary system, police stations, correctional institutions, educational and other community settings, including services to refugees and asylum seekers.

The essential complexity of interaction, heightened by the intercultural dimension, gave rise to new questions in the field of interpreting: How does communication unfold in the presence of a third party who takes on a mediating role? How does the interpreter in this mediating role understand, impact, and deal with the complexity of co-constructed discursive events? With these pressing questions guiding much of the incursion into the study of interpreting in public services and community settings, a clear departure from the preexisting professionalized forms of interpreting emerges. While conference interpreting (generally in the simultaneous or long consecutive modes) is typically concerned with monological and well-structured discourse, interpreting for the sake of access to basic services typically involves the co-construction of discourse and context through a dialogic process. The difference between these two distinct settings has gained increasing relevance.

The inferred precept in this dichotomy is an incompatibility in the imperatives that shape each of these two realms of interpreting. Some argue that the conduit model, inherited from the conference interpreting elders, aspires to erase the interpreter's presence and is not a good fit for settings in which interaction is central and the interpreter is very much present (Wadensjö/Gavioli 2023). Yet, what is left behind when forsaking the conduit archetype is not only the interpreter's invisibility aspirations, but the centrality of accurate message transferring as a guiding principle. A conduit conveys messages back and forth with as much precision as the multilayered and contextually laden complexity of the decoding-coding process allows for.

This latter dimension of the conduit metaphor is worth preserving. Gaining a sophisticated understanding and command of accuracy skills, I argue here, is central to all forms and settings in which interpreting takes place. Accuracy is an aspiration that requires progressive skills development. How to generate opportunities for accuracy skills development, even for discursive contexts in which co-construction defines the communicative situation? This question motivated me to launch an action research project aimed at generating DI practice materials designed to help interpreters build accuracy skills while integrating the relevance of situational information.

Action-research is a form of inquiry in which research and outcomes are intertwined, by design, with the imprint they leave on the environment that is the object of

study. Change through reflective intervention is the ultimate goal of action research projects (Costello 2011) through cycles of analysis and intervention that build upon each other. New reflective learning (conclusions) is reached with each round and it informs the next one. Following Lewin's (1947) seminal work, this iterative process is often referred to as a spiral:

> Each turn in the spiral comprises the stages of analysis, reconnaissance, reconceptualization of the problem, planning the intervention, implementation of the plan and evaluation of the effectiveness of the intervention. Subsequent cycles relate to revised planning and implementation, until outcomes are satisfactory in terms of resolution of the problem (Slatyer 2015: 5).

After four different cycles, the project has so far generated a collection of 43 multilingual dialogues in 8 language pairs and continues to yield learning opportunities for further improvement. Before explaining the method to generate this growing collection and discussing the results of the project so far, I will paint the backdrop for this ongoing endeavor. I explain how the message transfer dimension of DI fits within the most recent research and pedagogical trends that have focused on the interactional dimension of DI. After I review the kinds of practice materials developed for DI so far, I delve into the why, the how, and the what-next of our collection and the method to generate it.

1. The interactional and textual dimensions of DI

In what comes next, I shall explore first the arguments that have brought to the fore the importance of pedagogically addressing the interactional dimension of DI over the last couple of decades. Then I will provide arguments supporting the case that the textual dimension of DI should not be left behind.

1.1. The case for focusing on the interactional dimension of DI

The interactional dimension of interpreting refers to the communicative process in multiparty encounters. Since Wadensjö (1998) analyzed the process of DI, showing that the interpreter not only solves problems of translatability but also problems emanating from the situated interaction, many studies have followed which help highlight the differences that exist between conference interpreting and interpreting in situations that involve a multiparty dialogue. There are multiple dimensions the interpreter needs to address when working as part of an interaction (be it in community interpreting, in business settings, the media or other settings) and which are not present when conveying a monologue (in either simultaneous or long consecutive mode in a conference setting).

In her ethnographic study of interpreted communicative events in the U.S. healthcare system, Angelelli (2004) documented the prevalence of interpreters' active participation during the events she analyzed. Invisibility of the interpreter is the exception in her corpus and text ownership (that is, an overt imprint on interaction) by the

interpreter is the norm. This observation thus questions the conduit precept that is expected from professionals. Beyond the active participation of interpreters, a number of studies have analyzed the interpreters' contributions (Katan 2011; Davitti 2013; Merlini 2013; Gavioli 2014), as well as the interpreters' non-renditions (Gavioli/Baraldi 2021) as elements that are integral to the co-construction of meaning and of the communicative event. Baraldi and Gavioli (2012) edited a volume devoted to the coordinating dimension of DI. Coordination is understood to encompass such varied interventions as simplification of jargon, elaboration of information, use of discourse markers, clarification of questions, and even encouragement of side conversations.

In order to discern best ways to execute interventions in a contextually relevant manner when they are in order, both awareness and experience are essential. Nuanced discernment is needed to avoid situations warned against by Baraldi (2023: 60) in which interpreters "substract epistemic authority to both providers and seekers". For that, interpreter trainees should be given multiple opportunities for guided reflection. Hence, awareness and skills around the interactional complexity of triadic dialogues deserves relevance in interpreter training curricula, especially because such aspects were absent from longer traditional higher education opportunities that relied on the conference interpreting tradition.

Today, as a result of empirical research carried out over the last couple of decades, interpreting is understood as a situated practice. Wadensjö and Gavioli (2023: 6), referring specifically to public service settings, argue for the "necessity that interpreters are able to interpret the situation, together with (and 'in') the utterances that make it up, and are prepared to exercise discretion in accommodating their interpreting practices to the situated activity." An understanding of interpreting as being part and parcel of the contextual make-up of the communicative situation has major implications for the interpreter. An effective interpreter is a professional with sophisticated awareness of the multiple intricate layers of interaction, including her/his own presence, as well as a command of conceptual resources and protocols that she/he can draw from to address an infinite number of potential configurations.

1.2. The case for focusing on the textual dimension of DI

The textual dimension of interpreting refers to the translation decisions interpreters make to convey (oral) messages across languages. In actuality, the textual and the interactional dimensions are inextricably linked. It has long been understood that every text production is influenced by contextual circumstances, and in DI such circumstances include the interaction. We make a distinction here between text and interaction in the understanding that the two are not airtight categories; rather, they are dimensions which are intricately intertwined. Yet the ability to name them as conceptually different albeit practically interrelated, facilitates the ability to address these dimensions separately when teaching. Another way of distinguishing them is by using Wadensjö's (1998) duality: translation versus coordination.

The translational activity, which is rather central to longer conference interpreting programs (in which interaction is not directly accounted for) and, in my observation, traditionally taken for granted in many professionalizing shorter courses for community interpreters (which focus on interaction), is associated with the guiding principles

of accuracy and fidelity to the original message. Accuracy is the second most common principle found in codes of ethics for community interpreting from around the world and analyzed by Bancroft (2005: 18) and by Hale (2007: 108). What exactly accuracy entails is not always clear in such documents. The code of conduct from the Australian Institute of Interpreters and Translators stands out for embracing the subjective dimension of textual interlinguistic transfer by referring to the intentional dimension of the message: "Accuracy for the purpose of this Code means optimal and complete message transfer into the target language preserving the content and *intent* of the source message or text without omission or distortion" (AUSIT 2012, my emphasis).

In alignment with Hale (2008: 42-43) I understand "deciding how to render most accurately what the other two parties themselves have chosen to communicate to each other" as an essential skill that involves agency on the part of the interpreter in order to best convey intent. This agency, albeit related to decision-making at the textual level, is in fact embedded within a conceptualization of interpreting as interaction, as it involves acute awareness on the part of the interpreter of the subjective considerations by all participants in the communication—including the interpreters themselves—at the input and output stages of message transmission. What should prevail, in the midst of this complex decision-making for faithful renderings, is the guiding principle that the interpreter's agency is in fact at the service of the agency of the parties that need the interpretation, and this is not as straightforward as often assumed. It is one of the complex layers of interactional interpreting that deserves undivided attention and does not always get it.

The focus is generally placed somewhere else. After a review of didactic materials, Herring *et al.* (2021: 85-86) conclude that in contrast to the fields of conference interpreting and sign language interpreting, in "many manuals aimed at spoken-language DI students, skills-focused practice is [only] implicit or briefly touched on". The focus is on "setting-specific aspects of DI (e.g., context, setting, vocabulary, cultural dimensions, ethical dimensions, interactional dimensions) … but they do not generally dedicate significant space to presenting the core cognitive skills of interpreting as a set of skills and knowledge to be developed in a systematic, stepwise fashion" (Herring *et al.* 2021). Indeed, translational skills within interactional interpreting are strikingly very often disregarded.

The consequences of (trained) interpreters lacking basic translational skills are not to be underestimated. When accuracy and completeness are lacking, participants lose their voice. Angermeyer and Meyer (2021: 80) compared different settings, including court and healthcare, through corpus-based analysis and found that non-renditions by interpreters happen at higher rates when speaking the language of the institution than when speaking the minority language. This further feeds the power imbalance that recurs and pervades interactions with allophone societal service users. Vargas-Urpi (2015) also documented interpreters' tendency to favor the institution in an empirical study conducted in educational settings and noted the resulting increased asymmetry between the children and parents and the teacher. Ticca *et al.* (2023: 365) refer to Barsky (1996) and Jacquemet (2011) to remind us that the emergence of incoherence during asylum hearings is likely to result in a negative outcome. When the veracity of the story is determinative of the outcome, voice is crucial. With these examples in mind, it becomes evident that accuracy is tightly bound to the relative agency of every participant in the interaction.

2. DI Materials

Under the interactional paradigm described above, authenticity becomes central to the design of practice opportunities for dialogue interpreters. Real challenges posed by co-constructed communicative exchanges when bridging the language barrier are brought to the classroom under different initiatives that address different portions of the interactional pie. Here I review some of the documented initiatives.

The most typical approach involves role-plays (Taibi 2022; Dahnberg 2023): students and or instructors take on different roles to re-create situations in the classroom that can be interpreted and then commented on for situated group-wide or individual reflection. When these role-plays are fully scripted (e.g., Bancroft *et al.* 2015) the opportunities for authentic interaction diminish significantly. For that reason, some educators have developed semi-structured role-plays. The advantage is not just the inherent open-endedness of interventions, it is also the opportunity to include "mismatches and communication breakdowns, as well as related cultural and ethical issues" by way of carefully drafted instructions (Cirillo/Radicioni 2017: 126). The spontaneity of such exercises means there is no reference material to go back to when discussing and analyzing the outcome of the exercise. Stone *et al.* (2023) address this limitation through filming: they describe the usefulness of wall mounted recording equipment for role-plays with sign language interpreters, which allows for precise, after-the-fact analysis of different dimensions of the interpreted interaction. Sagli and Skaaden (2023) also highlight the advantages of filming role-plays for the analysis of both translational and interactional strategies. In their groups, trainees work with different language pairs, and this offers an interesting opportunity: "Subtle feedback signals such as breath-taking, gaze or hand and body movements to coordinate the turn-taking" come to the fore when one observes an interpreter at work who uses a language that one does not understand (Sagli/Skaaden 2023: 336).

Even if it does not involve first-hand experience, another valuable, but often costly, way of bringing opportunities for concrete discussion of interactional aspects is the recording of real-life interpreted encounters. The online platform Odimedi[1] offers a sample of videos that have been manipulated to preserve confidentiality and ensure anonymity of asylum seekers and service providers helped by interpreters in France (Ticca *et al.* 2023). Merlini (2017) also includes video-recorded authentic data from film festival interpreted situations in her DI class design. The CARM method, developed by Stokoe (2011), relies on recorded real interpreter-mediated interactions to offer trainees an opportunity to predict how communication unfolds in real life circumstances and "to participate by responding to participants' ongoing talk" while the recording is paused (Niemants *et al*. 2023: 345)

Other initiatives recreate interpreter-mediated encounters in diverse settings to showcase (sometimes with the help of professional actors) effective and ineffective practices. Two recent examples include the videos resulting from the ImPLI project[2] involving a consortium of six European universities which created materials for police and legal interpreting, and the collection "Expanding professional borders"[3] by

1 <https://www.odimedi.fr/>.
2 <https://site.unibo.it/interpretazione-giuridica-impli/en/educational-videos>.
3 <https://ddd.uab.cat/record/259584?ln=es>.

the research group MIRAS at the Universitat Autònoma de Barcelona (henceforth UAB). Neither of these initiatives includes authentic interactions, but they do offer the opportunity to bring to the classroom concrete, acted-out examples to be able to hold very contextualized discussions.

Beyond materials that enable group discussion and group practice in a classroom setting, there is a need for authentic materials that are suited for individual (independent) practice of translational skills for dialogical text. In conference interpreting, extensive practice for process automation (Seeber 2015) inside or outside the classroom (Setton/Dawrant 2016) is considered necessary in order to master the multiple cognitive skills involved in cross-linguistic message transfer. I argue that this is no less true for DI. The longer the interventions that a dialogue interpreter is able to accurately convey, the less the imprint on the interactional turn-taking, for instance, and the freer the speakers are to fully express their intent. This requires a good command of note-taking techniques specific to the often-unstructured nature of spontaneous dialogue speech. Note-taking, if nothing else, requires extended practice.

Some examples in the English-Spanish combination include the collection developed by Linkterpreting[4] at the Universidad de Vigo for a variety of settings. Holly Mikkelson's collection "The Interpreter's Edge"[5] offers extensive materials for consecutive practice in the U.S. legal setting but is not focused on dialogue interpreting. Another limited option for those who want to practice before taking certification exams in the healthcare or court settings in the United States is in the sample exams made available to the public by the testing organisms. All of these initiatives involve scripted and read-out-loud dialogues. Braun and Slater (2014), developed materials manipulating spontaneous speech to be inserted into 3D simulated environments through virtual reality technology. Another costly initiative involving not only spontaneous speech, but also real settings are the recorded trials that were the object of Hunt-Gómez's doctoral dissertation (2013). Some of them are accessible today through an interactive platform.[6] The extensive efforts that went into preserving anonymity and confidentiality are very apparent given the image and the voice distortion.

In the second part of this article, I discuss an approach to creating authenticity-oriented materials for the translational practice of DI that seeks to be cost-effective and replicable.

3. Developing SD

Situated Dialogues (henceforth, SD) is a collection of materials that results from several rounds of creation. For its latest iteration, a small team at the UAB collaborated with professionals from different realms of professional activity to generate multilingual dialogues that are situated and relevant. This action was co-financed by the Directorate General of Interpretation at the European Commission (SCIC)[7].

4 <http://linkterpreting.uvigo.es/?lang=en>.
5 <https://acebo.myshopify.com/products/the-interpreters-edge-third-edition>.
6 <https://ra.sav.us.es/rv/videos/interpretacion_juicio/>.
7 Grants for actions to support training in conference interpreting, academic year 2021-2022, European Commission, Directorate General for Interpretation

3.1. Innovating by compromising

The way this collection brings a slice of reality to the classroom is by re-creating plausible situations with the help of experts, and by recording spontaneous dialogues that would occur in that situation. With this approach, although the resulting product is a recording, these "situated dialogues" are anchored in the reality of different settings. Indeed, we resort to subject-area experts and identify with them typical situations in which an interpreter is needed. We help them recreate situations that are particularly relevant for interpreting trainees. Because the goal is innovative, so are the methods, which are in constant assessment and improvement.

Figure 1 depicts the steps for the creation of one bilingual dialogue. As can be seen, the starting point is a monolingual non-scripted exchange. The monolingual aspect of the original dialogue is an element of inauthenticity that is deemed to be a worthwhile compromise, as it allows for the participation of experts replicating the idiosyncrasies (procedures, protocols, and terminology) of their work environment. The multilingual origin of the exchange is one element of authenticity this method forsakes in order to ensure two other elements of authenticity: subject-matter contextual relevance as well as discursive authenticity by a subject-matter expert. It is rare to find subject-matter experts who are fluent enough in another language and this is one of the reasons original dialogues are monolingual.

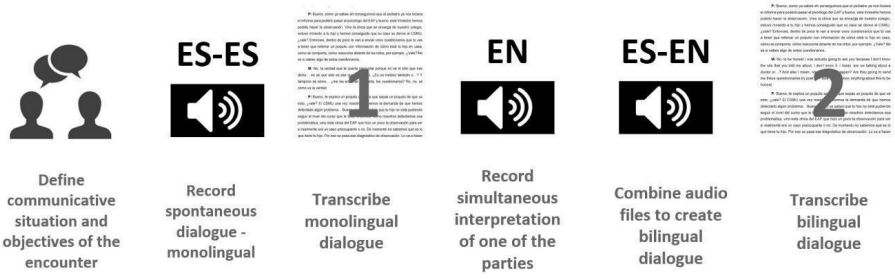

Figure 1: Stages in the dialogue creation process

The other reason why the monolingual source is considered a worthwhile compromise is that this approach involving a source dialogue that yields derived bilingual dialogues allows for replication into multiple language pairs. Figure 1 illustrates how, through the simultaneous (loose) interpretation of the utterances of one of the parties from the original exchange, the work developed with one expert for one dialogue can generate practice materials for multiple language pairs. That means that all the efforts and resources devoted to generating similar-to-real communicative situations are scaled to benefit interpreters and interpreter trainees who work with a variety of language pairs. This approach is labor-intensive but cost-effective. Every effort invested in generating one source dialogue (contacting experts, recording dialogues, transcribing originals, etc.) yields multiple bilingual dialogues. It also provides opportunities to work with shared (very similar) dialogues in non-language specific groups such as monolingual short courses for accreditation (Hale/Ozolins 2014), for which teaching message-transfer skills is particularly challenging.

Professional interpreters are given the assignment to record a simultaneous interpretation of the utterances of one of the parties. They are also provided with the (automatically generated and manually reviewed) transcript of the original dialogue. Their recording is used to generate a new bilingual audio file. Interpreters are given instructions to prioritize a natural feel to their renditions over an accurate translation of the original. If coherence is maintained and the exchanges throughout the dialogue make sense, the new bilingual product is valid.

3.2. Overcoming interpreting silos

One of the goals of the method devised is to generate a collection that meets the needs of a diverse audience. Downie (2021) effectively warns against silo thinking in interpreting studies: separating court from conference interpreting or other settings, he argues, leads to hasty assumptions on setting-specific needs and adaptations by interpreters. He shows that the social interaction dimension of interpreting is relevant across settings and points out that interpreter adaptations to the situatedness of their practice are in fact more ubiquitous than often acknowledged.

In this same vein and in a very intentional manner, the only characteristic of the defined target audience for this collection of materials is the need for flexible yet relevant practice opportunities in the translational aspect of specialized DI. As the collection stands now, it covers settings such as education, healthcare and police as well as business, media, and institutional settings. It spans across typically isolated fields of interpreting dealing both with public service and private market encounters. The goal is to address the needs of interpreters and interpreter trainees across fields of specialization. Regardless of the field, DI as a mode has characteristics that impact message transfer techniques and developing a situated awareness around accuracy in this mode is crucial in all fields.

The collection also spans levels of difficulty, and hence it addresses interpreters and interpreting trainees at all levels of professional development. With this method, the experts generate plausible dialogues similar to real-life encounters (form and contentwise) and difficulty assessment occurs after creation. As opposed to a method in which dialogues are scripted with control over information density and terminology, here, those parameters are established spontaneously. Consumers at all levels of their skills development can benefit from what emerges with this method, provided they have a way of determining which dialogue is best suited for their interpreting developmental stage. For that, a difficulty grading system is concomitant with the system included in the self-evaluation sheets which students in my classes are required/encouraged to use after interpreting exercises[8].

Novice trainees will find dialogues that naturally involve shorter utterances and accessible terminology. Experienced interpreters at the other end of the spectrum, benefit from practicing with dialogues including longer utterances. These might cover a specialized field for which they are preparing for an assignment, for instance. Ideally, a well-fed repository, analogous to the speech repositories available for conference

8 <https://ddd.uab.cat/record/259840?ln=en>.

interpreting (such as the EU's Speech Repository[9] or the Speechpool[10]) would cover an ever-growing collection of dialogues addressing specialized topics for which interpreting is a recurring need.

Because the need for message transfer skills is ubiquitous, these practice materials are suitable for all sorts of educational contexts. Interpreters who are working on their skills autonomously, either to prepare for an assignment or to get ready for certification exams, are also in great need of quality practice materials.

3.3. Dialogue pack

Each dialogue pack is composed of two elements: (1) the audio dialogue in video format including visual and auditory prompts for when to hit pause and interpret; and (2) an accompanying document which provides (a) contextual information regarding the setting and circumstances in which the dialogue takes place, (b) an itemized assessment of the difficulty of the dialogue and (c) a transcript of all utterances. All dialogue packs that are publicly available so far can be found on the UAB's digital repository which is linked through the MIRAS research group website.[11]

4. Discussing SD

The desire for a societally relevant repository of practice materials offering authenticity and relevance for myriad contexts interpreters can face, is inspired by de Manuel Jerez's initiative (2005) to create a database for the practice of conference interpreting. His database is fed by video recordings from real-life interpreted events, which, in the early 2000s were less easily accessible than today. With this effort, involving personally recording materials that presented no confidentiality or proprietary issues, he brought to the classroom highly diverse and highly contextualized speeches, thus aligning with the philosophy of situated learning. In González-Davies and Enríquez-Raido's words:

> Situated learning is generally understood as a context-dependent approach to translator and interpreter training under which learners are exposed to real-life and/or highly simulated work environments and tasks, both inside and outside the classroom. Under this approach, it is the tasks and real-life professional demands, as well as other contextual factors such as institutional, social, geographical, or community beliefs and customs, rather than a predetermined closed syllabus, that drive curricular design. (González-Davies/Enríquez-Raido 2016:1)

For the SD collection, to generate materials that "highly simulate" work environments, we rely on the participation of real-life subject-area experts. Together with plausible counterparts, they generate real-life dialogues. A real teacher, a real police officer, a real doctor or a real artist has a real exchange with a fictitious service user,

9 <https://webgate.ec.europa.eu/sr/>.
10 <http://www.speechpool.net/en/>.
11 <https://webs.uab.cat/miras/en/audiovisuals/>.

interviewee or interviewer. The situations are fictitious, but highly plausible and the dialogues are spontaneous.

4.1. How to use SD (Situated Dialogues)

Each dialogue pack lends itself to a variety of educational activities. The most straightforward is for dialogue users to record themselves while interpreting and then to listen to their renditions. This is, in itself, a good way to gain awareness about the interpreter's production and to learn what it takes to convert a message faithfully from one language to another. Message transfer effectiveness can be measured to a certain degree in terms of what the output sounds like. Is the language in the interpreted renditions idiomatic or does it reproduce structures from the original that hamper understanding? Are the tone and diction appropriate or does presentation interfere with how the message is received?

An added benefit of pre-recorded dialogues is replicability. Working several times with the same material is beneficial for skills-development as it allows to "highlight difficulties and think carefully about how to avoid falling into the same trap the next time around" (Gillies 2013: 38). Additionally, with the help of the transcript of the original utterances, the analysis can become more granular, because comparison is made easy. Which elements were missed? Which ones were added, and which ones distorted or embellished? Why might this departure from the original message have happened? And most importantly, how do these accuracy failures potentially impact the course of an interpreter-mediated interaction? The multilayered quality of non-scripted experts' speech renders this task particularly rich.

These reflections can be carried out in a group setting, led by the instructor, but they can also happen individually through self-assessment of recorded interpretations (cf. self-evaluation sheet linked under endnote 7). These dialogues can indeed be used for independent practice as homework or by individuals who are getting ready for certification exams or activating vocabulary for an assignment. They can be used in the classroom as a group where students take turns at rendering messages and receiving feedback or individually if the classroom is geared with conference equipment (booths, control consoles and receivers) or if the session is being held online through videoconference.

One tangential but highly instructive exercise involves the contextual information included in the document that accompanies each dialogue. Inferential and preparation skills are learned by analyzing the information provided. Who will be present at the encounter? What can we anticipate about the communicative situation? What are potential developments for this situation? Which terminology is likely to be used? What are good techniques to gather and handle terminological equivalents? Such questions destined to learn how to prepare for an assignment are inspired in the conference interpreting curriculum. Assignment preparation is less of a given in public service settings, yet there is no reason why public service interpreters would not benefit from this ability to anticipate what to expect from an assignment and to ask questions, when possible, to gather relevant information that can then help them carry out high quality work.

Finally, these pre-existing recorded dialogues provide good context to efficiently set the stage for parallel subsequent role-plays (of the kind described by Cirillo/

Radicioni 2017, referred to above) designed to address complementary skills, like turn-taking, coordination and on the spot decision-making. In a scaffolded approach to teaching interpreting skills, pre-existing recorded dialogues offer contextual familiarity for subsequent derivative role-plays that incorporate interactional challenges. These, in turn, can precede interpreted real exchanges with trainees of other professions who also go through simulations for their own training. Strelow *et al.* (2021) and Ortega-Herráez *et al*. (2022) on the one hand, and Krystallidou *et al*. (2018) and Hlavac/Saunders (2021) on the other, report on their experiences with interprofessional simulations in the healthcare and social work contexts respectively.

4.2. Work in progress

The current state of the collection is the result of four distinct cycles of actions. Like many of the approaches described in Niemants and Cirillo's edited volume, the initiative described here results from the double identity of the author as a "teacher-researcher" (Niemants/Cirillo 2017: 15) and the search, under both of those hats, for actions that lead to change. This aligns with action-research principles, seeking positive impact on the environment the researcher is immersed in.

The first cycle involved some piloting actions in 2017 in the field of medical interpreting when the author tested the method for Arcos Institute—a US-based education and consulting business the author founded— and with the help of a nurse practitioner and three potential/fictitious healthcare clients. The audience in mind were participants of continuing education classes taught by the author. Participants invariably asked for sources of materials to keep practicing translational skills. The second round was executed by Alba Serra Nicolás, a UAB master's student who developed, with the author's guidance and supervision, three dialogues, for her final project in the context of the Catalan education system. The third round was the object of an educational innovation project ("Aprenentatge reflexiu i creació col·laborativa de materials de pràctica per a la interpretació bilateral") granted to the author and her colleague Anna Suades Vall by their institution (UAB) for the academic year 2020-2021. The two professors collaborated with students to generate a reduced number of bilingual dialogues in one language pair. The fourth and latest round was co-funded by the European Commission (SCIC) and the UAB and developed between November 2021 and September 2022. It yielded the greatest number of materials and permitted for the first time to multiply the language combinations derived from one original monolingual dialogue.

4.3. Limitations

The impact of action research is double-pronged: it improves practice through actions, and it contributes to theory through reflective observation and analysis. With regard to reflective observation and analysis, two aspects are of particular interest.

The first aspect to be further streamlined is product creation. While we have obtained expected results in terms of relevance and authenticity for most dialogues, some are less spontaneous. These are good practice materials, but they lack the realism that is sought after by this method. In the experience gathered through the fourth cycle we

were able to observe that some experts are better able to role play than others. This is also true for collaborating interpreters. Some of the interpreters hired to generate the audio files in different languages grasped the essence of what we were looking for better than others. As a learning point for future cycles, we might question the choice of resorting to interpreters. In the future, we might look for actors with an understanding of the source language and give them more freedom to adapt the utterance into their target language in a way that generates plausible and believable dialogues.

The second aspect is the usefulness of the products (situated dialogues) for the purpose of learning strong message transfer skills for interactional interpreting. One caveat that was known from the outset is the flattened interactional dimensions of pre-recorded materials. The original interaction is natural since there is no script, but because the recorded dialogue happens independently of the interpreting intervention, conversation cannot be shaped by the interpreter's input. There are also no speech overlaps. That is far from what happens in real life, as has been widely documented. Yet, as explained in the next section, the impact of the interpreter's deviations from the original input's intentions is made apparent by the same token, and this limitation can be shaped into a strength if leveraged appropriately and complemented with other kinds of exercises (using methods exposed in section 4 and following the example of Viljanmaa's [2015] complementary methods).

4.4. Strengths

As discussed above, with pre-recorded dialogues the interpreter's input, whichever shape or form, cannot affect the course of the conversation and that is a weakness. Nevertheless, I contend it is a worthwhile compromise, because pre-recorded dialogues of natural speech in highly relevant contexts allow for highly relevant reflection about what accuracy entails and the ramifications of the lack thereof. Isolating one of the tasks required of the interpreter (translation) at the cost of freezing an arguably equally important task (coordination) is a legitimate staggered pedagogical approach.

Additionally, the fact that the recorded dialogue remains unaffected regardless of what the interpreter does, is not tantamount to being oblivious to the impact of the interpreter's input during the exercises. To the contrary, when the interpreter's input generates dissonance, the interpreter's translational decisions and their level of appropriateness become very visible. Because utterances follow the internal logic of a conversation that took place without the mediation of a third person (the interpreter), the impact of translation decisions by the interpreter becomes obvious when the internal logic of the exchange clashes with the logic of the interpretation. Incongruence helps highlight the different ways the interpreter potentially imprints the course of the conversation, if only through translation decisions (let alone through overt coordination when barriers to the flow of communication arise).

A collection of materials that can be sorted by difficulty and yield practice dialogues in settings that span across traditional barriers (like public service interpreting vs. conference interpreting; cf. Downie 2021), is a collection that showcases the relevance of fundamental interpreting skills regardless of the subject area. Through this kind of collection, it becomes experientially apparent that a parent-teacher meeting

where a public service interpreter intervenes is potentially just as full of jargon, terms, and idioms, and in many other ways potentially just as challenging, as a conversation between delegates for an EU mission a conference interpreter could serve for. A strength of this kind of approach to the development of practice materials, then, is that it promotes a unifying vision of the interpreting profession, where interpreting is interpreting indeed. Challenges need to be addressed situationally and contextually and every skillful pirouette (Skaaden's [2019] "discretionary powers") from the interpreter is aimed at enabling participants to exert communicative autonomy (Garcia-Beyaert 2021) despite language barriers. Every skillful pirouette emanates from the same springboard: a solid understanding of what is entailed when effectively conveying messages back and forth.

4.5. Further developments

Cycle 5 shall provide a renewed opportunity for creation, observation, and analysis. The two dimensions worth analyzing identified in 4.2 –the effectiveness of the dialogue-creating method, and the usefulness of SD to develop strong message transfer skills– can be assessed through raw and direct scrutiny. Indeed, the developers are also educators and we are using the materials in class, which provides us with a sound degree of insight. At the end of this section, I will mention some aspects we pinpointed and would like to address in cycle 5. Before that, however, I shall present potential strategies to go beyond the reflective insights accessible through the naked eye.

With a big enough collection of materials, the goal after cycle 5 becomes more ambitious. Provided we have access to a big enough sample of users who can report on their experiences, we shall be able to engage in systematic data collection for replicable data analysis. We can then reach empirically based conclusions capable of unveiling information not available at plain sight. In particular, the study of the usefulness of the SD materials for the development of strong message transfer skills would benefit from comparative analysis.

If the initial question is "have SD materials helped interpreter trainees develop their accuracy skills?", the comparative question could be: "how do indicators fare before and after trainees have practiced with SD materials?". Such indicators might include, among others: (1) attunement to the implications of accuracy, (2) awareness of the impact of translation decisions on the course of the interaction or (3) ability to justify translation decisions based on interactional contextual factors. These indicators can be measured both through direct observation –evaluating actual performance of trainees before and after practicing with SD materials– and through their self-reported experience and perceptions. For the latter, data collection means might include not only self-evaluation sheets (see footnote 7) but also surveys as well as focus groups. Focus groups offer an opportunity to delve into salient topics that may arise in the self-evaluation sheets and survey results. A qualitative analysis of a significant number of end-user experiences (their reports) and outputs (their performances) shall shed some light on further strengths and opportunities for improvement.

As for already identified opportunities for conscious intervention, one example lies in decision-making when turning dialogues into their bilingual form. When generating multiple bilingual dialogues from one monolingual dialogue we have gener-

ally maintained the subject-matter expert's utterances in their original language (the police officer, the doctor, the artist, etc.). We have turned the original utterances of the other interlocutor into different versions in different languages. This decision is based on the assumption that subject-matter idiosyncrasies are too regionally bound to be transferable to a different linguistic reality, whereas the culturally tied specificities of the subject-matter expert's interlocutor might be more easily adjusted without compromising the structural logic of the dialogue.

These assumptions need to be treated with caution. First, we might be overlooking cultural dissonance in some of the new language pairs if the interpreters who were given the assignment of adapting the utterances of an interlocutor did not catch potential clashes themselves. Second, we may be missing opportunities based on the assumptions described above. In medical encounters, for instance, whereas the procedural aspects of health care vary from country to country (how the nurse introduces him/herself or whether prescribed drugs are picked up at the neighborhood pharmacy or from within the hospital, for instance), the diagnostic and treatment protocols are widely shared in the western world. Thus, a patient-doctor dialogue about the implications of a C-section produced in one country holds subject-matter relevance (column 3, Figure 1) for interpreters in other regions as well. Some fields might lend themselves to this kind of trans-regional borrowing while others might not. Legal or police encounters might be too regionally bound for transferability, for instance.

The fourth cycle has allowed for some experimentation with the logistical aspects of derivation into multiple language pairs. Future developments of this ongoing action-research project need to pay particular attention to the effective transferability across languages. In other words, the multilingual creation process requires careful and culturally competent coordination with all participants, but especially with the interpreters or actors that create the new version of one of the interlocutors' speech. An ironically pertinent and pertinently ironic learning point.

5. Conclusions

In this paper I have discussed the importance of not relegating accuracy to the background in DI training of any format. Interpreters-to-be (enrolled in different kinds of programs), as well as practicing interpreters (who might have limited training) need opportunities to develop sophisticated skills for accurate message transfer. Message transfer skills are equally important in all realms of interpreting.

In DI, learning strong skills for accurate message transfer is best achieved in awareness of the interactional dimension of the interpreting service. For that reason, we propose a method for the creation of practice materials that involves authentic speech and close-to-authentic interaction. Re-created situations where spontaneous speech by subject-matter experts and their interlocutors is recorded, facilitate bringing to the classroom (or the independent practice session) both heightened contextual interactional relevance, and frozen overt coordination. While the latter might be perceived as a drawback for its lack of realism (interactional interpreting includes the interpreter's active input for coordination as well), I argue here that it, in fact, allows trainees to isolate the two actions identified by Wadensjö (1998)—translation and coordination—and to focus on the first as a strong foundation for the second. Coordi-

nation can be addressed at length in subsequent complementary activities involving real-time role-plays, for instance.

The ongoing project of creating the Situated Dialogues collection with the collaboration of professionals in all sorts of fields of expertise should help break Downie's (2021) interpreting silos by: (1) bringing back to the fore accurate message transfer as a desirable goal and a foundational skill in DI; and (2) taking down barriers between interpreting settings and highlighting the commonalities of DI across communicative events. I have also discussed some of the challenges and limitations of this approach. While this technique for creating dialogues might be onerous, the resulting product has proved very useful in the classroom and the author and the UAB team will be welcoming new collaboration for a fifth cycle of this action-research initiative, the results of which shall be ripe for systematic data collection and methodic analysis.

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Applying a sociological perspective to the analysis of court interpreting interactions: Exploring trust and distrust

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Abstract

This article introduces a novel approach to analysing court interpreting interactions by applying a sociological perspective. Using a corpus of transcripts of criminal trials held in Barcelona with interpreting services in English, French, and Romanian, this study develops a method to identify situations of distrust between interpreters and judges. It focuses on observing the dynamics of their interactions by analysing the distrust reactions shown by the judge. We rely on Luhmann's concept of trust, and more specifically on its functional equivalent: distrust. Two variables are used to operationalize distrust: the visibility of the interpreter in the discourse (the interpreter describes what is happening, checks that the defendant or witness understands what is being said, gives indications of behaviour, adds questions or answers or maintains conversations that are not translated for the other participants in the hearing) and the judge's understanding of the foreign language (the judge's ability to understand or speak the foreign language). This study examines the reactions of the judge in cases where they exhibit a certain degree of distrust and contributes to a sociological perspective on court interpreting studies, highlighting the power dynamics inherent in the interpreting process and the importance of trust in effective communication mediated by an interpreter.

Keywords

Court interpreting, ethics of interpreting, trust, corpus analysis, interaction analysis, Luhmann

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Catalonia has been in transition towards a multilingual society for years. The presence of various languages adds an element of complexity to the Catalan society that makes it necessary to depend on an intermediary intervention to make communication possible in public services. This situation is clearly reflected in courts, where communicative dynamics plays a very important role and interactions are in all respects highly hierarchical, with legally predetermined structures and a clear imprint of its written origin (Bestué 2019: 162). The intervention of an interpreter adds one more participant, whose presence might affect how power and control are typically distributed in a monolingual trial (Nartowska 2017). In this paper, our focus is on exploring interactions among participants, specifically how trust facilitates the coordination of actions and decisions in the communication (Raigal-Aran 2022).

The efficacy of interpreters has been a subject of scrutiny, as extensively evidenced by the literature (Arumí/Vargas-Urpí 2018; Vargas-Urpí 2017, 2019; Chi 2021). The lack of training of the practitioners serving as professional interpreters in such trials has been demonstrated (Vigier 2020). In this article, a court interpreter is considered to be a person who provides interpretation in court, regardless of their level of training or experience. In contrast, it is noteworthy that the impact of judges' lack of response regarding the vulnerability of speakers has not been accorded commensurate attention. While it has been emphasized that court interpreting is a collaborative effort, it is crucial to acknowledge that judges share the responsibility with other trial participants in ensuring the quality of interpreting (Ozolins/Hale 2009). And even if they feel they do not have at their disposal any mechanisms to monitor the interpreters' performance (Ortega-Herráez 2011), they clearly rely on the presence of these professionals to administer justice on a daily basis whenever a non-Spanish speaker is in the courtroom.

We argue that trust in the interpreter's work is the operative element of court interpreting interactions. Interpreter-assisted communication is generally considered successful in our corpus, primarily because it seldom elicits reactions from the judges. For example, we frequently observe monolingual side-conversations between the defendant or the witness and the interpreters in our data. While these interactions are visible and not in line with professional ethics, they are always tolerated. The only instances where reactions to the interpreter's performance are noted occur when judges possess a certain level of proficiency in the foreign language and can detect language-related issues. Therefore, language problems appear to be the sole factors that challenge trust in the interpreter's work in our corpus (Pym *et al.* 2023). We will delve into this thoroughly in the subsequent sections.

1. Applying trust in Translation and Interpreting Studies

Trust, a frequently discussed concept in the social sciences since the 1970s (Bachmann/Zaheer 2006; Lyon *et al.* 2015), is becoming more and more prevalent in a wide range of research fields (Morgner 2018). Without a specific definition having been universally accepted (Sanz *et al.* 2009: 42), in each particular case it has been conceptualised considering the research context. In this sense, trust is considered a

tool to reduce the feeling of insecurity, reduce the fear of uncertainty, reduce the possibility of making an adverse selection, facilitate decision-making in risk scenarios, solve problems, cooperate and coordinate, among others (Sanz *et al.* 2009: 31). In the field of Translation and Interpreting Studies, this concept has been explored in an increasing number of occasions (Froeliger 2004; Abdallah/Koskinen 2007; Duarte 2012; Cadwell 2015; Olohan/Davitti 2017; Wadensjö 2018; Rizzi *et al.* 2019) and data was gathered in almost all of them via structured or semi-structured interviews.

More specifically, in public service interpreting, it has been observed that users perceive the interpreting service to be satisfactory when the interpreting professionals come from their own informal networks (Edwards *et al.* 2005: 89). According to Rizzi *et al.* (2019: 12), trust can also have different levels as, for example, personal and institutional. It has also been observed that the fact that the interpreter undertakes multiple roles during interpreting in healthcare settings has no direct impact on how control, trust and satisfaction is perceived in relation to the interpreter's work (Zendedel *et al.* 2018: 1064). However, in the field of interpreting in police settings, an implicit lack of trust in interpreters' skills has been observed in interviews conducted with police officers, which seems to be related to the need for the police officers to maintain control (Wilson/Walsh 2021).

Luhmann's system's theory is a sociological framework that views society as a complex system of interconnected components. It emphasizes the autonomy and self-regulation of various subsystems (law, politics, economy, culture, etc.) and explores how these systems process and manage information to adapt and maintain stability in a complex dynamic social environment. Luhmann's theory has been applied a limited number of times in Translation and Interpreting Studies (Vermeer 2006; Hermans 2007; Tyulenev 2009, 2010, 2012a, 2012b; Botha 2020), but has not been adopted yet in court interpreting studies. In this article, we look at the interactions that take place in the courtroom with the presence of an interpreter, focusing on the most powerful participant in this context and the one who controls the development of the communicative act: the judge. We are using Luhmann's definition of trust, who considers it to be a mechanism for reducing social complexity (1968).

In this article, trust refers to the belief that someone has conveyed information accurately or, at least, efficiently. According to Luhmann (1968, trust helps to simplify social situations where there is no indication of distrust. In other words, distrust is the functional equivalent of trust (*Ibid.*: 123). It is just as important as trust because it enables us to make decisions in situations where we do not have enough information or where the information is negative. In Luhmann's words: "trust is not interested in knowing the essential truth about a matter, but in the success of reducing complexity" (*Ibid.*: 119, translated from German). Our study explores the relationship between trust and distrust and how it impacts court interpreting, which will allow a more in-depth analysis of court interpreting as a social act (Kang 2014).

2. Method

The aim of this article is to present the elements of measurement that allowed us to analyse and describe the relationship of trust between judges and interpreters observed in the criminal courtroom. We worked with a corpus of real court proceedings held

in the city of Barcelona from January to June 2015 compiled and transcribed verbatim by the researchers of the MIRAS research group and other universities (Arumí/Vargas-Urpí 2017, 2018; Bestué 2018, 2019; Orozco-Jutorán 2017, 2018, 2019; Vargas-Urpí 2017, 2019, 2020). The corpus of transcripts[1] is divided into 66 files corresponding to the 55 criminal trials,[2] a total of 1,116 minutes, of which 339.2 are bilingual (Vargas-Urpí 2019: 482). There are 19 trials with an English interpreter, nine with a French interpreter and 27 trials with a Romanian interpreter. In the 55 hearings, in total, 14 judges and 18 interpreters are involved. The corpus was analysed using EXMARaLDA (Schmidt/Wörner 2014), a free software tool for creating, managing, and analysing spoken language corpora.

Our objective was to develop a method enabling us to depict the interactions between interpreters and judges in a trial through the lens of trust. To formulate the analytical method, we had to transition from the conceptual realm of trust or distrust to elements that could be objectively measured within the corpus. This approach needed to rely on delineating elements discernible from scrutinizing the interactions within the courtroom, specifically, within the transcripts of these interactions. To achieve this, we randomly selected three trials from the corpus, one in each language (EN1, FR20, RO29). Subsequently, we performed up to three in-depth readings to identify interactions that could assist in characterizing trust and distrust within these interactions. This analytical process formed an integral part of a doctoral thesis project, with the three readings conducted collaboratively by the doctoral student and her supervisors. The results were then subject to detailed discussion.

Initially, we aimed to identify signs of trust, but these signs were technically invisible in the interactions we observed. We did, however, identify elements that suggested the existence of a potential process of distrust. We found that there were phenomena with similar patterns: (1) cases in which the interpreter's intervention is not due to their task of conveying information manifested in the original utterance, and (2) cases in which the interpreter does not need to translate because the judge speaks in the foreign language[3] or because the judge speaks immediately after the intervention of the defendant or the witness. Both phenomena were identified as our variables and our analysis focused on identifying signs of a lack of trust in the judge's reactions to these instances.

Judges could show some signs of distrust, either because they have some level of understanding of the foreign language or because the interpreter is clearly producing a non-rendition (Wadensjö 1998). Non-renditions, meaning renditions that do not correspond to an original utterance, can be used to manage turn-taking or dialogue in a justified manner but, as exposed extensively in Orozco-Jutorán (2017), Arumí/Vargas-Urpí (2018) and Vargas-Urpí (2019), most of the time are unjustified interventions in court interpreting. Indeed, unjustified non-renditions are used to warn, give

1 All information obtained in this research has been processed according to the Spanish Law 15/1999 and the EU Regulation (EU) 2016/679 on data protection.

2 There are 5 cases where the person who does not speak Spanish nor Catalan is the witness (EN14, FR21, FR28.1, FR28.2 and RO51). In the rest of the cases, the user is the defendant.

3 Language different from the official languages of the court, which are Catalan and Spanish, although in the corpus all the hearings are held in Spanish and the presence of Catalan is very rare (Vargas-Urpí 2020).

advice or instructions, but also to add information, or even to answer instead of the other person. In such situations the interpreter becomes discursively visible by taking a separate turn in the conversation. The fact that the other participants (i.e., judge, prosecutor, and defence counsel), who are in a more powerful position, tolerate these interventions and do not interrupt him/her has to be interpreted as a sign of recognition and entrustment of this irregular practice. To exemplify these situations observed in the data, Extract 1 presents a scenario in which the interpreter responds instead of the defendant, who remains entirely disengaged from the exchange, eliciting no reaction from the judge.

Extract 1 [EN6: 334-341]

Judge:	Conste su protesta en el acta y, dicho esto, pasamos a tomar declaración a Dino Krauss. Dino Krauss? (Let your objection be noted in the record and, having said that, we will now proceed with the statement of Dino Krauss. Dino Krauss?)
Interpreter:	Sí. (Yes.)

In many situations non-renditions can become side-conversations in the foreign language. These are cases in which a dialogue takes place in the foreign language between the defendant and the interpreter. Often, moreover, the question that precedes the side-conversation and the subsequent answer that is obtained do not correspond. For example, in the following extract the interpreter takes the initiative and interferes in the communication by asking the defendant to expand the information that he provides. Extract 2 presents a scenario to exemplify this situation:

Extract 2 [RO42: 133-143]

Prosecutor:	Dígale si además de él y del resto de acusados dormían allí más personas o solamente ellos. (Tell him whether other persons slept there in addition to him and the other defendants, or whether only the defendants slept there.)
Interpreter:	Ah, în afară de aceia care acuzați, ah, împreună cu tine dacă dormeau alte persoane? (Ah, apart from the defendant, ah, did other people sleep there?)
Defendant:	Da, dormeau altă, de la altă limbă, nu români. (Yes, they slept from another, from another language, not Romanian.)
Interpreter:	De unde? (From where?)
Defendant:	Spanioli sau marochine sau nu știu. (Spanish or Moroccan or I don't know.)
Interpreter:	Mai erau și marochine și spanioli? (Were there Moroccans and Spaniards as well?)
Defendant:	Da, erau mai multe corturi. (Yes, there were many tents.)
Interpreter:	Ah, habían más ah más tiendas allí de campaña y dice habían gente como marroquíes y españoles. (Ah, there were more ah more tents there and he says there were people like Moroccans and Spaniards.)

With regard to the second variable, the judge's ability to understand and speak the foreign language, we have classified these moments into two descriptive categories: cases in which the judge intervenes after an exchange between the defendant or the interpreter in a foreign language (without the interpreter having translated this intervention into the official language) and cases in which the judge speaks in the foreign language of the proceedings (cases in which the judge speaks in English, French or Romanian). The judge's ability to understand the foreign language was assessed on the basis of the presence of reactions from which knowledge of the foreign language is inferred (no specific data was available about the language level of the judges involved in the corpus). We have identified the cases where the judge directly speaks the foreign language and situations where s/he speaks right after the defendant's intervention in the foreign language so there is no need to wait for the interpretation.

The division of the instances of visibility of the interpreter in the discourse (Variable 1) in two distinct groups, as shown in Table 1, is facilitated by the duration of the intervention. This duration is quantified through the count of interactions that occur. With regards to instances where interpreters produce information through a single intervention, our findings suggest that the nature of the information conveyed is varied. Nevertheless, there is some redundancy in terms of the purpose of the information imparted. Such interventions can be categorized into five distinct elements: event description, comprehension check, behavioural indications, questions, and responses. With regards to instances where interpreters produce information through two or more interventions, they all take place in the foreign language of the proceedings, and they generate a dialogue between the interpreter and the defendant. We have called these "side-conversations" and two distinct metrics were employed to evaluate the duration of these exchanges: number of speaking-turns and duration of the exchanges in seconds. These metrics are necessary for assessing the impact of side-conversations on the judge's involvement in the trial. They highlight how much essential trial information the judge might miss when certain speaking-turns are not translated into Spanish during these side-conversations. As presented in Table 1, the categorization of instances of the judge's comprehension of the foreign language (Variable 2) can be attributed to the judge's mode of intervention. Specifically, when the judge speaks the foreign language or immediately follows the defendant's speech in Spanish without prior translation, it enables the classification of these instances into two distinct groups.

As shown in Table 1, when instances of visibility of the interpreter in the discourse (Variable 1) or the judge's comprehension of the foreign language (Variable 2) are found in our corpus, an assessment is made of the judge's response, which may include reactions as simple interruptions, comments on the interpreter's work and a subsequent change in the communicative strategy, or the request to replace the interpreter. Each scenario is associated with a corresponding trust impact, ranging from trust being maintained to a partial or total loss of trust.

Variables	Description of elements	Judge's reaction	Trust impact
Visibility of the interpreter in the discourse	One intervention (Event description, Comprehension check, Behavioural indications, Questions, Answers)	No reaction	Trust maintained
		Simple interruption	Trust maintained
		Comments on interpreter's work and change in communicative strategy	Partial loss of trust
		Request to replace the interpreter	Total loss of trust
	Two or more interventions (Side-conversations)	No reaction	Trust maintained
		Simple interruption	Trust maintained
		Comments on interpreter's work and change in communicative strategy	Partial loss of trust
		Request to replace the interpreter	Total loss of trust
Understanding of the foreign language by the judge	Judge's interventions without prior interpreting into the official language of the proceedings	No reaction	Trust maintained
		Simple interruption	Trust maintained
		Comments on interpreter's work and change in communicative strategy	Partial loss of trust
		Request to replace the interpreter	Total loss of trust
	Interventions of the judge in the foreign language of the proceedings	No Reaction	Trust maintained
		Simple interruption	Trust maintained
		Comments on interpreter's work and change in communicative strategy	Partial loss of trust
		Request to replace the interpreter	Total loss of trust

Table 1. Trust Measuring Analytical Method

In the first reading phase, we began the analysis of the transcripts: an in-depth reading of the 66 files of the corpus, corresponding to the 55 trials. When one of these elements was identified, the metadata was entered in an Excel spreadsheet, and the excerpt in an MS Word document. All cases were described and recorded with the following metadata:

Metadata	Description
ID	Numerical code identifying each case
Trial code	Number of the proceeding where the example has been identified
Language	Proceeding's foreign language
User of the interpreting service	Witness or defendant that has the right to an interpreter
Transcript identifier start	When the extract starts (expressed in minutes)
Transcript identifier end	When the ends
Exchange start	When the exchange starts
Exchange end	When the exchange ends (expressed in minutes)
Number of exchanges	Total number of interventions in the example
Judge	Code of the judge that participates in the trial
Interpreter	Code of the interpreter that participates in the trial

Table 2. Metadata

During the second reading phase, the researchers sought to identify elements that were not detected in the previous reading and to verify those that had already been identified. Again, the software EXMARaLDA (Schmidt/Wörner 2014) was used to analyse the corpus and MS Word and MS Excel were used to record new data and revisions of previous data, if necessary. A third close reading of the 66 files in the corpus was carried out in the third phase, but here the focus was mainly reviewing the data collected in the previous two phases. When we identified one of the elements, we looked at whether the judge responds to it. If s/he does, we considered that there is a possible sign of distrust.

3. Results

The results are presented in three parts: non-renditions as a sign of discourse visibility of the interpreter, impact of knowledge of the foreign language by the judges and judges' reactions.

3.1 Non-renditions as a sign of discourse visibility of the interpreter

We applied the analysis tool and identified the interpreter's interventions that do not respond to any previous speech by any of the other participants, i.e., the cases in which the interpreter "generates" information or is visible because s/he is producing a non-rendition. In total we have identified 76 instances of discourse visibility of the interpreter and we classified these instances into six descriptive categories. All of them are situations in which the interpreters add information based on their own initiative.

Firstly, we have identified situations in which the interpreter adds information about how the communicative act (event description), i.e., the criminal proceeding,

works. In them, we observe that the interpreter expands on the information provided by the original speaker, a member of the judiciary. In the second category, we observe situations in which the information added by the interpreter in the foreign language serves to ensure that the defendant has clearly understood what the member of the judiciary has asked him or her (comprehension check). The strategy followed by the interpreter to ensure that the defendant understands the question differs from case to case. There are situations where the interpreter asks the defendant directly and cases where the interpreter adds information to ensure that the defendant understands what is being said. Thirdly, there are situations where the interpreter adds information in the foreign language to advise the defendant on how to behave (behavioural indications). These cues refer to a variety of situations, but in all cases, they involve the interpreter telling the defendant what to do in terms of how s/he should handle the communicative situation. Fourthly, we identified questions asked by the interpreter that do not correspond to any prior intervention by a member of the judiciary or the defendant (questions). We noted that the added questions are found at the beginning of the hearing or during the cross-examination conducted by counsels. In the fifth category, we have identified the answers given by the interpreter that do not correspond to any prior intervention by the users of the interpreting service (answers). Finally, we identified side-conversations between the interpreter and the defendant in the foreign language. In them, there are two or more interventions by the interpreter that do not correspond to any previous intervention. In all these situations there is information that is not translated into the language of the proceeding. This excludes some of the participants in the communicative act, that is, speakers of the official language of the proceeding who do not understand the foreign language.

Type of visibility of the interpreter in the discourse	EN	FR	RO	TOTAL
One intervention				
Event description	4	0	3	7
Comprehension check	4	2	4	10
Behavioural indications	6	1	6	13
Questions	7	1	8	16
Answers	6	0	0	6
Two or more interventions				
Side-conversations	6	1	17	24
TOTAL	33	5	38	76

Table 3. Visibility of the interpreter in the discourse

As described in Table 3, we identified a total of seventy-six cases of interpreter's visibility. In most of them, despite the interpreters deviating from their role as interpreter and disregarding the rules of the ethical codes in each of these circumstances, the judge, the prosecutor, and the defence counsel remain unresponsive, failing to hold them accountable. In 4.3 the 4 cases in which we observed some kind of prompt reaction by the judge are presented.

3.2 Impact of knowledge of the foreign language by the judges

We identified 22 situations in which the judge proves that s/he understands or speaks the foreign language. Thus, we observed that in 12 of the trials with English interpretation, the judge speaks without the need for prior translation; 7 trials in the case of French; and finally, in Romanian, there are no cases identified in which the judge intervenes without prior interpretation.

Of these 22 situations, 19 are cases in which the judge speaks without waiting for interpreting, i.e., cases in which s/he demonstrates having understood the foreign language interventions. In the other 3 situations the judge speaks the foreign language of the proceedings directly (English/French), without waiting for an interpreted utterance.

3.3 The judge's reactions

When it comes to the instances of the interpreter's discourse visibility, out of the 76 situations in which the interpreter generates information and becomes visible in the discourse, only in 4 cases did we observe some kind of prompt reaction by the judge. The four identified reactions were found in three different trials (EN4, EN5.1 and EN11), all of them with English as the foreign language. On the contrary, when it comes to situations in which the judge proves that s/he understands or speaks the foreign language, of the total of 22 situations that have been identified, 6 reactions by the judge were observed. These six reactions are spread over four different trials (EN2, EN5, EN5.1, FR28.1[4]), three in English and one in French. Those results show that judges are clearly stepping up more to their responsibilities when they have some knowledge of the foreign language (27.27% of reactions) compared to the negligible response (5.26%) to non-renditions produced by interpreters.

Table 4 lists these 10 reactions by the judges all together, which indicates in which trial the reaction was produced, the variable that was observed (whether it is due to interpreter's interventions that do not respond to any previous input, or a judge's ability to understand the foreign language of the proceedings), what the specific reaction was (including the reaction in the original language, in Spanish, and a translation into English) and, finally, the consequences of the reaction.

4 In two of these hearings (EN4 and EN5.1), signs of distrust have also been identified in relation to the interpreter's discursive visibility.

Trial	Variable	Judge's reaction	Description of the reaction's consequences
EN 4 [27-51]	Visibility of the interpreter	(REACTION1) The judge interrupts the side-conversation: "Bien, gracias, a ver..." (OK, thank you, let's see).	The judge interrupts the side-conversation without making any comment concerning the interpreter's work.
EN 4 [88-123]	Visibility of the interpreter	(REACTION2) The judge interrupts the side-conversation: "Sí, dígale que esto no es un negocio, es decir, que no porque reconozca los hechos, se condiciona que se le deje en libertad" (Yes, tell him that this is not a negotiation, namely, that just because he acknowledges the facts, it does not mean that he will be released).	The judge interrupts the side-conversation without making any comment concerning the interpreter's work.
EN 5 [133-182]	Visibility of the interpreter	(REACTION3) The judge interrupts the side-conversation: "Sí, dígale que si quiere contestar a las preguntas que le formulen o no, que tiene derecho a no declarar. Habla inglés esta señora, ¿no? Venga" (Yes, tell her whether she wants to answer the questions or not, that she has the right not to testify. This woman speaks English, doesn't she? Come on.).	The judge interrupts the side-conversation without making any comment concerning the interpreter's work.
EN11 [313-340]	Visibility of the interpreter	(REACTION4) The judge interrupts the side-conversation: "Eh... No, no, dígale que no puede hablar él. Que, si tiene alguna pregunta, se la haga a usted, y es usted quien se lo traduce" (Eh.... No, no, tell him that he cannot speak. If he has any questions, he should ask you, and it is you who translates for him)	The judge interrupts the side-conversation without making any comment concerning the interpreter's work.
EN2 [227-247]	Judge's foreign language competence	(REACTION5) The judge intervenes when there is a side-conversation between the defendant and the interpreter to interrupt this exchange, and does so in a way that makes it clear that he understands the content of the speeches in the foreign language: "A ver, a ver, dígale, tradúzcame a mí, por favor, dígale [I: Sí, señoría] que me mire la cara, lo primero"(Let's see, let's see, tell him, translate for me, please, tell him [I: Yes, Your Honour] to look at my face, firstly).	The judge interrupts the side-conversation without making any comment concerning the interpreter's work.

Trial	Variable	Judge's reaction	Description of the reaction's consequences
EN4 [403-418]	Judge's foreign language competence	(REACTION6) The judge intervenes when there is a side-conversation between the defendant and the interpreter to interrupt this exchange, and does so in a way that makes it clear that she understands the content of the speeches in the foreign language: "Son dos cosas diferentes, lo -- , usted lo está entendiendo, una cosa es si se queda en prisión o no, que se resuelve después de que se dicte sentencia o si no se dicta sentencia, se resuelve una cosa, o se resuelve otra, y la otra es si usted ha cometido los hechos, si ha cometidos este delito, lo reconoce y acepta la condena. ¿Sí o no?" (They are two different things, the -- , you are understanding it, one thing is whether you stay in prison or not, which is resolved after the sentence is passed or if the sentence is not passed, one thing is resolved, or another is resolved, and the other is whether you have committed the facts, if you have committed this crime, you acknowledge it and accept the conviction. Yes or no?).	The judge interrupts the side-conversation without making any comment concerning the interpreter's work. The judge considers it necessary to make a clarification to address the doubts of the user of the interpreting. The side-conversation is not interrupted because of the side-conversation itself, but because of the content of what is being said.
EN5 [260-285]	Judge's foreign language competence	(REACTION7) She calls into question the quality of the interpreter's performance and training. The judge shows that she is doubtful about the interpreter's work by asking a question out loud and indicating to the interpreter how to translate a term: "Robar —a sí misma—. Steal ––a la intérprete–– (Steal —to herself—. Steal —to the interpreter—).	The judge requests replacing the interpreter.
EN5 [328-474]	Judge's foreign language competence	(REACTION8) The quality of the interpreting and the interpreter's training is called into question: "Es que *detained* tampoco existe. Interpreter, I don't know your level of English, but it is "detained" (There is no such thing as 'detained' either)	The judge requests replacing the interpreter.

Trial	Variable	Judge's reaction	Description of the reaction's consequences
EN5 [328-474]	Judge's foreign language competence	(REACTION9) The quality of the interpreting and the interpreter's training is called into question: "It's wrong (talking to herself)".	The judge requests replacing the interpreter.
FR28.1 [1480-1531]	Judge's foreign language competence	(REACTION10) The quality of the interpreting and the interpreter's training is called into question: "Sí, pero ent--, lo hemos..., como es una cosa delicada, como usted lo dice directamente, entonces lo entendemos major" (Yes, but we have..., as it is a rather delicate matter, as you put it directly, so we understand it better).	The performance of the interpreter is partially disregarded, and the user of the interpreting is asked to speak in Spanish.

Table 4. Identified judges' reactions

4. Discussion

We have identified only 10 reactions by the judges that can be considered expressions of distrust, although 98 elements were identified in total. They correspond to 5 trials (9.09 % of the corpus): 4 in English (EN2, EN4, EN5.1 and EN11) and 1 in French (FR28.1). No reaction was identified in any of the trials with an interpreter for Romanian despite the fact that 38 indicators were identified. In four of these five trials, the user of the interpreting is the defendant, and in one, it is the witness. We can observe that a total of four different judges participate in these five trials. One of them participates in two different trials, both of them in English (EN4 and EN5). As for the interpreters, four different interpreters participate (one of the interpreters participates in two trials, both in English).

The reactions from the judges can be divided into two groups: (1) cases in which the judge interrupts the communicative situation without making any comment concerning the interpreter's work (here we find six situations summarized in Table 2: REACTION1, REACTION2, REACTION3, REACTION4, REACTION5 and REACTION6) and (2) cases in which we do find explicit references to the interpreter's task (REACTION7, REACTION8, REACTION9 and REACTION10) and an assessment of the interpreter's language level.

In REACTION1, for instance, the judge interrupts the side-conversation between the defendant and the interpreter in the foreign language. She does so by ending the exchange with "Bien, gracias, a ver" ("OK, thank you, let's see"), but no explicit reference is made to the event that generates this indication of distrust (the side-conversation between the defendant and the interpreter in English). Nevertheless, the judge seems to readdress the behaviour that he does not consider appropriate. We see another of these side-conversations in REACTION4. Here the judge interrupts them

by asking the interpreter to inform the defendant how speaking turns work: "Eh... No, no, dígale que no puede hablar él. Que, si tiene alguna pregunta, se la haga a usted, y es usted quien se lo traduce" ("Eh.... No, no, tell him that he cannot speak. If he has any questions, he should ask you, and it is you who translates for him"). There is one case (REACTION8) in which the language level is directly questioned: "Señora intérprete, yo no sé su nivel de inglés, pero *detained* ("Interpreter, I don't know your level of English, but it is "detained"). It is worth noting that all these instances of distrust towards the interpreter's foreign language level are concentrated in two trials. In one of them, the foreign language is English (EN5.1) and in the other, French (FR28.1).

The 10 identified reactions denoting signs of distrust have been classified regarding their potential negative implications for the trial. There are three situations: termination of the side-conversations, termination of the interpreter's intervention, and replacement of the interpreter. The case in which the judge reacts by explicitly or implicitly asking the interpreter and the defendant to stop speaking to each other in the foreign language does not have any consequences for the course of the trial or for the definition of the interpreter's role. It should be noted that side-conversations, which can extend up to 35 seconds, always occur in the foreign language, excluding speakers of the official language of the proceedings who do not understand the foreign language.

To illustrate these reactions of the judges, we have selected two situations detected in our corpus. One of them is considered a case of partial loss of trust and the other one a case of total loss of trust or total distrust – which is in fact the only trial that was suspended by the judge because of the considered non-performance by the interpreter.

In trial FR28.1 we find a partial loss of trust since the interpreter's level of knowledge of the foreign language is called into question but is not considered an obstacle to pursue with the trial. In this trial, the witness is a French businessman employing a rather specialized language and having some command of the Spanish language, while the interpreter lacks the expert knowledge and shows a clear inability to interpret. The reaction of the judge, instead of calling for a recess in court and the replacement of the interpreter, is to pursue the trial with the witness employing a limited Spanish and some sporadic assistance from the interpreter. The judge decides to settle on a very poor model of communication: the members of the judiciary will ask questions in Spanish and the witness will speak in his limited Spanish. The interpreter will step in whenever the witness asks him to do so and in doing that, becomes some sort of assistant serving the witness. The main language of communication for all court operators and for the interpreter is now Spanish, and the presence of French is reduced to the few occasions where the witness requests the assistance of the interpreter. It should be noted that both the defence counsel and the witness himself also indicate on several occasions that the interpreter's work is not accurate. However, there is never any reference to the possibility of replacing the interpreter. The witness's linguistic competence is observed in the interactions in the first part of his intervention —when he answers questions asked in Spanish without waiting for the French translation from the interpreter, when he corrects the interpreter's interventions or when he intervenes directly in Spanish— and, later on, both he and the defence lawyer admit this competence, which they indicate is by no means a full language competence. It is one of the judges who demonstrates that he understands and speaks the foreign language, in this case, French. However, the possibility of requesting the intervention of another interpreter does not seem to have been considered by the judge.

In trial EN5 we find a total loss of trust: the judge requests replacing the interpreter. The interpreter's level of knowledge of the foreign language is called into question and she is considered an obstacle to continuing with the trial. Here the defendant, an English speaker, is being charged with a theft offence, while the interpreter is a woman with limited English proficiency but quite effective communicative skills. The total loss of trust becomes evident when the interpreter is replaced, however several problems had already been identified beforehand, illustrated by the judge's reactions, that point to a loss of trust. In this case, the interpreter does not show that she does not understand or speak English. In this trial, all the signs of distrust towards the interpreter have a common denominator: the judge demonstrates that she understands English. Indeed, two of the triggers for the judge's reactions indicating distrust towards her are two English terms: *rob* and *detain*. Here, too, the language level of the interpreter is called into question. The judge considers that these are not accurate translations of the words used in Spanish, and this leads her to question the interpreter's level of English and, subsequently, her professionalism when the interpreter admits having accepted the job because no other interpreter was available. However, it should be noted that translation —in this case, interpreting— is based on the recipients assuming the existence of an equivalence that we cannot empirically prove actually exists (Duarte 2012: 20). In this context, the judge interrupts the trial and requests a new interpreter, citing what she views as an inaccurate translation of specific terms. Notably, we observe that the judge's limited knowledge of the foreign language is the sole factor triggering a complete loss of trust in the interpreter's performance.

5. Conclusions

The aim of this article was to identify and present the key measurement elements used to observe how judges in the courtroom perceive and respond to the interpreter's performance in terms of trust and distrust. We operationalized two primary variables – discursive visibility of the interpreter, and the judge's ability to understand and speak the foreign language – which were applied to analyse the corpus. By employing a method to identify evidence of distrust towards interpreters, we have gained a better understanding of how interpreting influences the interactions between the agents involved, particularly between the interpreter and the judge. Our suggestion for further research is to employ this method in larger corpora with the assistance of specific software, such as EXMARaLDA (Schmidt/Wörner 2014), to obtain quantitative data and contemplate the responsibility of other agents in the quality of court interpreting. Our findings demonstrate that trust plays a pivotal role in understanding interpreting as a social act in the context of criminal trials.

We have identified ten judge's reactions that point to the existence of potential episodes of distrust towards interpreters, which has allowed us to describe loss of trust, both total and partial. The analysis of systematic and contextualized interactions has helped us to understand the role of interpreting in this social act and how it affects the interactions between the agents involved.

Our findings indicate that loss of trust towards the interpreter only undermines the functioning of the trial in rare cases. We have also observed that judges do not react or ask for any kind of explanation in the face of exclusionary behaviour by the

interpreters and the non-Spanish speakers, such as side-conversations, which due to their long duration (more than 35 seconds in some instances) could alert the members of the judiciary. Furthermore, these non-renditions, clearly against the interpreter's code of ethics, are not enough to generate distrust reactions from judges. Although the interactions eventually take place successfully from a communicative point of view, this does not imply that they do so from an ethical point of view.

The lack of reactions when faced with all these indicators underpin the very existence of a context of cooperation between the judge and the interpreter since breakdown of trust only occurs when the judge shows some knowledge of the foreign language. As argued in Pym *et al.* (2023), court interpreting in Spain follows a model of risk management greased by several instances of trust, for instance, the judge implicitly trusts the interpreter to carry out side-conversations in a language that is not Spanish, and the interpreter trusts the judge will allow these exchanges. The corpus reveals that this model is sustained in a lack of comprehensive awareness of the role of the interpreter by the members of the judiciary who only seem to perceive the textual task of the interpreter. Indeed, the only full challenge to the interpreter's performance is produced when evidence of "supposed" inaccurate textual translation is gathered. We observe that knowledge, or self-perceived knowledge of the foreign language, shapes trust in the Spanish courtrooms. The presence of the foreign language explains the need to trust in the interpreter and, at the same time, sustains the only reasons for not trusting showed by judges.

Excessive intervention by the interpreter, who is allowed to control turn taking and to conduct side-conversations, fails to generate any reaction from the judges. In our corpus, trials involving the Romanian-Spanish language pair exhibit the highest incidence of such transgressions, with interpreters of the Romanian language being particularly prone to more errors also in textual renditions as showed in Orozco Jutorán (2019) and Vargas-Urpí (2020). Interestingly, in the majority of these cases, distrust reactions from the judge do not occur. We have only identified signs of distrust coincidentally in two cases where the judge had some knowledge of the foreign language, being English or French. Nevertheless, the rights of the French and English speakers in our data are yet to be guaranteed, they hold a comparatively better status than the Romanian speakers. This is due to the fact that the judges' knowledge of the foreign language is the only variable that prompts some degree of response or scrutiny from them.

Since presence of the English and French languages combined represents only 15.42% of the court interpreting services provided in the Catalan context in 2020 (Generalitat de Catalunya 2020), other languages with an important presence, such as Arabic (42.21%) or Romanian (7.56%) remain unacceptably out of reach of the procedural rights – not only because of the default professionalism of the interpreters but, more seriously, because of the lack of awareness by the members of the judiciary about the role of the interpreter. The presence of the interpreter in the courtroom should overshadow the linguistic complexity added by the foreign language, since this communicative situation needs to be presided by trust to be functional. In addition, trust must by no means lead to judges completely abandoning their responsibilities in conducting and monitoring the interactions in the trial. By allowing unjustified non-renditions from interpreters, or encouraging them, they make most foreign languages "opaque" from the point of view of legal protection, and their speakers more vulnerable in the justice system.

According to our data, our analysis suggests that judges intervene solely based on their expertise in a particular language. Consequently, individuals who employ languages that are relatively unfamiliar to the judiciary are left in a more vulnerable and unprotected position. To address this precarious situation, implementing a trust/distrust framework could effectively mitigate such instances of defencelessness. Such an approach would allow judges to regain control of exchanges, by enabling them to exercise a degree of scrutiny over the proceedings despite the element of complexity added by the presence of the foreign language. Improving the standards of court interpreters' professionalism is an urgent and critical matter to assure access to justice for non-Spanish speakers, but those efforts need to go hand in hand in hand with a better understanding of good practices by all the criminal justice practitioners.

Transcription conventions

The corpus, consisting of authentic court proceedings held in the city of Barcelona from January to June 2015, was transcribed verbatim by the researchers of the MIRAS research group and other universities for the TIPP project.

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Exploring turn-taking in video-mediated interpreting: A research methodology using eye tracking

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Abstract

Research has shown that in video-mediated dialogue interpreting, the multimodal coordination of turn-taking differs from face-to-face interpreting depending on the physical distribution of participants (e.g., Licoppe/Veyrier 2020). In video-remote interpreting in particular, where the interpreter is remote while primary participants are co-located, the function of gaze as a turn-taking device may be constrained (Davitti 2019). However, little is known about gaze and turn-taking in the increasingly common configuration in which all participants are in different physical locations (three-point video interpreting), and, in particular, how this configuration compares to others. Therefore, the aim of the PhD project reported on in this paper is to compare how turn-taking is managed multimodally by participants in (1) three-point video interpreting, (2) video remote interpreting, and (3) face-to-face interpreting. This paper reports on the innovative experimental methodology developed for this comparison, which includes nine interpreter-mediated simulations in an educational setting. The paper demonstrates how the collection of experimental, quantitative data by means of mobile eye tracking can inform a qualitative, multimodal conversation analysis of the simulations, which is triangulated with data from post-hoc interviews. This paper discusses a number of methodological considerations of a mixed-methods design that integrates simulated data and technology.

Keywords

Interaction, turn-taking, mobile eye tracking, multimodal conversation analysis, methodology

Introduction

Video-mediated interpreting (VMI) is generally understood as a way to use videoconferencing technology to connect geographically distant participants to an interpreter-mediated interaction (Braun 2019). The practice has become increasingly popular and diverse over the past few years, a process which has likely been expedited by the COVID-19 pandemic (Li 2022; Matsushita 2022). Based on participants' physical locations during the interaction, VMI is often subdivided into a number of configurations. Braun (2019) distinguishes between videoconference interpreting (VCI), in which the interpreter is co-located with one of the primary participants while the other is located elsewhere, and video remote interpreting (VRI), in which the interpreter is the only remote participant. The present paper also discusses a configuration in which all participants (i.e. both primary participants and the interpreter) are in a different location. As terminology regarding this configuration and VMI in general is not yet standardised (Skinner *et al.* 2018), it will be referred to here as three-point video interpreting (3VI). Visual representations of the different configurations with an interpreter (INT) and two primary participants (PP1 & PP2) are displayed in Figure 1.

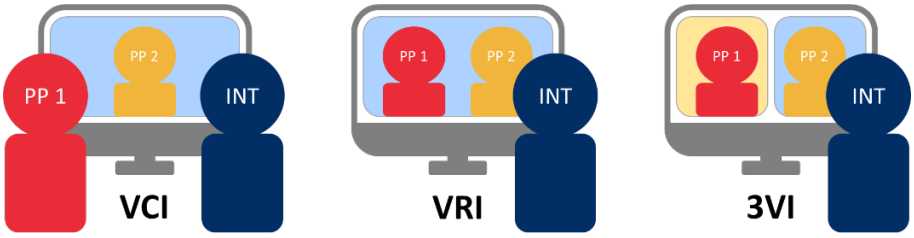

Figure 1: Visual representation of different VMI configurations

There seems to be a general consensus that VMI adds an additional layer of complexity to the already complex activity of interpreting (Braun/Taylor, 2012; Amato *et al.* 2018; Davitti, 2019; De Boe 2021; Hansen 2022). It is therefore no surprise that the dynamics of VMI interaction have become a frequent object of study, along with how these dynamics contrast to those of traditional face-to-face interpreting (F2FI). The physical separation inherent to video-mediated interaction limits participants' access to each other's environments, yet they tend to falsely assume a reciprocity of perspectives (Luff *et al.* 2003). As a result, problems can arise in terms of how participants coordinate the sequential unfolding of the interaction, and the efficiency of the multimodal resources they use during this process. Several studies have examined VRI and VCI in this regard, both through authentic data (Licoppe/Veyrier 2020, Hansen 2022), partially authentic data (Davitti 2019), and simulated data (Braun/Taylor 2012; De Boe 2020). Yet, for 3VI almost no research on this topic exists, let alone research which compares this configuration to others. This is the main research gap which my ongoing PhD project aims to address by comparing how turn-taking is managed multimodally by participants in 3VI, VRI and F2FI.

Gaze is considered one of the most important embodied resources for coordinating turn-taking, especially in multiparty interaction (Auer 2018; Vranjes *et al.* 2018),

and plays an important role in how participants decide who is addressed and who is to speak next. In this regard, gaze has mostly been examined in Interpreting Studies through close inspection of both authentic and simulated video-recorded data. The present paper, however, employs a fairly novel approach in the realm of dialogue interpreting through the use of mobile eye-tracking technology, which allows for a far more fine-grained and quantitative analysis of participants' gaze behaviour.

Therefore, the current paper discusses the methodology developed for my ongoing PhD project, which consists of nine interpreter-mediated simulations in an educational setting. In these simulations, quantitative eye-tracking data is gathered as a means of supporting a qualitative multimodal conversation analysis, which in turn will be triangulated with results from post-hoc interviews with the participants. The aim of the present paper is to demonstrate how the methodology of experimental research with eye tracking can inform the study of turn-taking in VMI in new and valuable ways. The methodology will be illustrated through a brief discussion of preliminary quantitative results. A detailed analysis of results, however, is beyond the scope of the present paper and will be published in future articles.

To this end, the paper gives an overview of the concepts relevant to the study of multimodal interaction in VMI (Section 1), briefly presents the study's data collection and methods (Section 2), and discusses a number of challenges related to data processing (Section 3). The mixed-methods design of the study is briefly discussed along with some preliminary quantitative results (Section 4), after which some concluding remarks are offered (Section 5).

1. Multimodal interaction in VMI

1.1 Terminological discrepancies

Terminology regarding VMI is far from standardised (Braun 2015). In the realm of dialogue interpreting, VRI and VCI, as proposed by Braun (2019), seem to have become the standard terms for denoting their respective configurations. On the contrary, 3VI has received a large variety of labels in previous literature, such as "videoconference interpreting + remote interpreting" (Braun/Taylor 2012: 34), "three-way […] video conference connection" (Braun 2015: 2), "three-way link" or "three-way connection" (Skinner *et al.* 2018: 3), "tele-interpreting" (Korak 2012: 84), and "three-point videoconference" (Spinolo *et al.* 2018: 16). The most commonly used prefix to denote this configuration seems to be "three-way". However, this term could also be interpreted as referring to the triadic nature of dialogue interpreting in general. In this respect, any interpreter-mediated interaction, be it face-to-face or video-mediated, can be considered 'three-way' interaction (Wadensjö 1998). The present paper uses 'three-point' as a prefix, since it refers more explicitly to the three separate locations of 3VI, which are arguably its most salient aspect in the context of the current study.

A common feature shared between all VMI configurations is that the interaction takes place within an environment which is fundamentally fractured: participants' actions are not shaped by a shared physical environment, but rather by their own local environment or ecology (Luff *et al.* 2003). Already in 2001, Hutchby discussed how participants in video-mediated interaction have different "affordances" than face-to-face interaction. This concept refers to the ways in which participants are enabled or restricted in different ways in how they perceive what happens in an interaction and how they act when compared depending on the configuration in which it takes place. More recent studies on interpreting have confirmed this idea. For instance, visual access in VMI is limited compared to F2FI (Spinolo *et al.* 2018), since usually only participants' upper bodies appear on relatively small screens. Consequently, participants are unable to see what is happening in their interlocutor's remote environment beyond the webcam's field of view, and they might also be unable to ascertain where their remote interlocutors are looking. Aural access can also be problematic as a result of poor sound quality or background noise, both of which may impede comprehension. Another important feature of VMI is latency, the technology-generated delay between the production of a participant's action and their remote interlocutor's perception of that action (Seuren *et al.* 2021). This slight temporal shift in the sequential unfolding of an interaction can introduce issues related to turn-taking, which has been qualitatively explored in an interpreting setting by Hansen (2022). The factors mentioned above may be reinforced by participants' false assumption of a reciprocity of perspectives, which leads them to assume that what is available to them, is also available to their remote interlocutor (Luff *et al.* 2003).

Nevertheless, while different configurations of VMI share several characteristics, they each come with their own sets of specific challenges and variables (Braun 2007; Skinner *et al.* 2018; Hansen 2022). The most salient difference between various configurations are the participants' physical locations during the interaction. 3VI distinguishes itself from both VCI and VRI in the layer of separation it adds to an interaction, turning every participant into a remote participant in relation to one another. Although analysing data in telephone interpreting, Rosenberg (2007) raises an interesting question regarding the complexity of three-point interactions, which is equally relevant for 3VI. In his study, he found that three-point telephone conversations were less problematic than telephone conversations in which both primary participants were co-located and the interpreter participated remotely, since participants in the former were all physically remote and thus "on an equal footing" (*Ibid.*: 72). Indeed, in VRI, the interpreter must interact with the primary participants remotely, while these themselves are able to interact with each other face-to-face. However, it could also be argued that 3VI renders interaction more complex than VRI, since it involves an additional location, connection and remote participant, and thus additional factors that may increase the chance of communication problems. However, there is no empirical data available to confirm nor refute these assumptions, since 3VI has not nearly been studied as much as its fellow configurations. To my knowledge, Braun's (2007) study is the only one that explicitly sets out to study this particular configuration. Through the use of role-plays, she focuses on the technical aspects of 3VI and the interpreters'

adaptation strategies to what was at the time a relatively novel practice. However, two crucial differences exist between the interactions observed by Braun and the interactions discussed in the present paper. First of all, while Braun's dataset consisted of interactions interpreted in the simultaneous mode, the current study uses consecutive interpreting, the turn-taking dynamics of which are very different from simultaneous interpreting. Second, while the primary participants were able to see each other, they were not able to see the interpreter, whereas in the 3VI configuration investigated in the present study, all participants have equal visual access to each other. Skaaden (2018) reports on professional interpreters' perceptions and experiences in 3VI during a remote course on VMI and during their professional practice. However, the study's inclusion of 3VI seems to be more so a product of the fact that the course took place online than an explicit intention to study 3VI in its own right. The present study, by contrast, constitutes a conscious effort to fill the current knowledge gap on 3VI by closely examining its multimodal turn-taking dynamics.

1.3 Turn-taking and multimodal communication

Studying turn-taking dynamics in the context of interpreting is an important topic ever since the seminal works of Wadensjö (1998) and Roy (1999), who conducted micro-analytical research into the ways in which interpreter-mediated interaction unfolds by closely examining participants' turn-taking behaviour, and the coordinating role of the interpreter during this process. Although their analyses did take other resources than talk into account, recent interaction-oriented studies on interpreting have started to place a much greater emphasis on the multimodal dimension of interpreter-mediated interaction through thorough observation of resources such as eye gaze, gestures and body posture (Pasquandrea 2012; Davitti 2013; Davitti/Pasquandrea 2017; Krystallidou/Pype 2018; Vranjes 2018). These studies have demonstrated the ways in which turn-taking in interpreter-mediated interaction unfolds as a result of the subtle interplay between verbal and embodied resources, which are combined into multimodal packages or 'gestalts' (Mondada 2014).

This multimodal approach has also been applied in the context of VMI, such as in Davitti (2019), who compared F2FI and a simulated VRI interaction in terms of interpreters' attempts at 'chunking', a practice aimed at maintaining a steady flow of dialogue by splitting participants' utterances into smaller, more manageable parts (*Ibid.*: 14). Licoppe/Veyrier (2020) studied chunking in interpreter-mediated asylum hearings in VCI, and also compared instances in which the interpreter was co-located with the remote asylum seeker to instances in which the interpreter was located in the courtroom to illustrate the possible effects of interpreters' spatial location on their management of answering sequences. Hansen (2022) examined how interpreters use embodied resources to initiate repair sequences in authentic VRI hospital encounters. She also underlines and demonstrates the importance of examining VMI from all available locations in the interaction, since the sequential order of utterances is slightly different in each location as a result of latency, which in turn influences how participants further interact with each other. The effects of delay in sound and image transfer are also mentioned by De Boe (2021), who compared simulated F2FI and VRI doc-

tor-patient consultations. Similarly to Davitti (2019) and Licoppe/Veyrier (2020), she observed that the interpreter's embodied resources – in this case, to facilitate repair – were less effective in VRI, and that the interpreter also tended to miss important visual cues onscreen by gazing down at her notebook. These findings further illustrate the need to approach each VMI configuration as a separate ecology with its own specific variables, for example, by looking into the role of gaze.

1.4 Gaze in dialogue interpreting

Studies on interaction have repeatedly highlighted the myriad of functions that gaze can fulfil. It can be used as a monitoring device to collect additional information from listeners or speakers (e.g., Argyle *et al.* 1973), but also as a way of signalling engagement and disengagement with the interaction (e.g., Lang 1978; Davitti 2012; Mason 2012), and as a means of expressing various interpersonal relationships (e.g., Mason 2012; Vranjes 2018). Aside from these functions, however, gaze has also been demonstrated to be an instrumental resource for turn-allocation. Vranjes *et al.* (2018) demonstrated how interpreters use gaze towards the ends of their turns to select a next speaker. Averting one's gaze is of similar importance for turn-taking. Mason (2012), reporting on the gaze behaviour of immigration officers during asylum interviews, found that the officers would occasionally avert their gaze from the other participants to signal the ends of their turns. Vranjes/Bot (2021), who studied participants' gaze behaviour in interpreter-mediated psychotherapy, found that interpreters tend to use gaze aversion from the current speaker as a way of signalling their intention to take the floor. During instances of overlap, the interpreter was more likely to yield the floor when gazing at the overlapping speaker. Conversely, the interpreter used gaze aversion in these situations as a way of retaining the conversational floor (*Ibid.*: 16-17). Nevertheless, the success of gaze as a means of turn-allocation very much depends on the other participants' interactional behaviour (Lerner 2003). A speaker's attempt to select a next speaker through gaze might very well fail if the latter does not notice this. This phenomenon was also demonstrated in a VMI setting by De Boe (2021).

It is important to note that of the studies discussed above, a small number used mobile eye tracking (i.e. Vranjes 2018 and Vranjes *et al.* 2018). This technology has gained popularity for the study of gaze in social interaction since it produces an extremely fine-grained analysis of participants' gaze behaviour compared to other methods. In Interpreting Studies, the use of eye tracking is far from new (Hu *et al.* 2022) and has been used to study cognitive load and processing (e.g., Hyönä *et al.* 1995; Seeber *et al.* 2020; Chen *et al.* 2021), mostly within the domain of conference interpreting, apart from Tiselius/Sneed (2020). However, using eye tracking to study social interaction in dialogue interpreting is still relatively novel, the first efforts having been made by Vranjes (2018) in her doctoral thesis. Eye tracking is also relatively new when it comes to studying VMI. One of the few examples of this is Doherty *et al.* (2022), who use a screen-based eye tracker to measure overt visual attention of interpreters during both simultaneous and consecutive in simulated investigative interviews carried out in VRI. The authors found that interpreters gazed less at the screen during the consecutive mode as a result of their note-taking, and that the interpreters

gazed more at the interviewer than the suspect, especially during consecutive interpreting. The present paper contributes to this growing body of research by providing a methodology for the analysis of gaze behaviour in interpreter-mediated interaction in various configurations of VMI through the use of mobile eye tracking. This type of eye tracking, as opposed to screen-based methods, provides a more complete picture of participants' gaze by also registering participants' eye movements beyond the computer screen.

2. Data collection & methods

As the present project is comparative in nature, it was decided to conduct a number of simulations as these allow for a more controlled research environment and therefore a higher degree of comparability than authentic data. In this section, we discuss how the simulations were designed to be as comparable as possible, as well as how they mimic as much as possible real-life situations.

A total of nine simulations of interpreter-mediated interactions between a school psychologist and a mother were carried out in sets of three, between June, 2022 and March, 2023. The participants included a Dutch-speaking school psychologist and a native Russian speaker playing the role of the mother, along with three practicing Dutch-Russian interpreters who each had at least five years of experience and had received specific interpreter training in the past.

Each set included the participation of a different interpreter, whereas the psychologist and the mother remained the same across all three sets. Simulations within the same set were carried out in three different configurations (3VI, VRI and F2FI), and were each based on a different theme. An overview of the order of configurations and themes can be found below in Table 1. During each simulation, the psychologist and the mother generated interaction based on short scenario descriptions they received beforehand. In each simulation, all participants wore mobile eye-tracking glasses and were recorded with external cameras and screen-recording software. After each simulation, all participants were interviewed separately about their perceptions of the interaction that had just taken place, after which they were given a short break while the researchers prepared the next simulation.

	Simulation 1	Simulation 2	Simulation 3
Interpreter A (June 2022)	3VI Theme 1	F2FI Theme 2	VRI Theme 3
Interpreter B (February 2023)	F2FI Theme 3	VRI Theme 1	3VI Theme 2
Interpreter C (March 2023)	VRI Theme 2	3VI Theme 3	F2FI Theme 1

Table 1: An overview of the simulation and scenario order per set

The Flemish Student Guidance Centre or CLB [Centrum voor Leerlingenbegeleiding] was selected as the setting for the interactions, as it is a context in which interpret-

er-mediated interactions, and by extension video-mediated interactions, commonly occur. Unique to Flanders, this organisation is primarily concerned with the wellbeing of children and adolescents from the start of preschool until the end of their secondary education. Pupils can contact the CLB with questions related to their school career, (mental) health or home situation, and parents and teachers can ask for advice regarding their child or pupil (Vlaams ministerie van onderwijs & vorming, n.d.). Three themes were selected to represent this broad range of subjects with which the CLB is confronted: (1) IQ-tests, (2) attention disorders, and (3) divorcing parents. The nine scenarios created around these themes were written to all follow the same three-part structure: (a) personal information about the mother and her child, (b) the child's behaviour at school, and (c) the child's behaviour at home. For each simulation, both primary participants received (a) and (b), while the mother also received (c). It should be noted that these scenarios did not contain literal scripts, but only background information around which the participants were to construct their interaction. Additionally, each participant received a short list of actions to undertake during the simulation (e.g. "Ask a question about x"). This overarching structure made it possible to maintain a degree of comparability between scenarios about different themes, while also allowing for variation between scenarios about the same theme. The latter was done to avoid that the mother and the psychologist would become too familiar with a given scenario. The questionnaires which form the basis for the post-hoc semi-structured interviews contained questions about the following themes: (1) interaction, (2) physical space and technology, (3) previous experience and preference, and (4) general assessment and remarks.

3. Data processing

A second consideration in experimental research designs is the careful preparation of data for optimal data analysis, particularly when gaze behaviour is the focus of analysis. To this end, we chose to work with the software ELAN[1] (Lausberg/Sloetjes 2009), which allows for the integration of several data types: transcription and annotation of audio and video files in different layers called 'tiers'. In this section we discuss how the video data was prepared (Section 3.1) and the subsequent integration of the eye-tracking data (Section 3.2).

3.1 Preparing data for analysis

Video data of the simulations was captured in three different ways, namely, through external video cameras, screen recordings, and gaze videos which are captured by the eye trackers' built-in cameras and enriched with the gaze data they collect. The external cameras generated a broad picture of the interaction by filming participants

1 ELAN is developed by the Max Planck Institute for Psycholinguistics in Nijmegen (The Netherlands) as part of The Language Archive. It can be downloaded at the following link: https://archive.mpi.nl/tla/elan.

in their local environment(s), while the screen recordings captured what participants could see on their screens. The eye-trackers (for this study we used the Tobii Glasses 3) captured gaze videos which roughly show participants' fields of view, along with a small gaze cursor – represented here by a yellow dot – which indicates where they are looking at a given moment. An example of each video source is shown in Figure 2, which contains the psychologist's gaze video (GV PSY), the parent's gaze video (GV MOT), the screen recording from their shared laptop (SR), and an external camera (EC). By combining and synchronising these different video sources into a single multi-screen video, it is possible to produce a more complete picture of the overall interaction, which makes it easier to further process and analyse the data.

Figure 2: Multi-screen video of a VRI simulation from the point of view of the psychologist and the parent

For F2FI, it is sufficient to combine the gaze videos of each participant with a video from one of the external cameras, an example of which is shown in Figure 3.

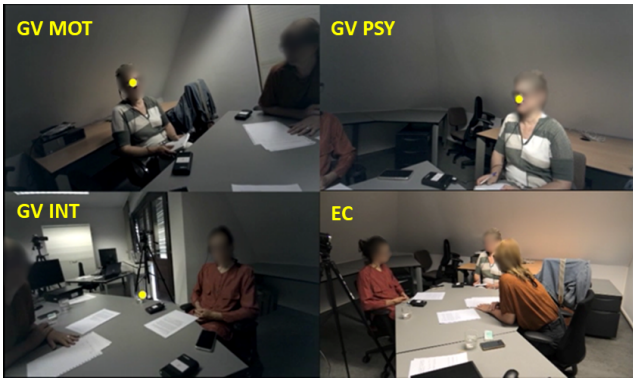

Figure 3: Multi-screen video of a F2FI simulation

However, for VRI and 3VI, a number of issues necessitate the creation of multiple multi-screen videos. For one, combining more than four videos into one makes the individual videos too small to analyse properly. Moreover, the inevitable latency in-

troduced by the video connection makes it impossible to properly synchronise video sources from different locations. For this reason, a multi-screen video was created for each location involved in an interaction. Two were created for VRI (one for the interpreter, and one for the psychologist and parent, the latter is shown in Figure 2), while three were created for 3VI (one for each participant). As a result, the 3VI multi-screen videos and the VRI video from the point of view of the interpreter only contained three video sources. An example is shown in Figure 4, which contains an external camera (EC) the interpreter's gaze video (GV INT) and a screen recording of the interpreter's computer (SR). While having only one multi-screen video per configuration might seem more desirable and less complex in terms of analysis, it is essential to have a video for each site when examining interaction in VMI, as the aforementioned latency slightly alters the sequentiality of the turn-taking order from the point of view of each location, as demonstrated in the work of Hansen (2022).

Figure 4: Multi-screen video of a 3VI simulation from the point of view of the interpreter

3.2 Eye tracking

3.2.1 How it works

Eye tracking refers to the process of measuring a person's eye movements in order to calculate where they are looking at any given moment. Most modern-day video-based eye-tracking systems utilise corneal reflection as their method for gaze estimation (Valtakari *et al.* 2021). This entails that the eye-tracker illuminates the cornea with an infrared light source in order to create a reflection. Based on video images of the eye, it then compares the position of this reflection – which serves as a constant point of reference – with the position of the pupil to calculate the coordinates of the current gaze point (i.e., the point at which a person is gazing at a given moment). Each calculated gaze point corresponds to one raw eye-tracking sample. The frequency at which these samples are captured is often referred to as an eye-tracker's *sampling rate*, which can vary greatly depending on the system. For instance, the sample rate of the Tobii Glasses 3 is 50 Hz, which means that they capture 50 samples per second,

or one sample every 0.02 seconds. An eye-tracking session of exactly 20 minutes at this sampling rate thus yields 60.000 samples. While this number might seem high, it should be noted that 50 Hz is generally considered quite low in terms of sampling rate, as some systems can measure at a rate of up to 2000 Hz (Holmqvist *et al.* 2011). Those systems, however, tend to severely restrict the freedom of movement afforded by its users and are often centred around displaying stimuli on a computer screen. They are therefore less viable for the study of gaze in human social interaction, in which participants frequently move their heads to look at their surroundings.

3.2.2 Segmenting raw gaze data into fixations

Eye movements can be divided into different types, the two most prominent of which are perhaps fixations and saccades. Fixations are generally defined as a period of time during which the eye remains relatively still and acquires visual information, while saccades are generally defined as the rapid movement of the eye from one fixation point to another, during which no visual information is acquired (Holmqvist *et al.* 2011). Other eye movements exist, but these are beyond the scope of the present paper. There are several ways to extract fixation data from raw eye-tracking data. Often, researchers inspect their data frame by frame to manually determine when a fixation occurs (e.g., Vranjes 2018). Although viable, for the current dataset, this method would be quite labour-intensive. Instead, the present study uses an I-VT algorithm provided by Tobii to detect fixations. In simple terms, this algorithm classifies contiguous gaze samples as either a fixation or saccade depending on whether or not the velocity of these samples crosses a given threshold, the velocity threshold (Olsen/Matos 2012). Expressed in degrees/second (°/s), the threshold can be modified by the researcher, but where exactly it should be set is subject to debate and depends heavily on several factors (Trabulsi *et al.* 2021). The general rule of thumb is that a lower threshold will yield more but shorter fixations, whereas a higher threshold will yield fewer but longer fixations. According to Holmqvist *et al.* (2011), however, the choice of velocity threshold is dependent on the aims of the study. A simplified example of how the filter works is displayed in Figure 5.

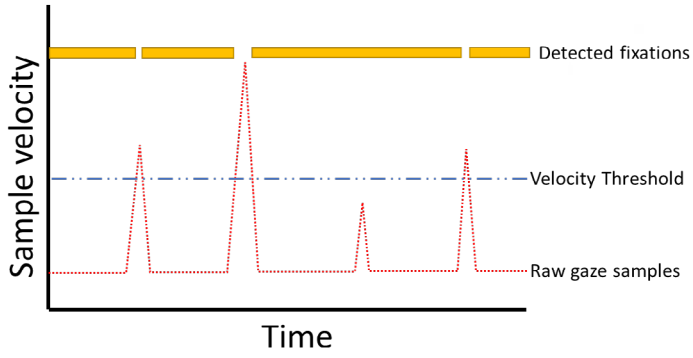

Figure 5: Simplified representation of the I-VT fixation detection algorithm

Tobii includes two I-VT filters in its eye-tracking analysis software by default: the I-VT fixation filter and the I-VT attention filter. The parameters of both filters are identical, except for the velocity threshold, which is set at 30°/s in the former and at 100°/s in the latter. The present study uses the I-VT attention filter with its velocity threshold at 100 °/s for several reasons. For one, Tobii notes on its website that this filter is meant for eye-tracking data captured "under dynamic situations, where either the subject is constantly moving or the objects or targets are moving around the subject" (Tobii 2018). Moreover, manual inspection of both filters revealed that certain sets of gaze samples, which could reasonably be classified as fixations, were not detected as such when using 30 °/s. This is especially an issue for the qualitative analysis, which relies on these fixations to examine participants' gaze behaviour during instances of turn-transfer (cf. Section 4). This is solved by using a velocity threshold of 100 °/s, although Tobii's website does note that this causes 10-15% of saccades to be classified as fixations. Additionally, some other eye movements are also included as fixations, which means that we are technically measuring foveal stabilisations, not fixations (Tobii 2018). Since the algorithm classifies these different eye movements as fixations, these will still be referred to as such in the present paper. The only other parameter which was modified by the researcher was "minimum fixation length", which was set at 120 ms, since this value is frequently used in other eye-tracking studies focusing on interaction (Vertegaal *et al.* 2001; Brône/Oben 2018; Vranjes 2018).

3.2.3 Annotating fixations

The fixations and saccades generated by the I-VT filter were imported into ELAN on the gaze tier for each participant, and then synchronised with their respective gaze videos, since the fixations occurring in the data correspond to the occurrence and position of the yellow cursor in the gaze videos. This is illustrated by the example in Figure 6, which is an extract from a VRI interaction from the point of view of the psychologist, during which she is gazing at the parent.

This synchronisation process was challenging, however, since slight temporal discrepancies occurred between the fixations of both data sources as a result of a difference in the eye tracker's sampling rate and the frame rate of its built-in camera. Such discrepancies cannot be fixed automatically and need to be taken into account during the quantitative and qualitative analysis.

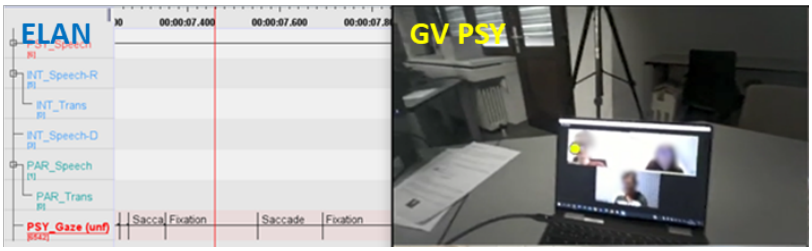

Figure 6: Example of a fixation on the psychologist's gaze tier and the corresponding moment in the gaze video

As the present study is interested in participants' visual attention with regard to turn-taking, fixations were manually annotated for their current location (i.e., where the participant was gazing during that fixation). In eye-tracking research in which both the environment and participants remain fully still, software can be used to draw areas of interest (AOIs) and calculate whether or not a fixation falls within a particular AOI. With mobile eye tracking, however, such AOI boxes would have to be redrawn very frequently, as participants and their interlocutors move very often, which would be very time-consuming, arguably even more so than manual annotation. Although specific software programs can aid in the automatic detection of AOIs (Callemein *et al.* 2019), these usually focus on face-to-face interaction. For the current study, manual annotation was deemed more appropriate, given the study's focus on different VMI configurations. This process was supported by still images containing the AOIs for each participant (cf. the coloured shapes in Figure 7), which were used by the researcher as a reference. Depending on the AOI in which a fixation occurred, it would receive a specific annotation. A limited tag set for AOIs was created for this purpose, which included each participant (annotated as either 'INT', 'PSY' or 'MOT') and participants' own notes (annotated as 'NOTES'). Fixations that did not fall within any of these AOIs were annotated as 'ELSE'. Fixations that were difficult to annotate because they occurred right on the border of two different AOIs (cf. Figure 8), an issue which mostly occurred in 3VI and VRI, were annotated as 'X'. This means that they will not be taken into account explicitly during the quantitative analysis. However, they can still be considered during the qualitative analysis.

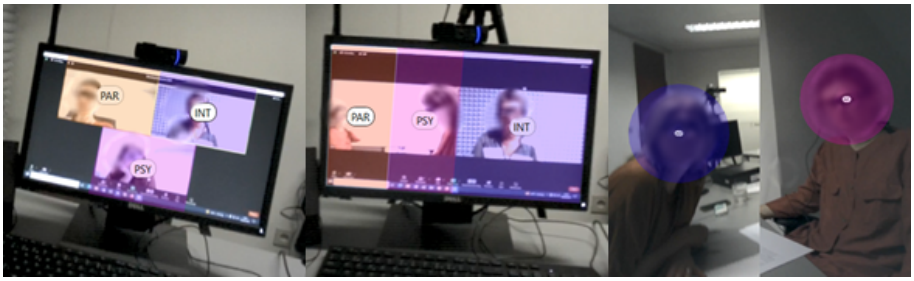

Figure 7: Reference images used during the annotation process from the point of view of the interpreter

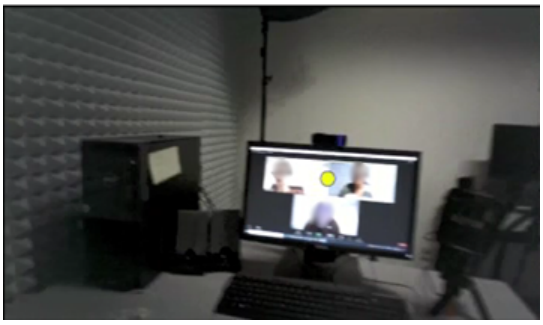

Figure 8: A fixation located right in between the mother and interpreter AOIs

4. Data analysis

The methodological design described above allows for detailed quantitative and qualitative comparisons of gaze behaviour across VMI configurations, to examine the role of gaze in turn taking. In the present section, we discuss a selection of preliminary results in order to illustrate how quantitative eye-tracking data can inform more in-depth qualitative analysis.

First, a quantitative analysis of the eye-tracking data allows us to determine which instances of turn transfer should be analysed. In this first step, the data generated by the eye trackers is used to identify possible relationships between participants' gaze behaviour and turn-taking coordination. Specifically, this quantitative analysis examines a participant's gaze behaviour within a variable time window at the end of every turn leading into turn transition, by quantifying at which AOI a participant is gazing and for how long. This window starts 100 ms[2] before the end of the current speaker's turn and ends when the next speaker commences their turn. Each instance of turn-transfer is then categorised based on which participant holds the current turn and which participant gains the next turn, which yields six categories in total (cf. Table 2). These different categories can next be compared across the three conditions (3VI, VRI and F2FI) and across the three interpreters.

Current turn	INT	INT	PSY	PSY	MOT	MOT
Next turn	PSY	MOT	INT	MOT	INT	PSY

Table 2: Overview of the six categories of turn-transfer

4.1 Preliminary quantitative results from interpreter A

By way of illustration, the current section discusses a part of the quantitative gaze data of interpreter A across the three configurations. We focus on turn-transfer instances where the floor is passed from the interpreter to either the mother (Table 3) or the psychologist (Table 4). Both tables show the average amount of time the interpreter spends gazing at each of the AOIs discussed in Section 3.2.3[3].

Table 3 shows that during turn transfers from the interpreter to the mother, the interpreter on average gazes at the mother for the majority of the time in all configurations. For 3VI and F2FI, the percentages are almost identical (73% and 74% respectively), whereas in 2VI the percentage is slightly lower (50%). As the mother is also the next speaker during these particular turn-transfers, these results are in line with Vranjes *et al.* (2018), in which interpreters used gaze at the ends of turns to select

2 This value was taken from Kendrick/Holler (2017), who suggest that on average observable gaze shifts are initiated 100 ms before a possible turn completion.

3 Columns labelled "OTHER" contain the small subset of fixations annotated as "X", as well as all non-fixation related gaze events (i.e., saccades and instances during which the eye-tracker is unable to find the eyes or assign a gaze event), and will not be taken into account during the analysis. For methodological reasons, the turn-transfer instances presented here only include gaps, not overlaps.

a next speaker. The second most gazed at AOI from the point of view of interpreter A in all three configurations are the interpreter's notes. This is not surprising since note-taking is an important aspect of dialogue interpreting.

INT→MOT	n	INT	PSY	MOT	NOTES	ELSE	OTHER
3VI	14	2%	0%	73%	11%	0%	14%
VRI	23	0%	0%	50%	17%	0%	32%
F2FI	23	0%	4%	74%	6%	0%	15%

Table 3: Interpreter A's gaze behaviour during INT-->MOT turn transfers

Table 4 shows that in both VRI and F2FI, the interpreter gazes at the psychologist for about half the time on average (42% and 51% respectively), which is again to be expected as the psychologist is the next speaker in these instances. Similarly to Table 3, her notes are the second most gazed at category for both of these configurations (12% and 25% respectively). In 3VI, however, the interpreter's gaze behaviour looks somewhat different. While nearly equal percentages of gaze time are allocated to the psychologist (17%) and the mother (13%), the interpreter mostly gazes at her notes in this configuration (35%). What exactly causes the interpreter to do so is something which can be further explored in the future in the qualitative analysis of this project, through close examination of the video data, which can be triangulated with relevant answers from the questionnaires.

INT→PSY	n	INT	PSY	MOT	NOTES	ELSE	OTHER
3VI	10	0%	17%	13%	35%	0%	35%
VRI	18	7%	42%	7%	12%	0%	32%
F2FI	14	0%	51%	0%	25%	0%	24%

Table 4: Interpreter A's gaze behaviour during INT-->PSY turn transfers

5. Conclusion

In this paper, I have presented the methodology of an ongoing PhD project which uses mobile eye tracking to study the role of gaze in the multimodal coordination of turn-taking in 3VI, VRI and F2FI. Each of these configurations involves a different physical distribution of participants, which affects participants' affordances in coordinating turn-taking through multimodal resources. Consequently, within the VMI configurations, we cannot assume that findings which apply to one of the configurations (VRI) automatically apply to the other (3VI). To fill this knowledge gap, comparative analysis of simulated interaction is required in a controlled, experimental setup, as discussed in this paper.

Since gaze plays an important role in turn-taking coordination, the present study uses mobile eye tracking. This technology provides much more fine-grained insights into participants' gaze behaviour compared to traditional video-based methods, and also provides a more complete picture than screen-based eye tracking by register-

ing participants' gaze beyond the computer screen. Nevertheless, mobile eye tracking presents researchers with a new set of challenges to overcome. This includes defining what constitutes a fixation, and determining how to extract and annotate fixations from raw eye-tracking data, a process which can be done either manually or automatically. For Interpreting Studies in particular, overcoming challenges related to eye tracking is especially important. Currently, only few studies have used the technology to study F2FI and VMI, resulting in a lack of established methodological frameworks. The present paper proposes a mixed-methods design in which the in-depth qualitative analysis of salient moments of turn transfer is informed by a quantitative analysis which explores possible correlations between participants' gaze behaviour at turn endings.

Through this paper, the author has argued how experimental research with eye tracking can supply valuable new data types that can inform research on gaze as a turn-taking device in VMI settings. Such methodologies allow for detailed comparisons between configurations and therefore complements existing research in each of the configurations. It is hoped that this paper has illustrated why and how to use experimental research designs in dialogue interpreting studies and how eye tracking is a solid tool for the study of gaze behaviour. As such, the author hopes to have contributed to the development of a solid methodological framework for dialogue interpreting.

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Distance vs. onsite (non-) streamed interpreting performances: a focus on the renditions of film scenes

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Abstract

The digital turn has changed every aspect of our lives, including the media ecosystem, which is today dominated by new digital media (Jensen 2021). In addition, the impact of the Covid-19 pandemic on both our private and professional lives has been both unexpected and profound. Interpreting services have been no exception. Drawing upon examples of Italian<>English film festival interpreting, the present paper investigates this digital turn. Data are taken from authentic performances provided at Giffoni, one of the most important Italy-based international film festivals. Some of its events are live-streamed and are therefore open to a remote audience made up of online users; moreover, in 2020 because of the pandemic, the Festival used video-mediated interpreting (Braun/Taylor 2012). Consequently, the data sets include onsite streamed events, distance streamed events and onsite non-streamed events. This corpus is analysed qualitatively, focusing in particular on the concept of audience design (Bell 1984, 1991), and more specifically on the renditions of some film scenes. The results show that both the live-streaming and the remoteness features have significant repercussions on the interpreting performances in the three interactional contexts.

Keywords

Film festival interpreting, dialogue interpreting, video-mediated interpreting, live-streaming, corpus-based interpreting studies, audience design, film scenes.

Premising that interpreter-mediated events do not occur in a social vacuum, Viezzi (1996: 28) praises the study carried out by Kurz (1993) who analysed expectations and priorities of different user groups: drawing upon two previous studies carried out by Bühler (1986) and Kurz herself (1989), the results highlight the importance of situationality. This aspect becomes even more significant when it comes to dialogue interpreting scenarios (Merlini 2020) where the interpreter "more than others is strongly dependent on the implication 'of a basic option as to what [s/he is] there for'" (Dal Fovo/Niemants 2015: 3 quoting Marzocchi 2005: 102). In these contexts, interpreting practice is still more emblematically a situated practice where interpreters become ratified participants who co-construct the interaction with their conversational partners (Cirillo/Niemants 2017: 2). Focusing on this social turn (Pöchhacker 2006), since the 90s scholars have become interested in analysing the dynamics of interpreter-mediated interpersonal interaction. This new focus also benefited from such disciplines as sociolinguistics (among many others, Allan Bell's audience design theory – 1984, 1991 – is a case in point) as well as it brought into view the institutional contexts in which the interpreting practice takes place, dealing with the peculiarities of each social setting.

This paper deals not only with the social turn, but more specifically with the digital turn (Jensen 2021). Fantinuoli (2018) talks about a "technological turn" which encompasses remote interpreting along with other technologies such as computer-assisted interpreting and machine interpreting. However, another label may be used here so as to include other tools which do not fall under the technological turn category as originally defined; drawing upon Pöchhacker's contribution (2020), we may look at it through the lenses of a "video turn" which characterises both web-streaming services and video-mediated interpreting practices (Braun/Taylor 2012). Focusing specifically on the latter, it is commonly believed that the first distance interpreting service known as Telephone Interpreting Service was launched in 1973 in Australia (Braun 2015; Spinolo 2021). Since then, distance interpreting services have increasingly developed and today they may be used in a very wide range of contexts and by means of a host of tools (Spinolo 2021: 62-63), digital video services included. As will soon become evident, the data analysed in the following sections fit in with the label "video turn".

The aim of this paper is to analyse the impact of the digital-video turn on a corpus of Italian<>English dialogue interpreting practices performed at the Giffoni Film Festival (henceforth GFF): these were live-streamed on YouTube and, as far as the 2020 edition is concerned, the GFF also used the distance interpreting mode because of the Covid-19 pandemic. Drawing specifically upon the concept of audience design (Bell 1984, 1991), the analysis deals with the renditions of some film scenes in three different interactional contexts: onsite streamed (henceforth OS) events, distance streamed (DS) events and onsite non-streamed (ON) events.

1. "Going video": video-mediated interpreting scenarios

As Pöchhacker (2020: 35) puts it, in theoretical terms the word "video" can be intended as a medium "to capture and transmit the interpreter's input and output in technolo-

gy-mediated scenarios as well as to capture and record audiovisual data on interpreting as an object of study". For the purpose of this paper, the first part of this definition is of primary interest since the GFF interpreting services are mediated by a video-link for the benefit of the audience and – in remote scenarios – of the primary participants as well. On the one hand, the video-link is the input for the web-streaming users who are watching the interview with their favourite star; on the other hand, it represents an essential bridge to connect distant participants. It is worth mentioning that the second part of the abovementioned definition deals specifically with multimodal approaches to dialogue interpreting[1]. Although these approaches go beyond the scope of this paper, it is worthy of note that some scholars have drawn upon multimodality while analysing (also) remote data (see for instance Davitti 2019), thus joining the two aspects together.

It is clear that digital telecommunication has revolutionised the way people communicate across the globe (Napier *et al*. 2018: 3). The rapid development of video technology both in terms of data quality and transmission has produced a Copernican revolution in our everyday and professional communication (Brône/Salaets 2020: 1). And even if it tries to resemble onsite face-to-face interaction, video-mediated communication influences the routines and strategies that speakers and hearers adopt (*Ibid*.). By the same token, a video-mediated access to an interpreter or, from his/her perspective to hearers and speakers, has an impact on the interaction (*Ibid*.).

Scholars have been interested in analysing the pros and cons of this mode since the early 2000s (see for instance Moser-Mercer 2003; Braun 2004), but it is clear that the Covid-19 pandemic has particularly fostered research in this field with studies carried out both by scholars and professionals (Spinolo 2021: 61).

The terminology used to refer to technology-mediated interpreting practices, however, is not yet standardised (Braun 2020: 569). For instance, Constable (2015; see also Braun 2019, 2020; Spinolo 2021) chooses "distance interpreting" as a hypernym to identify all ICT-enabled interpreting of a distant speaker at a given event. This label includes both teleconference and remote interpreting. Generally speaking, these modalities differ in two respects: direct/indirect visual access to primary participants; and the individual(s) who is/are remote (primary participants or interpreter respectively). Focusing on the medium, scholars such as Braun (2019) further distinguish between telephone- and video-mediated interpreting. Moreover, if we take into consideration the person who is remote, the boundaries between remote and teleconference interpreting may be blurred since each and every participant, including the interpreter, may be remote (Spinolo *et al.* 2018: 13); this constellation gained momentum during the Covid-19 pandemic (Braun/Zhang 2022). For the purpose of this paper, the label "video-mediated interpreting" (Braun/Taylor 2012; see also Braun/Davitti 2018) is particularly relevant as it stresses the video-link, which is of paramount importance in the GFF corpus which includes both live-streamed performances and distance interpreting practices. Therefore, in this specific case the label "video-mediated interpreting" is used in a broader sense than the original one, the latter dealing exclusively with distance interpreter-mediated encounters.

1 In a nutshell, scholars show how participants in an interpreter-mediated event co-construct interaction through a whole range of semiotic resources other than speech, i.e. gestures, gaze, facial expression, head and body movements (Pöchhacker 2020: 23).

As for the live-streaming feature *per se*, Braun (2006: 6-7) points out that interpreting in webcasts "shares some features with interpreting in a videoconference, but many more with TV interpreting": the major challenge is indeed that the audience is not only remote and invisible, but also passive because the interpreter has no access to the audience's feedback unless some tools (such as the live chat) are made available.

2. Data and methods of analysis

The GFF[2] has been taking place since 1971 in Giffoni Valle Piana, a small town near Salerno in the Campania Region, Southern Italy. Since the very beginning its creator, Claudio Gubitosi, has had a mission: promoting and developing cinema among children and young people. Each year the GFF welcomes thousands of children and young people coming from all over the world, developing a high international standing. On the occasion of its 50th anniversary (2020) it was renamed Giffoni Opportunity.

Juries known as Generator +13, +16 and +18 (namely going from 13 to over 18 years old) are made up of both Italian and foreign jurors. Therefore, their meetings with foreign guests are interpreted in the short consecutive (dialogue interpreting) mode between Italian and English. These are the two official languages of the Festival, with English being used as a lingua franca by international jurors. Meetings with foreign guests include post-screening Q&As with members of the film crew in question (e.g.: directors, actors, actresses etc.) and Q&As with famous international stars who have been invited to the GFF to receive special awards or present their film *premières*.

This interpreting mode is known as film festival interpreting (henceforth FFI, Merlini 2017), which differs from film interpreting (Russo 2015) because the former typically deals with face-to-face spontaneous interaction (e.g.: on-stage talk, awarding of prizes, interviews etc.) interpreted in the short consecutive mode[3], whereas the latter refers to the simultaneous interpretation of film dialogues. Moreover, FFI falls in neither of the two categories of linguistically mediated broadcast discourse described by Mack (2002: 207-208) as it is neither performed in a TV studio nor involves the translation of broadcasts of events taking place in a remote location independently of media coverage, staged and edited for the exclusive benefit of a television audience. Nevertheless, according to Merlini (2017: 139, emphasis in the original), FFI can be defined as "interpreting *also for* the media" since film festival events do attract media coverage and, therefore, FFI shares some features with media (TV) interpreting (Dal Fovo 2020), such as the diversity of addressees and communication levels; the high degree of visibility and exposure felt by interpreters; and the reference to an "ethics of entertainment" (Katan/Straniero Sergio 2001). This link with media communication can be applied to the GFF as well given that its events are broadcast in live streaming.

The corpus was originally designed for the author's PhD project (Picchio 2023; see also Picchio forthcoming) and covers a time span which goes from 2017 to 2020. It includes 23 clips (total duration: 15 hours) divided as follows: OS=10 clips; DS=7

2 Website of the GFF (in English) <https://www.giffonifilmfestival.it/en/>.

3 The label FFI might be applied to simultaneous interpretations as well, such as those analysed by Falbo (2007). However, this paper deals with the same interactional format as Merlini's because it focuses exclusively on performances interpreted in short consecutive.

clips; ON=6 clips. Both OS and DS events were broadcast on YouTube[4] and to date are still available on this platform, whereas ON clips were audio-recorded by the author of this paper when she attended the GFF as a researcher in July 2017[5]. Depending on the Covid-19 rules in force, DS clips include (a) hybrid and (b) totally remote events: in (a) the chairperson, the interpreter and part of the jurors were in Giffoni, whereas the guest and other jurors were remote; in (b) everyone was remote. Moreover, the GFF used the platform Zoom to connect remote participants and then broadcast this videocall on YouTube. Irrespective of the remoteness and/or the streaming features, all the clips share the dialogic interactional format, the language combination and the types of participants (i.e. chairperson, interpreter, guest and jurors).

These data were transcribed using the ELAN software (see Brugman/Russel 2004 for a general overview; see Niemants 2018 for an example of how to use ELAN for dialogue interpreting corpus analysis) which allows for a multi-tier annotation linked to the time codes of the video. As Figure 1 shows, the ELAN horizontal layout resembles a musical score, and each tier can be linked to a different speaker; in the same window the transcriber sees both his/her tiers and the video segment.

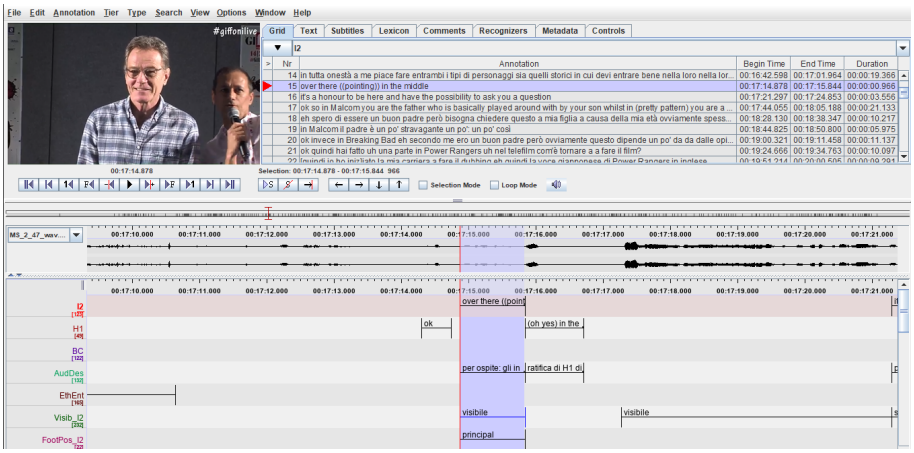

Figure 1. ELAN sample transcript

The tiers that were created include not only the conversation-analytical transcription of speakers' turns (so-called speaker tiers), but also some other tiers which allowed a preliminary analysis of the interactions while transcribing (analysis tiers). As for the latter, this paper focuses on the audience design tier (AudDes).

Drawing on Goffman's (1981) concept of participation status, Bell (1984, 1991) posits that a text producer's output is influenced in descending order by addressees (whose presence is known, who are ratified participants in the exchange, and who are directly addressed by the speaker); auditors (who are known, ratified, but not directly

4 The GFF YouTube channel is available at <https://www.youtube.com/channel/UCxE21XGkNhQ3msKOGq6_8Jg>.

5 Both the author's participation and her data collection were authorised by the GFF management.

addressed); overhearers (who are known but are neither ratified nor addressed); and eavesdroppers (whose presence is not even known, and who consequently have no influence at all on text production). Accommodation to one's audience group(s) varies according to the context of communication. In face-to-face encounters the speaker can monitor the audience's reactions and adjust his/her text progressively (Bell refers to a "responsive audience design"), whereas in media communication the speaker can rely exclusively on his/her own expectations about the audience ("initiative audience design"). Both these types of audience design can be applied to the GFF events because the interpreter addresses the flesh-and-blood jurors sitting in the movie theatre, but also the remote audience of web-users. Focusing on media-related interpreting, Straniero Sergio's studies (see for instance 1999, 2007) show that TV interpreters adjust their outputs primarily to the needs of the remote audience ("initiative audience design"). On the contrary, Merlini (2017) and Merlini/Picchio (2019) found that the "responsive audience design" prevails when it comes to FFI: those who are present in the cinema are the main receivers of the interpreter's output.

3. A threefold analysis of audience design

3.1 OS events

The following excerpts (see Appendix for transcription conventions) are taken from two types of live-streamed meetings known as Meet the Jury (MJ) and Meet the Star (MS), in which jurors (MJ) or cinemagoers (MS) meet famous international stars. Excerpts are identified by the same code as in the corpus, showing a progressive number and the edition of the GFF in question.

Excerpt 1 – MJ_1_47; J (Juror), I (Interpreter)

1 J hi I'm {name} from {city} in Italy and I'm really glad to have you here and I love you so much and I really loved your performance in Arrival and I adored a special quote which is if you could see your whole life from start to finish would you change things? but (xxx) your answer in the movie to be no so I would like to ask you the same question in the real life if you could see your whole life from start to finish would you change things? thank you so much I love you

2 I se potessi vedere la tua vita dall'inizio alla fine cambieresti qualcosa?
if you could see your life from start to finish would you change anything?

In this first excerpt, the juror addresses the actress Amy Adams and quotes a line taken from her movie *Arrival* ("if you could see your life from start to finish would you change things?") asking the actress the same question. The interpreter, however, omits the first part of the juror's turn and translates only the final personal question. The omission deletes the vital link between this personal question and the film that is being discussed and therefore it may hamper full comprehension since only those who

have watched this movie can grasp the (implicit) allusion to it.

Similarly, the following examples show that interpreters do not make clarifying additions and sometimes even omit relevant details.

Excerpt 2 – MS_1_47; KH (Kit Harington, actor), I (Interpreter)

1 KH uhm I think probably (3) probably this scene there is this scene ok so it- there is this scene with uhm uh when Ygritte dies

2 I è stata molto probabilmente la scena in cui Ygritte muore
probably the scene where Ygritte dies

3 KH because it was like it was so it was so sad and it was it was we had three weeks of night shoots so we were all very emotional anyway and uhm uh and there is this scene were (.) I turn around and she's there with the arrow (.) and there is this moment of like ((chuckling)) like fun ((chuckling))

4 I eh: beh ci sono state tre settimane di riprese di notte eh: e queste riprese di notte hanno fatto sì che fossimo tutti un po' come dire eh emotivamente carichi e poi mi giro mi giro <u>in una di quelle scene che conoscete</u> e c'è Ygritte che mi sta puntando la freccia contro quindi ovviamente eh quella lì
uh: well there were three weeks of night shoots uh: and these night shoots made us all a little bit well uh emotionally charged and then I turn I turn <u>in one of the scenes that you know</u> and there's Ygritte who's pointing the arrow to me so obviously that one

Excerpt 3 – MJ_6_49; J (Juror), I1, I2 (Interpreters)

1 J hi I'm my name is {name} I'm from {city} uhm I love the show very much and the third season was incredible and my favourite uhm my question is the scene <u>at the beginning of episode seven</u> I'm not gonna spoil that much but when <u>you both at the rest of the kids are in Hopper's cabin</u> and the monster comes uhm how was that filmed <u>I know Millie gets lifted in the air</u> like I can imagine that it took forever and it was very hard so how was that?

2 I1 ho una [domanda piuttosto tecnica]
I have a [*rather technical question*]

3 I2 [allora ehm] (1,3) voglio ehm non voglio spoilerare nulla però <u>nel settimo nel settimo episodio</u> c'è una parte nella quale <u>siete</u> nella <u>cabina</u> di Hopper e arriva il questo mostro eh vorrei sapere come eh è stata girata quella scena cioè <u>che effetti speciali sono stati usati</u> come è stata girata la scena?
[*well uhm*] *(1,3) I want uhm I don't want to spoil anything but <u>in episode seven seven</u> there's a part in which <u>you're</u> in Hopper's <u>cabin</u> and this monster comes uh I'd like to know how uh that scene was shot I mean <u>what visual effects were used</u> how the scene was shot*

In excerpt 2, the interpreter translates quite faithfully Kit Harington's words without adding any further information which could instead be useful to describe the *Game of Thrones*' scene more in depth. The interpreter merely refers to "one of the scenes

that you know" and therefore addresses exclusively the *Game of Thrones*' fans who are familiar with this reference: in that fight scene Ygritte (Rose Leslie) tries to kill Jon Snow (Kit Harington), but she is in turn killed by another man and dies in Snow's arms; despite being enemies, Snow and Ygritte had had a relationship earlier on. Moreover, this scene is emblematic because Rose Leslie and Kit Harington got married in 2018 (this MJ event dates back to 2017 when they were probably engaged).

Excerpt 3 is taken from a meeting with the actor Charlie Heaton and the actress Natalia Dyer who are known for starring in the TV series *Stranger Things*. The interpreter's rendition (I2) of the juror's turn is generic and vague and the familiarity with the cited scene is taken for granted, as the following elements show: "in episode seven" (vs. "at the beginning of episode seven"), "you are in Hopper's cabin" (vs. "you both and the rest of the kids are in Hopper's cabin"), "visual effects" (vs. "I know Millie gets lifted in the air"). Moreover, in Italian the word "cabina" is a case of linguistic interference because "cabin" translates as "baracca" in this specific case, whereas "cabina" refers to other types of cabins such as those in aircrafts or ships… or even an interpreting booth. Therefore, once again only the *Stranger Things*' fans who have just watched season three (which was released on 4th July 2019, namely fifteen days before the beginning of the Festival) are familiar with the details of that scene.

Therefore, all these three examples show how the interpreters' renditions address more (*ergo*, exclusively) the TV series'/film's fans rather than a heterogeneous and wider audience who may not know the scenes they are talking about.

3.2 DS events

The following excerpts are taken from a post-screening Q&A which was live streamed in December 2020. Each and every participant was remote, and the interpreter could take some notes (unlike his colleagues working in OS events). Both examples are taken from *Caught in the Net,* a Czech documentary which deals with online grooming. The web-users could not watch this film and had just access to the Q&A, whereas the jurors could also watch it before meeting the guests.

Excerpt 4 – DPP_12_50; PK (Pavla Klimešová, producer), I (Interpreter)

1 PK this actually happens quite a lot especially when the actresses for example Anezka or the other two girls go to the screenings for example Teresa the reddish one told me that she was at the screening in Brno that is the second largest city in Czech Republic and after one screening there was actually seven girls that came to her telling her that it actually happened to them and I think that when you have a discussion with the actresses who are in the film the kids it's much easier for them to approach them and tell them about these difficulties because if there would be someone who is older and maybe looks like the the the person (who doesn't) have a social media it's much harder to uh for the kids to actually talk to them maybe if Anezka has some uh also experiences with this (virtual sexual approach) by these kids maybe she can tell more about it I went to a couple of screenings where I talked to the kids and they wanted to

talk to me about it afterwards and we always tell them like if you would like to talk to us one-to-one we are here like half an hour after the screening you can definitely come to us to talk to us

2 I sì in effetti eh: è successo che ad alcune dopo alcune proiezioni in alcune scuole eh: alcuni- alcune ragazze soprattutto eh: si sono fatte avanti hanno detto che era successo anche a loro soprattutto mi ricordo ad una proiezione in una delle città più grandi della della Repubblica Ceca Brno eh: sette ragazze si sono approcciate a Teresa che è la ragazza con i capelli rossi del film e le hanno detto che era successa una cosa del genere anche a loro che avevano ricevuto degli abusi: online e devo dire che ehm il film con queste ragazze che ha come protagoniste queste ragazze che sembrano molto più giovani eh: della loro età facilita eh: la la come dire il fatto ehm che alcune ragazze si facciano avanti e dicano è successo anche a me perché molto spesso i ragazzi non lo fanno perché vedono che magari dall'altra parte c'è un adulto che magari non utilizza i social media e quindi è molto lontano dal loro mondo e: mentre il l'aver avuto tre ragazze che erano simili che sembravano di età simile alla loro ha facilitato questa- ha incoraggiato molte ragazze ad uscire fuori a dire è successo anche a me noi di solito ehm dopo la proiezione del film diciamo a tutti guardate noi siamo qui per un'altra mezz'ora se volete parlare da soli con noi noi ci siamo e: potete: potete fidarvi di noi

yes indeed uh: it happened after screening it in some schools uh: some- some girls in particular uh: came forward and said that it happened to them too I remember in particular that after one screening in one of the largest cities in in the Czech Republic Brno uh: seven girls approached Teresa who is the reddish girl in the film and told her that something like that happened to them too and they received some abuses: online and I have to say that uh the film with these girls starring these girls who look much uh: younger facilitates uh: the the you know the fact uh that some girls come forward and say it happened to me too because quite often young people don't do that because they see that maybe they are in front of an adult who maybe doesn't use social media and so is very far away from their world and: whereas meeting three young women who are like who look like their peers facilitated this- encouraged many girls to come forward and tell this happened to me to us too usually uhm after each screening we tell everyone we will be here for half an hour if you want to talk one-to-one with us we are here and: you can: you can trust us

Excerpt 4 shows that the interpreter clarifies some details through expanded renditions. For instance, he makes explicit the fact that the protagonists look younger ("the film with these girls starring these girls who look much uh: younger" – i.e. they play the role of some teenagers but they are in their twenties), which is the reason why they may encourage girls and boys to come forward and tell their own personal stories. Moreover, the interpreter clarifies why, on the contrary, young people may be inhibited from speaking with an adult who may seem farther away from their world ("quite often young people don't do that because they see that maybe they are in front of an adult who maybe doesn't use social media and so is very far away from their world").

By the same token, in excerpt 5 the actress admits having some therapy to overcome the "disgusting things" she suffered during the film shooting, and the interpreter

makes these "things" more explicit because he refers specifically to the online grooming committed by some predators who believed she was a young girl: "I had been in therapy for a year (…) because the hard thing was (…) the fact of being harassed by adults who believed that I was a young girl basically so they were interested in me because of that idea they had (…)". In this social docufilm the actresses pretended indeed to be teenagers and were really contacted by sexual predators.

Excerpt 5 – DPP_12_50; AP (Anezka Pithartovà, actress), I (Interpreter)

3 AP yeah I was I was uhm having therapy for a year I just finished now and it helped me a lot like to take stock about it all the time the- there uh wasn't just dealing with the guys with disgusting things but also like media pressure and uh my life kind of changed you know so there was all things together were kind of hard for me (…)

4 I sì in effetti ho fatto un anno di terapia dopo il film e mi ha aiutato molto parlare parlare tanto di quello che mi era successo ehm all'interno del film durante la produzione perché la cosa che: è stata difficile da affrontare non è stato soltanto l'idea di essere stata perseguitata da adulti che credevano che io fossi una ragazzina fondamentalmente quindi il loro interesse era dovuto a a questa idea ma anche dalle pressioni derivanti da dal dai media quindi la mia vita dopo aver girato il film è cambiata moltissimo eh e come dicevo parlarne molto mi ha dato una mano enorme (…)
yes indeed I had been in therapy for a year after the film and talking talking at length about what happened to me during the film production helped me a lot because the hard thing was not only the fact of being harassed by adults who believed that I was a young girl basically so they were interested in me because of that idea they had but also the pressure of of of mass media so my life after the film shooting has changed a lot uh and like I said before talking a lot about it helped me a lot (...)

All the details the interpreter clarifies in excerpts 4 and 5 are redundant for the jurors who have just watched the documentary; rather, they are useful to the web-users who could not watch the film and may need further information.

3.3 ON events

In the following excerpts – which, it is worth recalling, are taken from non-live streamed events – the interpreters explicitly mention specific scenes of the films in competition, even if these details are left implicit in the original turns. This shows that they watched the movies before the Q&As, they know them in depth, and they recount some scenes. In these examples the interpreters make the following details explicit: "the family photo sequence" vs. "photographs" (excerpt 6); "the scene where his mom kicks him out of house" vs. "facing his lonely journey" (excerpt 7); "in the last scenes" vs. "from now on" (excerpt 8). Moreover, the interpreter introduces explicitly the references to April (the protagonist of the film) and to the harassment which are both omitted in the original turn (excerpt 9).

Excerpt 6 – DPP_5_47; JK (Jesse Klein, director), I (Interpreter)

1 JK and by the second one there's a real bond there and they're confessing things to each other and then we switch to the photographs so you get a sense of their past and yeah there's a sort of- they feel like out of time and they are like in this world together (…)

2 I mentre nella seconda scena della macchina c'è un vero legame tant'è vero che dopo c'è la sequenza di foto di famiglia e quindi creano un legame con il passato dei protagonisti i due protagonisti nelle due scene della macchina sono fuori dal tempo (…)
whereas in the second car scene there's a real bond and indeed later there's the family photo sequence and so they create a link with the protagonists' past the two protagonists in the two car scenes are out of time (...)

Excerpt 7 – DPP_5_47; JK (Jesse Klein, director), I (Interpreter)

3 JK great thank you uhm yeah I mean I (couldn't guess) about the ending quite a bit and so the first riddle the first riddle appears in it I don't know what happens after the last frame of this movie like the story starts in the first frame where it's just Chris facing his (lonely) journey (…)

4 I io non so cosa succede dopo l'ultima scena io sicuramente sapevo cosa succedeva dopo la prima scena la scena della mamma che lo caccia fuori di casa (…)
I don't know what happens after the last scene I definitely knew what happened after the first scene the scene where his mom kicks him out of house (...)

Excerpt 8 – DPP_7_47; AlS (Alex Smith, director), I (Interpreter)

1 AlS uh sì it's whatever you get from it is the main metaphor uh but for for us there's an idea of it's a film about survival (.) and in this case what survives is love ((trying to speak Italian)) amor uh and that's a that's a he he would carry his father from now on all on his back and in his heart uh and that that's how we get to know our family our that's how our family survives through compassion and through connection

2 I sì assolutamente la- per me è stata una metafora l'idea di questo film era di far parlare i sopravvissuti anche se la cosa che sopravvive maggiormente è appunto l'amore in lui vediamo durante le ultime scene che porta suo padre sulla sua schiena e poi nel nel suo cuore quindi è anche una questione empatica di connessione tra padre e figlio quindi assolutamente una metafora
yeah absolutely the- for me it's a metaphor the idea of this film was to let survivors speak even if what survives more in him is love we see in the last scenes that he carries his father on his back and then in in his heart so it's also an empathic connection between father and son so yes absolutely it's a metaphor

Excerpt 9 – DPP_9_47; IM (Isaac Money, actor), I (Interpreter)

1 IM °it's fine° thank you very much uhm firstly I think the common sense says and I wanna I think he is in a very dark place and I think he is not aware of what he is doing in terms of like him being a bad (guy) he is confused he is hurt and he is his ideal of a relationship is really wrong uhm and I think he is in his mind thinking of the one thing that is missing in their love you know don't having sex he does not get the ideal of what he should have had so he miss- uh yeah he is confused really and then at the end for me he has a sort of realisation of what happened so I think that was the moment he thinks he saved he is saving their relationship and then he at the end he sees the pain that he has caused and I think that breaks his heart and he is ashamed and he is embarrassed as he should be

2 I beh in effetti sì è vero lui se lo merita ma lui è in un posto molto scuro non sa cosa sta facendo vaga nelle tenebre lui pensa che l'unica cosa che manchi alla sua relazione è il fatto che lui non abbia ancora fatto sesso con April e qua- ed è molto molto confuso quando in effetti lui la forza a fare sesso per lui è la realizzazione della propria relazione ma poi si rende conto si pente si rende conto del dolore cha ha causato e quindi piange perché si è reso conto come è ed è e ha vergogna come dovrebbe avere appunto grazie
°w*ell yeah° it's true that he deserves it but he is in a very dark place he doesn't know what he's doing he wanders in darkness he thinks that the only thing his relationship is missing is the fact that he hasn't had sex with April yet and wh- and he is very very confused when he forces her to have sex that for him is like the fulfilment of his relationship but then he realises he regrets it and he realises the pain he caused and so he cries because he realises he is like that and he feels ashamed as it should be thank you*

Therefore, excerpts from 6 to 9 show that interpreters make some elements explicit, recounting some scenes, supposedly to make the interaction between jurors and members of the film crew easier.

4. Discussion

The analysis of the three contexts reveals that:

1. in OS events, interpreters tend to generalise and let their audience fill the gaps by recalling autonomously the scenes in question. Here, zero renditions (Wadensjö 1998) are also found regarding the details of the film that is being discussed;
2. in DS events, interpreters adjust their outputs more than in OS meetings and thus cater for the communicative needs of a larger audience. In particular, they add some details during the post-screening Q&A;
3. in ON events, quite unexpectedly interpreters resort to expanded renditions related to some scenes of the films the audience has just watched.

Even if the corpus-based analysis discussed in this paper has been designed to be exclusively qualitative, some numbers help complete the picture. Drawing on the wider and more detailed analysis presented in Picchio (2023), data show that:

1. in OS events, interpreters do not add autonomous material, but rather generalise or even omit some parts in 66% of cases (n=19; total occurrences: 29);
2. in DS events, they actively cater for the communicative needs of their heterogeneous audience in 71% of cases (n=12; total occurrences: 17);
3. in ON events, they build their outputs by means of such strategies as expanded renditions in 75% of cases (n=12; total occurrences: 16).

Therefore, in terms of audience design, in the first case (OS events) interpreters do not adjust their outputs to the needs of a general audience, but rather address those who are familiar with the guest being interviewed. If this familiarity can be taken for granted in the case of the jurors – as the author of this paper saw first-hand in 2017 when she attended the GFF in person –, this cannot be said for web-users, whose competence is not assessable. Interestingly, this type of audience design is in line with the results previously discussed in Merlini (2017) and in Merlini/Picchio (2019)[6]. On the other hand, in the second case (DS events) interpreters adjust their texts to the needs of a larger audience made up not only of jurors but also of web-users: this may be due to the fact that all the participants are remote and therefore the absence of flesh-and-blood listeners evidently helps interpreters understand (*ergo*, remember) that further details are useful especially to the web-users who were not granted access to the film in advance. Finally, in the third case (ON events) interpreters cater exclusively to the needs of some of the jurors and add further information to their renditions. It is true that all the jurors have just watched the movie in competition, but interpreters recount unexpectedly some details of this or that specific scene. A likely motive for this behaviour may be that these interpreters aim to facilitate the interaction with the members of the film crew, especially when they refer to some technical aspects of their movies. Even if all the jurors have watched it earlier on, it is possible that some of them do not remember in detail some scenes and therefore interpreters make the references explicit. Given that the analysis presented in this paper is based exclusively on corpus evidence, future data triangulation with such methods as interviews with interpreters could back this up, confirming or rejecting the hypotheses that have been suggested here to describe their behaviour.

5. Conclusion

This paper deals with the "video turn" and more specifically with examples of "video-mediated interpreting", which encompasses here not only distance interpreter-mediated encounters but also live-streamed interpreting performances. Drawing upon the concept of audience design, the analysis focuses on the renditions of some film scenes, and the data sets include three different contexts of the Giffoni Film Festival. The excerpts show that the audience design changes across the three interactional contexts since the references to specific scenes are translated differently: the jurors are the

6 Merlini/Picchio's contribution (2019) focused exclusively on excerpts taken from the 47th edition of the GFF (2017); therefore, it dealt specifically with some of the OS events included in the wider corpus which is analysed in this paper.

main addressees of OS events; in DS meetings, interpreters cater for the communicative needs of a larger audience; while in ON events, interpreters address some jurors and unexpectedly make some scenes explicit. It is worthy of note that one interpreter in particular changes his approach depending on the setting. Also referring to the findings presented in Picchio (2023), data reveal that this interpreter works in all the three contexts. On the one hand, his renditions highlight that he autonomously adds textual materials during DS events, as well as showing a great agency and involvement in ON events. On the other hand, in occasion of OS events, he generalises and omits relevant elements of the original turns. Here again, an interview could support this corpus evidence.

The analysis also shows that the live-streaming feature makes some of the GFF events (i.e. OS ones) different from a TV show, whose broadcast addresses a mass audience (Straniero Sergio 2007). TV hosts and interpreters quite often explain this or that reference for the benefit of their remote audience, whereas in the GFF context interpreters take it for granted that everybody knows that specific film or scene. Therefore, the live-streaming audience is not perceived by interpreters as a heterogeneous mass of people, but rather as a group of fans who are familiar with the guest in question and his/her career. This perception changes in DS events, where the remoteness encourages interpreters to adjust their outputs to the needs of a larger audience of web-users who follow the live-streaming and not just to the jurors who are taking part in the videocall.

It appears, therefore, that both the live-streaming feature and the distance scenario have an impact on interpreting performances. These relatively new technologies introduce changes to the very context of the communicative event, and interpreters react accordingly. This can yield new insights not only into a film festival context as the one analysed here, but also into other settings which are likewise hit by the ever-changing world we are living in.

Appendix. Transcription conventions (adapted from Jefferson 2004)

{word}	anonymised word
(word)	unclear word(s)
(xxx)	unintelligible word(s)
(…)	omitted words
?	rising tone
(.)	short pause
(3)	pause with indication of seconds
((word))	non-verbal element
uh *etc.*	vocalized pause
word:	prolonged sound
word-	interrupted sound
°word°	softer sound
[word] [word]	overlap
word	feature of interest

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"Working at a distance from everybody": challenges (and some advantages) in working with Video-based Interpreting Platforms

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Abstract

The recent pandemic has unmistakably changed the way conference interpreters perform their work: the transition from the traditional booth with participants in a conference room to the fully online booth at the interpreter's home came suddenly and under the pressure of (inter)national health regulations. Although developments in interpreting technology are not novel and have been addressed since the 1990s, with first announcements like "conference interpreters in the electronic age" (Moser-Mercer 1992), the pandemic has speeded up the ongoing technological process, which now receives increasing scholarly attention (Fantinuoli 2018a, 2021; Corpas Pastor 2021). What still needs more scrutiny, however, is how these solutions are implemented in the daily interpreting business and how interpreters evaluate their use. In this study, funded by AIIC (Association Internationale des Interprètes de Conférence), we report on how interpreters experience the use of remote interpreting (RI) through video-based interpreting platforms (VIP), including virtual booth setups, in their professional life. The findings of interviews that were conducted with 10 professional interpreters show that interpreters experience a lot of challenges, like technological and communicative problems, greater fatigue, alleged lower interpreting quality online than onsite. At the same time, however, the forced shift to remote interpreting during the pandemic has helped them to discover some advantages of VIP solutions as well – especially when an online booth is available.

Keywords

Conference interpreting, COVID-19 pandemic, RSI (Remote Simultaneous Interpreting), technology, VIP (Video-based Interpreting Platform), virtual booth, work environment

Introduction

When the AIIC Research Committee (RC) in 2021 launched its call for research for the second time, prioritizing - amongst other topics - Remote Simultaneous Interpreting (RSI) (modalities, contexts, cognitive aspects, perception, equipment, ethics, etc.)[1], it was clear that the RC's interest in technology was triggered by the pandemic and the massive tele-working business for interpreters.

Ironically, the global health crisis, which speeded up the technological process, made interpreters also aware of the fact that their own health – mainly the auditory sense – is at risk when working at a distance[2], for instance when working with Video-based Interpreting Platforms (VIPs) that were multiplying from April 2020 on. Ball (2021) stresses that the bad sound quality in these systems is detrimental to interpreters' health:

> If participants do not understand properly, they can ask questions or it can go unnoticed. If interpreters do not understand properly, they cannot interrupt to ask questions, as they are not delegates in the meeting. […] For interpreters working with sound quality that is compromised may be worse than tiring and painful, it may prove dangerous to their health. Andrea Caniato posits that interpreters' report of tinnitus, hyperacusis and even hearing loss are the result of a problem more complex than acoustic shocks, but rather the result of poor sound quality. (Ball 2021: 265)

In the present contribution, after a brief state of the art (§1), we present the aim of our study, which is to learn about the challenges and advantages linked to RSI when using VIPs (§2). This information was achieved through interviews with 10 professional interpreters (§3). In the following paragraphs (§4 and 5) the findings of the interviews are presented, before the discussion and conclusion (§6). We focus on participants' perception of working at a distance from everybody (meaning conference rooms, conference participants, interpreter colleagues etc.). In our study, 'working at a distance from everybody' is considered as working physically alone in the home office (only one of the respondents had worked in a hub). In presenting this study, we address the concern voiced by the Task Force on Distance Interpreting (TFDI) of AIIC that "further research is also needed into DI impacts in real-life situations with quality, health and wellbeing as paramount."

1 <https://aiic.org/document/10248/AIIC%20Research%20grant_%20application%20form.pdf> (last access December 22, 2023).

2 See the following reports on health implications (acoustic shock and hearing impact) due to distance interpreting: <https://aiic.org/uploaded/web/Acoustic%20Shocks%20Research%20Project.pdf> and <https://medien-hd.iued.uni-heidelberg.de/wordpress/rsi-hearing-impact/> (last access December 22, 2023).

1. State of the art: a short overview

With this study, we tie in with Constable (2015), who set up a hierarchy of modes, going from maximum sensory input to least sensory input. When applying this hierarchy to the interpreting reality, he indicates face-to-face interpreting as interpreting with maximum sensory input, while he defines Audio Remote Interpreting as a way of interpreting with the least sensory input.

In his description, he stresses in what sense the differences between modes matter:

> Despite the fact that interpreters would agree that a video-mediated view of participants is better than none, the fact is that cameras do not function in the same way as the human eye and camera operators make their own choices, not those of each individual interpreter following the event. Interpreters may experience that it is more tiring, it can cause eyestrain, that the multiscreen mode can be distracting and that the faces of individual participants cannot be seen as clearly as a direct view. (Constable 2015:11)

The importance of the interpreting mode and the amount of sensory input relates to how humans construct meaning: in face-to-face interaction, for instance, paralinguistic features and kinesics observed in a live setting are more likely to help construct meaning than interaction at a distance, without even seeing each other (for example, over the phone). As Constable formulates it:

> Humans use multi-sensory inputs, processed simultaneously, in order to form understanding. Generally speaking, the more inputs are available simultaneously, the greater ease we have in constructing meaning. The fewer sensory inputs available to us, the more effort is needed to do so, and the more likely it is that input be misconstrued. (Constable 2015:7)

However, in 2015 nobody could foresee the rapid technological (r)evolution triggered by the pandemic that started in February 2020: it caused a spectacular increase in the development and use of web conferencing platforms like *Google meet*, *MS Teams*, *Webex* and *Zoom*, but also of multilingual event/web conferencing platforms like *Interactio*, *Interprefy*, *Kudo*, *QuaQua*, *VoiceBoxer*, amongst others, which offer remote interpreting options. Virtual booths that are available on platforms such as *cAPPisco* even allow interaction among the interpreters, and in this way imitate the co-located experience of the interpreter. A key question, however, is whether these systems provide a realistic and feasible alternative and what their impact was (and is) on the professional lives of conference interpreters.

1.1 Remote interpreting and technology

It is safe to say that the pandemic has caused a shock wave (or *seismic shift,* as expressed by the TFDI of AIIC[3]) in the interpreter's technological landscape. Although technological solutions for remote interpreting were already announced and discussed

3 <https://aiic.org/site/TFDI> (last access December 22, 2023).

in the nineties (Moser-Mercer 1992), and more recent studies mapped out the potential of technology in various interpreting settings (Mouzourakis 2006; Moser-Mercer 2011; Braun 2015), interpreters have always been reluctant towards using it (Fantinuoli 2018b; Downie 2020). Lack of interest is not only assigned by Fantinuoli to practitioners but also to scholars and to the academic debate "judging by the small number of studies on technologies published to date" (Fantinuoli 2018b:155).

At this point, however, we need to distinguish several types of Information and Communication Technologies (ICTs), following Fantinuoli who distinguishes *process-oriented* and *setting-oriented* technologies, depending on the level at which they interact with the interpreter and the interpreting task (Fantinuoli 2018b). *Process-oriented* technologies are designed to "support the interpreter during phases of an assignment, i.e. prior to, during and possibly after the interpreting activity proper, independent of the modality" (Fantinuoli 2018b: 155), whereas *setting-oriented* technologies "comprise ICT tools and software 'surrounding' the interpreting process proper, such as booth consoles, remote interpreting devices, training platforms, etc." (Fantinuoli 2018b:155). This means that Computer Assisted Interpreting (CAI) tools belong to the first group, while VIPs belong to the second.

While defining terms, we need to keep in mind from the start that, until now, ICTs did not have the same major impact on interpreting as on other professions, as confirmed by the fact that the manner in which interpreting is performed today has basically remained the same over the years (Fantinuoli 2018b:154). As a matter of fact, the impact of ICTs on the interpreting profession has been slow and sometimes marginal, but has increased exponentially since the pandemic.

As far as the reluctance towards CAI tools is concerned, it could be explained in part with the fact that their use may "raise doubts about the pure intellectual activity of interpreting" or because, from an economic point of view, "interpreting plays a marginal role in the language industry" and CAI tools represent "much less a cost-cutting factor than CAT (Computer Assisted Translation) tools" (Fantinuoli 2018b:163). Since this is not the focus of our research, we will not go further into the description of specific CAI tools.

Regarding remote interpreting platforms, the "feeling of being there" (referring to being live "on scene") and the impression that working with a screen deteriorates interpreting quality (Roziner/Shlesinger 2010) possibly has made interpreters reluctant to go remote, while remote interpreting training, as far as we know, has received very little to no attention at all. Moreover, not only in practice, but also in research and in the academic debate, there seemed to be a lack of interest, "judging by the small number of studies on technologies published to date" (Fantinuoli 2018b:155), taking into account that the publishing year lies 2 years ahead of the pandemic.

Finally, terminology is not always transparent and the use of a panoply of acronyms does not reduce confusion in this regard: Video-Mediated Interpreting (VMI), VRI (Video Remote Interpreting), VCI (Video Conference Interpreting), RSI (Remote Simultaneous Interpreting) and Video-based Interpreting Platforms (VIPs) are of interest to this contribution. Following Braun (2020),VMI is the 'overarching' term that refers to a new modality of interpreting, thanks to new videoconferencing technology in distance communication. It has different configurations depending on "the distribution of the primary participants (co-present or in different locations) and the

distribution of the interpreter(s) in relation to the primary participants" (*Ibid*: 47). VCI is used to indicate that interpreters are co-located with one of the primary participants, although they may be in a third location (Braun 2007 in Braun 2020: 48) while VRI refers to the configuration where the interpreter(s) is (are) physically separated from all of the primary participants (*Ibid*: 48).

VIPs in reality are Remote Simultaneous Interpreting (RSI) platforms that substitute and complement hardware equipment. They can be used for online events and webinars as well as regular onsite conferences with interpreters connecting remotely from their homes or specially equipped studios or hubs.[4] They became very important during the pandemic, especially in times of complete lockdown, where all participants were forced to interact from separate sites (in most cases every individual from their own home).

As stated above, the lack of – academic and professional – interest in the topic of ICT has drastically changed during and after the pandemic: the number of academic publications on remote simultaneous interpreting has increased (Fantinuoli 2021; Chmiel/ Spinolo 2022; Buján/ Collard 2023, to name just a few). Research projects such as the research of Chmiel and Spinolo[5] and Buján and Collard (ESIT project), which aim to examine the impact on the working conditions of interpreters, have been shooting up like mushrooms. While Chmiel and Spinolo have conducted a survey to "inform the design of the experiment aiming to investigate the impact of various remote interpreting settings on the interpreter's experience and performance" (Chmiel/Spinolo 2022: 257)[6], the survey launched in April 2021 by Buján and Collard "was aimed at quantitatively understanding the experiences of conference interpreters with remote simultaneous interpreting (RSI)"[7] and was completed by 946 conference interpreters. Results showed that interpreters had less work and fewer clients, that sessions were shorter (shifts with colleagues quicker), that 75% worked from home at that point in time and that only 26% preferred to do so. The study also revealed that teamwork in RSI matters, since 77% sometimes or always helped boothmates. As far as quality of the performance is concerned, 50% of the respondents thought they performed worse and 67% reported that working conditions were worse, while 83% considered RSI more difficult[8]. We must notice, however, that the survey was completed after a year of mostly complete lockdown.

The pandemic shift finally is also reflected in interpreter training: recent studies finally have revealed an increase in online interpreter training (Crezee *et al*. 2023).

4 <https://www.atanet.org/tools-and-technology/six-remote-simultaneous-interpreting-platforms-and-zoom/> (last access December 22, 2023).

5 See the AIIC blog about the first AIIC research grant, awarded to Agnieszka Chmiel and Nicoletta Spinolo at <https://aiic.org/site/blog/the-virtual-booth> (last access December 22, 2023).

6 This survey informed the experimental design about the most frequently used platform (Zoom) and generated insights into two independent variables, namely booth mate presence and type of multimodal input.

7 <https://aiic.org/viewEvent.html?no_header=true&productId=390> (last access December 22, 2023).

8 <https://knowledge-centre-interpretation.education.ec.europa.eu/en/news/esit-research-project-remote-simultaneous-interpreting> (last access December 22, 2023).

1.2 The feeling of "being there" and teamwork

(In)visibility has always been a much-discussed topic in various kinds and contexts of interpreting, including conference interpreting (Bavelas *et al*. 2008; Wadensjö 2008; Ozolins 2016; Pöchhacker 2020). The concept has at least a double meaning: physical (in)visibility, but also the more metaphorical indication of agency and power of the interpreter in the encounter, or the lack thereof (Ziegler/Gigliobianco 2018). Technology has inevitably played a role in both kinds of understandings and interpreters feel more excluded from the interaction or the event if they are not physically present, even if at physical meetings interpreters are also "separated" from the floor in their booths. Additionally, teamwork seems to be of paramount importance amongst conference interpreters and is considered more difficult in an online setting (Ziegler/Gigliobianco 2018; Seeber *et al.* 2019).

These studies stress the importance of interaction with colleagues, joint briefing and debriefing sessions and the preference to work in a 'hub-to-venue' setup rather than in a 'home-to-venue" setup. Seeber *et al.* (2019: 30) suggest that "working remotely, but as a team from the same place rather than individually from home, could have a substantial impact on interpreters' attitudes towards RI."

2. Aim of the research

Starting from Seeber's (2019) findings, we pursue to examine whether specifically designed video-based interpreting platforms (VIPs) can provide a valuable proxy for the real-life experience of interpreting teamwork and reduce the feeling of working literally at a distance from everybody (colleagues, clients and audience). For our data collection and for a second part of the study (an eye-tracking experiment during interpreting assignments), we used *cAPPisco*[9] which imitates the real world (virtual booths with consoles and virtual lounges). The tool allows to visually communicate with other interpreters and may thus create the idea of real collaboration in the booth during a remote, individual and 'solitary' workflow. The question is whether the ambition to approach a real-life situation is indeed realistic.

The aim of the study is twofold, namely to get a grip on both the social and the cognitive impact of working with state-of-the art technology, like the VIP platform *cAPPisco*. As stated above, in this contribution we report on the perception of interpreters who have worked (during the pandemic) and still work with VIPs, which means we focus only on social impact and perception of the interpreters (through interview data) on the use of VIPs. As a follow-up of this qualitative study with the results of the interviews, the findings of the focus group meeting as well as the description of the cognitive impact through an eye-tracking experiment will be reserved for another report.

9 <https://cappisco.com/en/>.

3. Methodology

We used qualitative research methods (interviews and a focus group discussion) to answer the main research question of this study: What is the impact of RSI (through VIPs) on the wellbeing of the interpreter and the quality of the interpreting performance?

- The main research question can be broken down into the following sub questions:
- what are the challenges and advantages of technology in RSI?
- what are the challenges and advantages for human contact and teamwork in RSI?
- which set-up of hardware and which software tools are used during RSI?
- are preparation time and teamwork impacted through RSI?
- can tools designed to have virtual booths and lounges for meetings and teamwork replace physical presence?

As stated before, we will report only on the interview data for reasons of conciseness.

3.1 Participants

Participants were recruited through a snowballing method, by sending our request to a number of professional interpreters in our own network, who then forwarded the request to colleagues, to AIIC-members and free-lance interpreters.

For the current study, which was conceived primarily as a pilot, we aimed to collect ten interviews and organize one focus group meeting. Collecting responses from even a relatively limited number of interpreters proved to be challenging. This was due in part to the fact that interpreters are generally under considerable pressure (also to participate in various kinds of research), especially during and after the pandemic, and in part to the fact that an interview and a focus group represent a considerable time commitment (compared to, for instance, a survey). Nevertheless, we managed to gather a diverse and very committed group that provided substantial input during the interviews and the focus group meeting.

The demographics show that this diversity is reached as far as age and experience is concerned (namely very experienced, experienced and rather new interpreters in the field) in a 30 to 63 years age range, although experienced interpreters are predominant. As far as gender is concerned (3M/7F), the distribution represents the global interpreter population[10]. It is interesting to notice that five out of ten respondents are also interpreter trainers, which maybe explains why they were interested in participating in the study to begin with. None of them – except one – had relevant experience with online interpreting on VIPs before the pandemic. Four participants were members of AIIC.

10 <https://www.troubleterps.com/10> (last access December 22, 2023).

3.2 Semi-structured interviews

After ethical approval from the Ethics Committee of KU Leuven[11] and after having received all signed informed consents from the participants, the semi-structured interviews were conducted according to the following set of scripted questions/topics to be addressed:

- Demographic information: age, gender, education, professional occupation, experience in interpreting, experience in online interpreting
- Challenges to tackle during "forced" remote interpreting (RI) with (a) questions about technology and (b) questions on interactional aspects (social and co-presence with colleagues)
- Advantages of RI: technology and interactional aspects
- The switch from onsite to online: training or learning-by-doing?
- Use of devices in remote interpreting: desktop, laptop(s), screen(s), tablet, mobile phone, headset … in preparation of and during interpreting
- Use of tools during interpreting
- Preparation for an online assignment
- Teamwork: how do you collaborate with the boothmate who is situated elsewhere?
- Do virtual booths help to imitate and/or replace a real-life experience?
- Self-perception on the quality of the interpreting performance online
- Conclusion: when looking back at pre-corona times, what can you conclude concerning interpreting via VIPs?
- Conclusion: does post-corona mean going back to live settings/stay online/mixed assignments?

The interviews were conducted in September 2022, held in Dutch and translation in English has been provided for this contribution.

3.4 Analysis

The interview recordings were transcribed for the purpose of this research. We opted for a basic transcription with only verbal information and no para-verbal or non-verbal annotations.

The process of data analysis involved a thematic analysis with an inductive approach to identify overarching themes (see section 4, findings) in the data, followed by a content analysis to select representative quotes to elucidate various themes (Hale/Napier 2013: 103).

The analysis was done manually on an Excel file, following the described structure of the interviews: each topic of the interview was noted on a different Excel sheet while the participants in the interviews received a row in each sheet numbered from 1 to 10. Within each excel sheet/topic, overarching themes were detected (see appendix for the thematic tree structure; see also section 4 findings).

Triangulation of data was carried out by the researchers themselves through independent coding put next to each other.

11 The reference number of the GDPR assessment is G-2022-5470.

4. Findings

The overarching themes that will be treated in the following paragraphs (4.1 to 4.8) concern technology (4.1) and the social and human aspects (4.2) of the online working condition, but also the sudden switch from onsite to online (4.3). The setup of devices was another recurrent point of discussion (screens, tablets etc., see 4.4) as well as the characteristics of VIPs (4.5). Other recurrent themes were individual preparation before the assignment (4.6) and interaction amongst colleagues during the assignment (4.7), as well as self-perception of interpreting performance quality (4.8) to conclude with reflections on the post-Corona era (4.9).

The subthemes mentioned by the participants have been highlighted through *italics*.

4.1 Technology

As far as the technology in VIPs is concerned, the most challenging elements at the start of the pandemic seemed to be *the lack of experience* (except for # 3), *the unreliability of the technology itself* – and most notably the *internet connection,* a challenge some interpreters solved by using a cable connection to avoid Wi-Fi problems – and *the lack of technicians*. While using VIPs, all interpreters, next to being a professional interpreter, are forced to fulfill the role of technician as well.

The *need for suitable hardware* (laptop, tablets, smartphones, headsets but also a separate microphone) and the resulting *distribution of attention* over multiple screens were described as challenges as well.

Sound quality of the floor is indicated as the most problematic item, while interpreters themselves as professionals try to offer good sound through professional materials (headset and microphone). One interpreter explains that online working is a *health threat* for all distance interpreters:

> It is because they limit everything to a very tiny bandwidth – they manipulate a lot of stuff – that everybody who only works this way, after a certain period, has problems with their ears, like tinnitus, because this little technology thing, this manipulation enters your ears all the time, in the same spot in your ear. (#10)

Despite these challenges, interpreters do see some *advantages* in their work through VIPs, like the fact that working online is convenient for short assignments (not for a whole day) and that they learned *new skills*, like learning to work with new platforms and with the virtual booth. One respondent stressed the fact that the technology has an impact on the international character of events. Somebody confirmed that in an online setting there are *fewer disturbing elements* (that mostly come from the conference room) and that in a *virtual booth* one can see the colleague-interpreter in a way that is similar to a real-life setting. However, one interpreter indicated that he was more easily distracted by the context he was working in (the home office) because he could see cars, persons, even birds and all kinds of movement that can distract from the interpreting task (# 5). It was also mentioned that VIPs, due to the pandemic, *were forced to improve* and one interpreter mentioned that sound quality on a VIP is much better than, for example, when working with a *bidule* in a real-life setting (e.g. during guided

tours or company visits). Some interpreters indicated that working online is *cheaper, time saving* and that it offers *more work* and multiplies the number of assignments one can plan in one day (e.g. have five meetings instead of two).

4.2 Social and human aspects

The *lack of small talk and feedback* and the feeling of *loneliness* are mentioned by all interpreters. Interpreter #5 summarizes these feelings as follows:

> When it [the pandemic] started to last or when after the first 'loosening' initiatives, all measures became more severe again and we were forced to work again more or completely online, it became hard to sit in front of a screen, to talk to a screen all the time without feedback from the client or colleagues.

As far as wellbeing is concerned, almost all interpreters confirmed that online interpreting is *exhausting and stressful*, amongst other things because the interpreter is mostly 'powerless' when there are technical and communicative problems. One interpreter clearly formulates this idea this way:

> Honestly, in the beginning I have asked myself: 'if this is going to work this way from now on, do I still want to be an interpreter? If I have to work this way for the rest of my days, I am not going to cope another 20 years'. (# 3)

An observation worth mentioning in this context – especially because it was formulated by an experienced interpreter – is that it was *more difficult for young interpreters to enter the market during the pandemic*, and more specifically the online market. The interpreter most likely noticed this because (s)he is also a trainer and has a close connection with novice interpreters. This idea could also be linked to another statement about the fact that *networking is quite impossible* online, which is of crucial importance for novice interpreters who are seeking to find their way into the market.

As far as *advantages* are concerned, it is suggested that the use of technology may contribute to a better work-life balance. All interpreters agree that the fact that one doesn't have *mobility* problems (trains, cars, even planes) is a great asset. Related to this point is a perceived *relaxed attitude* "where I can even interpret in my pyjama pants, as long as I am dressed up for the visible part". (#3)

The above-mentioned reduced mobility issues related to working from the home office (which was also linked to better rest because one doesn't need to get up very early in the morning) also allows interpreters to *carry out other tasks* (childminding, shopping, etc.) or even to execute simple domestic tasks inside the house during breaks from interpreting: interpreters confirmed that they need to get away from the screen from time to time and they use this time for specific tasks. They mostly do this following the meeting in their (wireless) headphone to remain informed of the development of the discussion(s).

4.3 Switch from onsite to online interpreting

All interpreters except for one confirmed that the *switch* they had to make towards VIPs was abrupt, unprepared, and thus *without any training or structural education.* One interpreter 'happened' to receive a full-day online training in 2019 from a tech provider, which also facilitated the whole event by offering a high-quality headset to the interpreter.

For all others, there were some 'onboarding' initiatives or short demos/tutorials/workshops offered by the platforms themselves (*cAPPisco*, *Interactio*, *Interprefy*, *Kudo*, *Zoom*). All interpreters stated that *personal research* and starting on a *trial-and-error* basis was the only way forward. However, one interpreter trainer added that this is not the case anymore for *young interpreters who are trained* to work with online platforms, tools and devices during the*ir education.*

4.4 Setup of devices

The *setup of devices* is rather *complex* for most interpreters: only one interpreter stated that she preferred only one computer, while all others sit in front of at least one computer, preferably two (desktop and laptop or two laptops), but certainly with multiple screens. Some have a third screen through a tablet and/or use their smartphone to contact colleagues in case of emergency, if the VIP shuts down or when problems of all kinds appear. All participants stressed the importance of a high-quality headset and microphone. Two interpreters purchased an extra microphone (radio-quality) to put on their desk.

4.5 VIPs and tools

The VIP platforms that were mentioned during the interviews and focus group meeting are *cAPPisco, Eyebridge, iBridge, Interprefy, Quaqua, Teams, Voiceboxer* and *Zoom.*

Tools for terminology management and glossaries consist mostly of personal terminology lists prepared by the interpreters themselves but they also referred to *InterPlex* (mentioned by only one participant) or online terminology tools like *IATE* as well as (automatic) translation tools like *Linguee, DeepL, Reverso* and *Google Translate* (mentioned by all participants).

What is remarkable is that all interpreters, except for one, were acquainted with the VIP platform *cAPPisco*. All were very positive about the application since

> You really have the impression that we are working in a room where we sit next to one another. We even hear the colleagues during their interpreting task, if you don't want to hear them you have to press a button. So, you hear them like when they are sitting next to you in the booth in the real world. And if you are making noise, you need to press a button too, to mute, otherwise they hear you while they are working. It is really like in a real booth, it is the closest thing to the real experience, that's why I think it is fantastic. (# 4)

A virtual booth (meaning one that is imitating the real booth where colleagues are sitting 'next' to each other and have consoles like in a 'real' booth) is generally appreciated, thanks to several factors: the fact that users can see and hear each other and that interpreters can more easily brief and debrief separately (without the client present) and are more inclined to do so. Debriefing can even be done in a virtual lounge.

Handover between interpreters is also experienced as more comfortable in a virtual booth setting in comparison to, for instance, a message through smartphone or a countdown timer. These timers make handover unnatural since handover happens when the interpreter decides that an idea has been expressed or an argumentation has been closed.

However, respondent #4 is the only one to conclude that VIPs including virtual booths are able to replace the 'real' contact. All others say such applications are the closest to the real booth and the real-life experience, but it could never replace the 'real world', because the online experience cannot take over the social contact with colleagues and clients.

4.6 Preparation for online assignments: content and technique

Preparation time in terms of the content of the assignment for all interpreters is guided more by the *kind of assignment* than by the online-onsite format. All interpreters also stress the *importance of receiving documents well in advance*, preferably a few days before the assignment, which again is independent of the interpreting mode. If the reception of documents beforehand is not possible, then it is still preferable to receive documents through the platform rather than not receiving anything at all. Some participants confirm that PowerPoint presentations are interesting for proper names, numbers and the like, especially when they have to interpret reports and sales or profit figures.

Positions diverge as far as the *technical preparation* is concerned: some say that they need more time since they act as technicians in their home office and need to prepare everything well in advance; others say that technical preparation time is comparable to the traditional booth setting: interpreters come in at least 15 minutes before, and do the same for an online assignment to test the technical equipment with the client (who sometimes asks to be there half an hour in advance).

4.7 Interaction during online assignments

The reported feelings of *loneliness* described above are confirmed in the assessment of the working environment and conditions: all interpreters state that they mostly work *online at home, alone.* There are some exceptions, for example when they work physically together (sitting next to one another) with one or two colleagues for a symposium or conference. Some reactions confirm what has been said about the virtual booth not being able to replace the real-life situation (see section 4.5), as we can read in this quote:

> For assignments where the content is more complex, like a conference for instance, you make an appointment with a colleague and decide together: "wouldn't it be better to sit together". Because then you can help each other more easily when you actually sit one next to the other. (#1)

Cooperation and *teamwork* are considered by all interpreters as *more difficult* in this remote setting. This is explained by the fact that online they listen less carefully to their colleague (e.g. because they are doing other things in the meantime, such as domestic tasks) and communication amongst interpreters not physically present in the same room is more difficult anyway. One interpreter adds the dimension of experience: for this interpreter, teamwork online is pretty much the same as onsite, but it depends more on the degree of experience of the colleague, since experienced interpreters depend less on colleagues. In practice, interpreters' teamwork is done through the *platform chat* or via an external chat (*Whatsapp)* to be sure not to be read by the client.

Handover is perceived as more difficult because of the different ways in which VIPs handle this; the most irritating is the already mentioned countdown system, but also a technician who takes over the organization is perceived as intrusive as far as handover is concerned. The most practical one is the one where one can see and hear the colleague in the virtual booth and just do the "thumb up" gesture to say one is ready to take over.

4.8 Self-perception on interpreting quality

When asked about *self-evaluation*, six of the respondents report that they presume their *quality is better onsite than online.* One interpreter even states that (s)he feels like demotivated: "I am inclined to work less. I just want to give up because my head is exploding" (# 3). Three others mention that they can reach the same quality if the conditions are equal (onsite vs. online), referring mostly to sound quality and the discipline of the participants (mute and unmute, background noise, asking to take the floor with the "raising hand" symbol, closing the "raising hand" symbol after the intervention and so on). Only one interpreter claims (s)he can deliver better quality online, provided that the above-mentioned conditions are met.

Causes for this alleged reduced quality are external factors: *poor sound quality, poor connection and freezing images/ delay, stress due to technology failure (connection breaking down completely, a software update in the middle of a meeting etc.), background noise of unmuted participants,* shorter *attention span, the fact that signaling a problem takes more time, impossibility to interpret/translate the chat messages, distraction factors (garden, people passing in the street)*. Only one interpreter states that she is less distracted because

> I am monitoring myself much better. I cannot do anything else, except looking at the screen. While onsite, I put more energy in looking at different things that surround me and that way my self-monitoring is less accurate. (#7)

The online work and the presumed quality loss have a serious *impact*: *weariness* is mentioned most, while three interpreters indicate their mood at the end of the assignment as "*frustration*".

4.9 Post-Corona times: Fall 2022

As far as post-Corona times are concerned, all interpreters clearly indicate they mostly *returned to onsite events*. However, the duration of an event may make organizers decide to have online meetings instead (e.g. for a short meeting of one or two hours). Almost all interpreters agree that it is a good evolution to have short meetings online, which generates an obvious gain of time. All interpreters, except one, prefer the *'hybrid' way of working* with most assignments onsite and some assignments online, e.g. shorter meetings, or 'one to many'meetings with no or few interaction from the audience. Only one interpreter prefers the online way of working. She expresses what all interpreters confirmed, namely that online assignments are 'here to stay' but:

> I think that onsite meetings will never fully disappear. You can feel that. That people say 'no, this kind of meeting must be done on site because online it is not going to work'. So, I think onsite will always be there, but meetings that are administrative, not personal, not delicate, that can easily be organized online, just to agree on some topics, for those kinds of meetings I think online is the future, yes. People are sick of travelling for hours and have now got used to teleworking, you see? (#6)

When interpreters are asked a retrospective opinion on the initially forced online interpreting, they are all generally positive and thankful for the occasion that was offered, despite the unpleasant conditions of a pandemic. All interpreters state that after years of *non-existing* RSI this has become *a regular way of working,* from which they learned a lot and which they consider an *enrichment*. These working conditions have taught one interpreter more '*resilience*', while another repeats that it is very *dangerous for the auditory senses* of the interpreter.

5. Discussion and conclusion

The findings of the interviews, reported in this paper, allow us to gain insights into professional interpreters' stances towards VIP-solutions in the first post-pandemic phase.

The reluctance of interpreters towards technology (Downie 2020) has undergone some changes, and this could even be viewed as a "positive" consequence of the forced lockdowns during the pandemic. Indeed, before the pandemic, most of the interviewees had no experience with RSI (except one interpreter who had had one experience).

The most striking positive response to the use of VIP-solutions is that mobility stress is significantly reduced, and that one can combine domestic tasks with the interpreting assignment (see also Chmiel/Spinolo, AIIC blog). Unfortunately, the mobility stress related to onsite interpreting assignments has been replaced by technology stress. The idea that besides performing the interpreting task, the interpreter must be "their own" technician causes additional stress. However, participants indicated that they got used to the new set-up and that the primary cause of stress are bad connections (because they are out of their control) and the attitude of clients who seem to forget about the interpreter.

This observation is closely linked to what we have found in the literature on the "feeling of being there" or the "sense of presence" (Roziner/Shlesinger 2010; Ziegler/Gigliobianco 2018; Seeber *et al.* 2019;). The 'dehumanizing' effect of online work weighs on the interpreters, especially because of the loss of personal contact with both the client and the boothmate.

Body language was also indicated to be of paramount importance in this sense, but participants pointed out that it remains difficult to get full access to it online. However, this can be partially solved by a VIP with virtual booths and lounges that can imitate the real-life situation – at least as far as interpreter colleagues are concerned – although it cannot fully replace the real world, precisely because of the fact that there is no live human interaction online like in the booth. A (limited) advantage of these kinds of VIPs with a "real" virtual booth, is that one can see and hear the boothmates, which is very important for hand-over or for teamwork and, again, body language.

While the solution of interpreting hubs seems to be satisfactory by some interpreters (Seeber *et al.* 2019; Chaves 2020), participants in this study do not seem to view this as a preferred option, despite the "lonely" way of working at the home office. This probably has to do with the fact that the mobility issue comes in again, since one has to move towards the hub.

A comparison with the findings of the ESIT survey (Buján/Collard 2022) is hard to perform because of divergent methodology and formats, namely quantitative research with surveys and a large number of respondents, against qualitative research with interviews with a limited number of participants. Moreover, our research was conducted after the pandemic, while the ESIT survey was sent out during the pandemic. However, it is interesting to see that the claim that online interpreters have less work was denied by participants in this study. On the contrary, they even indicated that they could accept more assignments. This again seems to be connected to the time gain of not having to travel. Another observation based on the ESIT survey, is that 75% of interpreters work at home, while only 26% prefer to do so, cannot really be confirmed either, because times have changed. The survey was carried out during (mostly) lockdown period(s) in 2021, while in 2022 and 2023 (the period in which this study was conducted), most meetings went live again. However, there is a clear distinction between complex, multilingual meetings and short, administrative meetings: the former will nowadays take place onsite, the latter mainly online.

We cannot confirm the self-assessment of the interpreting quality either: while the survey states that 50% of the participants feel their quality is lower with online interpreting, in our discussion opinions seemed to be shifting.

The fact that the majority (83%) indicates that online work is more difficult is confirmed throughout the discussions and is attributed to multitasking, technological stress, disrespectful clients and a feeling of loneliness in front of the screen, without real contact with the client or colleagues.

What we need to stress is that new generations of interpreters since Covid are trained to work with VIPs (Cheung 2022; Crezee *et al.,* 2023), which is a "luxury" none of the participants had: the sudden transition towards online work made them all "self-made" technicians and online practitioners in only a few weeks or months.

Finally, given the limited number of participants in the study, we do not make any claims on generalizability for the entire profession.

By way of conclusion, we can state that RSI on VIPs is likely here to stay, but in a reduced way: while only one interpreter indicated his online assignments had been reduced to practically zero, all others described a hybrid way of working, mostly on-site but still consistently online. Actually, this hybrid way of working was considered as a positive evolution, since the alternation offers advantages like the fact that the interpreter can stay at home a few times a week.

Since RSI and VIPs are here to stay, this contribution can serve as a call for more research on this way of working for instance on cognitive load through eye tracking, but also on the introduction of CAI and the importance of the human factor in a society where AI will claim more space.

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Technology

Challenges
→ Software
  − No knowledge
  − No experience
  − Safety of software
  − No external help
  − Unreliability of technology
    ○ fear for connection failure (wifi)
→ Hardware
  − Eventual purchase of (new) hardware
    ○ Laptop(s)
    ○ Screen(s)
    ○ iPad or tablet
    ○ smartphone
  − Extra cable to replace (if needed) wifi-connection
→ Sound quality of the floor
→ Health threat

Advantages
→ New skills
  − Learning to work with new platforms
  − Learning to work with virtual booth
→ Less disturbing factors
→ More international
→ Enhanced (technology in) platforms over time
→ Contact with colleagues with virtual booth
→ Online has become an extra (work) opportunity
→ Cheaper
→ Time saving
  − More opportunities to work (5 meetings instead of 2)

Social/human aspect

Challenges
→ Social interaction
  − No small talk, no interaction
  − Loneliness
  − No feedback
  − Meeting new colleagues is strange
→ Less work
  − For young, novice interpreters
    ○ Because networking more difficult

→ Wellbeing
  - Tiring mentally
  - Tiring physically
    - Eyes
    - Ears
  - More stress
  - Powerless (if there are problems)

Advantages
→ Better work-life balance
  - No commuting/traveling stress
  - Time saving
    - Domestic chores can be done (during pauses)
    - Better rest (getting up later)

Transition
→ Learning by doing
  - No training or education
  - Short demo's /onboarding initiatives
→ Training (1 respondent!)

VIPs setup of devices
→ Computer
→ Laptop(s)
→ Screen(s)
→ Tabled/iPad
→ Smartphone

VIPs Tools
→ Platforms
  - cAPPisco
  - iBridge
  - Interprefy
  - Quaqua
  - Teams
  - Voiceboxer
  - Zoom

→ Terminology
  - Interplex
  - Internet
    - IATE
    - Linguee
    - Google Translate
    - Dictionaries
    - DeepL
    - Reverso

→ Own terminology lists
→ Own written notes
→ Documents form the client
→ Notepad and pen

Perceived quality of performance
→ Better on site
- Reasons
  - Poor sound quality
  - Poor connection (freezing images)
  - Background noise
    - Due to unmuted participants
  - Signalling a problem is slower
  - Stress due to technology failure (wifi, software update in the middle of a meeting etc.)
  - Attention span
  - Distraction factors (windows home office)
  - Impossibility to interpret/translate the chat

→ Impact of (perceived) worse quality
- Frustration
- Weariness
- 'Overloaded' head

→ Less easily distracted (one participant!)

Preparation (content)
→ Even greater importance of documents received beforehand
→ If documents not beforehand, then at least via platform
→ Preparation time
- Not depending on onsite vs. online
- Depending on theme/topic

Preparation (technical)
→ Longer
- No technician available at home
- Technical testing (by interpreter him/herself) is necessary

→ Same (online vs. onsite)

Interaction
→ Working place
- Alone at home office
- (Physically) together in one home office
  - If difficult task

→ Teamwork
- Perception
  - More difficult online
  - Less listening to colleague

        - Because of household chores in the meantime
      - Same
        - Depending on the experience of the colleague
  - Practice
    - Chat
    - Smartphone (Whatsapp)

→ Handover
  - Perception
    - More difficult
      - 'Handover button" different in different VIPs
      - Due to countdown system of some buttons
      - If technicians take over and organize handover
      - Via smartphone (Whatsapp)
      - Via chat function on VIP
    - More comfortable
      - In virtual booth (colleague is visible)

cAPPisco with virtual booth

→ best alternative for seeing and hearing each other live

→ not a fully-fledged valuable alternative for live interpreting

POST-CORONA (Fall 2022)

→ format
  - return onsite
  - some online (short, compact)

→ perception
  - short events better online
  - long events better onsite

→ preference
  - hybrid way of working (online and onsite)
    - find balance between online- onsite
    - find balance between advantages/challenges

→ advantage
  - working remotely as enrichment of skills

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Cornelia Zwischenberger, Karin Reithofer, and Sylvi Rennert (Eds) (2023) *Introducing New Hypertexts on Interpreting (Studies): A Tribute to Franz Pöchhacker*, Amsterdam/Philadelphia: John Benjamins, pp. 287. ISBN: 9789027213464

Reviewed by Paola Gentile

Introducing New Hypertexts on Interpreting (Studies), edited by Cornelia Zwischenberger, Karin Reithofer, and Sylvi Rennert, stands as a *festschrift* to the remarkable contributions made by Franz Pöchhacker to the field of Interpreting Studies (IS). Drawing upon his research, this volume invites readers to explore the broad scope of perspectives offered by Pöchhacker's work and the new strands of research that have originated from his expertise throughout the years. It suffices to search the Translation Studies Bibliography to explore the bewildering number of around 100 publications under his name on a variety of topics that testifies to the ever-growing curiosity and versatility of this scholar: from quality in interpreting to the professionalisation of community interpreting, from training to media interpreting. All these topics have been exhaustively explored in many of his publications and offer excellent inspiration for the chapters contained in this volume.

Distinguished scholars in the field of IS were invited to delve into both traditional and contemporary perspectives on Pöchhacker's research. The prologue begins with the notion that hypertexts serve as "metaperspectives," providing "comprehensive overviews of various topics while also introducing new insights into them" (p. 1). Furthermore, the standpoint of this volume posits that conferences act as "hypertexts," which steer the interpreter's actions toward a specific Skopos. Pöchhacker consistently underscored the significance of the situational and communicative context in both interpreter-mediated interactions and training. This has always been clear from his publications: from the pioneering *Simultandolmetschen als komplexes Handeln* (1994), to the monograph *Introducing Interpreting Studies* (2016), from *Doing Justice to Court Interpreting* (Shlesinger/Pöchhacker 2010) to the editing of the *Routledge*

Encyclopedia of Interpreting Studies (Pöchhacker 2015). These works are characterised not only by methodological rigour, but also by an in-depth knowledge of the discipline that has allowed him to accurately anticipate concrete future developments.

The volume is divided into five sections: 1. Methods and methodologies; 2. Public service interpreting; 3. Interpreting as a profession; 4. Interpreter education; 5. Interpreting and "new" media. Each chapter offers a precise perspective on a particular topic: from mixed methods in interpreting research (Napier and Hale) to user expectations (Liu), from methodological approaches in interpreting quality research (Pradas Macías) to the evolution in training community interpreting in Austria (Ahamer and Dabić), from court interpreting (Pym, Raigal-Aran and Bestué Salinas) to the role of the interpreter in colonial times (Kolb and Pöllabauer), from the professional/non-professional dichotomy (Grbić) to the interpreter in a project network for television (Kadrić and Iacono), from the use of mock conferences for competence development (Andres) to a system dynamics model for interpreting research and training (Behr), from speech to text interpreting (Romero-Fresco) to the use of technology in the post-Covid era (Salaets and Balogh).

In the initial section of the book, the contributors delve deeply into a subject close to Pöchhacker's heart: the methodological rigor of research in IS. This scholar was the first to propose a rapprochement between Translation and Interpreting Studies (TIS) and the social sciences and to recommend the use of the mixed methods approach, which is thoroughly investigated in the first chapter of this section (Napier and Hale), as well as in the second chapter written by Liu. In her study, Liu provides a review of the literature on surveys on user expectations in the evaluation of simultaneous interpreting, starting from the seminar study by Bühler (1986) and concluding with some considerations on the use of more comprehensive methods which are not only based on questionnaires. The fact that quality in interpreting is such a multifaceted aspect to evaluate emerges from Pöchhacker's project *QuaSI*, which introduced the pioneering method of combining user expectations and evaluations. The chapter by Pradas Macías delves deeper into this topic, by showing the results obtained by the research group *ECIS* (Evaluación de la Calidad en Interpretación Simultánea) led by Angela Collados Aís and by a more recent study by Sánchez-Santa Barbara and Pradas Macías which includes implicit theories from psychology, in order to demonstrate that the evaluation of interpreters' output depends "to a large extent on the horizon of the actors […], which is in turn conditioned by sociocultural factors (stereotypes, implicit theories, etc.) […] independently of whether they are experts or laypersons in the field" (p. 86).

The second section of this volume explores the field of public service interpreting (PSI). There is no need to further emphasise Pöchhacker's merits for being the first interpreting scholar in Europe to shed light on this profession, which still has a long way to go in terms of social recognition. Fortunately, progress has been made in some areas: Ahamer and Dabić describe the programmes and courses on community interpreting at some Austrian universities, such as the MA programme entitled "Translation and Dialogue Interpreting" at the ITAT in Graz and the course in dialogue interpreting at the Centre for Translation Studies at the University of Vienna. In the second paper of this section, Pym, Raigal-Aran and Bestué Salinas reflect on the quality of court interpreting in two situations: one in which there is a side conversation between

the defendant and the interpreter and the second one in which the bond of trust between the interpreter and the judge is broken due to the lack of professionalism of the interpreter. In the conclusion, the authors illustrate the pros and cons of non-standard practices, why they take place, and whether quality standards could be reconsidered in these situations. The chapter by Kolb and Pöllabauer takes a microhistorical approach to illustrate the role and agency of Sara Kierstede in the colonial administration of Dutch society in New Amsterdam. Although this chapter would seem to be the least consistent with the lines of research carried out by Pöchhacker, its most interesting aspect is the fine line between PSI and diplomatic interpreting.

To someone like myself, who covered status and the professionalisation of interpreting in my PhD thesis, the third section was very thought-provoking, not only because in the first chapter Grbić taps into her previous studies on boundary work to map out situations where translation and interpreting take place, breaking away from the typical "professional/non-professional" divide, but also because the chapter by Kadrić and Iacono concretely demonstrates some of the situations described by Grbić by illustrating the role of the interpreter in the context of a documentary film. The two scholars draw on the importance of the network and show how this facilitates the interpreter's multidimensional alignment for the creation of an effective product.

In the fourth strand of this book, Andres questions whether today's training programmes can be fit for purpose for the changing market of the 21st century. She insists on the need to prepare students to develop situational intelligence, which can be trained through two formats: mock conferences and "SIMnar", a novelty introduced by Pöchhacker himself at the University of Vienna, which consists of a two-hours scientific class embedded in the curriculum in the seminar format to practise a real situation. By echoing the systemic approach employed in previous chapters, Behr illustrates the usefulness of an online tool that helps students visualise the dynamics of the interpretation process. This method has the merit of increasing students' awareness on preparation and organisation when preparing an interpreting assignment.

The fifth section concretely illustrates the technological advancements that are likely to shape not only the professional practice of interpreting, but also its training. Romero-Fresco adopts Pöchhacker's quality criteria for evaluating Speech to text interpreting (STTI), but in the second part of his paper he elucidates how difficult it is to gain recognition of this interpretive mode at ISO and in the EU. In the second and final scholarly chapter of this volume, Salaets and Balogh examine available e-tools and resources to improve interpreters' performance, with the hope that they will be systematically introduced into the training of all students of interpreting. The book concludes with an afterword by Mary Snell-Hornby, which traces Pöchhacker's remarkable career journey from his early days as a PhD student to the Vienna Translation Summits post-Berlin Wall, from his presidency of EST to his role in shaping a new curriculum at the University of Vienna.

The comprehensive approach of this book – which contains a holistic view of the evolution of Pöchhacker's research areas – is particularly refreshing because it encourages TIS scholars to broaden the scope of their research. In this respect, I think it is a very useful abridgement of much of the research in IS over the last 25 years which is neither as general as an encyclopaedia, but nor as narrow as a volume on a single topic. From a pedagogical perspective, the book proves valuable, as each chap-

ter critically reflects on the previous studies, making it a useful resource for literature reviews on several IS topics. The effective structuring of sections ensures a coherent narrative throughout the volume, with a clear thread connecting the contributors' pieces of research to Pöchhacker's work. The inclusion of comprehensive references and the accurately compiled bibliographies of the chapters further enhance the scholarly value and the unwavering commitment to academic rigour of the authors and editors.

However, the volume's overall structure, while beneficial, does have a few downsides. Some chapters do not place a strong emphasis on recent evidence, relying on case studies from a few years back. This creates a certain heterogeneity among the chapters: some provide concrete case studies (Behr, Kolb and Pöllabauer, Napier and Hale, Pradas Macías, Pym, Raigal-Aran and Bestué Salinas, Romero Fresco), while others (Ahamer and Dabić, Andres, Grbić, Liu, Salaets and Balogh), are somewhat more descriptive, though they offer, like Grbić's chapter, an excellent classification of interpreting phenomena and priceless insights into the potential implications of technology in the post-Covid era (Salaets and Balogh). This diversification might be attributed to the book's nature: volumes of this kind do not aim to present groundbreaking research, but rather, to reflect on how far we have come in achieving the state of the art of a specific discipline. And we could say that much work has been done from the beginning of Pöchhacker's career in the 1990s to present day, since the impact of his research is still reverberating strongly today, not only in the studies related to the field (which have far exceeded those on conference interpreting),[1] but also in training, as can be seen from recent publications on curriculum development in (public service) interpreter training (Ng/Crezee 2020; Seel *et al*. 2023), and on the use and perception of interpreting technologies (Salaets/Balogh 2020; Corpas Pastor/Defrancq 2023). Like previous *festschriften* such as *Beyond Descriptive Translation Studies* (Pym *et al*. 2008), this volume provides a diverse array of research insights, making it valuable for both TIS scholars and early-stage MA and PhD students, as well as professional interpreters.

On a concluding note, I would not describe Pöchhacker's career as "meteoric". Mary Snell-Hornby's choice of this term intrigued me and prompted me to turn to the Cambridge Dictionary online for further clarification. While "meteoric" does indeed convey the idea of something developing rapidly and gaining substantial attention, it also carries the connotation of being sudden and usually brief. In my view, this characterisation does not quite align with Pöchhacker's career. I distinctly recall, like several other PhD students in IS, procuring an entire mandatory bibliography of Pöchhacker's articles to read for the assessment exams. Alongside Daniel Gile, Pöchhacker occupies a place in the Olympus of Interpreting Studies. This is not solely due to the breadth of his research interests, but also because, as highlighted by the editors in the Introduction, he served as a patient and open-minded mentor who left and still leaves a "deep and lasting influence" (p. 1) on interpreting scholars.

1 In the Translation Studies Bibliography, there are 725 entries on "community/public service interpreting" and 434 on "conference interpreting".

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THE INTERPRETERS' NEWSLETTER
ISSUE 29 (2024)

Editors: Simo Määttä (University of Helsinki) and Marc Orlando (Macquarie University)

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